MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

AUGUST 23, 2006

PERMIT TO INSTALL
191-00E

ISSUED TO
EQRR, EQ RESOURCE RECOVERY

LOCATED AT
36345 Van Born Road
Romulus, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
B5451

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **May 31, 2006**	
DATE PERMIT TO INSTALL APPROVED: **August 23, 2006**	SIGNATURE: **G. Vinson Hellwig**
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NOx	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM-10	Particulate Matter less than 10 microns diameter
MSDS	Material Safety Data Sheet	pph	Pound per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	psia	Pounds per square inch absolute
PSD	Prevention of Significant Deterioration	psig	Pounds per square inch gauge
PTE	Permanent Total Enclosure	scf	Standard cubic feet
PTI	Permit to Install	sec	Seconds
RACT	Reasonably Available Control Technology	SO_2	Sulfur Dioxide
ROP	Renewable Operating Permit	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient		
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **[R336.1201(1)]**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **[R336.1201(4)]**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R336.1201(6)(b)]**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **[R336.1201(8), Section 5510 of Act 451, PA 1994]**

5. The AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R336.1219. The notification shall include all of the information required by R336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Pemit to Install. **[R336.1219]**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **[R336.1901]**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **[R336.1912]**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **[R336.1301]**

    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.

    b) A visible emission limit specified by an applicable federal new source performance standard.

    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R336.1370(2). **[R336.1370]**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack ID
EUFRAC	Fractional Distillation Column/Reboiler	N/A
EUWW5	Storage of Waste Water	SV001
EUTANK500	Recoverable Fuel Tank	N/A
EUTANK501	Recoverable Fuel Tank	N/A
EUTANK502	Recoverable Fuel Tank	N/A
EUWW7	Storage of Waste Water	SV001
EUWW100	Storage of Waste Water	SV001
EUWW101	Storage of Waste Water	SV001
EUWW102	Storage of Waste Water	SV001
EUWW103	Storage of Waste Water	SV001
EUWW104	Storage of Waste Water	SV001
EUWW105	Storage of Waste Water	N/A
EUWW106	Storage of Waste Water	N/A
EUWW107	Storage of Waste Water	N/A
EUWW108	Storage of Waste Water	N/A
EUWW300	Waste Water Treatment Tank	N/A
EUWW301	Waste Water Treatment Tank	N/A
EUWW6	Storage of Waste Water	SV001
EUWW9	Storage of Waste Water	SV001
EUWW10	Storage of Waste Water	SV001
EUAIRSTRIPPER	Shallow Tray Air Stripper	SVAIRSTRIPPER
EUPRESSROOM	Filter Press Following Waste Water Treatment	N/A – Fugitive emissions only.

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group		Stack ID
FGRECFUELS	EUTANK500 EUTANK501	EUTANK502	N/A
FGWASTEWATER	EUWW5 EUWW6 EUWW7 EUWW9 EUWW10	EUWW100 EUWW101 EUWW102 EUWW103 EUWW104	SV001
FGDEICE	EUWW300 EUWW 301 EUFRAC	EUWW105 EUWW106	N/A
FGCOMMONVENTHDR	EUWW300* EUWW301* EUWW107*	EUWW108* EUFRAC* FGWASTEWATER	SV001
FGFACILITY	All equipment at the facility including equipment covered by other permits, grandfathered equipment and exempt equipment.		N/A

Note: Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.

