

COMMISSION
Kathy Castor
Pat Frank
Ken Hagan
Jim Norman
Jan K. Platt
Thomas Scott
Ronda Storms



Administrative Offices,
Legal & Water Management Division
The Roger P. Stewart Environmental Center
1900 - 9th Ave. • Tampa, FL 33605
Ph. (813) 272-5960 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 276-2256
Wetlands Management Fax 272-7144
1410 N. 21st Street • Tampa, FL 33605

Executive Director
Richard D. Garrity, Ph.D.

November 21, 2003

Attn: Jonathan Holtom
Department of Environmental Protection – Title V

RE: Motiva Enterprises LLC CAM Plan

Mr. Holtom:

Attached is a copy of the CAM Plan for Motiva Enterprises LLC – Port Tampa Terminal (0570197) for your review. We are also reviewing the CAM as part of the permit application review and will provide any relative comments to you via e-mail within the 2 weeks. Please let us know if you have any questions.

You may reach us at 813-272-5955 ext. 1269 (Ron Dennis) or ext. 1285 (Jeff Sims).

Sincerely,

Jeffrey D. Sims
Jeffrey D. Sims

Sims J @ EPCHC.org
Dennis R

RECEIVED

NOV 26 2003

BUREAU OF AIR REGULATION



COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

Motiva Enterprises LLC – Port Tampa Terminal
FDEP Facility ID 0570197

RECEIVED

NOV 26 2003

BUREAU OF AIR REGULATION

Prepared for:

MOTIVA

ENTERPRISES LLC

1717, 61st Avenue North
Nashville, Tennessee

Facility Location:

6500 West Commerce Street
Tampa, Florida

Prepared by:

E A R T H  T E C H

A Tyco Infrastructure Services Company

1455 Old Alabama Road
Suite 170
Roswell, Georgia 30076

Earth Tech Project No. 68268

October 2003

engineering and technology
Earth Tech
for the planet.

TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
EXECUTIVE SUMMARY	ES-1
1.0 PROCESS DESCRIPTION	1
1.1 LOADING RACK OPERATION DESCRIPTION	1
1.2 VAPOR RECOVERY UNIT DESCRIPTION	2
1.3 VAPOR COMBUSTION UNIT DESCRIPTION.....	3
2.0 APPLICABLE REQUIREMENTS	4
3.0 PROPOSED COMPLIANCE ASSURANCE MONITORING.....	8
3.1 VAPOR RECOVERY UNIT COMPLIANCE ASSURANCE MONITORING	8
3.2 VAPOR COMBUSTION UNIT COMPLIANCE ASSURANCE MONITORING	14
3.2.1 Emissions Unit	14
3.2.2 Applicable Requirements	14
3.2.3 Monitoring Approach	14
3.2.4 Basis	15
3.2.5 Additional Comments.....	16
3.2.6 Specific Compliance Assurance Monitoring Plan Content Requirements.....	16

LIST OF TABLES

<u>Table</u>	
1	Compliance with 40 CFR 64.4
2	Vapor Recovery Unit Compliance Assurance Monitoring
3	Vapor Combustion Unit Compliance Assurance Monitoring

LIST OF FIGURES

<u>Figure</u>	
1	Loading Rack Block Flow Diagram

LIST OF APPENDICES

Appendix

- | | |
|---|---|
| A | Periodic Monitoring Plan |
| B | Stack Test Results |
| C | Manufacturers' Recommendations (Future) |

LIST OF ACRONYMS

CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
LEL	Lower Explosive Limit
mg/l	milligrams per liter
NSPS	New Source Performance Standards
PLC	Programmable Logic Controller
PSEU	Pollutant-Specific Emissions Unit
QA	Quality Assurance
QC	Quality Control
US EPA	United States Environmental Protection Agency
UV	ultraviolet
VCU	vapor combustion unit
VDU	vapor destruction unit
VE	visible emission
VOC	volatile organic compound
VRU	vapor recovery unit

EXECUTIVE SUMMARY

Motiva Enterprises LLC owns and operates a petroleum bulk terminal at 6500 west Commerce Street, Tampa, Florida (Motiva/Motiva Port Tampa Terminal). The facility is a major source for volatile organic compounds (VOCs) and was issued a Title V Operating permit by the Environmental Protection Commission of Hillsborough County on April 20, 1999 (Permit No. 0570197-007-AV). The pollutant-specific emissions unit (PSEU) of concern at Motiva is not a "Large PSEU" and is therefore classified as an "Other PSEU" per 40 Code of Federal Regulation (CFR) 64.5(b). Facilities with "other PSEUs" are required to submit a Compliance Assurance Monitoring (CAM) Plan with their Title V renewal application. Motiva is submitting this CAM Plan in conjunction with the Title V renewal application.

The PSEU that this CAM Plan addresses is a petroleum product loading rack. The loading rack is used to load petroleum products into trucks. Emissions from the loading rack are controlled by two separate control devices:

- A dual-bed vacuum regenerative carbon adsorption vapor recovery unit (VRU) and
- A vapor combustion unit (VCU), also referred to as a flare, or a vapor destruction unit (VDU).

The two separate control devices operate in tandem. Both control devices are subject to CAM.

The loading rack's vapor collection system is subject to an emission limitation standard that restricts emissions to 35 mg of total organic compounds per liter of gasoline loaded (mg/l), under 40 Code of Federal Regulations (CFR) 60.502(b). The VRU and VCU are also required to achieve a VOC emission limit of 10 mg/l from the initial construction permit. Emissions from both control devices are in compliance with both emission standards.

The monitoring approach described in this CAM plan closely follows guidance issued by the United States Environmental Protection Agency (US EPA). The guidance used for the proposed monitoring for the VRU is "US EPA CAM Technical Guidance Document, A.24 Carbon Adsorber for VOC Control - Facility EE" dated September 2000. Operation of the VRU will comply with CAM through monitoring of the vacuum profile; inspection, maintenance, and operator training; carbon bed testing; and leak detection and repair.

The guidance used for the proposed VCU monitoring is “Reissued Technical Examples in Appendices to the Title V Technical Reference Document: D.3 Process vents, etc., controlled by flare,” dated April 2001 (<http://www.epa.gov/ttnemc01/cam.html>). Operation of the VCU will comply with CAM through: visible emissions observation, and pilot flame temperature monitoring.

The Port Tampa terminal operates in compliance with an approved Periodic Monitoring Plan as required by Condition A.13 of Section 13 in the current Title V permit. This plan addresses a very similar regulatory requirement and is incorporated into this CAM Plan.

The Port Tampa terminal differs from other petroleum distribution terminals in that it has two control devices for the same petroleum product loading rack. There is some redundancy built into this system, which makes the release of uncontrolled VOC emissions less likely. This relatively unique configuration renders some portions of the US EPA guidance documents inapplicable, because each US EPA guidance document assumes that the control device it refers to is the only control device for the emissions source.

This document is organized as follows: *Section 1.0: System Description* describes the loading rack and associated control devices. *Section 2.0: Applicable Requirements* lists the specific CAM requirements of 40 CFR 64, and explains how this CAM Plan satisfies them. *Section 3.0: Proposed Compliance Assurance Monitoring* contains the CAM plan approach criteria in a tabular format, and is based on the table in each US EPA guidance document. Appendix A includes a copy of the approved Periodic Monitoring Plan. Appendix B includes relevant stack test results. Appendix C (Future) contains manufacturers’ recommendations for equipment operation.

According to the convention followed at the facility, and therefore in this CAM plan, a greater vacuum refers to a value closer towards absolute vacuum, whereas less vacuum refers to a value closer towards atmospheric pressure. Thus a vacuum greater than 27.0 in. Hg indicates a vacuum closer towards absolute vacuum.

Permit Limit

The facility will need to make physical equipment changes to comply with this CAM Plan. Therefore, we are requesting a schedule to install the required equipment by no later than 180 days after the effective date of the renewed Title V permit (consistent with 40CFR64.4(e)).

NO!

1.0 PROCESS DESCRIPTION

The Port Tampa Terminal is described as follows in the Initial Title V Air Operation Permit:

At the facility, the applicant receives the bulk supply of petroleum products by marine vessel. The petroleum products are stored in the tanks and redistributed by loading out to tanker trucks or a pipeline to the airport...

VOC emissions generated by the truck loading operations are collected by the use of a vapor recovery system, which directs emissions to a holding tank (bladder). From the holding tank VOC emissions are directed to either a John Zink, Model AAT-825-6-15-4-2-x Retrofit VRU consisting of two identical charcoal filled canisters or a John Zink Company Vapor Combustion Unit (Model No. ZCT-2-8-35-2-316-X).

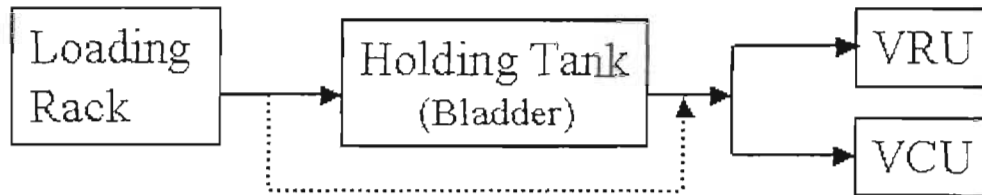
The emission unit –002 Loading Rack with VRU and VCU is the only emission source subject to CAM because it is the only it is the only emission unit that meets all of the following criteria:

- subject to an emission limitation (per 40 CFR 60.502(b)),
- uses a control device to achieve compliance with the above emission limit,
- potential pre-control emissions of VOCs from the emissions unit are at least 100 tons per year (which is the major source threshold for Hillsborough County), and
- not otherwise exempt from 40 CFR Part 64.

1.1 LOADING RACK OPERATION DESCRIPTION

Loading bays are equipped to load petroleum products onto trucks. The petroleum products loaded are gasoline, distillate fuels, diesel, and additives. Each bay is equipped with vapor recovery hoses positioned at the truck loading areas for hook-up to the vapor control system. The vapor hoses and associated piping transport vapors to the VRU, which may also collect in a vapor holding tank (also known as the bladder tank). Figure 1 shows the overall process configuration (vapor flow) of the loading rack. The holding tank is designed to allow a controlled feed of vapors to the VRU. The loading rack generates VOC emissions only when trucks are being loaded.

Figure 1
Loading Rack Block Flow Diagram



System interlocks prevent trucks from being loaded unless either the VRU or VCU is operating. However, vapors may collect in the bladder tank for several hours before they are sent to the VRU and/or VCU. Once the holding tank reaches a set level, the VCU starts up to prevent a high level alarm on the bladder tank. Vapors are not sent to the VCU until confirmation of pilot flame ignition is achieved. If the VCU does not start properly and the bladder tank reaches its high/high alarm level, system interlocks shutdown the loading rack.

all good

1.2 VAPOR RECOVERY UNIT DESCRIPTION

The carbon adsorber (VRU) has two identical beds, one adsorbing while the other is desorbing, with each bed on a 13-minute cycle. Carbon bed regeneration is accomplished by a combination of high vacuum and purge air stripping, which removes previously adsorbed petroleum vapor from the carbon and restores the carbon's ability to adsorb vapor during the next cycle. The vacuum pump extracts concentrated petroleum vapor from the carbon bed and discharges into a separator. Non-condensed hydrocarbon vapor and hydrocarbon condensate flow from the separator to an absorber column, which functions as the recovery device for the system. In the absorber, the hydrocarbon vapor flows up through the absorber packing, where it gets liquefied and is subsequently recovered by absorption. Gasoline product from a storage tank is used as the absorbent fluid. The recovered product is returned along with the circulating gasoline back to the product storage tank. A small stream of air and residual vapor exits the top of the absorber column and is recycled to the on-stream carbon bed where the residual petroleum vapor is re-adsorbed.

