



AUTHORITY TO CONSTRUCT

A/C NO.: 22270

ISSUED BY: _____
ADY R. SANTOS

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ISSUED TO: THE PROCTER & GAMBLE MANUFACTURING CO.

LOCATION: 8201 FRUITRIDGE RD., SACRAMENTO, CA 95826

DESCRIPTION: MODIFICATION OF METHYL ESTER AND GLYCERINE MFG. PROCESS [P/O 22006] WHERE THE ESTER DRYER EXHAUST IS CONVERTED TO A CLOSED VENT SYSTEM:

- VENT ESTER DRYER (EMISSION SOURCE ID #1012) EXHAUST TO THE APC THERMAL OXIDIZER (P/O 21602); OR
- VENT ESTER DRYER (EMISSION SOURCE ID #1012) EXHAUST TO THE ATMOSPHERE (BACKUP MODE WILL BE ALLOWED DURING PROCESS DEFINITION ONLY)

DESCRIPTION OF PROCESS EQUIPMENT IS SHOWN IN APPENDIX 'A'.

AUTHORITY TO CONSTRUCT CONDITIONS

GENERAL

1. THE EQUIPMENT SHALL BE PROPERLY MAINTAINED.
2. THE AIR POLLUTION CONTROL OFFICER AND/OR AUTHORIZED REPRESENTATIVES, UPON THE PRESENTATION OF CREDENTIALS, SHALL BE PERMITTED:
 - A. TO ENTER UPON THE PREMISES WHERE THE SOURCE IS LOCATED OR IN WHICH ANY RECORDS ARE REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS AUTHORITY TO CONSTRUCT, AND
 - B. AT REASONABLE TIMES TO HAVE ACCESS TO AND COPY ANY RECORDS REQUIRED TO BE KEPT UNDER THE TERMS AND CONDITIONS OF THIS AUTHORITY TO CONSTRUCT, AND
 - C. TO INSPECT ANY EQUIPMENT, OPERATION, OR METHOD REQUIRED IN THIS AUTHORITY TO CONSTRUCT, AND
 - D. TO SAMPLE EMISSIONS FROM THE SOURCE OR REQUIRE SAMPLES TO BE TAKEN.
3. THIS AUTHORITY TO CONSTRUCT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26, PART 4, CHAPTER 3, OF THE CALIFORNIA HEALTH AND SAFETY CODE OR THE RULES AND REGULATIONS OF THE AIR QUALITY MANAGEMENT DISTRICT.
4. THE PROCESS SHALL NOT DISCHARGE SUCH QUANTITIES OF AIR CONTAMINANTS OR OTHER MATERIAL WHICH CAUSE INJURY, DETRIMENT, NUISANCE OR ANNOYANCE TO ANY CONSIDERABLE NUMBER OF PERSONS OR TO THE PUBLIC, OR



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WHICH ENDANGER THE COMFORT, REPOSE, HEALTH, OR SAFETY OF ANY SUCH PERSONS OR THE PUBLIC, OR WHICH CAUSE, OR HAVE A NATURAL TENDENCY TO CAUSE, INJURY OR DAMAGE TO BUSINESS OR PROPERTY.

5. A LEGIBLE COPY OF THIS AUTHORITY TO CONSTRUCT SHALL BE MAINTAINED ON THE PREMISES WITH THE EQUIPMENT.

EMISSION LIMITATIONS

6. THE PROCESS SHALL NOT DISCHARGE INTO THE ATMOSPHERE ANY VISIBLE AIR CONTAMINANTS OTHER THAN UNCOMBINED WATER VAPOR, FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR, WHICH ARE AS DARK OR DARKER THAN RINGELMANN NO. 1 OR EQUIVALENT TO OR GREATER THAN 20% OPACITY.
7. EMISSIONS FROM THE PROCESS AND EMISSIONS UNITS SHALL NOT EXCEED THE FOLLOWING LIMITS:

PROCESS	POLLUTANT	MAXIMUM ALLOWABLE EMISSION (A) LB/QUARTER
METHYL ESTER AND GLYCERINE MANUFACTURING PROCESS	ROC	5,142

EMISSIONS UNIT	POLLUTANT	MAXIMUM ALLOWABLE EMISSIONS (A) LB/QUARTER
ESTER DRYER (EMISSION SOURCE ID 1012)	ROC	1,400 (B)
GLYCERINE EVAPORATOR CONDENSER (EMISSION SOURCE ID 1020)		1,104

(A) REFER TO THE EMISSIONS TABLE IN APPENDIX 'B'.

