



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

11/8/2012

Bill Rupert  
BP-Husky Refining LLC  
4001 Cedar Point Road  
Oregon, OH 43616

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL

Facility ID: 0448020007  
Permit Number: P0111328  
Permit Type: Administrative Modification  
County: Lucas

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Toledo Blade. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

and Toledo Department of Environmental Services  
348 South Erie Street  
Toledo, OH 43604

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 -Via E-Mail Notification  
TDES; Michigan; Indiana; Canada

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

The BP-Husky Toledo refinery (BPH) submitted an application for an administrative PTI modification that will establish federally enforceable voluntary reduced SO<sub>2</sub> emission limits on the several process heaters and other emission units at the refinery.

BPH requests the reduced SO<sub>2</sub> emission limits in association with Toledo Feed Optimization (TFO) project to assure that the TFO project will not result in a significant net emissions increase at any point in time, and to make those reductions enforceable at and after the time at which construction commences on the BGOT Recycle Gas Compressor project.

BPH requests three types of emissions limits:

- An interim limit on the new Reformer 3 Heater (B036): BP proposes a 30 tons per year (TPY) SO<sub>2</sub> limit for the Reformer 3 Heater which was permitted with allowable emissions of 38 TPY SO<sub>2</sub> limit in PTI P0103694, but has not yet begun to operate. This limit will take effect immediately upon permit issuance and revert back to the original limit of 38 TPY once the interim group limit becomes effective. At that point, Reformer 3 will be part of the interim group limit. BPH requests that the proposed interim limit will not take effect if BPH project plans change such that the existing Crude 1 and Vacuum 1 Heaters are not replaced.
- An interim group limit on the combined emissions of several emissions units: BPH proposes a new interim group SO<sub>2</sub> limit. This group limit will take effect upon the initial startup of the replacements to the existing Crude 1 and Vac 1 Heaters (B015 and B031, respectively). It will be applicable until the later of:
  - a) Fifteen (15) months after the initial startup of the replacements to B015 and B031; or
  - b) The completion of construction and initial shakedown of the new Coker Gas Plant expected to be constructed as a part of the upcoming Toledo Feed Optimization Project.

Upon its expiration, it will be replaced by the final limits discussed below. BPH requests that the proposed interim group limit will not take effect if BPH project plans change such that the existing Crude 1 and Vacuum 1 Heaters are not replaced.

- New lower final limits on five specific heaters: BPH proposes new final SO<sub>2</sub> limits for the following sources: Coker 3 Heater (B032), Coker 2 Heater (B017), Crude Vacuum 2 Heater (B019), the Naphtha Hydrotreater Heater (B022), and the Reformer 3 Heater (B036). These new final SO<sub>2</sub> limits will take effect upon expiration of the above group limit.



3. Source Emissions:

Current Allowable Emissions

Unit ID	Process Unit	Current Allowable SO <sub>2</sub> Emissions in Tons Per Year (TPY)
Existing Heaters Affected by Recent Project		
B015	Crude 1 Heater**	356
B031	Vac 1 Heater**	12.26
B019	CV 2 Heater	21.02
B032	Coker 3 Heater	20.46
B017	Coker 2 Heater**	91.46
B029	ADHT Heater	2.32
B022	Naphtha Hydrotreater Heater**	91.45
B030	BGOT Heater	3.86
B033	East BGOT Heater	3.86
B018	FCC Preheat Heater**	257
B001	Hydrogen Plant Heater	27.84
B013	Reformer 1 Regen Heater**	5.27
B014	Reformer 1 Heater**	315
B006	Reformer 2 Heater**	362
B005	Reformer 2 Regen Heater**	38.11
B036	Reformer 3 Heater	38.0
Other Affected Emissions Units		
B034/B035	Alstom Boilers (incremental steam)	22.0
P009/P037	SRU 1/ SRU 2&3**	258

Sum of Allowable Emissions      1926 SO<sub>2</sub> TPY  
 Proposed Interim SO<sub>2</sub> Group Limit    207.5 SO<sub>2</sub> TPY

Note for above table: Heaters noted with “\*\*” do not have annual TPY SO<sub>2</sub> limits, but instead have short term concentration or lb/hr limits. The allowables shown for these heaters/units are the annual equivalents of the short term limits.