*** Emission units are subject to the requirements of flexible group FGCOMMONVENTHDR when EUWW300, EUWW301, and/or EUFRAC are in hazardous waste service.**

The following conditions apply to:
FGCOMMONVENTHDR

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirement
1.1	Volatile Organic Compounds (VOCs)	FGCOMMON-VENTHDR when using either the regenerative thermal oxidizer (RTO) or the flare, as determined at SV001 or SVFLARE, respectively.	6.9 pounds per hour.	Testing protocol.	S.C. Nos. 1.8, 1.12 through 1.15, and 1.23 through 1.26.	**R336.1225, R336.1702(a)**
1.2	VOCs	FGCOMMON-VENTHDR when using either the RTO or the flare, as determined at SV001 or SVFLARE, respectively.	2.9 tons per year.	12 month rolling time period as determined at the end of each month.	S.C. Nos. 1.7 through 1.17, 1.24 through 1.29, and 1.31 through 1.36.	**R336.1702(a)**

Material Usage Limits

1.3 The throughput of material through tanks which comprise the following flexible groups or emission units shall not exceed the following volumetric rates: **[R336.1702(a)]**

Flexible Group/Emission Unit	Gallons per Day
FGDEICE	60,000
EUWW107 and EUWW108 combined throughput	500,000
FGWASTEWATER	500,000

1.4 The volume of recovered petroleum product (RPP) from FGRECFUELS shall not exceed a monthly average of 10,000 gallons per day nor 585,000 gallons per year.

Process/ Operational Limits

1.5 The permittee shall not operate FGCOMMONVENTHDR unless the RTO or the flare system is installed and operating properly. The RTO shall be designed and operated to achieve at least 95 percent or greater destruction, on a weight-basis, of the design amount of total organic compounds (TOC), less methane and ethane, as contained in FGCOMMONVENTHDR's vent stream entering the RTO. The flare shall be designed and operated to achieve at least 95 percent or greater removal, on a weight-basis, of the design amount of total organic compounds (TOC), less methane and ethane, as contained in FGCOMMONVENTHDR's vent stream entering the flare. **[R336.1225, R336.1702(a), R336.1901, R336.1910]**

1.6 The permittee shall not operate FGCOMMONVENTHDR with sole reliance on the flare system for VOC emissions control more than 336 hours per year, with the exception of malfunction or emergency

episodes. Malfunction episodes are covered in the approved Malfunction Abatement Plan referenced elsewhere in these permit special conditions. **[R336.1225, R336.1702(a), R336.1901]**

1.7 The permittee shall not change the material being processed in EUFRAC from solvent to glycol more than once per calendar day. **[R336.1224, R336.1225, R336.1702(a)]**

1.8 The permittee shall not operate the RTO unless the scrubber has a solution pH in the range of 8 to 10. **[R336.1224, R336.1225, R336.1910]**

1.9 The permittee shall not operate the RTO unless the thermal oxidizer has a minimum temperature of 1400 degrees Fahrenheit and a minimum retention time of 0.5 second in the combustion chamber. **[R336.1224, R336.1225, R336.1910]**

1.10 The permittee shall not operate the RTO unless the pressure gauge (located downstream of Tank108) is maintained at a pressure of less than or equal to 0.1 inches of water. **[R336.1224, R336.1225, R336.1910]**

1.11 The permittee shall not operate FGFACILITY unless the approved malfunction abatement plant (MAP), or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. If the malfunction abatement plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan was initially developed, the owner or operator shall revise the malfunction abatement plan within 45 days after such an event occurs and submit the revised plan to the AQD District Supervisor. The revised plan shall include procedures for maintaining and operating in a satisfactory manner, FGFACILITY, add-on air pollution control device, or monitoring equipment during malfunction events, and a program for corrective action for such events.

The plan shall include procedures for maintaining and operating in a satisfactory manner, FGFACILITY, add-on air pollution control devices, especially the RTO, and monitoring equipment during malfunction events, and a program for corrective action for such events. The MAP shall also include an inspection schedule and preventative program for all flanges, fittings, valves, seals, connections, piping, and ductwork associated with the RTO and the flare. The permittee shall maintain a log which contains the dates of inspections, replacements, and maintenance to the various components. **[R336.1224, R336.1702(a), R336.1901, R336.1910]**

Equipment

1.12 The permittee shall equip the scrubber with an electronic pH probe and an electronic data monitor capable of taking readings on five minute increments. **[R336.1224, R336.1225, R336.1910]**

