TABLE 1: VRU CAM

	Indicator 1	Indicator 2	Indicator 3
Indicator	Outlet VOC concentration (percent hydrocarbon as propane)	Inspection, maintenance, carbon bed testing, and operator training.	Vapor collection system leak check.
Monitoring Approach	Use of a continuous hydrocarbon concentration analyzer	Periodic inspections and maintenance by properly trained personnel. Daily inspections are performed by operators. These inspections include checks of regenerating bed operating temperatures, cycle time, operating pressures, and verification of relevant fluid levels. Quarterly maintenance is performed by the VRU vendor under a maintenance contract in accordance with the standard maintenance specifications for the system. Testing of the carbon in each bed (lab analysis of adsorptive capacity) is performed annually.	Monthly sight, sound smell inspection of the vapor collection system [as required by 40 CFR 60.502(j) and 40 CFR 63.11089].
Indicator Range Action Level Range	The indicator range on the analyzer is 0-2% hydrocarbon. The % hydrocarbon that is equivalent to the 10 mg/liter limit specified in the permit is determined by Motiva based on each source test.* A shutdown alarm (which ceases loading at the racks or diverts the emissions to the VCU) will activate at a level equal to 90% of the 10 mg/liter equivalent concentration. The VRU is programmed to trigger a warning alarm when the VOC emissions exceed 75% of the 10 mg/liter equivalent concentration. These alarms are based on 6-hour rolling averages.	As indicated by the vendor and listed in the operations manual.	Detection of a leak using sight, sound smell inspection techniques.

	Indicator 1	Indicator 2	Indicator 3
Excursion Level/Reportable Incident Range	Loading rack shutdown alarms will be recorded by the data acquisition system. Product loading at the racks will cease or be diverted to the VCU if the CEM reaches 90% of the 10 mg/liter standard on a 6-hour rolling average basis. An exceedance occurs if the emissions from the VRU exceed the concentration equivalent to the 10 mg/liter standard on a 6-hour rolling average basis.	A reportable incident (although not necessarily indicative of emission of VOC above permitted levels) occurs if the periodic inspections, scheduled preventative maintenance, or carbon test is not performed or documented, or if corrective action is not initiated within 24 hours of detection of any issues identified during inspection, maintenance, or testing.	Detection of a leak using sight, sound smell inspection techniques.
Response to Indicators Action Level Range	Load rack operations are automatically shut down or vapors are redirected to the VCU if the emissions exceed the concentration equivalent to 90% of the 10 mg/liter standard. Breach of the action level range will trigger an investigation, corrective action, and an internal reporting requirement. Upon an action level alarm being acknowledged by the facility, an investigation will be triggered and a corrective action will be initiated within 24 hours.	Corrective actions will be initiated within 24 hours of the detection of the incident.	As required by 40 CFR 60.502(j) and 40 CFR 63.11089(c), initial attempt at repair will be made within 5 calendar days of detection, final repair will accomplished within 15 calendar days of detection.
Performance Criteria Data Representativeness	Concentrations less than the 10 mg/liter equivalent concentration indicate that the carbon adsorption system is working properly. The continuous emissions monitoring system alarm set points are based on the most recent successful compliance stack test. Stack tests are conducted in accordance with accepted EPA methods.	Trained personnel using documented inspection and maintenance procedures will verify VRU operation. Carbon samples will be taken using representative samples taken from both beds.	Leaks are inspected using techniques prescribed by 40 CFR 60.502(j) and 40 CFR 63.11089.
Verification of Operational Status	Verification of CEMS operational status is done by way of daily visual observation of the CEMS system.	Daily inspections (each day an operator is on duty during normal working days).	NA
QA/QC Practices and Criteria	Daily zero (low level) and high level calibration drift checks. Adjust if the drift exceeds 2.5% of the span value.	New operators are given appropriate hands-on training with a qualified operator, prior to working alone or performing VRU maintenance. Quarterly maintenance is performed by a licensed contractor.	Leaks are inspected using techniques prescribed by 40 CFR 60.502(j) and 40 CFR 63.11089.