Proposed Final Individual Heater Limits

			Existing SO <sub>2</sub> Limit	Proposed New SO <sub>2</sub> Limit		Conditions upon which Limit will Apply
Most Recent PTI	Unit ID	Description	TPY	TPY		
04-01471 (7/7/07)	B032	Coker 3 Heater	20.46	11.64		Applies on expiration of the Interim Group Limit
04-01471 (7/7/07)	B017	Coker 2 Heater	91.45	3.64		Applies on expiration of the Interim Group Limit
04-01290 (7/25/02)	B022	Naphtha Hydrotreater (NHT) Heater	91.45	3.64		Applies on expiration of the Interim Group Limit
04-01290 (7/25/02)	B019	Crude Vacuum 2 Heater	21.02	12.15		Applies on expiration of the Interim Group Limit
P0103694	B036	Reformer 3 Heater	38.0	22.8		Applies on expiration of the Interim Group Limit

4. Conclusion:

This administrative PTI modification is needed to impose voluntary SO<sub>2</sub> limits on the above mentioned units at levels not higher than past baseline. This administrative PTI modification does not result in any emission increases.

5. Please provide additional notes or comments as necessary:

None

6. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
<u>SO<sub>2</sub></u>	<u>261.4</u>



**LUCAS COUNTY**

**PUBLIC NOTICE**

**OHIO ENVIRONMENTAL PROTECTION AGENCY  
ISSUANCE OF DRAFT PERMIT TO INSTALL  
TO BP HUSKY - TOLEDO REFINERY**

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that the Ohio EPA issue a draft action of an administrative Permit to Install (PTI) modification to BP-Husky Refining LLC (BPH) located in Lucas County, Ohio. The draft action (PTI number P0111328) was issued on November 8, 2012.

The purpose of this administrative PTI modification is to establish federally enforceable voluntary reduced SO<sub>2</sub> emission limits on the several process heaters and other emission units at the refinery. BPH requests the reduced SO<sub>2</sub> emission limits in association with Toledo Feed Optimization (TFO) project to assure that the TFO project will not result in a significant net emissions increase at any point in time, and to make those reductions enforceable at and after the time at which construction commences on the BGOT Recycle Gas Compressor project.

It should be noted that this PTI does not result in any increase in air emissions.

A public hearing on the draft air permit is scheduled at 6:30 p.m., December 12, 2012, at the Lake Erie Center, 6200 Bayshore Road, Oregon, OH 43616. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard.

All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments must be received by Ohio EPA/Toledo Division of Environmental Services by the close of business on December 17, 2012. Comments received after December 17, 2012 may not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to Peter Park, Toledo Division of Environmental Services, 348 South Erie Street, Toledo, Ohio, 43602. Fax number: (419) 936-3959.

Further information concerning this application, which is available for public inspection, may be secured from Peter Park, Toledo Division of Environmental Services at the above address during normal business hours. Telephone number: (419) 936-3936





**DRAFT**

**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
BP-Husky Refining LLC

Facility ID:	0448020007
Permit Number:	P0111328
Permit Type:	Administrative Modification
Issued:	11/8/2012
Effective:	To be entered upon final issuance





**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
BP-Husky Refining LLC

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**Draft Permit-to-Install**  
BP-Husky Refining LLC  
**Permit Number:** P0111328  
**Facility ID:** 0448020007

**Effective Date:** To be entered upon final issuance

## Authorization

Facility ID: 0448020007  
Facility Description: Toledo Refinery  
Application Number(s): M0001922  
Permit Number: P0111328  
Permit Description: This administrative PTI modification is to establish federally enforceable voluntary reduced SO2 emission limits on the several process heaters and other emission units at the refinery.  
Permit Type: Administrative Modification  
Permit Fee: \$0.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 11/8/2012  
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

