

Exhibit 8

## Changes in ConocoPhillips Wood River Refinery CORE Permit from draft to Final Issued 7/19/07– Flare Section

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*(Permit changes (redlining) were not available to the public from IEPA – This document was produced by comparing the draft permit line by line with the final permit, then cutting and pasting new sections and crossing out removed sections by hand. New sections are shown with underline, removed sections are crossed out. Some sections where provisions remained the same were nevertheless re-numbered in the final. This made it rather difficult to identify the same provision, and to identify changes between the two permit versions. I did not compare every single word of the two documents, but compared on a paragraph by paragraph basis to identify changes, still a painstaking and time-consuming process. Changes begin with Section 4.7.5. I only performed this analysis for a portion of the permit – the Flares section.)*

### 4.7 Flares

#### 4.7.1 Description

Flares dispose of releases of flammable process gas that can not be recovered, as can occur from various units, by combustion. These releases can occur from safety relief valves, test instruments and monitors, waste process gas and blowdown, and gases collected via vents and drains during depressurization of vessels or equipment in preparation for turnaround and maintenance. Many releases are of sufficient quantity that most of it may be compressed and recovered and then used in heaters and boilers after being processed with amine absorbers to remove H<sub>2</sub>S. The excess that cannot be recovered is sent to a flare. The releases are generally hydrocarbons but may be hydrogen or any combination of hydrogen, hydrocarbon, sulfur compounds and inert gases. The flares burn the gases to form carbon dioxide, sulfur dioxide, and water. Only recovered gases are treated through the amine absorbers. If the compressor capacity is exceeded then these gases go directly to a flare and those gases are likely to contain H<sub>2</sub>S.

Releases to flare systems are managed to prevent product loss. Some processes require a minor amount of venting during normal operation to safely dispose of non-condensable gases, such as nitrogen, that are present as dictated by the nature of the process.

The new coker flare is equipped with a system for using steam (i.e., steam-assisted) to assure more complete combustion.

As these flares combust process gases, they must be operated in compliance with applicable federal emissions standards for flaring.

#### 4.7.2 List of Emission Units and Air Pollution Control Equipment

| Emission Unit | Description                     |
|---------------|---------------------------------|
| DCUF          | New Coker Flare, Steam-Assisted |
| HP2F          | New HP-2 Flare, Nonassisted     |

#### 4.7.3 Applicable Provisions and Regulations

- a. An “affected unit” for the purpose of these unit-specific conditions is a flare described in Conditions 4.7.1 and 4.7.2.
- b. The affected units are subject to New Source Performance Standards (NSPS) for Petroleum Refineries, 40 CFR Part 60, Subpart J. The affected units are considered a fuel gas combustion device pursuant to this NSPS.
  - i. Pursuant to 40 CFR 60.104(a)(1), the Permittee shall not burn in the affected unit, any fuel gas that contains hydrogen sulfide (H<sub>2</sub>S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this requirement.
- c. The affected units are subject to General Control Device Requirements specified at 40 CFR 60.18, which provides:
  - i. Flares shall be designed for and operated with no visible emissions as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours [40 CFR 60.18(c)(1)].
  - ii. Flares shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f) [40 CFR 60.18(c)(2)].
  - iii. The Permittee has the choice of adhering to either the heat content specifications in 40 CFR 60.18(c)(3)(ii) and the maximum tip velocity specifications in 40 CFR

60.18(c)(4), or adhering to the requirements in 40 CFR 60.18(c)(3)(i) [40 CFR 60.18(c)(3)].

- iv. A. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii) [40 CFR 60.18(c)(4)(i)].
- B. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf) [40 CFR 60.18(c)(4)(ii)].
- C. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed [40 CFR 60.18(c)(4)(iii)].
- v. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(6) [40 CFR 60.18(c)(5)].
- vi. Flares used to comply with this 40 CFR 60.18 shall be steam-assisted, air-assisted, or nonassisted [40 CFR 60.18(c)(6)].
- vii. Owners or operators of flares used to comply with the provisions of 40 CFR 60.18 shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices [40 CFR 60.18(d)].

- viii. Flares used to comply with provisions of 40 CFR 60.18 shall be operated at all times when emissions may be vented to them [40 CFR 60.18(e)].

