Appendix CAM

NUSTAR TERMINALS OPERATIONS PARTNERSHIP, L.P.
NUSTAR JACKSONVILLE TERMINAL
6531 Evergreen Avenue
Jacksonville, FL 32208

FACILITY ID NO.: 0310028
DUVAL COUNTY
AIR CONSTRUCTION PERMIT
PERMIT PROJECT NO.: 0310028-018-AC

Compliance Assurance Monitoring Requirements

Pursuant to Rule 62-213.440(1)(b)1.a., FAC, the CAM plans that are included in this appendix contain the monitoring requirements necessary to satisfy 40 CFR 64. Conditions 1. – 17. are generic conditions applicable to all emissions units that are subject to the CAM requirements. Specific requirements related to each emissions unit are contained in the attached tables, as submitted by the applicant and approved by the Department.

40 CFR 64.6 Approval of Monitoring.

1. The attached CAM plan(s), as submitted by the applicant, is/are approved for the purposes of satisfying the requirements of 40 CFR 64.3.
   [40 CFR 64.6(a)]

2. The attached CAM plan(s) include the following information:
   (i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);
   (ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and
   (iii) The performance requirements established to satisfy 40 CFR 64.3(b) or (d), as applicable.
   [40 CFR 64.6(c)(1)]

3. The attached CAM plan(s) describe the means by which the owner or operator will define an exceedance of the permitted limits or an excursion from the stated indicator ranges and averaging periods for purposes of responding to (see CAM Conditions 5. - 9.) and reporting exceedances or excursions (see CAM Conditions 10. – 14.).
   [40 CFR 64.6(c)(2)]

4. The permittee is required to conduct the monitoring specified in the attached CAM plan(s) and shall fulfill the obligations specified in the conditions below (see CAM Conditions 5. - 17.).
   [40 CFR 64.6(c)(3)]

40 CFR 64.7 Operation of Approved Monitoring.

5. Commencement of operation. The owner or operator shall conduct the monitoring required under this appendix upon the received date of this Title V permit.
   [40 CFR 64.7(a)]

6. Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
   [40 CFR 64.7(b)]

7. Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
   [40 CFR 64.7(c)]

8. Response to excursions or exceedances.
   a. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions, if allowed by this permit). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
   b. Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

   [40 CFR 64.7(d)(1) & (2)]

9. Documentation of need for improved monitoring. If the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
   [40 CFR 64.7(e)]

40 CFR 64.8 Quality Improvement Plan (QIP) Requirements.

10. Based on the results of a determination made under CAM Condition 8.a., above, the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with CAM Condition 4., an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, may require the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.
    [40 CFR 64.8(a)]

11. Elements of a QIP:
    a. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.
    b. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:
       (i) Improved preventive maintenance practices.
       (ii) Process operation changes.
       (iii) Appropriate improvements to control methods.
       (iv) Other steps appropriate to correct control performance.
       (v) More frequent or improved monitoring (only in conjunction with one or more steps under CAM Condition 11.b(i) through (iv), above).

    [40 CFR 64.8(b)]

12. If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
    [40 CFR 64.8(c)]

13. Following implementation of a QIP, upon any subsequent determination pursuant to CAM Condition 8.b., the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:
    a. Failed to address the cause of the control device performance problems; or
    b. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

    [40 CFR 64.8(d)]

14. Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
[40 CFR 64.8(e)]

40 CFR 64.9 Reporting And Recordkeeping Requirements.

15. General reporting requirements.
    a. On and after the date specified in CAM Condition 5. by which the owner or operator must use monitoring that meets the requirements of this appendix, the owner or operator shall submit monitoring reports semi-annually to the permitting authority in accordance with Rule 62-213.440(1)(b)3.a., F.A.C.
    b. A report for monitoring under this part shall include, at a minimum, the information required under Rule 62-213.440(1)(b)3.a., F.A.C., and the following information, as applicable:
        (i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
        (ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
        (iii) A description of the actions taken to implement a QIP during the reporting period as specified in CAM Conditions 10. through 14. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

    [40 CFR 64.9(a)]

16. General recordkeeping requirements.
    a. The owner or operator shall comply with the recordkeeping requirements specified in Rule 62-213.440(1)(b)2., F.A.C. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to CAM Conditions 10. through 14. and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).
    b. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

    [40 CFR 64.9(b)]

40 CFR 64.10 Savings Provisions.

17. It should be noted that nothing in this appendix shall:
    a. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this appendix shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under Title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.
    b. Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.
    c. Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

    [40 CFR 64.10]