BP-Husky Refining LLC  
4001 Cedar Point Road  
P.O. Box 696  
Oregon, OH 43697

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services  
348 South Erie Street  
Toledo, OH 43604  
(419)936-3015

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



**Draft Permit-to-Install**  
BP-Husky Refining LLC  
**Permit Number:** P0111328  
**Facility ID:** 0448020007

**Effective Date:** To be entered upon final issuance

## Authorization (continued)

Permit Number: P0111328

Permit Description: This administrative PTI modification is to establish federally enforceable voluntary reduced SO<sub>2</sub> emission limits on the several process heaters and other emission units at the refinery.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

<b>Emissions Unit ID:</b>	<b>B019</b>
Company Equipment ID:	Crude/Vac 2 Furnace
Superseded Permit Number:	P0107122
General Permit Category and Type:	Not Applicable



**Draft Permit-to-Install**  
BP-Husky Refining LLC  
**Permit Number:** P0111328  
**Facility ID:** 0448020007  
**Effective Date:** To be entered upon final issuance

## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

## **2. Severability Clause**

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Toledo Department of Environmental Services.



- (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Toledo Department of Environmental Services. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.
  - (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Toledo Department of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## **5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Toledo Department of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## **6. Compliance Requirements**

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## **8. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

## **9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Toledo Department of Environmental Services.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission



limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Toledo Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

## **10. Applicability**

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

## **11. Construction of New Sources(s) and Authorization to Install**

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently



removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## **12. Permit-To-Operate Application**

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

## **13. Construction Compliance Certification**

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## **14. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.



**15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

**16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.



**Draft Permit-to-Install**  
BP-Husky Refining LLC  
**Permit Number:** P0111328  
**Facility ID:** 0448020007  
**Effective Date:** To be entered upon final issuance

## **B. Facility-Wide Terms and Conditions**



Effective Date: To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.
2. The following terms and conditions are federally enforceable.
  - a) Applicable Emissions Limitations and/ or Control Requirements
    - (1) Interim SO<sub>2</sub> limit for B036, Reformer 3 heater

Beginning on the effective date of this permit, and continuing until the earlier of (a) the initial startup of replacements for the Crude 1 and Vacuum 1 Heaters (B015 and B031) or (b) December 31, 2015, the sulfur dioxide (SO<sub>2</sub>) emissions from the Reformer 3 heater (B036) shall not exceed 30 tons SO<sub>2</sub> per year as a rolling, 12-month summation of the monthly emissions. Thereafter, except as provided in paragraphs a)(2) and a)(3) below, the SO<sub>2</sub> emissions shall not exceed the level established in Permit to Install P0203694 issued on August 7, 2009.

- (2) Interim Multi-Unit SO<sub>2</sub> Emission Limit

Beginning on the date of initial startup of replacements for the Crude 1 and Vacuum 1 heaters (B015 and B031) and continuing until the later of (a) fifteen (15) months thereafter, or (b) the completion of construction and initial shakedown of the modifications to the Coker Gas Plant expected to be constructed as part of the upcoming Toledo Feedstock Optimization Project, the total combined SO<sub>2</sub> emissions from the units listed below shall not exceed 207.5 tons SO<sub>2</sub> per year as a rolling, 12-month summation of the monthly emissions.

B030	BGOT Heater
B033	East BGOT Heater
B015	Existing Crude 1 Heater
B031	Existing Vacuum 1 Heater
TBD	Replacement For Crude 1 Heater
TBD	Replacement Vacuum 1 Heater
B019	Crude Vacuum 2 Heaters
B017	Coker 2 Heater
B032	Coker 3 Heater
B022	Naphtha Hydrotreater Heater
B029	ADHT Heater
B034/B035	Alstom Boilers (Incremental Firing)
B036	Reformer 3 Heater
P009	SRU 1
P037	SRU 2&3

- (3) Beginning the later of (a) fifteen (15) months after initial startup of the replacements for the Crude 1 and Vacuum 1 Heaters (B015 and B031), or (b) the completion of construction and initial shakedown of the modifications to the Coker Gas Plant expected to be constructed as part of the upcoming Toledo Feedstock Optimization Project, SO<sub>2</sub> emissions from the following heaters shall not exceed the limits included in Table 1.