*Note: The affected units control VOM emissions from various emission units which are subject to certain regulations, which reference the general control device requirements in the NSPS at 40 CFR 60.18. In addition, both new and existing flares at the refinery become affected facilities under NSPS pursuant to Paragraph 11 of the Consent Decree.*

- d. The affected units are subject to 35 IAC 214.301, which provides that no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any affected flare to exceed 2,000 ppm.

#### 4.7.4 Non-Applicability of Regulations of Concern

Non-applicability of regulations of concern are not set for the affected units.

#### 4.7.5 Control Requirements and Work Practices

##### a. BACT/LAER Technology

- i. The affected units shall be operated with equipment design specifications and work practices consistent with the NSPS requirements for flares in 40 CFR 60.18.
- ii. Gaseous fuels meeting the requirements of 40 CFR 60.104(a)(1) and process upset gases (as defined in 40 CFR 60.101(e)) shall be the only gases combusted in the affected units.
- iii. The Delayed Coking Unit shall be designed, operated and maintained with a waste gas recovery system with redundant compressor capacity, i.e., a system with two or more waste gas recovery compressors whose capacity is sufficient to handle the normal range of waste gas generated from operation of the Delayed Coking Unit (including startup and shutdown), even when one compressor is not in service, as may occur with routine preventative maintenance of compressors.

- iv. Except during malfunction, as defined by 40 CFR 63.2, depressurization of process vessels in the Delayed Coking Unit shall be conducted with waste gases recovered for use in the fuel gas system until the pressure in the vessel is no more than 5.0 lb per square inch gauge, before any waste gases are sent to be combusted in an affected unit.

Note: Turnarounds of the delayed Coker Unit are subject to the requirements of 35 IAC 219.444.

- v. Flaring associated with the Delayed Coker Unit and Hydrogen Plant shall be minimized by operating and maintaining the affected units, including the associated waste gas recovery system for the Delayed Coker Unit, in accordance with a Flaring Minimization Plan (Plan) in accordance with Condition 4.7.6-2, which Plan may be consolidated with other plans required for the Delayed Coker Unit and affected units, such as the turnaround plan required by 35 IAC 219.444(b).
- vi. The Permittee shall conduct an event-specific investigation into each hydrocarbon flaring incident or the Delayed Coker Unit or Hydrogen Plant, which investigation shall include a root-cause analysis for the incident unless the Permittee relies upon a previous analysis for an incident, with a report for the incident and investigation submitted to the Illinois EPA in accordance with Condition 4.7.10(d). For this purpose, a hydrocarbon flaring incident is the flaring of waste gas that involves flaring of 100,000 scf or more of waste gas or results in VOM emissions of 50 or more pounds in a period of 24 hours or less.

Condition 4.7.5(a) represents the application of the Best Available Control Technology and the application of the Lowest Achievable Emission Rate.

- b. The Permittee shall not vent any gas stream containing reduced sulfur compound concentrations to an affected unit that would cause the sulfur dioxide emissions into the atmosphere from any affected unit to exceed 2,000 ppm, except as allowed by Condition 4.7.5(b)(i). This limit ensures that the affected units meet the emission limits 35 IAC 214.301.

i. Subject to the following terms and conditions, the Permittee is authorized pursuant to 35 IAC 201.149 to vent gases containing reduced sulfur compound concentrations to DCUF (Coker Flare) that would cause the sulfur dioxide emissions into the atmosphere from this flare to exceed the limitations stated in 35 IAC 214.301 during malfunctions of equipment venting to DCUF as necessary to prevent severe damage to equipment and hazard to employees, subject to the recordkeeping and reporting requirements of Conditions 4.7.9(g) and 4.7.10(c), pursuant to 35 IAC 201.149-;

A. This authorization only allows such continued operation as necessary to prevent hazard to persons or severe damage to equipment or to provide essential services and does not extend to continued operation solely for the economic benefit of the Permittee.

B. Upon occurrence of excess emissions due to malfunction or breakdown, the Permittee shall as soon as practicable reduce equipment load, repair equipment, remove equipment from service or undertake other action so that excess emissions cease.

C. The Permittee shall fulfill applicable recordkeeping and reporting requirements of Conditions 4.7.9(f) and 4.7.10(c), pursuant to 35 IAC 201.149.

D. Following notification to the Illinois EPA of a malfunction or breakdown with excess emissions, the Permittee shall comply with all reasonable directives of the Illinois EPA with respect to such incident, pursuant to 35 IAC 201.263.