Emissions Unit No. 023 - Loading Rack Operation - Annex I		
	Indicator No. 1	**Indicator No. 2**
I. Indicator	Presence of Flame	Tight connection of the vapor return line to the tanker truck.
Monitoring Approach	Flame presence is monitored using an ultraviolet flame detector (UFD). **Operation Note:** After a tanker truck pulls into a loading rack, a remote signal is sent to the VCU programmable logic controller (PLC) to automatically ignite the pilot flame. If the pilot flame is not detected by the UFD after the fifth automatic ignition trial, the PLC will shut down the combustion system due to pilot failure. After the UFD verifies that the flame is present, a green light illuminates at the loading rack, and the vapor flow control valve on the vapor recovery line to the VCU opens to allow vapors to flow to the VCU. If the UFD signal is lost during loading, the loading rack automatically shuts down and the green light is turned off, at the same time the vapor flow control valve to the VCU will close preventing vapors from escaping the system without being combusted.	A tight connection of the vapor recovery line must occur, otherwise the automation system will not allow loading. **Operation Note:** The trailer is equipped with an interlock switch that is not enabled unless the vapor recovery fitting is securely in place. This interlock switch is connected to the terminal's automation permissive signal which operates the actual flow control valves.
II. Indicator Range	An excursion occurs whenever the UFD signal is lost during loading (i.e., the flame is absent). This will result in an automatic shutoff at the loading rack, making loading impossible, and the closing of the vapor flow control valve to the VCU, preventing vapors from venting through the VCU.	An excursion occurs whenever the secure connection is broken and the interlock switch becomes disconnected, resulting in an automatic shutoff of the loading rack, making loading impossible.
III. Performance Criteria		
A. Data Representativeness	The UFD is wired to the stack to detect the presence of a flame.	The interlock switch must close the circuit in order for a permissive signal to be transmitted and allow the flow valves to open.
B. Verification of Operational Status	For a green light to be present at the VCU control panel and at the overfill prevention system, and for the vapor flow control valve to the VCU to open, the UFD must detect the presence of a flame.	Permissive signal at the overfill prevention system confirms that the vapor recovery line is securely connected.
C. QA/QC Practices and Criteria	Manufacturer's routine maintenance requirements include keeping the flame detection system adjusted for the smoothest, most reliable operation, and ensuring that the flame signal current is above the manufacturer's minimum acceptable level. The minimum flame signal voltage is 1.25 volts D.C. If the voltage drops below this minimum voltage fro 0.8 seconds, the loading rack will shut down and the vapor flow control valve will close preventing vapors from escaping through the VCU.	Inspection and maintenance of the vapor recovery line fittings.
D. Monitoring Frequency	The UFD operates continuously, when the VCU is operating.	The interlock switch must be locked at all times loading is taking place.
E. Data Collection Procedures	The UFD continuously senses the ultraviolet radiation emitted by the combustion flames and generates a current (microamps) signal to the PLC.	A signal is continuously sent to the tanker truck overfill prevention system when the interlock switch is engaged.

Emissions Unit No. 034 - Loading Rack Operation - Annex II		
	Indicator No. 1	**Indicator No. 2**
I. Indicator	Presence of Flame	Tight connection of the vapor return line to the tanker truck.
Monitoring Approach	Flame presence is monitored using an ultraviolet flame detector (UFD). **Operation Note:** After a tanker truck pulls into a loading rack, a remote signal is sent to the VCU programmable logic controller (PLC) to automatically ignite the pilot flame. If the pilot flame is not detected by the UFD after the fifth automatic ignition trial, the PLC will shut down the combustion system due to pilot failure. After the UFD verifies that the flame is present, a green light illuminates at the loading rack, and the vapor flow control valve on the vapor recovery line to the VCU opens to allow vapors to flow to the VCU. If the UFD signal is lost during loading, the loading rack automatically shuts down and the green light is turned off, at the same time the vapor flow control valve to the VCU will close preventing vapors from escaping the system without being combusted.	A tight connection of the vapor recovery line must occur, otherwise the automation system will not allow loading. **Operation Note:** The trailer is equipped with an interlock switch that is not enabled unless the vapor recovery fitting is securely in place. This interlock switch is connected to the terminal's automation permissive signal which operates the actual flow control valves.
II. Indicator Range	An excursion occurs whenever the UFD signal is lost during loading (i.e., the flame is absent). This will result in an automatic shutoff at the loading rack, making loading impossible, and the closing of the vapor flow control valve to the VCU, preventing vapors from venting through the VCU.	An excursion occurs whenever the secure connection is broken and the interlock switch becomes disconnected, resulting in an automatic shutoff of the loading rack, making loading impossible.
III. Performance Criteria		
A. Data Representativeness	The UFD is wired to the stack to detect the presence of a flame.	The interlock switch must close the circuit in order for a permissive signal to be transmitted and allow the flow valves to open.
B. Verification of Operational Status	For a green light to be present at the VCU control panel and at the overfill prevention system, and for the vapor flow control valve to the VCU to open, the UFD must detect the presence of a flame.	Permissive signal at the overfill prevention system confirms that the vapor recovery line is securely connected.
C. QA/QC Practices and Criteria	Manufacturer's routine maintenance requirements include keeping the flame detection system adjusted for the smoothest, most reliable operation, and ensuring that the flame signal current is above the manufacturer's minimum acceptable level. The minimum flame signal voltage is 1.25 volts D.C. If the voltage drops below this minimum voltage fro 0.8 seconds, the loading rack will shut down and the vapor flow control valve will close preventing vapors from escaping through the VCU.	Inspection and maintenance of the vapor recovery line fittings.
D. Monitoring Frequency	The UFD operates continuously, when the VCU is operating.	The interlock switch must be locked at all times loading is taking place.
E. Data Collection Procedures	The UFD continuously senses the ultraviolet radiation emitted by the combustion flames and generates a current (microamps) signal to the PLC.	A signal is continuously sent to the tanker truck overfill prevention system when the interlock switch is engaged.