1.3 VAPOR COMBUSTION UNIT DESCRIPTION

The flare (VCU) burns petroleum product vapors in a controlled system. Vapors are ignited by a propane-fired pilot flame. The VCU is equipped with a combustion air control damper that controls the amount of combustion air to maintain optimal VOC destruction conditions as determined from the vendor prescribed operating temperature. System operation is controlled by a programmable logic controller (PLC). Prior to operation, the propane pilot flame is spark-ignited. UV detectors then prove the presence of the pilot flame, and the PLC allows petroleum product vapors to enter the flare and combust.

2.0 APPLICABLE REQUIREMENTS

This CAM Plan meets the requirements of 40 CFR 64.4. Each regulatory requirement is repeated below, along with a description of how the CAM Plan meets the requirement.

**Table 1
 Compliance with 40 CFR 64.4**

Requirement	Compliance Description
64.4 (a) The owner or operator shall submit to the permitting authority monitoring that satisfies the design requirements in § 64.3. The submission shall include the following information: (1) The indicators to be monitored to satisfy §§ 64.3(a)(1)-(2); (2) The ranges or designated conditions for such indicators, or the process by which such indicator ranges or designated conditions shall be established; (3) The performance criteria for the monitoring to satisfy § 64.3(b); and (4) If applicable, the indicator ranges and performance criteria for a CEMS, COMS or PEMS pursuant to § 64.3(d).	<i>Indicators for the VRU are: regeneration cycle vacuum, carbon bed I&M and testing, and leak checks. Indicators for VCU are: visible emissions checks and pilot flame sensing. Ranges and performance criteria are listed in Section 3. The VRU is designed to meet the required emission limit at a vacuum of 27" Hg or greater. There are no associated CEMS, COMS, or PEMS associated with the VCU, so paragraph (4) does not apply to this device.</i>
64.4 (b) As part of the information submitted, the owner or operator shall submit a justification for the proposed elements of the monitoring. If the performance specifications proposed to satisfy § 64.3(b)(2) or (3) include differences from manufacturer recommendations, the owner or operator shall explain the reasons for the differences between the requirements proposed by the owner or operator and the manufacturer's recommendations or requirements.	<i>The proposed elements of monitoring are justified because they closely follow relevant US EPA guidance. There are no differences between the requirements proposed and the manufacturers' recommendations and/or requirements.</i>
64.4 (b) (cont'd) The owner or operator also shall submit any data supporting the justification, and may refer to generally available sources of information used to support the justification (such as generally available air pollution engineering manuals, or US EPA or permitting authority publications on appropriate monitoring for various types of control devices or capture systems).	<i>This CAM Plan references the following generally available sources of information: "US EPA CAM Technical Guidance Document, A.24 Carbon Adsorber for VOC Control - Facility EE,"(9/00) and "Reissued Technical Examples in Appendices to the Title V Technical Reference Document: D.3 Process vents, etc., controlled by flare," (4/01)(http://www.epa.gov/ttnemc01/cam.html).</i>

Requirement	Compliance Description
<p>64.4 (b) (cont'd) To justify the appropriateness of the monitoring elements proposed, the owner or operator may rely in part on existing applicable requirements that establish the monitoring for the applicable pollutant-specific emissions unit or a similar unit.</p>	<p><i>The terminal has an approved Periodic Monitoring Plan as required by Condition A.13 of Section 13 in the current Title V permit. This plan addresses a very similar regulatory requirement and is incorporated into this CAM Plan. A copy is included in Appendix A.</i></p>
<p>64.4 (b) (cont'd) If an owner or operator relies on presumptively acceptable monitoring, no further justification for the appropriateness of that monitoring should be necessary other than an explanation of the applicability of such monitoring to the unit in question, unless data or information is brought forward to rebut the assumption. Presumptively acceptable monitoring includes:</p> <ol style="list-style-type: none"> (1) Presumptively acceptable or required monitoring approaches, established by the permitting authority in a rule that constitutes part of the applicable implementation plan required pursuant to title I of the Act, that are designed to achieve compliance with this part for particular pollutant-specific emissions units; (2) Continuous emission, opacity or predictive emission monitoring systems that satisfy applicable monitoring requirements and performance specifications as specified in § 64.3(d); (3) Excepted or alternative monitoring methods allowed or approved pursuant to Part 75 of this chapter; (4) Monitoring included for standards exempt from this part pursuant to § 64.2(b)(1)(i) or (vi) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit; and (5) Presumptively acceptable monitoring identified in guidance by the US EPA. Such guidance will address the requirements under § 64.4(a), (b), and (c) to the extent practicable. 	<p><i>This CAM Plan relies heavily on guidance by the US EPA for very similar sources and control devices. There are some differences between the Tampa Terminal equipment arrangement and the arrangements in the US EPA guidance. Therefore, the CAM plan includes justification that the monitoring is acceptable.</i></p>

Requirement	Compliance Description
<p>64.4 (c) (1) Except as provided in paragraph (d) of this section, the owner or operator shall submit control device (and process and capture system, if applicable) operating parameter data obtained during the conduct of the applicable compliance or performance test conducted under conditions specified by the applicable rule. If the applicable rule does not specify testing conditions or only partially specifies test conditions, the performance test generally shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit. Such data may be supplemented, if desired, by engineering assessments and manufacturer's recommendations to justify the indicator ranges (or, if applicable, the procedures for establishing such indicator ranges). Emission testing is not required to be conducted over the entire indicator range or range of potential emissions.</p> <p>(2) The owner or operator must document that no changes to the pollutant specific emissions unit, including the control device and capture system, have taken place that could result in a significant change in the control system performance or the selected ranges or designated conditions for the indicators to be monitored since the performance or compliance tests were conducted.</p>	<p><i>Compliance test results are included in Appendix B.</i></p> <p><i>Motiva hereby documents that no changes to the loading rack, including the VRU, VCU and bladder, have taken place that could result in a significant change in the control system performance or the selected ranges or designated conditions for the indicators to be monitored since the performance or compliance tests were conducted.</i></p>
<p>64.4 (d) If existing data from unit-specific compliance or performance testing specified in paragraph (c) of this section are not available, the owner or operator:</p> <p>(1) Shall submit a test plan and schedule for obtaining such data in accordance with paragraph (e) of this section; or</p> <p>(2) May submit indicator ranges (or procedures for establishing indicator ranges) that rely on engineering assessments and other data, provided that the owner or operator demonstrates that factors specific to the type of monitoring, control device, or pollutant-specific emissions unit make compliance or performance testing unnecessary to establish indicator ranges at levels that satisfy the criteria in § 64.3(a).</p>	<p><i>Since test data are available, this paragraph does not apply</i></p>
<p>64.4 (e) If the monitoring submitted by the owner or operator requires installation, testing, or other necessary activities prior to use of the monitoring for purposes of this part, the owner or operator shall include an implementation plan and schedule for installing, testing and performing any other appropriate activities prior to use of the monitoring. The implementation plan and schedule shall provide for use of the monitoring as expeditiously as practicable after approval of the monitoring in the part 70 or 71 permit pursuant to § 64.6, but in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval of the permit.</p>	<p><i>The proposed monitoring for the VRU requires continuous vacuum monitoring with visible alarms for various set points. The facility will need to install a continuous pressure transducer/transmitter, link it to the facility's PLC, and program the various set points. Motiva proposes to install this equipment no later than 180 days after the effective date of the renewed Title V permit.</i></p>

NO

Requirement	Compliance Description
<p>64.4 (f) If a control device is common to more than one pollutant-specific emissions unit, the owner or operator may submit monitoring for the control device and identify the pollutant-specific emissions units affected and any process or associated capture device conditions that must be maintained or monitored in accordance with § 64.3(a) rather than submit separate monitoring for each pollutant-specific emissions unit.</p>	<p><i>The loading rack is the only pollutant-specific emissions unit that feeds to the VRU and the VCU. Therefore, this paragraph does not apply.</i></p>
<p>64.4 (g) If a single pollutant-specific emissions unit is controlled by more than one control device similar in design and operation, the owner or operator may submit monitoring that applies to all the control devices and identify the control devices affected and any process or associated capture device conditions that must be maintained or monitored in accordance with § 64.3(a) rather than submit a separate description of monitoring for each control device.</p>	<p><i>While the loading rack is controlled by more than one control device, the VRU and VCU are not similar in design and operation. Therefore, Motiva is submitting a separate description of monitoring for each control device.</i></p>

3.0 PROPOSED COMPLIANCE ASSURANCE MONITORING

3.1 VAPOR RECOVERY UNIT COMPLIANCE ASSURANCE MONITORING

The following table documents how CAM will be achieved for the VRU. It follows the format provided by the US EPA guidance.

Table 2
Vapor Recovery Unit Compliance Assurance Monitoring

	Indicator 1	Indicator 2	Indicator 3
Indicator	Regeneration cycle vacuum. Specifically, monitoring the vacuum on the regenerating bed to confirm that it remains at or above 27.0 inches of mercury (in. Hg) vacuum.	Documentation of inspection, maintenance and operator training program, and carbon bed testing.	Documentation of inspection, maintenance, and leak checks of vapor recovery system.
Monitoring Approach	Pressure transmitter, relayed to system PLC.	Proper VRU operation is verified by performing periodic inspections and maintenance by properly trained personnel. Daily operator checks include regenerating bed operating temperature profile, cycle time, operating pressures, operating temperatures, and verification of relevant fluid levels. Daily operator checks are performed each day that an operator is on duty during normal working days. 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) will also be performed annually.	Monthly leak check of vapor collection system
Indicator Range Action Level Range*	A corrective action is triggered when the regenerating carbon bed decreases to less than 27.0 in. Hg vacuum during regeneration. When the action level range is breached, a visual alarm is triggered on the control panel. This alarm must be acknowledged by an operator to turn off.	NA	A corrective action is triggered if an LEL reading of 10% - <20% is detected during an inspection.

	Indicator 1	Indicator 2	Indicator 3
Excursion Level/Reportable Incident Range*	When the regenerating carbon bed decreases to 26.5 in. Hg vacuum during regeneration, a visual alarm is triggered and vapors are no longer sent to the VRU. Normal loading operations will continue and the VRU will be bypassed with the vapors delivered to the VCU. In the event both the VRU and VCU are not available, normal loading operations will continue until the holding tank has reached its high-level capacity of 22' 2". At this point, the high/high-level alarm in the holding tank will activate and automatically shut down the loading rack. An excursion/reportable incident occurs when the holding tank reaches its high/high-level capacity of 22' 2".	A reportable incident (although not necessarily indicative of an 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 to correct any problems identified during the inspection, maintenance of the unit or carbon testing.	A reportable incident (although not necessarily an emission of VOC above permitted levels) occurs if an LEL reading equal to or above 20% is detected during an inspection.
Response to Indicators Action Level Range	Breach of the action level range will trigger an investigation, a corrective action, and an internal reporting requirement. Upon an action level alarm being acknowledged by the facility, a corrective action will be initiated within 24 hours. If the required corrective action cannot be conducted by onsite personnel, the contracted maintenance group will be notified of the incident within 24 hours and will be brought onsite as soon as possible.	NA	Exceeding the action level range will trigger an investigation, a corrective action, and an internal reporting requirement. Leaks will be repaired within 30 calendar days.