Table 1 – Individual SO<sub>2</sub> Emissions Limits

Heater	Tons SO <sub>2</sub> Per Rolling 12-month Period
B017 Coker 2 Heater	3.64
B019, Crude Vacuum 2 Heater	12.15
B022, Naphtha Hydrotreater Heater	3.64
B032, Coker 3 Heater	11.64
B036, Reformer 3 Heater	22.8

- (4) For purposes of clarity, the first month used in a 12-month rolling average compliance period is the calendar month in which the emission limitation becomes effective, and the first complete 12-month rolling average compliance period is 12 calendar months later (e.g., for a limit effective on January 15, the first month in the period is January and the first complete 12-month period ends on the 31st of the following December).
- b) Operational Restrictions
- (1) The Crude 1 (B015) and Vacuum 1 (B031) heaters shall be permanently shut down 180 days after the initial startup of replacement units for those heaters.
- c) Monitoring and/or Recordkeeping Requirements
- (1) By no later than the date of initial startup of replacements for the Crude 1 and Vacuum 1 Heaters (B015 and B031), the Permittee shall install, calibrate, operate, and maintain instrumentation to monitor and record the concentration by volume (dry basis) of total sulfur at a location or locations that accurately represent(s) the total sulfur concentration in the refinery fuel gas burned in each of the heaters and boilers listed in a)(2) (except for the Reformer 3 Heater (B036)). Data from the continuous total sulfur analyzer(s) shall be used to demonstrate and report compliance with the SO<sub>2</sub> emissions limitations in a)(1), a)(2), and a)(3).
- (2) The permittee shall install, operate and maintain equipment to continuously monitor and record total sulfur from this emissions unit in units of the applicable standards. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Appendix B, Performance Specification 5, and operated in accordance with 40 CFR 60.13.
- Each continuous monitoring system consists of all the equipment used to acquire data and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.



The permittee shall maintain documentation from Ohio EPA that the continuous total sulfur monitoring system has been certified in accordance with test methods contained in 40 CFR Part 60, Appendix B, or other test methods as approved by Ohio EPA, Central Office. The letter of certification shall be made available to the Ohio EPA upon request.

The permittee shall maintain records of all data obtained by the continuous total sulfur monitoring system including, emissions of total sulfur in units of the applicable standards in the appropriate averaging period, results of daily zero/span calibration checks, and magnitudes of manual calibration adjustments.

- (3) Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of total sulfur in the fuel gas being burned.
- (4) The Permittee shall record and maintain records of (i) the daily average total sulfur concentration in the fuel gas burned in each of the heaters and boilers listed in a)(2), (ii) the daily total SO<sub>2</sub> emissions from each such heater, listed in a)(2), calculated in accordance with e)(1)b., and (iii) the total combined SO<sub>2</sub> emissions for all heaters and boilers listed in a)(2) for the calendar month and for the rolling, 12-month period.
- (5) For purposes of calculating daily SO<sub>2</sub> emissions, the permittee shall monitor and record the following for each heater and boiler listed in a)(2):
  - a. The volume of fuel burned in standard cubic feet per day; and
  - b. The daily average total sulfur in fuel gas.

d) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

all exceedances of the rolling, 12-month emission limitations for SO<sub>2</sub> specified in a) and, for the first 12 calendar months following the effective date of the emissions limitations specified in a), all exceedances of the maximum allowable cumulative emission levels in specified in a);

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

e) Testing Requirements

- (1) Compliance with the emission limitation(s) in a)(1), a)(2), and a)(3) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitation

Reformer 3 Heater (B036) emissions shall not exceed 30 tons SO<sub>2</sub> per year as a rolling 12-month summation of the monthly emissions during the period specified in a)(1).