E. This authorization does not relieve the Permittee from the continuing obligation to minimize excess emissions during malfunction or breakdown. As provided by 35 IAC 201.265, an authorization in a permit for continued operation with excess emissions during malfunction and breakdown does not shield the Permittee from enforcement for any such violation and only constitutes a prima facie defense to such an enforcement action provided that

the Permittee has fully complied with all terms and conditions connected with such authorization.

4.7.6-1 Production and Emission Limitations

- a. Emissions from the affected units shall not exceed the following limits. Compliance with the annual limits shall be determined from a running total of 12 months of data:

| Emission Unit | Emissions (Tons/Year) |                 |                 |      |                     |
|---------------|-----------------------|-----------------|-----------------|------|---------------------|
|               | CO                    | NO <sub>x</sub> | SO <sub>2</sub> | VOM  | PM/PM <sub>10</sub> |
| DCUF          | 24.3                  | 4.5             | 644.5           | 4.1  | ---                 |
| HP2*          | 147.9                 | 246.8           | 127.2           | 24.8 | 45.6                |

\* Note: HP2 includes HP2 H-1, CWT 24, HP2F, and HP2 Fugitives.

4.7.6-2 Flaring Minimization Plan

- a. The Flaring Minimization Plan (Plan) prepared by the Permittee for the Delayed Coker Unit and Hydrogen Plant shall include the following:
- i. A general description of the Delayed Coker Unit, including the associated waste gas recovery system and affected units, accompanied by process flow diagram(s).
  - ii. A description of the Permittee's written operating procedures for the normal operation of the Delayed Coker Unit, including recovery of waste gas for use as fuel during startup and shutdown.
  - iii. A detailed description of the established responsibilities of different personnel at the refinery for the operation and maintenance of the Delayed Coker Unit.
  - iv. A detailed description of the Permittee's procedures for flaring due to occurrence of process upsets or



equipment failures, including provisions in these procedures that act to minimize flaring.

- v. A detailed description of the Permittee's procedures to minimize flaring in conjunction with major maintenance and turnarounds of the Delayed Coker Unit, including the planning conducted as part of such work to minimize flaring.
- vi. A detailed description of the Permittee's procedures for the fuel gas systems to facilitate acceptance of waste gas and to maintain or restore recovery of waste gas during flaring events.
- vii. A detailed description of the Permittee's procedures for preventative maintenance of the Delayed Coker Unit, including provisions in these procedures that should act to minimize flaring.
- viii. A detailed description of the Permittee's procedures for periodic evaluation of flaring activity generally and specific evaluation of flaring incidents, including both identification of the causes of flaring, assessment of measures to eliminate or reduce such flaring, and implementation of feasible measures to reduce flaring.

- b.
  - i. The Permittee shall submit a copy of the Plan to the Illinois EPA for review and comments at least 60 days prior to initial startup of the delayed Coker Unit.
  - ii. The Permittee shall review the Plan on at least an annual basis and revise the plan so that it is kept current.
  - iii. The Permittee shall make changes to the Plan upon request by the Illinois EPA for an emission unit if required by the Illinois EPA or USEPA, as provided for by 40 CFR 63.6(e)(3)(vii), or as otherwise required by 40 CFR 63.6(e)(viii) [40 CFR 63.6(e)(3)(vii) and (viii)].
  - iv. These Plans are records required by this permit, which the Permittee must retain in accordance with

the general requirements for retention and availability of records. In addition, when the Permittee revises the Plan, the Permittee must also retain and make available the previous (i.e., superseded) version of the Plan for a period of at least 5 years after such revision.

#### 4.7.7 Testing Requirements

- a. i. Upon request by the Illinois EPA, the Permittee shall conduct testing of an affected unit under such conditions as may be specified by the Illinois EPA and/or USEPA. This test shall meet the following requirements:

A. i. The test shall be conducted by an approved independent testing service.

B. ii.—The test shall be conducted during conditions which are representative of maximum emissions during normal operation.

ii. The following methods shall be used for testing:

b. i. A. USEPA Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of Condition 4.7.3(c)(i) (40 CFR 60.18). The observation period is 2 hours and shall be used according to Method 22 [40 CFR 60.18(f)(1)].

ii. B. The net heating value of the gas being combusted in a flare shall be calculated using the equation in 40 CFR 60.18(f)(3).

iii. C. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by USEPA Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip [40 CFR 60.18(f)(4)].

iv. D. The maximum permitted velocity,  $V_{max}$ , for flares complying with 40 CFR 60.18(c)(4)(iii) shall be determined by the equation in 40 CFR 60.18(f)(5).

v. E. The maximum permitted velocity,  $V_{max}$ , for airassisted

flares shall be determined by the equation in 40 CFR 60.18(f)(6).