Check at the Motiva

	Indicator 1	Indicator 2	Indicator 3
Excursion Level/Reportable Incident Range	An excursion will trigger an investigation, corrective action, and an internal reporting requirement. The VRU will be immediately bypassed with the vapors delivered to the VCU. Upon the discontinuation of vapor flow from the holding tank to the VRU, a visual alarm is triggered and a corrective action will be initiated within 24 hours of acknowledgement of the alarm. If the required corrective action cannot be conducted by onsite personnel, the contracted maintenance group will be notified of the incident within 24 hours and will be brought onsite as soon as possible. Until such time that the corrective action is completed, vapors will be delivered to the VCU.	A reportable incident will trigger an investigation, corrective action, and an external reporting requirement. Corrective actions will be initiated within 24 hours of the detection of the reportable incident.	A reportable incident will trigger an investigation, a corrective action, and an external reporting requirement. Leaks will be repaired within 15 calendar days.
Performance Criteria Data Representativeness	The pressure cycle is measured in the vacuum pump suction line. The minimum accuracy of the pressure transmitter is +/- 1.0 percent. The pressure transmitter is equipped with a visual alarm that is triggered when the regenerating carbon bed vacuum decreases to the Action Level. The alarm has to be acknowledged by an operator to turn off. The pressure transmitter is also equipped with an additional visual alarm that is triggered when the carbon bed vacuum decreases to the excursion level.	VRU operation will be verified by trained personnel using documented inspection and maintenance procedures. Carbon samples will be properly taken using representative samples taken from both beds.	As required by 40 CFR 60.502(j), leaks are inspected using sight, sound and smell. Additionally, a handheld monitor is used to check for leaks in the vapor collection system bladder tank.
Verification of Operational Status	NA	NA	NA

	Indicator 1	Indicator 2	Indicator 3
QA/QC Practices and Criteria	Pressure transmitter is calibrated annually.	New operators are given 40 hours of hands-on training with a qualified operator, prior to working alone.	Procedures are followed according to 40 CFR 60.502(j), NSPS for Bulk Gasoline Terminals. In addition, the bladder tank is inspected for leaks using a handheld monitor.
	Alarm light operation is visually checked each day that an operator is on duty during normal working days.	Each operator is given one day of hands-on training annually with the VRU maintenance contractor on proper maintenance, operation, and repair of the VRU.	
	New operators are given 40 hours of hands-on training by a qualified operator, prior to working independently.	Quarterly maintenance is performed by licensed contractor with extensive knowledge of VRU operation and maintenance.	
Monitoring Frequency	Pressure profile is monitored and recorded continuously during each regeneration cycle and visual alarms are triggered when the action level/excursion level is breached. Regeneration cycle is monitored visually, once per 24-hour shift when operator is on duty during normal working days.	Periodic operation and maintenance checks conducted by onsite trained operators. Contract maintenance group performs quarterly scheduled maintenance. Carbon bed testing is performed annually.	Monthly leak check of vapor collection system.
	Alarm light is checked daily when operator is on duty.		

	Indicator 1	Indicator 2	Indicator 3
Data Collection Procedures	The operator records the pressure profile during one regeneration cycle per 24-hour shift, except when operator is not on duty (weekends, holidays, etc.) Copies of these pressure profile records are maintained onsite. Alarm light and status are checked and recorded once per day except when operator is not on duty (i.e., weekends, holidays). Alarm lights will not turn off until acknowledged. After the period when an operator is not on duty, the next shift operator on duty will initiate VRU operation inspection as soon as possible after beginning shift. Periods when the interlock system shuts down the loading rack are recorded.	Results of daily inspections are recorded in the VRU Weekly Inspection Report. Incidents when the VRU is taken out of service for routine maintenance by plant personnel are recorded in a Monthly Maintenance and Malfunction Report. A quarterly maintenance report is prepared by the maintenance service company and a copy is left at the terminal prior to their departure. Results of the carbon bed testing are maintained onsite. Documentation of operator training along with the quarterly maintenance report and carbon bed test results are maintained onsite.	Records of leak checks, leaks found, and corrective actions taken are kept on file at the facility.
Averaging Period	None.	None.	None.
APCD Bypass Monitoring	The VRU/VCU vapor collection and control system is designed such that both systems can operate simultaneously. The VCU has the capacity to handle the maximum flow rate of vapors from the loading rack. Under normal operating conditions, bypass of the APCD (i.e., the VRU and VCU) cannot occur based on the design of the PSEU. Specifically, all vapors collected at the loading rack flow through a single header to the bladder tank and/or the VRU/VCU. If the vapor flow rate from the loading rack exceeds the processing rate of the VRU, the excess vapors will collect in the bladder tank. When the bladder tank reaches a certain level, additional vapors are delivered to the VCU to maintain or reduce the bladder level. When the loading rack vapor flow rate decreases below the VRU processing rate, the vapors held in the bladder tank will be processed by the VRU/VCU. There are no other lines coming from the loading rack or the bladder tank; thus, there are no alternate pathways for vapors to bypass the VRU/VCU during normal operation. Refer to Figure 1 for a diagram that shows vapor flow from the loading rack to the PSEU.		

*Indicator ranges for Compliance Indicator No. 1 were developed using US EPA guidance and equipment specifications, and are supported by emission test analyses. Emission test results are included in Appendix B.

3.2 VAPOR COMBUSTION UNIT COMPLIANCE ASSURANCE MONITORING

The table below documents how CAM will be achieved for the VCU. It follows the format provided by the US EPA guidance as summarized below.

3.2.1 Emissions Unit

1.1 Process/Emissions Unit: Transfer operation

1.2 Pollutant: VOC

1.3 Emissions Control Technique: Flare

3.2.2 Applicable Requirements

Emissions control:

- Reduce emissions of organic VOC using a flare.

Equipment standard:

- Flares must be designed and operated according to the specifications in 40 CFR 60.18.
1. The flare must be designed and operated with no visible emissions.
 2. The flare must be operated with a flame present at all times.
 3. The flare must be operated at all times when emissions may be vented to it.

3.2.3 Monitoring Approach

The US EPA guidance requires that the facility “ensure no bypass of the flare is occurring”. Because the Port Tampa Terminal uses the VRU and VCU in tandem, there is no bypass for the flare (essentially, the flare is the bypass for the VRU). There are no bypass stacks in the vapor control system. Therefore, this requirement is met through the intrinsic system arrangement.

Table 3
Vapor Combustion Unit Compliance Assurance Monitoring

Applicable Requirement	Operate flare with no visible emissions (VEs)	Operate flare with pilot flame present at all times
General Monitoring Approach	VEs observation	Monitor presence of pilot flame
Monitoring Methods and Location	VEs observation via daily visual observations, supplemented by recordkeeping of instances in which unable to correct visible emissions problem and duration of VE. Perform a VE inspection as soon as any intentional or unintentional release of vent gas to the flare occurs (no later than one hour after event).	UV detectors and alarm system
Indicator Range	No VEs	Presence of flame
Data Collection Frequency	Daily	Continuous
Averaging Period	None	None
Recordkeeping	Log all observations of VEs of more than a few seconds (control response time) and the duration of the event	Note in logbook all alarm activation incidents and record whether each alarm activation indicates the pilot flame is extinguished
QA/QC	None	Calibration, maintenance, and operation of UV sensing devices will be performed following manufacturer's specifications.

3.2.4 Basis

Visible emissions: A smoking flare indicates incomplete combustion and therefore potential VOC emissions. Use of daily visual observations gives the operator the opportunity to observe the flare at any time and take corrective action if needed.

Presence of pilot flame: Presence of pilot flame indicates that the flare is operating. A UV detection system that provides continuous monitoring and is connected to an alarm system ensures that corrective action is taken immediately if the pilot light is extinguished. The VCU cannot accept vapors if the pilot flame is not on based upon the UV sensors.

3.2.5 Additional Comments

- The US EPA document states that a video camera or daily visual observations are a means of acceptable monitoring. Establishment of a video camera was not selected because of logistical concerns. The facility currently conducts daily visual observations.
- The US EPA document raises concerns about the use of video or infrared cameras to monitor the pilot flame. The Port Tampa terminal is not proposing the use of such cameras. The UV detectors can immediately sense when the pilot flame is not present, and they are also interlocked with the PLC, which will automatically shut down the loading rack in the event that the pilot flame cannot be lit or goes out.

3.2.6 Specific Compliance Assurance Monitoring Plan Content Requirements

Performance criteria for the monitoring to satisfy 40 CFR 64.3(b):

- Specifications: UV detectors are installed to detect flame presence. Visible observations will be performed from a place where the flare is clearly visible.
- QA/QC: Follow manufacturers recommendations for maintenance of the UV detectors. Not applicable for visible observations.
- Monitoring frequency: Continuous monitoring for the UV detectors, and daily monitoring for the visible observations. Manual logging of alarm events and manual logging of incidents of visible emissions.

Appendix A
Periodic Monitoring Plan

Periodic Monitoring Plan
For
Vapor Recovery Unit (VRU) /
Vapor Combustor Unit (VCU) System
Motiva Enterprises LLC, Port Tampa Terminal

Purpose

This Plan fulfills the requirements of Specific Condition A.13 of Permit # 0570197-007-AV, which requires submittal of a periodic monitoring plan to the Environmental Protection Commission of Hillsborough County for review and approval. As required, the Plan includes parameters to be monitored and monthly checks on the VRU outlet and the VCU flame detection system to ensure proper operation and compliance. After approval, the Plan will be incorporated into the Permit.

The Plan is designed to provide reasonable assurance of compliance with the VRU/VCU performance standard of 10 mg VOC/liter gasoline loaded specified in Special Conditions A.3 and A.4. Because of differences in equipment/operation between the VRU and VCU, the Plan addresses each separately. In addition, the proposed monitoring for the VRU, the primary control device, is more rigorous than the VCU, which is operated less frequently than the VRU. The Plan does not address the vapor collection system used to provide vapors to the VRU/VCU system.

Information Sources Considered in Developing the Plan

The following sources of information were considered in developing the Plan:

- *Periodic Monitoring Guidance for Title V Operating Permit Programs*, issued by US EPA September 15, 1998.
- *Draft Periodic Monitoring Technical Reference Document*, by Midwest Research Institute for US EPA, dated April 30, 1999.
- Applicable regulations and monitoring provisions in the Permit.
- Manufacturer's Operation and Maintenance Manuals for the VRU and VCU.
- Monitoring, process, maintenance, or control data already available for the emission units.

Technical Evaluation, Justification and Selection

Tables 1 and 2 list the selected methods for the VRU and VCU, respectively. Tables 3 and 4 describe the methods evaluated, criteria used and methods selected for the Plan.

Table 1 - Periodic Monitoring Methods for VRU

Monitoring Method	Table 3 Reference	Citation, if Previously Required	Frequency
The permittee shall maintain a monthly record keeping system in order to ensure compliance with Specific Condition A.5: A) Month, year B) Product throughput: _____ gallons C) Rolling cumulative 12-month total for item B) above.	3.a	Permit Special Condition A.18	Continuous (Monthly records verify that allowed products were loaded throughout each relevant time period.)
During operation of the VRU, a deep vacuum shall be reached at the regeneration cycle and that vacuum shall be a minimum of 27 inches mercury. This should be checked and recorded daily.	2.a	Permit Special Condition A.6	Daily
Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purpose of this paragraph, detection methods incorporating sight, sound or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.	5.a	Permit Special Condition A.7.G	Monthly
The VRU outlet shall be visually inspected monthly for visible carbon emissions and build up around the VRU vent. If carbon is observed, corrective action shall be taken in accordance with the manufacturer's operation and maintenance manual. Inspections and follow-up actions shall be documented.	5.b		Monthly
Test the VRU and liquid loading equipment during each federal fiscal year (October 1 - September 30) on an annual basis for VOC.	6.a	Permit Special Condition A.9	Annual

Table 2 -- Periodic Monitoring Methods for VCU

Monitoring Method	Table 4 Reference	Citation, if Previously Required	Frequency
The permittee shall maintain a monthly record keeping system in order to ensure compliance with Specific Condition A.5: D) Month, year E) Product throughput: _____ gallons F) Rolling cumulative 12-month total for item B) above.	J.a	Permit Special Condition A.18	Continuous (Monthly records verify that allowed products were loaded throughout each relevant time period.)
Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purpose of this paragraph, detection methods incorporating sight, sound or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.	5.a	Permit Special Condition A.7.G	Monthly
During each period of use, the VCU flame detector shall be checked monthly for proper operation. The results shall be documented.	5.b		Monthly
Test the VCU-flare and System at intervals if five (5) years commencing on a 60 day window centered one-hundred and eighty days prior to the expiration of this operating permit. Test for VOC and opacity.ch federal fiscal year (October 1 - September 30) on an annual basis for VOC.	6.a	Permit Special Condition A.9	Every 5 years
Perform visual determination of visible emissions from VCU stack using Method 22, as part of tests required by Special Condition A.9.	6.c	Permit Special Condition A.8.A (frequency not specified)	Every 5 years

Table 3 - Evaluation of Existing and Potential Periodic Monitoring Methods for the VRU