Applicable Compliance Method:

Calculate the daily Reformer 3 Heater SO<sub>2</sub> emissions (lbs SO<sub>2</sub>/day) by multiplying the daily fuel used (mmscf) by the daily average concentration of the fuel total sulfur (ppmv) in scf sulfur / mmscf fuel, multiplying by the molecular weight of SO<sub>2</sub> (64 lbs/lbmole) and dividing by the conversion of 379 (scf/lbmole) which is based on standard conditions at 60° F and 14.7 psia.

Where:

Fuel total sulfur = Concentration of the H<sub>2</sub>S measured in the fuel fired plus a 35 ppmv allowance for non-H<sub>2</sub>S sulfur based on past testing at the BP-Husky refinery, or more recent test value if future testing is performed.

b. Emission Limitation

Reformer 3 Heater (B036) shall not exceed 22.8 tons SO<sub>2</sub> per year as a rolling 12-month summation of the monthly emissions during the period specified in a)(3).

Applicable Compliance Method:

Calculate the daily Reformer 3 Heater SO<sub>2</sub> emissions (lbs SO<sub>2</sub>/day) by multiplying the daily fuel used (mmscf) by the daily average concentration of the fuel total sulfur (ppmv) in scf sulfur/mmscf fuel, multiplying by the molecular weight of SO<sub>2</sub> (64 lbs/lbmole) and dividing by the conversion of 379 (scf/lbmole) which is based on standard conditions at 60° F and 14.7 psia.

Where:

Fuel total sulfur = concentration of the H<sub>2</sub>S measured in the fuel fired plus a 35 ppmv allowance for non-H<sub>2</sub>S sulfur based on past testing at the BP-Husky refinery, or a more recent test value if future testing is performed.

c. Emission Limitation

The total combined SO<sub>2</sub> emissions from the emissions units listed in a)(2) shall not exceed 207.5 tons SO<sub>2</sub> per year as a rolling, 12-month summation of the monthly emissions during the period specified in a)(2).

Applicable Compliance Method:

i. Alstom Boiler (B034 & B035) incremental emissions of SO<sub>2</sub> shall be calculated by multiplying the Alstom boiler incremental firing rate (MMBtu/hr) by the number of hours of operation, dividing by the fuel



heating value (btu/scf) multiplying by the daily average total sulfur in the fuel (ppmv) as recorded by the total sulfur continuous emissions monitoring system, dividing by the constant 379 (scf/lbmole), and multiplying by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.

The total Alstom Boiler incremental firing rate shall be equal to 31 MMBtu/hr until the initial start-up of the proposed new Coker Gas Plant and equal to 93 MMBtu/hr thereafter.

- ii. Calculate the Reformer 3 Heater (B036) SO<sub>2</sub> emissions by multiplying the daily average fuel used (mmscf) by the daily average concentration of the fuel total sulfur (ppmv) in (scf sulfur / mmscf fuel), multiplying by the molecular weight of SO<sub>2</sub> (64 lbs/lbmole) and dividing by the conversion of 379 (scf/lbmole) which is based on standard conditions at 60° F and 14.7 psia.

Where:

Fuel total sulfur = actual concentration of the H<sub>2</sub>S in the fuel fired as measured by the H<sub>2</sub>S continuous emissions monitoring system (CEMS) plus a 35 ppmv allowance for non-H<sub>2</sub>S sulfur from past testing or more recent test value if future testing is performed.

35 ppmv non-H<sub>2</sub>S sulfur is based on past testing at the BP-Husky refinery

- iii. For other Heaters listed in a)(2), SO<sub>2</sub> emissions shall be calculated by multiplying the daily average fuel use (mmscf) by the daily average concentration of the total sulfur in the fuel fired (scf sulfur/ mmscf fuel) as recorded by the total sulfur continuous emissions monitoring system divided by the constant 379 (scf/lbmole) and multiplied by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.
  - iv. SO<sub>2</sub> emissions from SRU1, 2, and 3 (P009 and P037) of a)(2) shall be calculated by using the monthly average SO<sub>2</sub> concentration from the CEMS and the calculated monthly total gas flow to determine the monthly total SO<sub>2</sub> emissions.
- d. Coker 2 heater (B017) shall not exceed 3.64 tons SO<sub>2</sub> per year as a rolling, 12-month summation of the monthly emissions beginning on the date specified in a.(3).