- b.
  - i. Upon request by the Illinois EPA, the Permittee shall conduct sampling of process streams in the Delayed Coker Unit to obtain representative samples of the waste gases that would be sent to the flare for the Unit if waste gases were to be flared.
  - ii. The Permittee shall have these samples analyzed for hydrocarbon and sulfur content using appropriate ASTM Test methods or standard analysis methods.
- c. The Permittee shall maintain records of the reports for these tests, which shall include the following, for at least five years from the date that a more recent test is performed:
  - i. The date, place and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions of the unit at the time of sampling or measurement.

#### 4.7.8-1 Monitoring Requirements

- a. i. As provided by the NSPS, compliance with the H<sub>2</sub>S standard in 40 CFR 60.104(a)(1) shall be measured as follows: Method 11, 15, 15A, or 16 shall be used to determine the H<sub>2</sub>S concentration in the fuel gas. The gases entering the sampling train should be at about atmospheric pressure. If the pressure in the refinery fuel gas lines is relatively high, a flow control valve may be used to reduce the pressure. If the line pressure is high enough to operate the sampling train without a vacuum pump, the pump may be eliminated from the sampling train. The sample shall be drawn from a

point near the centroid of the fuel gas line [40 CFR 60.106(e)(1)].

b. ii. The Permittee shall comply with the monitoring requirements specified in 40 CFR 60.105 for the affected units by installing, calibrating, maintaining and operating either of the following continuous monitoring systems:

A. An instrument for continuously monitoring and recording the concentration by volume (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere from the affected units. The monitor shall include an oxygen monitor for correcting the data for excess air; or

B. An instrument for continuously monitoring and recording the concentration (dry basis) of H<sub>2</sub>S in fuel gases subject to 40 CFR 60.104(a)(1) before being burned in the affected units.

Note: The combustion of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from the H<sub>2</sub>S limitation in 40 CFR 60.104(a)(1). Continuous monitoring is not required for exempt gas streams.

iii. Notwithstanding the above, the Permittee may also comply with alternative monitoring procedures pursuant to 40 CFR 60.13(i), if after receipt and consideration of written application, the USEPA approves such procedures for the affected units.

e-b. ~~The presence of a flare pilot flame shall be monitored. The Permittee shall continuously monitor each affected unit for the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18(f)(2)]~~

c. The Permittee shall continuously monitor each affected unit associated with the Delayed Coking Unit for the occurrence of flow of waste gases, other than normal flow of purge gas and leakage from "closed" pressure relief valves, to the affected unit.

- d. The Permittee shall continuously monitor either: 1) The flow and hydrocarbon and sulfur content of waste gas to each affected unit associated with the Delayed Coking Unit; or 2) The operating parameters of the Delayed Coking Unit and affected units as needed for the flow and composition of waste gas to the affected units to be determined.
  
- e. The Permittee shall keep records of the data collected by these monitoring systems and the operation and maintenance of these monitoring systems, including:
  - i. Records of the date and duration of any time when a required monitoring instrument or device for an affected unit was not in operation, with explanation.
  
  - ii. Records to address compliance with Condition 4.7.3(b)(i) of either: 1) The concentration by volume (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere (SO<sub>2</sub> monitoring); or 2) The concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in the affected unit (H<sub>2</sub>S monitoring).
  
  - iii. Records of the date and duration of any time when there was no pilot flame present at an affected unit, with explanation.

#### 4.7.8-2 Observation Requirements

- a. Unless a continuous video image of the flare tip of an affected unit is provided to the operator(s) in the control room for an affected unit, the Permittee shall conduct observation for visible emissions from an affected unit when waste gases are flared for more than 30 minutes, as follows:
  - i. Observations shall not be required between sunset and sunrise, during other periods when valid observations of visible emissions using USEPA Method 22 are not possible, during periods when all personnel capable of conducting such observations are engaged in other essential tasks related to the event, and during periods when such observations would pose a significant safety hazard to an observer due to the unusual circumstances of the event.
  