1.13 The permittee shall equip the RTO with a thermocouple and volumetric flow meter, both of which should be connected to an electronic data monitor capable of taking readings on five minute increments. **[R336.1224, R336.1225, R336.1910]**

1.14 The permittee shall equip the flare with a monitoring sample port. **[R336.1225, R336.1702(a), R336.1910]**

1.15 The permittee shall equip FGCOMMONVENTHDR with a static pressure gauge (located downstream from Tank 108) that is capable of reading static pressure in increments of 0.1 inches of water. **[R336.1224, R336.1225, R336.1910]**

1.16 The permittee shall equip FGCOMMONVENTHDR with an alarm that illuminates when the static pressure at the static pressure gauge location (downstream from Tank 108) is greater than 0.1 inches of water. **[R336.1224, R336.1225, R336.1910]**

1.17 The permittee shall equip FGCOMMONVENTHDR with an additional four pressure gauges located as follows: Pressure Gage 5 is located outside the west wall of the wastewater treatment building, 20 feet south of the north wall; Pressure Gage 6 is located outside the south wall of the wastewater treatment building, 30 feet east of the west wall, next to door; Pressure Gage 7 is located in the Wastewater Tank Farm, between tanks 9 and 10; Pressure Gage 8 is located in the Wastewater Tank Farm, between tanks 104 and 105. **[R336.1224, R336.1225** and **R336.1910]**

Monitoring

1.18 The permittee shall monitor the temperature and the volumetric flow rate in the RTO combustion chamber using a thermocouple, flow-meter, and electronic data monitors on five minute increments. **[R336.1224, R336.1225, R336.1910]**

1.19 The permittee shall monitor the pH of the scrubber solution inside the scrubber using an electronic pH probe and an electronic data monitor on five minute increments. **[R336.1224, R336.1225, R336.1910]**

1.20 The permittee shall monitor the static pressure FGCOMMONVENTHDR at the static pressure gauge location (downstream from Tank 108) at least once a week unless the District Supervisor approves an alternative schedule. **[R336.1224, R336.1225, R336.1910]**

1.21 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the combustion zone temperature of the RTO on five minute increments. **[R336.1910]**

1.22 The permittee shall monitor the daily hours of operation of the RTO. **[R336.1702(a)]**

1.23 The permittee shall monitor the hours of operation of the flare on a daily basis when operating. **[R336.1225, R336.1702(a)]**

1.24 The permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications a heat sensing device, such as an ultraviolet beam sensor or thermocouple, and a recording device to indicate and record the presence of a flame on five minute increments whenever the flare is in operation. **[R336.1225, R336.1702(a)]**

Recordkeeping/Reporting/Notification

1.25 The permittee shall keep a written record of the amount of material treated on a daily basis and on a monthly basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a)]**

1.26 The permittee shall keep a written record of all the RTO downtime during the operation of FGCOMMONVENTHDR, including the number of hours downtime per event and the number of events per calendar month. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a)]**

1.27 The permittee shall keep, in a satisfactory manner, daily records of the hours of operation of FGCOMMONVENTHDR. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a)]**

1.28 The permittee shall keep, in a satisfactory manner, records of the date and the hours of operation of FGCOMMONVENTHDR when venting to the flare during normal operation or during malfunctions or emergency episodes. The permittee shall maintain records of the presence of a flame on five minute increments whenever the flare is in operation. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1225, R336.1702(a)]**

1.29 The permittee shall keep, in a satisfactory manner, monthly records of the quantities and composition of all materials processed in FGWASTEWATER, FGDEICE, or FGRECFUELS. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1702(a)]**

1.30 The permittee shall keep records as required to demonstrate compliance with the emission limits of this permit. Emission totals shall be calculated using the methods described in Appendix 1. A monthly summary of these emissions shall be kept on file for at least five years and made available to the Air Quality Division upon request. Within 30 days following the end of each calendar month, the applicant shall calculate and record emissions from the process for the previous calendar month to demonstrate compliance with the 12-month rolling time period emission totals specified in this permit. **[R336.1224, R336.1225, R336.1702(a)]**