Applicable Compliance Method:

SO<sub>2</sub> emissions shall be calculated by multiplying the daily average fuel use (mmscf) by the daily average concentration of the total sulfur in the fuel fired (scf sulfur/ mmscf fuel) as recorded by the total sulfur continuous emissions monitoring system divided by the constant 379 (scf/lbmole) and multiplied by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.



e. Emission Limitation

Naphtha Treater Heater (B022) emissions shall not exceed 3.64 tons per year as a SO<sub>2</sub> per rolling, 12-month summation of the monthly emissions beginning on the date specified in a.(3).

Applicable Compliance Method:

SO<sub>2</sub> emissions shall be calculated by multiplying the daily average fuel use (mmscf) by the daily average concentration of the total sulfur in the fuel fired (scf sulfur/ mmscf fuel) as recorded by the total sulfur continuous emissions monitoring system divided by the constant 379 (scf/lbmole) and multiplied by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.

f. Emission Limitation

Crude Vac 2 (B019) emissions shall not exceed 12.15 tons per year SO<sub>2</sub> as a rolling 12-month summation of the monthly emissions beginning on the date specified in a.(3).

Applicable Compliance Method:

SO<sub>2</sub> emissions shall be calculated by multiplying the daily average fuel use (mmscf) by the daily average concentration of the total sulfur in the fuel fired (scf sulfur/ mmscf fuel) as recorded by the total sulfur continuous emissions monitoring system divided by the constant 379 (scf/lbmole) and multiplied by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.

g. Emission Limitation

Coker 3 Heater (B032) shall not exceed 11.64 tons SO<sub>2</sub> per rolling, 12-months period, beginning on the date specified in a.(3).

Applicable Compliance Method:

SO<sub>2</sub> emissions shall be calculated by multiplying the daily average fuel use (mmscf) by the daily average concentration of the total sulfur in the fuel fired (scf sulfur/ mmscf fuel) as recorded by the total sulfur continuous emissions monitoring system divided by the constant 379 (scf/lbmole) and multiplied by the molecular weight of SO<sub>2</sub> 64 lbs/lbmole.

3. The following emissions unit contained in section C. of this permit is subject to 40 CFR Part 60 Subpart J: B019. The complete NSPS requirements, including the NSPS General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the appropriate Ohio EPA district or local air agency.



**Draft Permit-to-Install**  
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## **C. Emissions Unit Terms and Conditions**



**1. B019, Crude/Vac 2 Furnace**

**Operations, Property and/or Equipment Description:**

Crude Vac 2 Furnace 240 MMBtu per hr

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	262.8 tons per year NO <sub>x</sub> based on a rolling, 12-month summation of the monthly emissions;  21.02 tons per year SO <sub>2</sub> based on a rolling, 12-month summation of the monthly emissions  See b)(2)a. and b)(2)c  Also see B.2.a), c), d), & e)
b.	OAC rule 3745-17-07(A)	Visible particulate emissions shall not exceed 20% opacity as a six-minute average, unless otherwise specified by the rule
c.	OAC rule 3745-17-10(B)(1)	0.020 pound of particulate emissions per million Btu of heat input
d.	OAC rule 3745-18-54(W)(1)	See b)(2)d.
e.	40 CFR Part 60, Subpart J (40 CFR 60.100-109)  [In accordance with 40 CFR 60.104(a)(1) this emissions unit is a fuel gas combustion device and	See b)(2)b.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	subject to the emissions limitations/control measures specified in this section]	
f.	40 CFR 60.1-19	See b)(2)e.
g.	40 CFR Part 63, Subpart DDDDD	See b)(2)h.