(B) EMISSION IS BASED ON THE EMISSION FACTOR OF 0.0144 LB/10³ LB ESTER AND THE APPLICABLE PRODUCT PROCESS RATE SPECIFIED IN CONDITION NO. 12.

8. COMPLIANCE WITH THE EMISSIONS LIMITATIONS IN CONDITION NO. 6 SHALL BE DETERMINED AS FOLLOWS:

ESTER DRYER EMISSIONS WHEN VENTED TO THE APC THERMAL OXIDIZER (P/O 21602)

ROC EMISSIONS = [(PROCESS RATE, 10³ LB ESTER/QTR) x (EMISSION FACTOR, 0.0144 LB/10³ LB ESTER)] x [1 - 0.98]
(LB/QUARTER)

ESTER DRYER EMISSIONS WHEN VENTED TO THE ATMOSPHERE (BACKUP MODE)

ROC EMISSIONS = [(PROCESS RATE, 10³ LB ESTER/QTR) x (EMISSION FACTOR, 0.0144 LB/10³ LB ESTER)]
(LB/QUARTER)



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9. FUGITIVE ROC EMISSIONS FROM EQUIPMENT LEAKS SHALL NOT EXCEED THE FOLLOWING LIMITS:

EQUIPMENT TYPE	QUANTITY	SERVICE	EMISSION FACTOR (A) KG/HR/SOURCE	MAXIMUM ALLOWABLE ROC EMISSIONS (B) LB/QUARTER
VALVES	382	GAS	0.000131	242
VALVES	3,101	LIGHT LIQUID	0.000165	2,470
VALVES	3,306	HEAVY LIQUID	0.00023	3,671
PUMP SEALS	79	LIGHT LIQUID	0.00187	713
PUMP SEALS	147	HEAVY LIQUID	0.00210	1,490
AGITATOR SEALS	15	LIGHT LIQUID	0.00187	135
AGITATOR SEALS	65	HEAVY LIQUID	0.00187	587
COMPRESSOR SEALS	0	GAS	0.0894	0
PRESSURE RELIEF VALVES	17	GAS	0.0447	3,669
CONNECTORS	20,768 (C)	ALL	0.0000810	8,122
OPEN-ENDED LINES	901	ALL	0.00150	6,525
TOTAL				27,624

(A) EMISSION FACTORS ARE FROM *PROTOCOL FOR EQUIPMENT LEAK EMISSION ESTIMATES*, EPA-453/R-95-017, NOVEMBER 1995, TABLE 2-5, SO2MI SCREENING RANGES EMISSION FACTORS, <10,000 PPMV (ASSUMING ALL TOC IS ROC).

(B) POTENTIAL TO EMIT IS BASED ON 2,190 HOURS/QUARTER OF OPERATION.

(C) INCLUDES ESTIMATED CONNECTORS IN HEAVY LIQUID SERVICE.

10. THE CONTENTS OR PRODUCTS ASSOCIATED WITH EACH DEVICE SHALL NOT DEVIATE FROM THOSE IDENTIFIED IN THE PERMIT APPLICATION INCLUDING CHANGES IN CONSTITUENT MASS FRACTIONS OR OPERATING TEMPERATURES THAT WOULD RESULT IN AN INCREASE IN THE VOC COMPOSITE PARTIAL VAPOR PRESSURE AT THE ACTUAL OPERATING CONDITIONS OF THE EMISSIONS UNIT.



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EQUIPMENT STANDARDS

11. EMISSIONS FROM ALL EQUIPMENT SPECIFIED IN THE TABLE BELOW SHALL COMPLY WITH EITHER THE MAXIMUM UNCONTROLLED EMISSION LIMITS OR THE CONTROL SYSTEM REQUIREMENTS:

EQUIPMENT	MAXIMUM UNCONTROL ROC EMISSIONS OR CONTROL SYSTEM REQUIREMENT
REACTOR, DISTILLATION COLUMN, CRYSTALLIZER, EVAPORATOR OR ENCLOSED CENTRIFUGE	$\leq 15 \text{ LB}$ OR VOC CAPTURE AND CONTROL SYSTEM WITH A COMBINED SYSTEM EFFICIENCY $\geq 85\%$ BY WEIGHT AND A CONTROL EFFICIENCY $\geq 90\%$ BY WEIGHT
IF A VOC CAPTURE AND CONTROL SYSTEM CONTROLS MORE THAN TWO PROCESS VENTS FROM REACTORS, DISTILLATION COLUMNS, CRYSTALLIZERS, EVAPORATORS OR ENCLOSED CENTRIFUGES	COMBINED ROC EMISSIONS FROM ALL PROCESS VENTS REDUCED TO $< 33 \text{ LB/DAY}$ OR OVERALL COMBINED SYSTEM EFFICIENCY $\geq 85\%$ BY WEIGHT AND AN OVERALL CONTROL EFFICIENCY $\geq 90\%$ BY WEIGHT
CENTRIFUGE, ROTARY VACUUM FILTER OR OTHER DEVICE HAVING AN EXPOSED LIQUID SURFACE WHERE THE LIQUID CONTAINS VOC WITH A VOC COMPOSITE PARTIAL VAPOR PRESSURE $\geq 26 \text{ MM HG @ } 20^\circ\text{C}$	$\leq 15 \text{ LB/DAY}$ OR A VOC CAPTURE AND CONTROL SYSTEM WITH A COMBINED SYSTEM EFFICIENCY $\geq 85\%$ BY WEIGHT AND A CONTROL EFFICIENCY $\geq 90\%$ BY WEIGHT
DRYER OR OTHER PRODUCTION EQUIPMENT EXHAUST SYSTEM	A. IF MAXIMUM UNCONTROLLED ROC EMISSIONS IS $\geq 330 \text{ LB/DAY}$, A VOC CAPTURE AND CONTROL SYSTEM WITH A COMBINED SYSTEM EFFICIENCY $\geq 85\%$ BY WEIGHT AND A CONTROL EFFICIENCY $\geq 90\%$ BY WEIGHT. B. IF MAXIMUM UNCONTROL ROC EMISSIONS IS $< 330 \text{ LB/DAY}$, REDUCE ROC EMISSIONS TO 33 LB/DAY .
PROCESS TANK CONTAINING MATERIAL WITH A VOC COMPOSITE PARTIAL VAPOR PRESSURE $> 26 \text{ MM HG @ } 20^\circ\text{C}$	A. A CLOSED CONTAINER, WHICH IS KEPT TIGHTLY COVERED AT ALL TIMES EXCEPT WHEN ACCESSING THE CONTAINER. B. MAXIMUM UNCONTROLLED ROC EMISSIONS $\leq 15 \text{ LB/DAY}$. OR VOC CAPTURE AND CONTROL SYSTEM WITH A COMBINED SYSTEM EFFICIENCY $\geq 85\%$ BY WEIGHT AND A CONTROL EFFICIENCY $\geq 90\%$ BY WEIGHT



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EQUIPMENT	MAXIMUM UNCONTROL ROC EMISSIONS OR CONTROL SYSTEM REQUIREMENT
EQUIPMENT TRANSFERRING LIQUID WITH A VOC COMPOSITE VAPOR PRESSURE > 26 MM HG @ 20°C INTO ANY TRUCK, TRAILER, RAILROAD TANK CAR OR STORAGE TANK OF 2,000 GALLONS CAPACITY OR GREATER	<p>VAPOR BALANCE SYSTEM WITH ALL OF THE FOLLOWING COMPONENTS:</p> <ul style="list-style-type: none"> A. A PERMANENT SUBMERGED FILL PIPE WHICH DISCHARGES AT NOT MORE THAN SIX INCHES FROM THE BOTTOM OF THE TANK; B. A SUBMERGED FILL PIPE WHICH DISCHARGES AT NOT MORE THAN SIX INCHES FROM THE BOTTOM OF THE TANKER TRUCK OR RAIL CAR; C. A VAPOR RETURN LINE WHICH TRANSFERS AT LEAST 90% BY WEIGHT OF THE DISPLACED VOC VAPOR FROM THE STATIONARY STORAGE TANK BEING FILLED BACK TO THE MOBILE OR STATIONARY SUPPLY TANK; AND D. A PRESSURE/VACUUM RELIEF VALVE WITH RELIEF SETTINGS OF NOT LESS THAN ± 0.03 PSIG. <p style="text-align: center;">OR</p> <p>VOC CAPTURE AND CONTROL SYSTEM WITH A COMBINED SYSTEM EFFICIENCY OF $\geq 85\%$ BY WEIGHT AND A CONTROL EFFICIENCY OF $\geq 90\%$ BY WEIGHT</p> <p style="text-align: center;">OR</p> <p>AN INTERNAL OR EXTERNAL FLOATING ROOF WHICH COMPLIES WITH THE PROCEDURES DESCRIBED IN 40 CFR 63, SECTIONS 119(b), (c), (d) AND 63.120.</p>
STORAGE TANKS WITH CAPACITIES > 40,000 GALLONS	COMPLIANCE WITH SMAQMD RULE 446 – STORAGE OF PETROLEUM PRODUCTS.
STORAGE TANK WITH A CAPACITY > 55 GALLONS AND $\leq 40,000$ GALLONS CONTAINING MATERIAL WITH A VOC COMPOSITE PARTIAL VAPOR PRESSURE OF > 78 MM HG @ 20°C	A PRESSURE/VACUUM RELIEF VALVE WITH A RELIEF SETTING OF NOT LESS THAN ± 0.03 PSIG OR AN EQUIVALENT CONTROL METHOD PERMITTED UNDER SMAQMD RULE 201 – GENERAL PERMIT REQUIREMENTS, ON ALL VENTS OF ANY STORAGE TANK.
STORAGE TANK WITH A CAPACITY ≤ 55 GALLONS CONTAINING MATERIAL WITH A VOC COMPOSITE PARTIAL VAPOR PRESSURE OF > 78 MM HG @ 20°C	CLOSED CONTAINER, WHICH IS KEPT TIGHTLY COVERED AT ALL TIMES EXCEPT WHEN ACCESSING THE CONTAINER