General/Specific Methods Considered	Current Requirement?	Provides Reliable Data?	Provides Data Related to Relevant Time Period?	Provides Data Representative Of Compliance?	Used By Similar Sources?	Addresses Margin of Compliance And Variability Of Results?	Technical And Economic Feasibility Vs. Other Methods	Proposed for Periodic Monitoring Plan?
1. Continuous Emissions Monitoring System (CEMS)	a. No	a. Yes	a. Yes	a. Yes	a. Yes - Where required	a. Yes	a. No - CEMS is not currently in place, is expensive, and labor intensive to maintain.	a. No
2. Parametric Monitoring a. Daily check that VRU regeneration vacuum is 27 inches of mercury or greater	a. Yes - Permit Special Condition A.6	a. Yes	a. Yes	a. Yes	a. Yes - Vacuum check is part of VRU manufacturer's recommendations	a. Yes	a. Yes - Check is part of Terminal Operator's normal inspection procedure	a. Yes
3. Raw Material/ Pollutant Content/ Mass Balance a. Records of products loaded shall be kept	a. Yes - Permit Special Condition A.18	a. Yes	a. Yes	a. Yes	a. Yes	a. Yes	a. Yes - Records are already kept by Terminal	a. Yes
4. Documentation of Work Practices a. None evaluated								
5. Inspection and Maintenance/ Recordkeeping a. Monthly inspection of VRU for liquid/vapor leaks and repair within 15 days. b. Monthly visual inspection of VRU outlet for carbon emissions or buildup around VRU outlet.	a. Yes - Permit Special Condition A.7.0 b. No	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes - Records are already kept by Terminal b. Yes c. Yes - Records are already kept	a. Yes b. Yes c. Yes
6. Periodic Testing a. Test VRU for VOC each fiscal year, per 40CFR60.503 b. Test VRU for VOC in each "relevant time period" (every six hours)	a. Yes - Permit Special Condition A.9 b. No	a. Yes b. Yes	a. No b. Yes	a. Yes b. Yes	a. Yes b. No	a. Yes - Test occurs at high loading rate b. Yes	a. Yes b. No - High cost and resource burden; inadequate throughput to conduct test during certain periods	a. Yes b. No

Table 4 - Evaluation of Existing and Potential Periodic Monitoring Methods for the VCU

General/Specific Methods Considered	Current Requirement?	Provides Reliable Data?	Provides Data Related to Relevant Time Period?	Provides Data Representative Of Compliance?	Used By Similar Sources?	Addresses Margin of Compliance And Variability Of Results?	Technical And Economic Feasibility Vs. Other Methods	Proposed for Periodic Monitoring Plan?
1.a. Continuous Emissions Monitoring Systems (CEMS) (of Combustion Temperature)	a. No	a. Yes	a. Yes	a. Questionable - temperature/emissions can only be roughly correlated	b. Yes - Where required	a. Yes	a. No - CEMS is not currently in place; data is difficult and labor intensive to analyze.	a. No
2. Parametric Monitoring a. None evaluated								
3. Raw Material/ Pollutant Content/ Mass Balance a. Records of products loaded	a. Yes - Permit Special Condition A.18	a. Yes	a. Yes	a. Yes	a. Yes	a. Yes	a. Yes - Records are already kept by Terminal	a. Yes
4. Documentation of Work Practices a. None evaluated								
5. Inspection and Maintenance/ Recordkeeping a. Monthly inspection of VCU for liquid/vapor leaks and repair within 15 days. b. Check flange detector monthly for proper operation.	a. Yes - Permit Special Condition A.7.G b. No	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes b. Yes	a. Yes - Records are already kept b. Yes	a. Yes
6. Periodic Testing a. Test VCU for VOC and opacity at intervals of five years beginning 9/23/03 - 11/23/03, per 40CFR60.503 b. Test VCU for VOC and opacity in each "relevant time period" (every six hours) c. Perform visual determination of visible emissions from VCU stack using Method 22, as part of tests required by Special Condition A.9.	a. Yes - Permit Special Condition A.9 b. No c. No - Permit Special Condition A.8 specifies test method but not frequency	a. Yes b. Yes c. Yes	a. No b. Yes c. No	a. Yes b. Yes c. Yes	a. Yes b. No c. Yes	a. Yes - Test occurs at high loading rate b. Yes c. Yes	a. Yes b. No - High cost and resource burden; inadequate throughput to conduct test during certain periods c. Yes	a. Yes b. No c. Yes

Appendix B
Stack Test Reports

Please refer to the Stack Test Results located in the Control Equipment Section of the
Title V Air Permit Application Renewal

Need tests

Appendix C

Manufacturers' Recommendations (Future)

BEST AVAILABLE COPY

COMMISSION
Kathy Costor
Pat Frank
Ken Hagan
Jim Norman
Jan K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garrity, Ph.D.

Administrative Offices,
Water Management Division
The Ridge Environmental Center
1440 21st Street, Tampa, FL 33605
Ph (813) 272-5605 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-7144
Wetlands Management Fax 272-7144
1440 21st Street • Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 7/6/04

TO: Sarah Hutton

FAX Phone: 850-922-6979 Voice Phone: 850-922-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 4

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1269

FROM: Ben Dennis

(Circle applicable section below)

Air Division

-Compliance

-Enforcement/Analysis

-Monitoring/Toxics

-Permitting

SPECIAL INSTRUCTIONS: For Your Info. Any Comments?

RECEIVED

JUL 06 2004

DIVISION OF AIR
RESOURCE MANAGEMENT

BEST AVAILABLE COPY

COMMISSION
 Kathy Castor
 Pat Frank
 Ken Hagan
 Jim Norman
 Jan K. Platt
 Thomas Scott
 Ronda Storms



Executive Director
 Richard D. Garrity, Ph.D.

Administrative Offices,
 Loyal Water Management Division
 The Roger P. Stewart Environmental Center
 1900 9th Ave. • Tampa, FL 33605
 Ph. (813) 272-3960 • Fax (813) 272-5157
 Air Management Fax 272-3605
 Waste Management Fax 272-2256
 Wetlands Management Fax 272-7144
 1410 21st Street • Tampa, FL 33605

April 29, 2004

Mr. Craig Payne
 Plant Manager
 Motiva Enterprises, LLC
 6500 Commerce Street
 Tampa, FL 33609

Re: Periodic Monitoring Plan and CAM Plan

Dear Mr. Payne:

The Environmental Protection Commission of Hillsborough County has reviewed the response of the Warning Notice dated on October 6th, 2003. Based on EPC's staff review, your facility meets the exemptions under 40 CFR 63 Subpart R and therefore, the facility is not in violation of the continuous emission monitoring requirements as stipulated in 40 CFR 63.427(a)(1) and (3).

However, during our review of the records it was found that, in accordance with 40 CFR 60 Section 70.6(a) (3) Rule 62-213.440 (1) (b) F.A.C. and Specific Condition A.13 of your Title V Permit 0570197-007-AV, Motiva was required to implement a Periodical Monitoring Plan on the VRU/ VCU systems. The plan submitted by your facility on August 20, 1999 was initially found to be acceptable by EPC staff, however, subsequent evaluation of this plan was found to be deficient.

In accordance with Section 504 of the Clean Air Act and the State of Florida's Periodic Monitoring Rule 62-213.440 (1) (b), all Title V permits must contain periodic monitoring to assure compliance with the applicable requirements in the permit. The above mentioned regulations specify that all Title V permits contain the following;

- (1) All monitoring and analysis procedures or test methods required under the applicable monitoring and testing requirements,
- (2) Periodic monitoring sufficient to yield reliable data and demonstrate compliance with the permit. Such monitoring requirements shall assure use of recordkeeping terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirements, and
- (3) Requirements concerning the use, maintenance, and installation of monitoring equipment or methods.

Furthermore, the permit shall incorporate all applicable recordkeeping requirements including;

- (1) Records of monitoring information that specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement,

BEST AVAILABLE COPY

- (2) the date(s) analyses were performed,
- (3) the company or entity that performed the analyses,
- (4) the analytical techniques or methods used, and
- (5) results of such analyses.

Based on the above requirements, Motiva's Periodic Monitoring Plan should have contained the monitoring of a key parameter (e.g. VRU regeneration vacuum pressure, carbon activity level, VCU combustion temperature or outlet VOC concentration) with a specific monitoring frequency, units, measuring technique and averaging time. This information could have been established during the testing of the control device(s) to assure compliance with the permit conditions or generated from design and historical information.

However, since Motiva is in the process of renewing their Title V Permit, a Continuous Assurance Monitoring (CAM) Plan is also required with the renewal application. The CAM Plan should have contained the required elements of the Periodic Monitoring Plan already stated above and the requirements stipulated in 40 CFR 64.

40 CFR Section 64.3 requires that the CAM plan provide reasonable assurance of compliance with the emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit. The rule further states that the monitoring meets the following general criteria, which have been summarized:

- (1) The owner or operator shall design the monitoring to obtain data for one or more indicators of emission control performance for the control device, any associated capture system and, if necessary processes at a pollutant specific emissions unit.
- (2) The owner or operator shall establish an appropriate range(s) or designated condition(s) for the selected indicator(s) such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions. Such range(s) or condition(s) shall reflect the proper operation and maintenance of the control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operating conditions at least to the level required to achieve compliance with the applicable requirements.

In addition, unless specifically stated otherwise by an applicable requirement, the owner or operator shall monitor indicators to detect any bypass of the control device (or capture system) to the atmosphere, if such bypass can occur based on the design of the pollutant-specific emissions unit.

Furthermore, the owner or operator shall design the monitoring to meet the following performance criteria:

- (1) Specifications that provide for obtaining data that are representative of the emissions or parameters being monitored (such as detector location and installation specifications, if applicable).
- (2) For new or modified monitoring equipment, verification procedures to confirm the operational status of the monitoring prior to the date by which the owner or operator must conduct monitoring under this part as specified in § 64.7(a). The owner or operator shall consider the monitoring equipment manufacturer's requirements or recommendations for installation, calibration, and start-up operation.

BEST AVAILABLE COPY

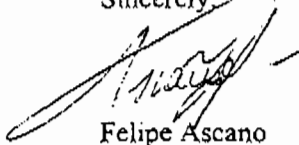
(3) Quality assurance and control practices that are adequate to ensure the continuing validity of the data. The owner or operator shall consider manufacturer recommendations or requirements applicable to the monitoring in developing appropriate quality assurance and control practices.

(4) Specifications for the frequency of conducting the monitoring, the data collection procedures that will be used (e.g., computerized data acquisition and handling, alarm sensor, or manual log entries based on gauge readings), and, if applicable, the period over which discrete data points will be averaged for the purpose of determining whether an excursion or exceedance has occurred. At a minimum, the owner or operator shall design the period over which data are obtained and, if applicable, averaged consistent with the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). For all pollutant-specific emissions units with the potential to emit greater than the major source threshold, the owner or operator shall for each parameter monitored collect four or more data values equally spaced over each hour and average the values, as applicable, over the applicable averaging period. For all other non-major pollutant-specific emissions units, the frequency of data collection may be less than the four per hour, but the monitoring shall include some data collection at least once per 24-hour period (e.g., a daily inspection of a carbon absorber operation in conjunction with a weekly or monthly check of emissions with a portable analyzer).

The above mentioned general and performance criteria should have been included in the CAM plan in order to fulfill the requirements of the rules. In your letter dated March 11, 2004, which you submitted to the EPC, you requested an extension of time to submit the CAM plan and stated that you planned to conduct tests on the VRU. However, you do not mention any planned testing on the VCU. Please be advised that the CAM Plan must include the VCU because it is also a control device for the loading rack.

Please submit a revised Periodic Monitoring and CAM Plan that includes the above mentioned information within 30 days of receipt of this letter. Please be advised that a failure to do so may result in enforcement action. If you have any questions, please contact Diana Lee, P.E. at (813) 272-5530.

Sincerely,



Felipe Ascano
Air Compliance Engineer

BEST AVAILABLE COPY

COMMISSION
Kathy Castor
Pat Frank
Ken Hagan
Jim Norman
Jan K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garrity, Ph.D.