(2) Additional Terms and Conditions

- a. This permit to install incorporates the emission limits and schedules set out in paragraphs 14-18 and 21 of the Consent Decree (United States of America, et al., v. BP Exploration & Oil Co., et al., Civil Action No. 2:96CV095 RL).
- b. The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling 3-hour average H<sub>2</sub>S concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that BP shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Until September 30, 2003, the Vacuum 2 Unit vent gas currently burned in this emissions unit is excluded from this requirement.
- c. By no later than September 30, 2003, this emissions unit shall be considered an affected facility for purposes of 40 CFR Part 60, Subpart J, and shall comply with all requirements of 40 CFR 60, Subparts A and J as those subparts apply to fuel gas combustion devices.
- d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
- e. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are pertinent to emissions units affected by 40 CFR Part 60.
- f. The permittee shall maintain a written quality assurance/quality control plan for the continuous hydrogen sulfide monitoring system, designed to ensure continuous valid and representative readings of hydrogen sulfide emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.



The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

- g. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.
- h. On May 16, 2011, U.S. EPA decided to Stay the Boiler MACT (40 CFR Part 63, Subpart DDDDD). This delay of effectiveness will remain in place until the proceedings for judicial review are completed or U.S. EPA completes its reconsideration of the rules, whichever is earlier, and the Agency publishes a notice in the Federal Register announcing that the rules are in effect. Upon being effective, this emissions unit will be subject to 40 CFR Part 63, Subpart DDDDD.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

c) Operational Restrictions

- (1) The permittee shall only burn natural gas, LP gas and/or refinery fuel gas in this emissions unit.
- (2) The quality of the natural gas, LP gas and/or refinery fuel gas burned in this emissions unit shall meet, on an "as burned" basis, a sulfur content that is sufficient to comply with the allowable hydrogen sulfide emission limitation of 0.10 grain per dry standard cubic foot as a volume-weighted, rolling 3-hour average.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than refinery fuel gas, LP gas, or natural gas, the permittee shall maintain a record of the type, quantity, and heating value in Btu/dscf of the fuel burned.
- (2) The permittee shall monitor and record the hourly, daily and monthly average firing rate in terms of standard cubic feet per hour. From this data, the permittee shall calculate and maintain records of the monthly and rolling, 12-month total SO<sub>2</sub> and NO<sub>x</sub> emission rates in units of tons per month and tons per year in accordance with the procedure outlined in f).
- (3) The permittee shall calibrate, maintain and operate a continuous monitoring system for measurement of the H<sub>2</sub>S content in the fuel gas before being burned in this fuel gas combustion device.



- a. The H<sub>2</sub>S monitoring device shall continuously monitor and record the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in any fuel gas combustion device.
  - b. The span value for this instrument is 425 mg/dscm H<sub>2</sub>S.
  - c. Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H<sub>2</sub>S in the fuel gas being burned.
  - d. The performance evaluations for this H<sub>2</sub>S monitor shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.
- (4) The permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous hydrogen sulfide monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 7. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

- (5) The permittee shall operate and maintain equipment to continuously monitor and record hydrogen sulfide emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous hydrogen sulfide monitoring system including, but not limited to:

- a. emissions of hydrogen sulfide in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
- b. emissions of hydrogen sulfide, in all units of the applicable standard(s) and in the appropriate averaging period;
- c. results of quarterly cylinder gas audits;
- d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
- e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);



- f. hours of operation of the emissions unit, continuous hydrogen sulfide monitoring system, and control equipment;
- g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous hydrogen sulfide monitoring system;
- h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous hydrogen sulfide monitoring system; as well as,
- i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).
- j. All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

The permittee shall maintain records of the monthly average net H<sub>2</sub>S of the fuel burned in this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each month when the NO<sub>x</sub> emissions exceed 262.8 tons/yr based on a rolling, 12-month summation of the monthly emissions. The permittee shall submit deviation (excursion) reports that identify each month when the SO<sub>2</sub> emissions exceed 21.02 tons/yr based on a rolling, 12-month summation of the monthly emissions.
- (2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than refinery fuel gas, LP gas, and/or natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (3) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous hydrogen sulfide monitoring system:
  - a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of hydrogen sulfide emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).