1.31 The permittee shall maintain a written record of the change in service from deicing fluid treatment to hazardous waste storage/treatment for emission units EUWW300, EUWW301, and EUFRAC. When these emission units are in deicing fluid service EUWW300, EUWW301, and EUFRAC are subject to the requirements for flexible group FGDEICE. When EUWW300, EUWW301, and/or EUFRAC are in hazardous waste service, then EUWW300, EUWW301, EUWW107, EUWW108, and EUFRAC are subject to the requirements for flexible group FGCOMMONVENTHDR. **[R336.1224, R336.1225, R336.1702(a)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.32a	SV001	18	25	**40 CFR 52.21(c) and (d), R336.1225**
1.32b	SVFLARE	60	25	**40 CFR 52.21(c) and (d), R336.1225**
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

APPENDIX 1

Vent Calculations

The VOCs emitted from each of the processes shall be determined, according to the steps listed below or equivalent, at the end of each month. These values shall then be summed to determine the total VOCs from EQRR* for that month. This total VOC emission rate shall then be used in determining the 12-month rolling period emission rate, which shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

The VOCs emitted from each of the following individual processes, i.e. those identified in FGCOMMONVENTHDR, shall be determined as follows, or equivalent approved by the District Supervisor:

Blending Process, Reclamation Process Material Handling Operations, and Solvent Tank Storage

1) EQRR will record and use the actual monthly throughput of waste for the Blending Tanks, Reclamation Process Material Handling Operations, and Solvent Tank Storage.

2) Using the above throughput value, EQRR will perform emission rate calculations using the US EPA "TANKS" program, based on worst-case generic waste compositions. The output data will yield the total uncontrolled emissions.

3) Determine the after-control emission rate by multiplying the value determined in step #2 by 0.05, i.e. 1.0 – 0.95.

4) This total VOC monthly emission rate, for the Blending Process, Reclamation Process Material Handling Operations, and Solvent Tank Storage, shall be included in the total VOC emissions tally for all of the EQRR processes combined.* That sum total shall then be used in determining the 12-month rolling period emission rate for the combination of VOCs from all the processes.* That value shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

Drum Emptying Station (DES)

Total DES System VOC Emissions	==	DES System VOC Emissions	+	Diluent Tank VOC Emissions

1) Use 1.414 lb VOC per hour as the uncontrolled emission rate for the DES System itself, i.e. not including emissions from the diluent tank. This value is based on calculations listed in the permit application and in EQRR's PTE demonstration report dated June 27, 2002. (The permittee may, alternatively, determine the hourly uncontrolled emission rate based on waste characterization sheets and/or worst-case generic waste compositions for wastes handled in the DES System process.)

2) Determine the hourly and monthly after-control DES System emission rates:

a) Hourly:

Multiply the DES System hourly uncontrolled emission rate by 0.05, i.e. 1.0 – 0.95 = 0.05.

$$\frac{1.414 \text{ lb VOC}}{\text{hour}} \times 0.05 = 0.071 \frac{\text{lb VOC}}{\text{hour}}$$

b) Monthly:

0.071 lb/hour x No. hrs operated/day x No. days operated/month = ___ lbs/month
= ___ ton/month

3) Use 0.62 lb VOC per hour as the uncontrolled emission rate for the diluent tank. This value is based on calculations listed in the permit application and in EQRR's PTE demonstration report dated June 27, 2002. (The permittee may, alternatively, determine the hourly uncontrolled emission rate based on waste characterization sheets and/or worst-case generic waste compositions for wastes handled in the diluent tank process).

a) Hourly:

$$\frac{0.62 \text{ lb VOC}}{\text{hour}} \times 0.05 = 0.031 \frac{\text{lb VOC}}{\text{hour}}$$

b) Monthly:

0.031 lb/hour x No. hours operated/day * No. days operated/month = ___ lbs/month
= ___ ton/month