Administrative Offices,
Legal & Water Management Division
The Roger P. Stewart Environmental Center
1400 9th Ave • Tampa, FL 33605
Ph. (813) 272-5600 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-2250
Wetlands Management Fax 272-7144
1410 21st Street • Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 5/27/04

TO: Jonathan Holton

FAX Phone: 850-922-6979 Voice Phone: 850-901-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 2

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1269

FROM: Pat Dennis

(Circle applicable section below)

- Air Division
 - Compliance
 - Monitoring/Toxics
- Enforcement/Analysis
- Permitting

SPECIAL INSTRUCTIONS: I did find a page in the initial Motiva permit application asking for a change in Permit Condition 4.6 so that it agree with the CAM Plan. This page is attached to this info.

BEST AVAILABLE COPY

Motiva Enterprises LLC
 Port Tampa Terminal - FDEP Facility ID No. 0570197

Requested Permit Changes

Motiva requests the following changes be incorporated into the Title V Air Permit renewal based on the justification provided.

Item	Action	Comment
Emission Unit Group 011 – Additive Tanks	Deletion of group from Permit and Removal of all corresponding permit conditions.	<ul style="list-style-type: none"> Emissions from additive tanks are considered insignificant per FDEP Rule 62-213.430(6)(b). Total emissions for all additive tanks combined are as follows: PTE total HAPs = 0.02 tpy (40 lbs); PTE VOCs = 0.14 tpy. The total facility throughput of 679,053,000 gallons per any twelve consecutive months will still apply and will include any throughput through these additive tanks.
Emission Unit Group – Fugitive Emissions	Deletion of group from Permit and removal of all corresponding permit conditions	Emissions from the fugitive emissions group are considered insignificant per FDEP Rule 62-213.430(6)(b). Total emissions for the fugitive emissions group are as follows: PTE VOCS = 0.82 TPY; PTE Total HAPS = 0.14 tpy.
Annual VRU Testing – Permit Condition A.9.	Modification of testing requirement	Rule 62-297.310(7)(a) 4 requires testing only if the source has an applicable emission standard and the emissions are greater than the thresholds listed. Although the VRU does have an emission limitation of 10 mg TOC/l, potential VOC emissions for the VRU do not exceed the thresholds (100 tons per year). Motiva requests that the annual VRU testing be modified to once every five years (prior to Title V Permit Application Renewal).
Revision to product throughput for facility.	<ul style="list-style-type: none"> Revise Permit Condition A.1. to reflect maximum throughput of 679,053,000 gallons (this includes throughput for additive tanks) Revise Permit Condition A.5. to reflect same maximum throughput of 679,053,000 gallons. 	For emission units, Motiva Enterprises requests a maximum throughput rate to ensure compliance.
Revision to product throughput for Emission Group 009	Revise Permit Condition B.1. to reflect throughput used in Title V Permit Renewal for Distillate Tank Group (Emission Unit 009).	Maximum product throughput for Emission Unit 009 for any twelve consecutive months is: 180,670,000 gallons.
Revision to Permit Condition No. A.6.	Modify Permit Condition A.6. to be in accordance with the requirements set forth in the Compliance Assurance Monitoring Plan.	In accordance with the CAM Plan, if the regeneration vacuum is less than 27.0 inches of mercury, the action level has been triggered. If the vacuum is less than 26.5 inches of mercury, then the excursion level has been triggered. The corresponding actions and reporting noted for these two levels in the CAM plan will apply.
Permit Condition No. A.2.	Revise process flow description of the Vapor Recovery System	The vapors can be routed to the bladder tank or can be sent directly to the VRU or the VCU. Refer to the Alternative Methods of Operation and Process Flow Diagrams for additional information.
Permit Condition No. A.13.	Remove Permit Condition No. A.13. since this Periodic Monitoring Plan has already been submitted to the EPC.	The plan will need to be incorporated into the Title V Air Permit.

BEST AVAILABLE COPY

COMMISSION
Kathy Casor
Pat Frank
Ken Hagan
Jim Norman
Jan K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garrity, Ph.D.

Administrative Offices,
Legal & Water Management Division
The Robert Stewart Environmental Center
1400 21st Street • Tampa, FL 33605
Ph (813) 272-5605 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-2256
Wetlands Management Fax 272-7134
1410 21st Street • Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 6/29/04

TO: Sarah Ann Dalton

FAX Phone: 850-933-6979 Voice Phone: 850-933-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 2

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1269

FROM: Pat Dennis

(Circle applicable section below)

- Air Division
- Compliance
- Monitoring/Toxics
- Enforcement/Analysis
- Permitting

SPECIAL INSTRUCTIONS: Turn 4th letter from Bill Norman
forwarded per your request.
Call Louise Scott at 813-272-5157
first. would be reserve the administrative Conference room at our
main building at 1400 21st Avenue for CAM Training the last week in July.
Pat Dennis has no problem with this week.

BEST AVAILABLE COPY



**CERTIFIED MAIL 7003 1010 0001 8489 5287
RETURN RECEIPT REQUESTED**

June 4, 2004

Ms. Alice H. Harman
Environmental Protection Commission of Hillsborough County
Lozano Building
1410 N. 21st Street
Tampa, FL 33605

Subject: Request for Modification of Construction Permit
Hillsborough County – AP; DEP File No. 0570197-013-AV
Motiva Enterprises LLC - Port Tampa Terminal
6500 West Commerce Street, Tampa, Florida

Dear Ms. Harman:

Pursuant to my conversation with your Mr. Ron Dennis, this letter serves to request that the subject construction permit be modified to reflect operational limits established through EPA approved testing. Presently, condition A6 of the current operating permit limits the minimum vacuum on the regeneration cycle of the carbon beds to 27 in/hg. The tests established that at 25.5 in/hg, the unit operates below the permit limit of 10 ppm VOCs. The CAM plan submitted with the permit renewal sets the corrective action level at 26.5 in/hg and the excursion level at 25.5 in/hg. Motive feels that based upon the test results and the procedures established in the CAM plan, that the new limit will insure that the unit operates below the 10 ppm emission limit.

I would like to express my appreciation of Mr. Dennis's assistance with the permit renewal.

If you have any questions, please call me at (615)350-8180.

Sincerely,

Jil J. Norman
Environmental Engineer III

CC: JHoltman – FLDEP
RDennis – EPCHC
JCPayne – Motiva Enterprises
RButala - Earthtec

RECEIVED
JUN 08 2004

EPC AIR MANAGEMENT

BEST AVAILABLE COPY

COMMISSION
Kathy Costor
Pat Frank
Ken Hagan
Jim Norman
Jan K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garrity, Ph.D.

Administrative Offices,
Legal & Water Management Division
The Royal Poinciana Environmental Center
1900 98th Ave. • Tampa, FL 33605
Ph. (813) 272-5605 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-2250
Wetlands Management Fax 272-7144
1400 21st Street • Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 6/1/04

TO: Sarah Ann Dalton

FAX Phone: 850-922-6979 Voice Phone: 850-922-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 4

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1069

FROM: Ben Demas

(Circle applicable section below)

Air Division

-Compliance

-Enforcement/Analysis

-Monitoring/Toxics

-Permitting

SPECIAL INSTRUCTIONS: We just received this letter today from
Neha. It has info regarding their proposed Cam Plan. Have
you decided whether we need a second interpretation letter with respect to
the Cam Plan?

BEST AVAILABLE COPY



CERTIFIED MAIL 7004 0750 0000 7233 3870
RETURN RECEIPT REQUESTED

May 26, 2004

Ms. Alice Harman
Environmental Protection Commission of Hillsborough County
1410 N. 21st Street
Tampa, Florida 33605

Subject: Response to EPC's Comments dated April 29, 2004
DEP File No. 0570197-013-AV
Motiva Enterprises LLC,
6500 West Commerce Street, Tampa, Florida

Dear Ms. Harman:

Motiva Enterprises LLC, located at the above address (Motiva), has received EPC's request for additional information in regards to the Periodic Monitoring Plan submitted in 1999, and the Compliance Assurance Monitoring (CAM) Plan related to the Title V renewal application that Motiva submitted initially in October 2003. (Please note that a revised Title V renewal application was submitted in May 2004). Specifically, EPC requested that Motiva submit a revised Periodic Monitoring Plan and CAM Plan that include specific information as outlined in your letter. The specific information requested in these two plans is as follows:

1. The Periodic Monitoring Plan shall meet the requirements of the State Of Florida's Periodic Monitoring Rule 62-213.440(1)(b);
2. The CAM Plan shall be designed to obtain data from one or more indicators of emission control performance for the control device;
3. The CAM Plan shall establish an appropriate range(s) or designated condition(s) for the selected indicator(s) to provide reasonable assurance of ongoing compliance;
4. The CAM Plan shall include monitoring to detect any bypass of the control device if such bypass can occur based on the design of the pollutant specific emission unit;
5. The CAM Plan shall include specifications that provide for obtaining data that are representative of the emissions parameters being monitored (such as detector location and installation specifications, if applicable);
6. For new monitoring equipment, the CAM Plan shall include verification procedures to confirm operational status prior to the date the owner must conduct monitoring as specified under 40 CFR 64.7(a);

BEST AVAILABLE COPY

7. The CAM Plan shall include specifications for the frequency of conducting the monitoring, the data collection that will be used, and, if applicable, the period over which discrete data points will be averaged; and
8. The CAM Plan shall include the VCU.

Motiva has reviewed the documents we have submitted and your request for additional information, and provides the following responses.

1. Pursuant to 62-213.440(1)(b), periodic monitoring shall be conducted to meet the requirements under 62-213.440(4). In accordance with 62-213.440(4)(b)(3), "monitoring performed pursuant to... emission limits or standards for which monitoring requirements are established pursuant to 40 CFR 64 (Compliance Assurance Monitoring)... satisfies periodic monitoring for that requirement". Therefore, the submittal and forthcoming approval of the CAM Plan will satisfy the requirement for periodic monitoring.
2. The CAM Plan includes indicators of performance for both the VRU and VCU. Consistent with EPA guidance, vacuum level was selected as the indicator of performance for the VRU. In accordance with EPA guidance, two indicators of compliance were provided for the VCU, visible emissions and presence of a pilot flame.
3. The CAM Plan includes the designated conditions under which both the VRU and VCU provide a reasonable assurance of ongoing compliance with the applicable emission limit. The designated condition for the VRU is a vacuum level at or above 25.5 inches of mercury based upon recent emissions testing. The emissions testing demonstrated compliance with the applicable emission limit at vacuum levels at or above 25.0 inches of mercury. The designated conditions for the VCU are no visible emissions and the presence of the pilot flame. Emissions testing of the VCU submitted with the CAM Plan documents compliance with the applicable emission limit.
4. As discussed in the APCD Bypass Monitoring for the VRU CAM and Section 3.2.3 of the CAM Plan, the design of the control system does not allow for bypass of the control devices.
5. In accordance with EPA Guidance and as noted in the Performance Criteria for the VRU, the vacuum will be measured in the vacuum pump suction line and the minimum accuracy of the pressure transmitter will be ± 1.0 percent. The performance criteria specifications for the VCU, as described in Section 3.2.6 of the CAM Plan, are UV detectors will be installed to detect flame presence. Visible emission observations will be performed from a place where the flare is clearly visible.
6. As specified under 40 CFR 64.7(a), "the owner or operator shall conduct the monitoring required under this part upon issuance of a Part 70 or 71 permit that includes such monitoring, or by such later date specified in the permit pursuant to §64.6(d)". The provisions of 40 CFR 64.6(d) state that "if the monitoring proposed requires installation, testing or final verification of operational status, the Part 70 or 71 permit shall include an enforceable schedule with appropriate milestones for completing such installation, testing, or final verification consistent with the requirements in §64.4(e)". In accordance with 40 CFR 64.4(e), Motiva has proposed an implementation schedule of 180 days for installing, testing and performing any other appropriate activities prior to use of the monitoring equipment required for the VRU. For the VCU, the pilot flame monitoring device is existing equipment and therefore not subject to these provisions under 40 CFR 64.
7. In accordance with EPA Guidance and as documented in the CAM Plan, the VRU regeneration vacuum will be monitored and recorded continuously. The operator will record records of the pressure profile daily. In accordance with EPA Guidance and as documented in the CAM Plan, the presence of a pilot

BEST AVAILABLE COPY

flame in the VCU will be monitored continuously and visible emissions will be checked daily. Records of visible emissions and any alarms of the pilot flame will be recorded for each specific event.