  - ii. Observations shall be conducted using Method 22.

- iii. Observations shall begin within 45 minutes after the start of the flare event and continue on at least an hourly basis thereafter.
- iv. The duration of each period of observation shall be at least 6 minutes, after which time observation may be ended even if visible emissions are observed.
- v. The Permittee shall keep a log or other records for this activity that includes information as specified by Method 22 for each period of observations and information explaining why observations, if any, were not performed for the flaring event.

#### 4.7.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items:

- ~~a. — Date and duration of any time when the pilot flame monitoring equipment of an affected unit was not in operation, with explanation.~~
- ~~b. — Date and duration of any time when there was no pilot flame present at an affected unit, with explanation.~~
- a. A file containing an engineering analysis for the waste gas recovery system for the Delayed Coker Unit addressing compliance with Condition 4.7.5(a)(iii), including a description of the recovery system, the capacity of each compressor, and information on the generation of waste gas during the different modes of operation of the Delayed Coker Unit.
- b. A file that contains documentation for the methodology that the Permittee will follow for calculating emissions from each affected unit, including:
  - i. A description of the procedure for calculating emissions attributable to combustion of fuel for the pilot flame fuel, purge gas and waste gas.
  - ii. A description of the procedures for determining flows of different streams to the flare as related to operational

monitoring, if continuous monitoring is not conducted for a stream.

- iii. A description of the procedures for determining the composition of different streams to the flare as related to operational monitoring, if continuous monitoring is not conducted for a stream, with the composition that will be used for different streams, with supporting documentation.
- c. Records of the following items for each exceedance of a standard, requirement of limit in Condition 4.7.3, 4.7.5, or 4.7.6, which shall include:
  - i. Identification of the ~~limits~~ applicable requirement(s) that may have been exceeded.
  - ii. Duration of the possible exceedance.
  - iii. An estimate of the amount of emissions in excess of the applicable standard.
  - iv. A description of the cause of the possible exceedance.
  - v. When compliance was reestablished.
- d. Records for operation and emissions of each affected unit, including:
  - i. Operation and emissions associated with the pilot flame and purge gas streams.
  - ii. Information for each period when waste gas was flared, including, date, time, duration, reason for flaring, total volume of gas flared\*, whether any waste gas was recovered for fuel with estimated amount, hydrocarbon and sulfur content of the waste gas\*, total emissions of VOM and SO<sub>2</sub>, detailed explanation of reason for flaring, any measures taken to prevent similar events and other relevant information related to the flaring event.

\* Accompanied by supporting calculations.

- ~~d. Records of the most recent tests required in Condition 4.7.7(a), which include the following:~~

- i. ~~The date, place and time of sampling or measurements.~~
  - ii. ~~The date(s) analyses were performed.~~
  - iii. ~~The company or entity that performed the analyses.~~
  - iv. ~~The analytical techniques or methods used.~~
  - v. ~~The results of such analyses.~~
  - vi. ~~The operating conditions as existing at the time of sampling or measurement.~~
- e. Records of VOM, NO<sub>x</sub>, SO<sub>2</sub>, and CO emissions from each the affected units (tons/month and tons/year).
- f. ~~The Permittee shall maintain records of the following items to demonstrate compliance with Condition 4.7.3(b)(i):~~
- i. ~~For a SO<sub>2</sub> monitor: a record of the concentration by volume (dry basis, zero percent excess air) of SO<sub>2</sub> emissions into the atmosphere; or~~
  - ii. ~~For a H<sub>2</sub>S monitor: a record of the concentration (dry basis) of H<sub>2</sub>S in fuel gases before being burned in the affected units.~~
- g. ~~Records for Malfunctions and Breakdowns~~
- f. The Permittee shall maintain rRecords, pursuant to 35 IAC 201.263, of continued operation of equipment venting to the DCUF subject to Condition 4.7.5(b)(i) during malfunctions and breakdown, which as a minimum, shall include:
- i. Date and duration of malfunction or breakdown.
  - ii. A detailed explanation of the malfunction or breakdown.
  - iii. An explanation why the affected equipment venting to the DCUF continued to operate in accordance with Condition 4.7.5(b)(i).
  - iv. The measures used to reduce the quantity of emissions and the duration of the event.



- vi. The steps taken to prevent similar malfunctions or breakdowns or reduce their frequency and severity.
- vii. The amount of release above typical emissions during malfunction/breakdown.