	Indicator 1	Indicator 2	Indicator 3
Monitoring Frequency	The outlet concentration is monitored at least once every minute and the 6-hour average is continually updated with each data acquisition point.	Daily inspections (each day an operator is on duty during normal working days). Quarterly scheduled maintenance by a licensed contractor. Annual carbon bed testing.	At least monthly.
Data Collection Procedures	CEMS data is collected and compiled in a data acquisition system (DAS).	Results of daily inspections are recorded in the VRU Weekly Inspection Report. Incidents when plant personnel take the VRU out of service for routine maintenance are recorded in a Monthly Maintenance and Malfunction Report. These records are maintained onsite. The maintenance service company prepares a quarterly maintenance report and a copy is left at the terminal prior to their departure. Results of the carbon bed testing are maintained onsite.	Records of monthly inspections and records or repair are maintained on file at the facility.
Averaging Period	Rolling 6-hour averaging period in accordance with NSPS XX 6-hour source testing requirements.	NA	NA
APCD Bypass Monitoring	The VRU/VCU control system is designed such that either system can operate as the primary control device and both systems have the capacity to handle the maximum flow rate of vapors from the loading rack; however, the VRU is the primary control device during normal operation. Under normal operating conditions, bypass of the APCD (i.e., the VRU or VCU) cannot occur based on the physical design of the load rack. Specifically, all vapors collected at the loading rack flow through a single header to the VRU/VCU. There are no other vapor lines leaving the loading rack; thus there are no alternate pathways for vapors to bypass the VRU/VCU during normal operation. Additionally, the load rack is designed to prohibit loading operations from commencing unless either the VRU or VCU are online and ready to receive vapors from load rack operations.		

***Outlet hydrocarbon concentration values that are equivalent to 10 mg/l are determined as part of each performance test conducted at the facility. The initial equivalent hydrocarbon concentration value is 0.3% HC as propane on a six hour average, based on the performance test conducted on November 17, 2011. This value will change based on the latest successful performance test. Notification of changes to the equivalent hydrocarbon concentration value will be provided by Motiva to the EPCHC with the submittal of the performance test compliance demonstration report. A Title V permit modification is not required to approve the changes to the correlations between outlet VOC concentration (% HC by volume) and VOC emissions (mg/L).**

TABLE 2: VCU CAM

	Indicator 1	Indicator 2
Indicator	Operate VCU with pilot flame present at all times.	Documentation of inspection, maintenance and operator training program.
Monitoring Approach	Monitor presence of pilot flame.	Proper VCU operation is verified by performing daily inspections (only during periods when the unit is in use) of the vapor line valve, control panel, operating temperature, warning lights and the emergency shutdown system. Verification is done by way of visual observation or with an automated alarm or shutdown system. A quarterly inspection of the VCU is performed by a qualified VCU maintenance contractor under a maintenance contract in accordance with the standard maintenance specifications for the system.
Indicator Range Action Level Range	Presence of a pilot flame.	NA
Excursion Level/Reportable Incident Range	Non-detection of a pilot flame.	A reportable incident (although not necessarily indicative of an emissions level in excess of permitted levels) occurs if the quarterly inspections or scheduled preventative maintenance is not performed, documented, or if corrective action is not initiated according to the Monitoring and Inspection Plan.
Response to Indicators Action Level Range	If the pilot flame presence is not detected, load rack operations are automatically shut down, or all vapors must be routed to the VRU as long as it is fully functional.	Corrective actions will be initiated within 24 hours of the detection of the incident.
Performance Criteria Data Representativeness	Presence of a pilot flame indicates combustion is taking place.	Trained personnel using documented inspection procedures verify proper VCU operation. In the event the equipment is not operating properly, the VCU maintenance contractor is contacted to perform the necessary repairs.
Verification of Operational Status	PLC system continuously verifies the operational status of the UV detector.	NA

	Indicator 1	Indicator 2
QA/QC Practices and Criteria	Calibration, maintenance, and operation of UV sensing devices will be performed following manufacturer's specifications.	New operators are given appropriate hands-on training with a qualified operator, prior to working alone. Quarterly maintenance is performed by a licensed contractor with extensive knowledge of VCU operation and maintenance.
Monitoring Frequency	UV detectors and alarm system continuously monitor the presence of a pilot flame.	Periodic operation and maintenance checks are conducted by onsite trained operators. Contract maintenance staff perform quarterly scheduled maintenance.
Data Collection Procedures	Note in logbook all action level incidents (i.e., instances where no pilot flame is detected but when loading has occurred).	Incidents when plant personnel take the VCU out of service for maintenance are recorded in a Maintenance and Malfunction Report. The maintenance service company prepares a maintenance report and a copy is left at the terminal prior to their departure. Documentation of operator training for new hires along with the maintenance report is maintained onsite.
Averaging Period	None.	None.
APCD Bypass Monitoring	The VRU/VCU control system is designed such that either system can operate as the primary control device and both systems have the capacity to handle the maximum flow rate of vapors from the loading rack; however, the VRU is the primary control device during normal operation. Under normal operating conditions, bypass of the APCD (i.e., the VRU or VCU) cannot occur based on the physical design of the load rack. Specifically, all vapors collected at the loading rack flow through a single header to the VRU/VCU. There are no other vapor lines leaving the loading rack; thus there are no alternate pathways for vapors to bypass the VRU/VCU during normal operation. Additionally, the load rack is designed to prohibit loading operations from commencing unless either the VRU or VCU are online and ready to receive vapors from load rack operations.	