8. Monitoring of the VCU is included in the CAM plan and emissions test data for the VCU was submitted in the section titled "Control Device Information" in the Title V renewal application submitted in May 2004. Motiva will complete a new round of performance testing in May 2004 and will submit the results of this testing to the EPC.

Motiva would like to stress that the proposed CAM Plans for the VRU and VCU were taken directly from EPA guidance¹ that was developed to meet the requirements under 40 CFR 64. The monitoring proposed for the VRU and VCU is also consistent with CAM Plans approved by the EPC for VRUs and VCUs at other facilities. Therefore, we strongly believe that our proposed CAM Plan is compliant with applicable state and federal regulations.

Should you have any questions or require additional information regarding this additional information, please contact me at (615) 350-8180 or via e-mail at JJNorman@Motivaenterprises.com

Sincerely,

Motiva Enterprises LLC



Jil J. Norman
Environmental Engineer

cc: Mr. J Craig Payne, Motiva Enterprises LLC
Ms. Jil J Norman, Motiva Enterprises LLC
Ms. Reshmi Butala, Earth Tech, Inc.

¹ <http://www.epa.gov/ttn/emc/cam/appsa-c99.pdf>, <http://www.epa.gov/ttn/emc/cam/camsupp2.pdf>

BEST AVAILABLE COPY

COMMISSION
Kathy Castor
Pat Frank
Ken Hagan
Jim Norman
Ian K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garnity, Ph.D.

Administrative Offices
Water Management Division
The Robert S. Sigwart Environmental Center
1900 21st Ave. - Tampa, FL 33605
Ph (813) 272-5940 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-2250
Welfare Management Fax 272-7144
1410 21st Street - Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 5/27/04

TO: Jonathan Walton

FAX Phone: 850-922-6979 Voice Phone: 850-911-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 3

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1269

FROM: Pat Dennis

(Circle applicable section below)

- Air Division
- Compliance
- Monitoring/Toxics
- Enforcement/Analysis
- Permitting

SPECIAL INSTRUCTIONS: Here's some info on the maximum Volcano levels will during the three recent tests. Hopefully, this will help you make sure some out of the state test data that I sent you earlier. I am surprised that this info was not included with the test results

BEST AVAILABLE COPY

MOTIVA
ENTERPRISES LLC

CERTIFIED MAIL 7003 1010 0001 8489 5478
RETURN RECEIPT REQUESTED

RECEIVED

APR 05 2004

April 1, 2004

Ms. Dianna Lee
Environmental Protection Commission of Hillsborough County
Lozano Building
1410 N. 21st Street
Tampa, FL 33605

EPC of HC
AIR MANAGEMENT

Subject: Notice of Proposed Testing of VRU
Hillsborough County - AP
DEP File No. 0570197-013-AV
Motiva Enterprises LLC
Port Tampa Terminal
6500 West Commerce Street, Tampa, Florida

Dear Ms. Lee:

Pursuant to the conversations that Ms. Reshmi Butala of Earth Tech had held with you on February 26, and March 30, 2004, Motiva Enterprises LLC, hereby provides notice of VOC emission tests that it proposes to conduct on the Vapor Recovery Unit at its Tampa terminal. This testing is a voluntary action that Motiva is taking in order to determine if the facility can lower the regeneration vacuum level setting on the VRU and still maintain compliance with the permitted VOC emission limit. Results from these tests will help the facility address EPC's comments/concerns on Motiva's CAM plan that was submitted in October 2003, in conjunction with the Title V permit renewal application. Currently, the facility's Title V permit requires that a regeneration level vacuum of 27 inches of Hg be maintained. The testing was/will be conducted by Jordan Technologies as follows:

Test 1 (held during week of March 22, 2004): A 3-hour run was conducted at a maximum vacuum level of 26.5 inches of Hg, during which time the carbon bed temperatures were monitored once an hour.

Test 2 (held during week of March 22, 2004): A second test run was conducted for 24 hours at 26 inches of Hg vacuum. The carbon bed temperatures were monitored at the beginning and end of the 24-hour run.

Test 3 (to be held on Wednesday, April 7, 2004): A 3-hour test will be conducted at a maximum vacuum level of 25.5 inches of Hg; if results from this test are favorable, the facility may conduct an additional test at 25 inches of Hg vacuum. The carbon bed temperature will be monitored once an hour.

BEST AVAILABLE COPY

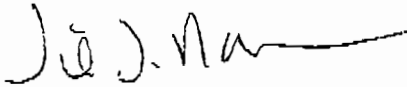
Notice of Proposed Testing
Page 2

The test method used will be Method 25B for all three tests. Sample lines will be installed at the vent stacks of each carbon vessel, which runs to a 3-way solenoid valve hooked to a sample pump. The sample pump will provide a sample to the 0%-5% analyzer, which is monitored by a chart recorder. The recorder monitors the analyzer every 5 seconds and gives a 5 minute average. The results are then calculated to give an average mg/l emission rate. Prior to each test run, the analyzer is calibrated at the beginning of each run with a High, Medium and Low range gas and at the end with the Medium gas.

Results from all three tests will be submitted with the revised CAM plan.

Should you have any questions or comments on this test protocol, please contact me at (615) 350-8180 or Ms. Reshmi Butala of Earth Tech at (770) 990-1417.

Sincerely,



Jil J. Norman

Environmental Engineer III

Cc: Ms. Alice Harman, EPC

Mr. Ron Dennis, EPC ✓

Steve Babcock, Earth Tech

BEST AVAILABLE COPY

COMMISSION
Kathy Castor
Pat Frank
Ken Hagan
Jim Norman
Ian K. Platt
Thomas Scott
Ronda Storms



Executive Director
Richard D. Garrity, Ph.D.

Administrative Offices,
Legal & Water Management Division
The Reg. of Stewart Environmental Center
1901 17th Ave. • Tampa, FL 33605
Ph (813) 272-5605 • Fax (813) 272-5157
Air Management Fax 272-5605
Waste Management Fax 272-5256
Wetlands Management Fax 272-7144
1410 1st Street • Tampa, FL 33605

ENVIRONMENTAL PROTECTION COMMISSION
of Hillsborough County

FAX Transmittal Sheet

DATE: 5/20/04

TO: Jonathan Horton

FAX Phone: 84-920-6979 Voice Phone: 850-921-9531

TOTAL NUMBER OF PAGES INCLUDING THIS COVER PAGE: 16

EPC FAX Transmission Line: (813) 272-5605
For retransmission or any FAX problems, call:
(813) 272-5530 ext. 1269

FROM: Pam Dennis

(Circle applicable section below)

Air Division

-Compliance

-Enforcement/Analysis

-Monitoring/Toxics

-Permitting

SPECIAL INSTRUCTIONS: Motiva Enterprises LLC - VRI
Test 1, 2, and 3 Results per your request. I am off on
Friday but I will be back on Monday.

BEST AVAILABLE COPY

**VRU, Test 1 Results
3-hr CEM, March 25, 2004**

The table area contains a grid of lines, but the text within the cells is extremely faint and illegible. It appears to be a data table with multiple columns and rows, but no specific values can be discerned.

**Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 1 Results
3-hr CEM, March 25, 2004**

Test results as provided by Jordan Technologies

cem003.wk4

VRU Emissions and Efficiency from CEM Data

Estimated Calculations

input
calcs.
alternate

Use One Truck Load as the Basis for all Calculations

Truck Volume =	9,000	gals	
HC vol% in =	30	vol %	359.08858
HC vol% out =	0.02	vol %	379.43089
Purge Air Volume Fraction =	0.1	NOTE: this is variable	
Propane Calibration Gas Density =	7	gm/gal	6.9465608
Butane Calibration Gas Density =	9.2	gm/gal	9.1562215

HC Mass In = 9000 gal x 30 % HC x 7 gm/gal
= **18,900** gm

HC Mass Out = ((9000 gal x (1-30%HC)) + (9000 x 0.1)) x 0.02%HC x 7 gm/gal
= **10** gm

mg/liter unit conversion = HC mass out x 1000 mg/gm x 1/9000 gal x 1/3.785 liter/gal
= **0.30** mg/liter

Efficiency calculation = (HC mass in - HC Mass out)/HC Mass in x 100%

99.47 %

HC In vol %
HC out vol %

% volume to % weight

HC =	65	lb/lb-mole
	65	% vol
	80.63	% wt

Air =	29	lb/lb-mole
	35.00	% vol
	19.37	% wt

% weight to % volume

HC =	65	lb/lb-mole
	80.63	% wt
	65.00	% vol

Air =	29	lb/lb-mole
	19.37	% wt
	35.00	% vol

**Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 1 Results
 3-br CEM, March 25, 2004**

20	efficiency	mg/liter	25	efficiency	mg/liter	30	efficiency	mg/liter	35	efficiency	mg/liter
0.1	99.55	1.66	0.1	99.66	1.57	0.1	99.73	1.48	0.1	99.79	1.39
0.2	99.10	3.33	0.2	99.32	3.14	0.2	99.47	2.96	0.2	99.57	2.77
0.3	98.65	4.99	0.3	98.98	4.72	0.3	99.20	4.44	0.3	99.36	4.16
0.4	98.20	6.66	0.4	98.64	6.29	0.4	98.93	5.92	0.4	99.14	5.55
0.5	97.75	8.32	0.5	98.30	7.86	0.5	98.67	7.40	0.5	98.93	6.94
0.6	97.30	9.99	0.6	97.96	9.43	0.6	98.40	8.88	0.6	98.71	8.32
0.7	96.85	11.65	0.7	97.62	11.00	0.7	98.13	10.36	0.7	98.50	9.71
0.8	96.40	13.32	0.8	97.28	12.58	0.8	97.87	11.84	0.8	98.29	11.10
0.9	95.95	14.98	0.9	96.94	14.15	0.9	97.60	13.32	0.9	98.07	12.48
1	95.50	16.64	1	96.60	15.72	1	97.33	14.80	1	97.86	13.87
1.1	95.05	18.31	1.1	96.26	17.29	1.1	97.07	16.27	1.1	97.64	15.26
1.2	94.60	19.97	1.2	95.92	18.86	1.2	96.80	17.75	1.2	97.43	16.64
1.3	94.15	21.64	1.3	95.58	20.44	1.3	96.53	19.23	1.3	97.21	18.03
1.4	93.70	23.30	1.4	95.24	22.01	1.4	96.27	20.71	1.4	97.00	19.42
1.5	93.25	24.97	1.5	94.90	23.58	1.5	96.00	22.19	1.5	96.79	20.81
1.6	92.80	26.63	1.6	94.56	25.15	1.6	95.73	23.67	1.6	96.57	22.19
1.7	92.35	28.30	1.7	94.22	26.72	1.7	95.47	25.15	1.7	96.36	23.58
1.8	91.90	29.96	1.8	93.88	28.30	1.8	95.20	26.63	1.8	96.14	24.97
1.9	91.45	31.62	1.9	93.54	29.87	1.9	94.93	28.11	1.9	95.93	26.35
2	91.00	33.29	2	93.20	31.44	2	94.67	29.59	2	95.71	27.74
2.5	88.75	41.61	2.5	91.50	39.30	2.5	93.33	36.99	2.5	94.64	34.68
3	86.50	49.93	3	89.80	47.16	3	92.00	44.39	3	93.57	41.61
3.5	84.25	58.26	3.5	88.10	55.02	3.5	90.67	51.78	3.5	92.50	48.55
4	82.00	66.58	4	86.40	62.88	4	89.33	59.18	4	91.43	55.48
4.5	79.75	74.90	4.5	84.70	70.74	4.5	88.00	66.58	4.5	90.36	62.42
5	77.50	83.22	5	83.00	78.60	5	86.67	73.98	5	89.29	69.35