4.7.10 Reporting Requirements

- a. The Permittee shall comply with the applicable reporting requirements specified in 40 CFR 60.107(e) and (f) and 40 CFR 60.105(e)(3).

- b. ~~Reporting of Deviations~~

The Permittee shall promptly notify the Illinois EPA of deviations of an affected unit with the permit requirements of this section (Section 4.7). Reports shall include information specified in Condition 4.7.10(b)(i).

- i. ~~Within 30 days of e~~ Exceedance of the limits in Conditions 4.7.3, 4.7.5, or 4.7.6, shall be reported within 30 days and the notification shall include:

- A. Identification of the limit that may have been exceeded.
- B. Duration of the possible exceedance.
- C. An estimate of the amount of emissions in excess of the applicable standard.
- D. A description of the cause of the possible exceedance.
- E. When compliance was reestablished.

- c. Reporting of Malfunctions and Breakdowns

The Permittee shall provide the following notification and reports to the Illinois EPA, Air Compliance Unit and Regional Field Office, pursuant to 35 IAC 201.263, concerning continued operation of equipment venting to the DCUF subject to Condition 4.7.5(b)(i) during malfunction or breakdown:

- A. The Permittee shall notify the Illinois EPA's regional office by telephone as soon as possible during normal working hours, but no later than three (3) days, upon the occurrence of noncompliance due to malfunction or breakdown.
        - B. Upon achievement of compliance, the Permittee shall give a written follow-up notice within 15 days to the Illinois EPA, Air Compliance Unit and Regional Field Office, providing a detailed explanation of the event, an explanation why continued operation of equipment venting to the DCUF was necessary, the length of time during which operation continued under such conditions, the measures taken by the Permittee to minimize and correct deficiencies with chronology, and when the repairs were completed or when the particular equipment venting to the DCUF was taken out of service.
        - C. If compliance is not achieved within 5 working days of the occurrence, the Permittee shall submit interim status reports to the Illinois EPA, Air Compliance Unit and Regional Field Office, within 5 days of the occurrence and every 14 days thereafter, until compliance is achieved. These interim reports shall provide a brief explanation of the nature of the malfunction or breakdown, corrective actions accomplished to date, actions anticipated to occur with schedule, and the expected date on which repairs will be complete or the particular equipment venting to the DCUF will be taken out of service.
      - ii. The Permittee shall submit semi-annual malfunction and breakdown reports to the Illinois EPA consistent with the source's CAAPP permit. These reports may be submitted along with other semi-annual reports required by the source's CAAPP permit and shall include the following information for malfunctions and breakdowns of equipment venting to the DCUF during the reporting period:
        - A. A listing of malfunctions and breakdowns, in chronological order, that includes:
          - I. The date, time, and duration of each incident.

- II. The identity of the affected operation(s) involved in the incident.
  - B. Dates of the notices and reports of Conditions 4.7.10(c)(i).
  - C. Any supplement information the Permittee wishes to provide to the notices and reports of Conditions 4.7.10(c)(i).
  - D. The aggregate duration of all incidents during the reporting period.
  - E. If there have been no such incidents during the reporting period, this shall be stated in the report.
- d. With its Annual Emission Report, the Permittee shall submit a report to the Illinois EPA for flaring by each affected unit during the previous year, which report shall:
- i. List each event during the year when waste gas was flared, with a description of the event, including cause, amount of emissions and duration.
  - ii. Summarize flaring activity and emissions during the previous year, including an assessment of the cause(s) for such flaring as related to the number of events and share of emissions.
  - iii. Include copies of the summaries for flaring activity for the preceding three years, as reported in earlier reports.
  - iv. Provide an analysis of the amount of waste gas that was recovered as related to the amount of waste gas that was flared.
  - v. Summarize actions or measures implemented during the previous year taken to reduce flaring, and the reason for and observed effect of these actions.
  - vi. Summarize actions or measures planned for implementation during the current year to reduce flaring, and the reason for and expected effect of these actions.

- d. With the periodic monitoring reports required by the CAAPP permit for the source, for any reporting period in which significant flaring incident(s) occurred, the Permittee shall submit report(s) to the Illinois EPA for the root cause analysis performed for the incident(s) pursuant to Condition 4.7.5(a)(vi).

*[This last section should be numbered e. but is numbered d.]*