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EQUIPMENT OPERATION

12. THE FACILITY SHALL NOT EXCEED THE FOLLOWING RAW MATERIAL AND PRODUCT PROCESS RATE LIMITATIONS DURING THE PROCESS DEFINITION PERIOD WHERE THE ESTER DRYER EMISSIONS ARE VENTED TO THE APC THERMAL OXIDIZER:

RAW MATERIAL	MAXIMUM ALLOWABLE PROCESS RATE LB/QUARTER
CRUDE VEGETABLE OIL	147,500,000

PRODUCT	ESTER DRYER EXHAUST VENTING MODE (B)	MAXIMUM ALLOWABLE PROCESS RATES (A)	
		LB/MONTH (C)	LB/QUARTER
ESTERS	IF VENTED TO APC THERMAL OXIDIZER	46,083,000	138, 250,000
	IF VENTED TO THE ATMOSPHERE (BACKUP)	32,384,000 (D)	

- (A) PRODUCT THROUGHPUT IS MONITORED FROM THE OIL FLOW TO THE ESTER REACTOR FLOWMETER PLUS THE BOTTOMS FLOW TO THE ESTER REACTOR FLOWMETER.
- (B) REFER TO EXHIBIT '1' FOR THE SCHEMATIC DIAGRAM OF THE VENT STREAM MODE SCENARIOS.
- (C) MONTHLY PROCESS RATE LIMITS SHALL APPLY IN THE EVENT THE ESTER DRYER EXHAUST STREAM IS VENTED TO THE ATMOSPHERE WHILE OPERATING UNDER THE BACKUP MODE IN AT LEAST ONE DAY IN A CALENDAR MONTH.
- (D) THE MONTHLY PROCESS RATE, WHEN OPERATING IN THE BACKUP MODE, IS THE MONTHLY AVERAGE OF THE 97,152,000 LB/QUARTER PROCESS RATE AND THE EMISSION FACTOR, 0.0144 LB/10³ LB ESTER.
13. AS A CLOSED VENT SYSTEM, THE FACILITY SHALL ENSURE THAT THE EXISTING ESTER DRYER 4-INCH VENT LINE TO THE ATMOSPHERE IS RETROFITTED WITH A LOCK-AND-KEY TYPE SEAL MECHANISM, UNTIL BACKUP MODE IS PERMANENTLY ELIMINATED.
14. THE LOCK-AND-KEY TYPE SEAL MECHANISM SHALL BE MONITORED ON A MONTHLY BASIS, UNTIL BACKUP MODE IS PERMANENTLY ELIMINATED.
15. THE FACILITY SHALL USE CLOSED CONTAINERS FOR THE STORAGE OR DISPOSAL OF CLOTH, PAPER, OR SPONGES USED FOR SOLVENT CLEANUP.
16. THE FACILITY SHALL STORE FRESH AND SPENT CLEANUP SOLVENT MATERIALS IN CLOSED CONTAINERS.
17. THE FACILITY SHALL NOT USE A CLEANUP MATERIAL TO PERFORM IN-LINE SOLVENT CLEANING OF PROCESS UNITS AND PIPINGS UNLESS EITHER:
- A. THE EMISSIONS ARE VENTED TO A VOC CAPTURE AND CONTROL SYSTEM WHICH HAS A COMBINED SYSTEM EFFICIENCY OF AT LEAST 85% BY WEIGHT AND A CONTROL EFFICIENCY OF AT LEAST 90% BY WEIGHT; OR
 - B. THE SOLVENT COMPLIES WITH A VOC CONTENT LIMIT OF 200 GRAMS/LITER AND A VAPOR PRESSURE LIMIT OF LESS THAN 45 MM HG @ 20°C.