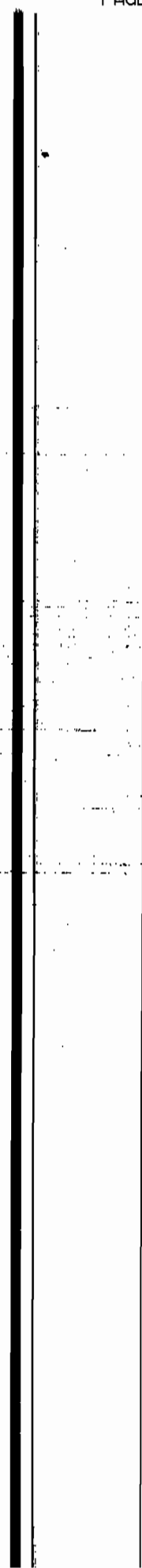
Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 1 Results
3-hr CEM, March 25, 2004

40	efficiency	mg/liter	45	efficiency	mg/liter	50	efficiency	mg/liter	55	efficiency	mg/liter
0.1	99.83	1.29	0.1	99.86	1.20	0.1	99.88	1.11	0.1	99.90	1.02
0.2	99.65	2.59	0.2	99.71	2.40	0.2	99.76	2.22	0.2	99.80	2.03
0.3	99.48	3.88	0.3	99.57	3.61	0.3	99.64	3.33	0.3	99.70	3.05
0.4	99.30	5.18	0.4	99.42	4.81	0.4	99.52	4.44	0.4	99.60	4.07
0.5	99.13	6.47	0.5	99.28	6.01	0.5	99.40	5.55	0.5	99.50	5.09
0.6	98.95	7.77	0.6	99.13	7.21	0.6	99.28	6.66	0.6	99.40	6.10
0.7	98.78	9.06	0.7	98.99	8.41	0.7	99.16	7.77	0.7	99.30	7.12
0.8	98.60	10.36	0.8	98.84	9.62	0.8	99.04	8.88	0.8	99.20	8.14
0.9	98.43	11.65	0.9	98.70	10.82	0.9	98.92	9.99	0.9	99.10	9.15
1	98.25	12.95	1	98.56	12.02	1	98.80	11.10	1	99.00	10.17
1.1	98.08	14.24	1.1	98.41	13.22	1.1	98.68	12.21	1.1	98.90	11.19
1.2	97.90	15.54	1.2	98.27	14.43	1.2	98.56	13.32	1.2	98.80	12.21
1.3	97.73	16.83	1.3	98.12	15.63	1.3	98.44	14.43	1.3	98.70	13.22
1.4	97.55	18.12	1.4	97.98	16.83	1.4	98.32	15.54	1.4	98.60	14.24
1.5	97.38	19.42	1.5	97.83	18.03	1.5	98.20	16.64	1.5	98.50	15.26
1.6	97.20	20.71	1.6	97.69	19.23	1.6	98.08	17.75	1.6	98.40	16.27
1.7	97.03	22.01	1.7	97.54	20.44	1.7	97.96	18.86	1.7	98.30	17.29
1.8	96.85	23.30	1.8	97.40	21.64	1.8	97.84	19.97	1.8	98.20	18.31
1.9	96.68	24.60	1.9	97.26	22.84	1.9	97.72	21.08	1.9	98.10	19.33
2	96.50	25.89	2	97.11	24.04	2	97.60	22.19	2	98.00	20.34
2.5	95.63	32.36	2.5	96.39	30.05	2.5	97.00	27.74	2.5	97.50	25.43
3	94.75	38.84	3	95.67	36.06	3	96.40	33.29	3	97.00	30.52
3.5	93.88	45.31	3.5	94.94	42.07	3.5	95.80	38.84	3.5	96.50	35.60
4	93.00	51.78	4	94.22	48.08	4	95.20	44.39	4	96.00	40.69
4.5	92.13	58.26	4.5	93.50	54.10	4.5	94.60	49.93	4.5	95.50	45.77
5	91.25	64.73	5	92.78	60.11	5	94.00	55.48	5	95.00	50.86

Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 1 Results
3-hr CEM, March 25, 2004

60	efficiency	mg/liter
0.1	99.92	0.92
0.2	99.83	1.85
0.3	99.75	2.77
0.4	99.67	3.70
0.5	99.58	4.62
0.6	99.50	5.55
0.7	99.42	6.47
0.8	99.33	7.40
0.9	99.25	8.32
1	99.17	9.25
1.1	99.08	10.17
1.2	99.00	11.10
1.3	98.92	12.02
1.4	98.83	12.95
1.5	98.75	13.87
1.6	98.67	14.80
1.7	98.58	15.72
1.8	98.50	16.64
1.9	98.42	17.57
2	98.33	18.49
2.5	97.92	23.12
3	97.50	27.74
3.5	97.08	32.36
4	96.67	36.99
4.5	96.25	41.61
5	95.83	46.24

VRU, Test 2 Results
24-hr CEM, March 25, 2004



Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 2 Results
 24-hr CEM, March 25, 2004

Test results as provided by Jordan Technologies

cem003.wk4

VRU Emissions and Efficiency from CEM Data

Estimated Calculations

input
calcs.
alternate

Use One Truck Load as the Basis for all Calculations

Truck Volume =	9,000	gals	
HC vol% in =	30	vol %	359.088576
HC vol% out =	0.02	vol %	379.430894
Purge Air Volume Fraction =	0.1	NOTE: this is variable	
Propane Calibration Gas Density =	7	gm/gal	6.94656079
Butane Calibration Gas Density =	9.2	gm/gal	9.1562215

HC Mass In = 9000 gal x 30 % HC x 7 gm/gal
 = 18,900 gm

HC Mass Out = ((9000 gal x (1-30%HC)) + (9000 x 0.1)) x 0.02%HC x 7 gm/gal
 = 10 gm

mg/liter unit conversion = HC mass out x 1000 mg/gm x 1/9000 gal x 1/3.785 liter/gal
 = 0.30 mg/liter

Efficiency calculation = (HC mass in - HC Mass out)/HC Mass in x 100%
 = 99.95 %

HC In vol %

HC out vol %

% volume to % weight

HC =	65	lb/lb-mole
	65	% vol
	80.63	% wt

Air =	29	lb/lb-mole
	35.00	% vol
	19.37	% wt

% weight to % volume

HC =	65	lb/lb-mole
	80.63	% wt
	65.00	% vol

Air =	29	lb/lb-mole
	19.37	% wt
	35.00	% vol

Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 2 Results
24-hr CEM, March 25, 2004

20	efficiency	mg/liter	25	efficiency	mg/liter	30	efficiency	mg/liter	35	efficiency	mg/liter
0.1	99.55	1.66	0.1	99.66	1.57	0.1	99.73	1.48	0.1	99.79	1.39
0.2	99.10	3.33	0.2	99.32	3.14	0.2	99.47	2.96	0.2	99.57	2.77
0.3	98.65	4.99	0.3	98.98	4.72	0.3	99.20	4.44	0.3	99.36	4.16
0.4	98.20	6.66	0.4	98.64	6.29	0.4	98.93	5.92	0.4	99.14	5.55
0.5	97.75	8.32	0.5	98.30	7.86	0.5	98.67	7.40	0.5	98.93	6.94
0.6	97.30	9.99	0.6	97.96	9.43	0.6	98.40	8.88	0.6	98.71	8.32
0.7	96.85	11.65	0.7	97.62	11.00	0.7	98.13	10.36	0.7	98.50	9.71
0.8	96.40	13.32	0.8	97.28	12.58	0.8	97.87	11.84	0.8	98.29	11.10
0.9	95.95	14.98	0.9	96.94	14.15	0.9	97.60	13.32	0.9	98.07	12.48
1	95.50	16.64	1	96.60	15.72	1	97.33	14.80	1	97.86	13.87
1.1	95.05	18.31	1.1	96.26	17.29	1.1	97.07	16.27	1.1	97.64	15.26
1.2	94.60	19.97	1.2	95.92	18.86	1.2	96.80	17.75	1.2	97.43	16.64
1.3	94.15	21.64	1.3	95.58	20.44	1.3	96.53	19.23	1.3	97.21	18.03
1.4	93.70	23.30	1.4	95.24	22.01	1.4	96.27	20.71	1.4	97.00	19.42
1.5	93.25	24.97	1.5	94.90	23.58	1.5	96.00	22.19	1.5	96.79	20.81
1.6	92.80	26.63	1.6	94.56	25.15	1.6	95.73	23.67	1.6	96.57	22.19
1.7	92.35	28.30	1.7	94.22	26.72	1.7	95.47	25.15	1.7	96.36	23.58
1.8	91.90	29.96	1.8	93.88	28.30	1.8	95.20	26.63	1.8	96.14	24.97
1.9	91.45	31.62	1.9	93.54	29.87	1.9	94.93	28.11	1.9	95.93	26.35
2	91.00	33.29	2	93.20	31.44	2	94.67	29.59	2	95.71	27.74
2.5	88.75	41.61	2.5	91.50	39.30	2.5	93.33	36.99	2.5	94.64	34.68
3	86.50	49.93	3	89.80	47.16	3	92.00	44.39	3	93.57	41.61
3.5	84.25	58.26	3.5	88.10	55.02	3.5	90.67	51.78	3.5	92.50	48.55
4	82.00	66.58	4	86.40	62.88	4	89.33	59.18	4	91.43	55.48
4.5	79.75	74.90	4.5	84.70	70.74	4.5	88.00	66.58	4.5	90.36	62.42
5	77.50	83.22	5	83.00	78.60	5	86.67	73.98	5	89.29	69.35

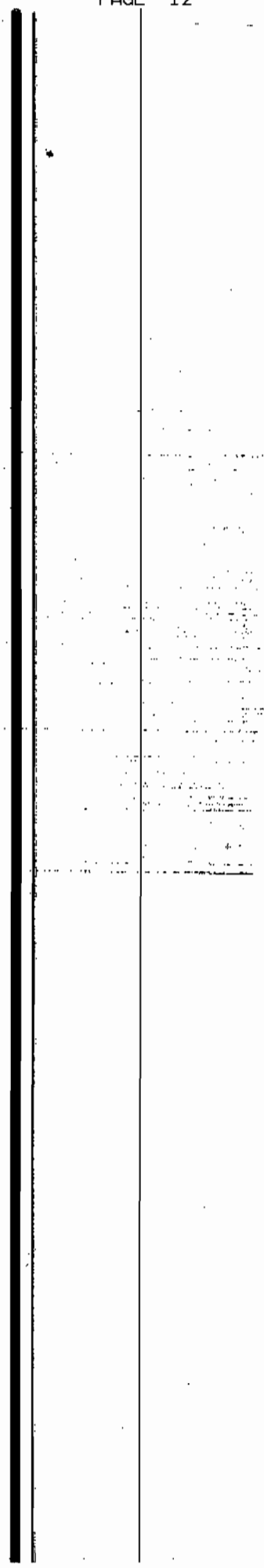
Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 2 Results
 24-hr CEM, March 25, 2004