- b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
- i. the facility name and address;
  - ii. the manufacturer and model number of the continuous hydrogen sulfide and other associated monitors;
  - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
  - iv. the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
  - v. the total hydrogen sulfide emissions for the calendar quarter (tons);
  - vi. the total operating time (hours) of the emissions unit;
  - vii. the total operating time of the continuous hydrogen sulfide monitoring system while the emissions unit was in operation;
  - viii. results and dates of quarterly cylinder gas audits;
  - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
  - x. unless previously submitted, the results of any relative accuracy test audit showing the continuous hydrogen sulfide monitor out-of-control and the compliant results following any corrective actions;
  - xi. the date, time, and duration of any/each malfunction\*\* of the continuous hydrogen sulfide monitoring system, emissions unit, and/or control equipment;
  - xii. the date, time, and duration of any downtime\*\* of the continuous hydrogen sulfide monitoring system and/or control equipment while the emissions unit was in operation; and
  - xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report



\*\* each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

[40 CFR 60.7]

- (4) Unless otherwise specified above, the reports required to be submitted under e). shall be submitted in accordance with the Standard Terms and Conditions of Section A.

Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

- (1) Compliance with the emissions limitation(s) in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

0.020 pound of particulate emissions per million Btu of heat input

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance using the methods and procedures specified in OAC rule 3745-17-03(B)(9).

c. Emission Limitation:

0.10 grain H<sub>2</sub>S per dry standard cubic foot of fuel gas burned as a volume-weighted, rolling 3-hour average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements of d). If required, compliance shall also be demonstrated based upon the methods and procedures of 40 CFR 60.106(e)(1).

d. Emission Limitation:

262.8 tons per year NO<sub>x</sub> based on a rolling, 12-month summation of the monthly emissions



Applicable Compliance Method:

If required, the permittee shall establish a new NO<sub>x</sub> emission factor in units of pounds NO<sub>x</sub> per million Btu of heat input using Methods 3A, 7E and 19 of 40 CFR Part 60. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA. Multiply the stack test derived emission factor (lb/mmBtu) by the monthly average hourly fuel gas burned (mmscf/month), multiplied by the monthly average heating value of fuel burned (mmBtu/mmscf) to determine the monthly total NO<sub>x</sub> emissions. Add the monthly total NO<sub>x</sub> emissions to the total NO<sub>x</sub> emissions for the previous 11 months to determine the rolling 12-month total NO<sub>x</sub> emissions.

e. Emission Limitation:

21.02 tons per year SO<sub>2</sub> based on a rolling, 12-month summation of the monthly emissions

Applicable Compliance Method:

Multiply the monthly average net H<sub>2</sub>S concentration by the monthly total gas flow to determine the lbs H<sub>2</sub>S per month. Convert H<sub>2</sub>S to SO<sub>2</sub> at a rate of 34 pounds H<sub>2</sub>S to 64 pounds SO<sub>2</sub> emissions. Add the monthly total to the total for the previous 11 calendar months to determine the rolling 12-month total SO<sub>2</sub> emissions.

- (2) Ongoing compliance with the hydrogen sulfide emission limitation(s) contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the requirements of 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

g) Miscellaneous Requirements

- (1) Excessive Audit Inaccuracy. If the RA, using the RATA, CGA, or RAA exceeds the criteria in section 5.2.3 of 40 CFR Part 60, Appendix F Procedure 1, the CEMS is out-of-control. If the CEMS is out-of-control, take necessary corrective action to eliminate the problem. Following corrective action, the source permittee must audit the CEMS with a RATA, CGA, or RAA to determine if the CEMS is operating within the specifications. A RATA must always be used following an out-of-control period resulting from a RATA. The audit following corrective action does not require analysis of USEPA performance audit samples. If audit results show the CEMS to be out-of-control, the CEMS operator shall report both the audit showing the CEMS to be out-of-control and the results of the audit following corrective action showing the CEMS to be operating within specifications.