4) Add the monthly values derived in items 2b and 3b together in order to determine the total monthly DES VOC emissions:

___ ton/month + ___ ton/month = ___ ton/month

5) This total VOC monthly emission rate, for the DES, shall be included in the total VOC emissions tally for all of the EQRR processes combined.* That sum total shall then be used in determining the 12-month rolling period emission rate for the combination of VOCs from all the processes. That value shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

Fractional Distillation Process

1) Determine the peak VOC concentration of residual solvent vapors from the "changeover" process, or use 10,000 ppm (expressed as propane). This is the value that was used in the PTE calculations.

2) Use the emission rate factor from EQRR's PTE demonstration report dated June 27, 2002, for uncontrolled VOC emissions that occur during the fractional distillation column evacuation process, i.e. 26.0 lbs VOC per "changeover."

$$\text{VOC Emissions Per Month} = \frac{26.0 \text{ lb VOC}}{\text{Changeover}} \times (1 - 0.95) \times \frac{\text{\# of changeovers}}{\text{month}}$$

3) This total VOC monthly emission rate, for the Fractional Distillation Process, shall be included in the total VOC emissions tally for all of the processes combined.* That sum total shall then be used in determining the 12-month rolling period emission rate for the combination of VOCs from all the processes.* That value shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

Wastewater Treatment

1) Use 1.60 mg/l as the total wastewater VOC content

2) Use actual wastewater treatment throughput, not to exceed 500,000 gal/day wastewater treatment capacity.

3) Hourly Uncontrolled VOC Emission Rate = 0.28 lb/hour (as determined in EQRR's PTE demonstration report dated June 27, 2002)

4) Wastewater Treatment Process Hourly VOC Emission Rate, After-Control = 0.28 lb/hour x (1.0 – 0.95) = 0.014 lb/hour

5) Wastewater Treatment Process Monthly VOC Emission Rate, After-Control = 0.014 lb/hour * No. hours operated/day * No. days operated/month * 1/2000 ton/lbs = total tons/month

6) This total VOC monthly emission rate, for the Wastewater Treatment Process, shall be included in the total VOC emissions tally for all of the processes combined.* That sum total shall then be used in determining the 12-month rolling period emission rate for the combination of VOCs from all the processes.* That value shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

Oil Treatment

1) Use 121.0 $\frac{\text{mg VOCs}}{\text{kg waste oil}}$ as the total VOC content for the waste oil to be treated (based on empirical data).

2) Use actual throughput or 50, 000 gal/day waste oil treatment capacity.

3) Use 7.3 lbs/gal as density of waste oil.

4) Hourly Uncontrolled VOC Emission Rate = ***x*** lb/hour (as determined in EQRR's PTE demonstration report dated June 27, 2002)

5) Waste Oil Treatment Process Hourly VOC Emission Rate, After Control = ***x*** lb/hour x (1.0 – 0.95) = ***y*** lb/hour

6) Waste Oil Treatment Process Monthly VOC Emission Rate, After-Control = ***y*** lb/hour * No. hours operated /day * No. days operated/month * 1/2000 ton/lbs

= total tons/month

7) This total VOC monthly emission rate, for the Waste Oil Treatment Process, shall be included in the total VOC emissions tally for all of the processes combined.* That sum total shall then be used in determining the 12-month rolling period emission rate for the combination of VOCs from all the processes.* That value shall then be compared to the 2.9 TPY (per 12-month rolling time period) emission rate limit.

Total Facility, Minus Air Stripper

VOC emissions for all the process operations that are tied into the common vent header (FGCOMMONVENTHDR) =

Blending Process, Reclamation Process Material Handling Operations, and Solvent Tank Storage VOC Emissions	+	DES VOC Emissions	+	
Fractional Distillation Process VOC Emissions	+	Wastewater Treatment VOC Emissions	+	Oil Treatment VOC Emissions

* Minus emissions from the Air Stripper, which is covered under a separate Wayne County issued permit.