40		45		50		55					
efficiency	mg/liter	efficiency	mg/liter	efficiency	mg/liter	efficiency	mg/liter				
0.1	99.83	1.29	0.1	99.86	1.20	0.1	99.88	1.11	0.1	99.90	1.02
0.2	99.65	2.59	0.2	99.71	2.40	0.2	99.76	2.22	0.2	99.80	2.03
0.3	99.48	3.88	0.3	99.57	3.61	0.3	99.64	3.33	0.3	99.70	3.05
0.4	99.30	5.18	0.4	99.42	4.81	0.4	99.52	4.44	0.4	99.60	4.07
0.5	99.13	6.47	0.5	99.28	6.01	0.5	99.40	5.55	0.5	99.50	5.09
0.6	98.95	7.77	0.6	99.13	7.21	0.6	99.28	6.66	0.6	99.40	6.10
0.7	98.78	9.06	0.7	98.99	8.41	0.7	99.16	7.77	0.7	99.30	7.12
0.8	98.60	10.36	0.8	98.84	9.62	0.8	99.04	8.88	0.8	99.20	8.14
0.9	98.43	11.65	0.9	98.70	10.82	0.9	98.92	9.99	0.9	99.10	9.15
1	98.25	12.95	1	98.56	12.02	1	98.80	11.10	1	99.00	10.17
1.1	98.08	14.24	1.1	98.41	13.22	1.1	98.68	12.21	1.1	98.90	11.19
1.2	97.90	15.54	1.2	98.27	14.43	1.2	98.56	13.32	1.2	98.80	12.21
1.3	97.73	16.83	1.3	98.12	15.63	1.3	98.44	14.43	1.3	98.70	13.22
1.4	97.55	18.12	1.4	97.98	16.83	1.4	98.32	15.54	1.4	98.60	14.24
1.5	97.38	19.42	1.5	97.83	18.03	1.5	98.20	16.64	1.5	98.50	15.26
1.6	97.20	20.71	1.6	97.69	19.23	1.6	98.08	17.75	1.6	98.40	16.27
1.7	97.03	22.01	1.7	97.54	20.44	1.7	97.96	18.86	1.7	98.30	17.29
1.8	96.85	23.30	1.8	97.40	21.64	1.8	97.84	19.97	1.8	98.20	18.31
1.9	96.68	24.60	1.9	97.26	22.84	1.9	97.72	21.08	1.9	98.10	19.33
2	96.50	25.89	2	97.11	24.04	2	97.60	22.19	2	98.00	20.34
2.5	95.63	32.36	2.5	96.39	30.05	2.5	97.00	27.74	2.5	97.50	25.43
3	94.75	38.84	3	95.67	36.06	3	96.40	33.29	3	97.00	30.52
3.5	93.88	45.31	3.5	94.94	42.07	3.5	95.80	38.84	3.5	96.50	35.60
4	93.00	51.78	4	94.22	48.08	4	95.20	44.39	4	96.00	40.69
4.5	92.13	58.26	4.5	93.50	54.10	4.5	94.60	49.93	4.5	95.50	45.77
5	91.25	64.73	5	92.78	60.11	5	94.00	55.48	5	95.00	50.86

Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 2 Results
24-hr CEM, March 25, 2004

60	efficiency	mg/liter
0.1	99.92	0.92
0.2	99.83	1.85
0.3	99.75	2.77
0.4	99.67	3.70
0.5	99.58	4.62
0.6	99.50	5.55
0.7	99.42	6.47
0.8	99.33	7.40
0.9	99.25	8.32
1	99.17	9.25
1.1	99.08	10.17
1.2	99.00	11.10
1.3	98.92	12.02
1.4	98.83	12.95
1.5	98.75	13.87
1.6	98.67	14.80
1.7	98.58	15.72
1.8	98.50	16.64
1.9	98.42	17.57
2	98.33	18.49
2.5	97.92	23.12
3	97.50	27.74
3.5	97.08	32.36
4	96.67	36.99
4.5	96.25	41.61
5	95.83	46.24

**VRU, Test 3 Results
3-hr CEM, April 7, 2004**



Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 3 Results
 3-hr CEM, April 7, 2004

Test results as provided by Jordan Technologies
 cem003.wk4

VRU Emissions and Efficiency from CEM Data

Estimated Calculations

input
calcs.
alternate.

Use One Truck Load as the Basis for all Calculations

Truck Volume =	9,000	gals	
HC vol% in =	30	vol %	359.088576
HC vol% out =	0.02	vol %	379.430894
Purge Air Volume Fraction =	0.1	NOTE: this is variable	
Propane Calibration Gas Density =	7	gm/gal	6.94656079
Butane Calibration Gas Density =	9.2	gm/gal	9.1562215

HC Mass In = 9000 gal x 30 % HC x 7 gm/gal
 = 18,900 gm

HC Mass Out = ((9000 gal x (1-30%HC)) + (9000 x 0.1)) x 0.02%HC x 7 gm/gal
 = 10 gm

mg/liter unit conversion = HC mass out x 1000 mg/gm x 1/9000 gal x 1/3.785 liter/gal
 = 0.30 mg/liter

Efficiency calculation = (HC mass in - HC Mass out)/HC Mass in x 100%
 = 99.95 %

HC in vol %

HC out vol %

% volume to % weight

HC =	65	lb/lb-mole
	65	% vol
	80.63	% wt

Air =	29	lb/lb-mole
	35.00	% vol
	19.37	% wt

% weight to % volume

HC =	65	lb/lb-mole
	80.63	% wt
	65.00	% vol

Air =	29	lb/lb-mole
	19.37	% wt
	35.00	% vol

Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 3 Results
 3-hr CEM, April 7, 2004

20	efficiency	mg/liter	25	efficiency	mg/liter	30	efficiency	mg/liter	35	efficiency	mg/liter
0.1	99.55	1.66	0.1	99.66	1.57	0.1	99.73	1.48	0.1	99.79	1.39
0.2	99.10	3.33	0.2	99.32	3.14	0.2	99.47	2.96	0.2	99.57	2.77
0.3	98.65	4.99	0.3	98.98	4.72	0.3	99.20	4.44	0.3	99.36	4.16
0.4	98.20	6.66	0.4	98.64	6.29	0.4	98.93	5.92	0.4	99.14	5.55
0.5	97.75	8.32	0.5	98.30	7.86	0.5	98.67	7.40	0.5	98.93	6.94
0.6	97.30	9.99	0.6	97.96	9.43	0.6	98.40	8.88	0.6	98.71	8.32
0.7	96.85	11.65	0.7	97.62	11.00	0.7	98.13	10.36	0.7	98.50	9.71
0.8	96.40	13.32	0.8	97.28	12.58	0.8	97.87	11.84	0.8	98.29	11.10
0.9	95.95	14.98	0.9	96.94	14.15	0.9	97.60	13.32	0.9	98.07	12.48
1	95.50	16.64	1	96.60	15.72	1	97.33	14.80	1	97.86	13.87
1.1	95.05	18.31	1.1	96.26	17.29	1.1	97.07	16.27	1.1	97.64	15.26
1.2	94.60	19.97	1.2	95.92	18.86	1.2	96.80	17.75	1.2	97.43	16.64
1.3	94.15	21.64	1.3	95.58	20.44	1.3	96.53	19.23	1.3	97.21	18.03
1.4	93.70	23.30	1.4	95.24	22.01	1.4	96.27	20.71	1.4	97.00	19.42
1.5	93.25	24.97	1.5	94.90	23.58	1.5	96.00	22.19	1.5	96.79	20.81
1.6	92.80	26.63	1.6	94.56	25.15	1.6	95.73	23.67	1.6	96.57	22.19
1.7	92.35	28.30	1.7	94.22	26.72	1.7	95.47	25.15	1.7	96.36	23.58
1.8	91.90	29.96	1.8	93.88	28.30	1.8	95.20	26.63	1.8	96.14	24.97
1.9	91.45	31.62	1.9	93.54	29.87	1.9	94.93	28.11	1.9	95.93	26.35
2	91.00	33.29	2	93.20	31.44	2	94.67	29.59	2	95.71	27.74
2.5	88.75	41.61	2.5	91.50	39.30	2.5	93.33	36.99	2.5	94.64	34.68
3	86.50	49.93	3	89.80	47.16	3	92.00	44.39	3	93.57	41.61
3.5	84.25	58.26	3.5	88.10	55.02	3.5	90.67	51.78	3.5	92.50	48.55
4	82.00	66.58	4	86.40	62.88	4	89.33	59.18	4	91.43	55.48
4.5	79.75	74.90	4.5	84.70	70.74	4.5	88.00	66.58	4.5	90.36	62.42
5	77.50	83.22	5	83.00	78.60	5	86.67	73.98	5	89.29	69.35

**Motiva Enterprises LLC
 Port Tampa Plant - FDEP Facility ID No. 0570197
 VRU, Test 3 Results
 3-hr CEM, April 7, 2004**

40	efficiency	mg/liter	45	efficiency	mg/liter	50	efficiency	mg/liter	55	efficiency	mg/liter
0.1	99.83	1.29	0.1	99.86	1.20	0.1	99.88	1.11	0.1	99.90	1.02
0.2	99.65	2.59	0.2	99.71	2.40	0.2	99.76	2.22	0.2	99.80	2.03
0.3	99.48	3.88	0.3	99.57	3.61	0.3	99.64	3.33	0.3	99.70	3.05
0.4	99.30	5.18	0.4	99.42	4.81	0.4	99.52	4.44	0.4	99.60	4.07
0.5	99.13	6.47	0.5	99.28	6.01	0.5	99.40	5.55	0.5	99.50	5.09
0.6	98.95	7.77	0.6	99.13	7.21	0.6	99.28	6.66	0.6	99.40	6.10
0.7	98.78	9.06	0.7	98.99	8.41	0.7	99.16	7.77	0.7	99.30	7.12
0.8	98.60	10.36	0.8	98.84	9.62	0.8	99.04	8.88	0.8	99.20	8.14
0.9	98.43	11.65	0.9	98.70	10.82	0.9	98.92	9.99	0.9	99.10	9.15
1	98.25	12.95	1	98.56	12.02	1	98.80	11.10	1	99.00	10.17
1.1	98.08	14.24	1.1	98.41	13.22	1.1	98.68	12.21	1.1	98.90	11.19
1.2	97.90	15.54	1.2	98.27	14.43	1.2	98.56	13.32	1.2	98.80	12.21
1.3	97.73	16.83	1.3	98.12	15.63	1.3	98.44	14.43	1.3	98.70	13.22
1.4	97.55	18.12	1.4	97.98	16.83	1.4	98.32	15.54	1.4	98.60	14.24
1.5	97.38	19.42	1.5	97.83	18.03	1.5	98.20	16.64	1.5	98.50	15.26
1.6	97.20	20.71	1.6	97.69	19.23	1.6	98.08	17.75	1.6	98.40	16.27
1.7	97.03	22.01	1.7	97.54	20.44	1.7	97.96	18.86	1.7	98.30	17.29
1.8	96.85	23.30	1.8	97.40	21.64	1.8	97.84	19.97	1.8	98.20	18.31
1.9	96.68	24.60	1.9	97.26	22.84	1.9	97.72	21.08	1.9	98.10	19.33
2	96.50	25.89	2	97.11	24.04	2	97.60	22.19	2	98.00	20.34
2.5	95.63	32.36	2.5	96.39	30.05	2.5	97.00	27.74	2.5	97.50	25.43
3	94.75	38.84	3	95.67	36.06	3	96.40	33.29	3	97.00	30.52
3.5	93.88	45.31	3.5	94.94	42.07	3.5	95.80	38.84	3.5	96.50	35.60
4	93.00	51.78	4	94.22	48.08	4	95.20	44.39	4	96.00	40.69
4.5	92.13	58.26	4.5	93.50	54.10	4.5	94.60	49.93	4.5	95.50	45.77
5	91.25	64.73	5	92.78	60.11	5	94.00	55.48	5	95.00	50.86

Motiva Enterprises LLC
Port Tampa Plant - FDEP Facility ID No. 0570197
VRU, Test 3 Results
3-hr CEM, April 7, 2004

60	efficiency	mg/liter
0.1	99.92	0.92
0.2	99.83	1.85
0.3	99.75	2.77
0.4	99.67	3.70
0.5	99.58	4.62
0.6	99.50	5.55
0.7	99.42	6.47
0.8	99.33	7.40
0.9	99.25	8.32
1	99.17	9.25
1.1	99.08	10.17
1.2	99.00	11.10
1.3	98.92	12.02
1.4	98.83	12.95
1.5	98.75	13.87
1.6	98.67	14.80
1.7	98.58	15.72
1.8	98.50	16.64
1.9	98.42	17.57
2	98.33	18.49
2.5	97.92	23.12
3	97.50	27.74
3.5	97.08	32.36
4	96.67	36.99
4.5	96.25	41.61
5	95.83	46.24