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18. EXCEPT FOR LABORATORY EQUIPMENT CLEANING EXEMPT PURSUANT TO RULE 464, SECTION 115, THE FACILITY SHALL NOT USE A SOLVENT TO PERFORM MAINTENANCE SOLVENT CLEANING, INCLUDING BUT NOT LIMITED TO MECHANICAL PARTS AND WORK AREAS, UNLESS THE SOLVENT COMPLIES WITH A VOC CONTENT LIMIT OF 25 GRAMS/LITER (0.21 POUNDS/GALLON).

FUGITIVE EMISSIONS MONITORING REQUIREMENTS

19. THE FACILITY SHALL NOT USE ANY AFFECTED DEVICE OR FLANGE, AS DEFINED IN RULE 443, SECTIONS 201 AND 208, IN THE PROCESS FOR HANDLING VOLATILE ORGANIC COMPOUNDS UNLESS SUCH AFFECTED DEVICE OR FLANGE DOES NOT ALLOW THE VOLATILE ORGANIC COMPOUND BEING HANDLED TO LEAK INTO THE ATMOSPHERE.
20. EACH AFFECTED DEVICE LOCATED AT THE END OF A PIPE OR LINE CONTAINING VOLATILE ORGANIC COMPOUNDS SHALL BE SEALED WITH A BLIND FLANGE, PLUG, OR CAP WHEN NOT IN USE, EXCEPT FOR ANY OF THE FOLLOWING:
- A. VALVES ON PRODUCT SAMPLING LINES
 - B. SAFETY PRESSURE RELIEF VALVES
 - C. BLEEDER VALVES IN DOUBLE BLOCK AND BLEEDER VALVE SYSTEMS
 - D. WATER DRAIN VALVES
 - E. LOADING SPOUTS
21. EACH AFFECTED DEVICE OR FLANGE WHICH HAS BEEN DISCOVERED TO BE LEAKING SHALL BE AFFIXED WITH A WEATHERPROOF, BRIGHTLY COLORED, READILY VISIBLE TAG BEARING THE DATE THE LEAK WAS DISCOVERED. THE TAG SHALL REMAIN IN PLACE UNTIL THE LEAKING AFFECTED DEVICE OR FLANGE IS REPAIRED OR REPLACED, REINSPECTED, AND FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF RULE 443.
22. EACH AFFECTED DEVICE OR FLANGE HANDLING VOLATILE ORGANIC COMPOUNDS SHALL BE INSPECTED FOR LEAKS ACCORDING TO THE FOLLOWING SCHEDULE:

AFFECTED DEVICE	SERVICE	LEAK DEFINITION	INSPECTION FREQUENCY	INSPECTION METHOD
PRESSURE RELIEF DEVICES	GAS	IMPROPER RESEAT	WITHIN 24 HOURS AFTER EVERY OVER-PRESSURE RELIEF	VISUAL OR MANUAL
PUMPS	LIGHT LIQUID	VISIBLE LEAK	WEEKLY	VISUAL
PUMPS	ALL	500 PPMV	QUARTERLY	PORTABLE HYDROCARBON DETECTION INSTRUMENT MEASURED 1 CM FROM THE SOURCE



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AFFECTED DEVICE	SERVICE	LEAK DEFINITION	INSPECTION FREQUENCY	INSPECTION METHOD
COMPRESSORS	ALL	500 PPMV	QUARTERLY	PORTABLE HYDROCARBON DETECTION INSTRUMENT MEASURED 1 CM FROM THE SOURCE
VALVES, FLANGES, PRESSURE RELIEF DEVICES, CONNECTIONS, AND MISCELLANEOUS DEVICES	ALL	100 PPMV	QUARTERLY (A)	PORTABLE HYDROCARBON DETECTION INSTRUMENT MEASURED 1 CM FROM THE SOURCE

(A) QUARTERLY INSPECTIONS OF VALVES MAY BE REDUCED TO ANNUAL INSPECTIONS IF LESS THAN 2% OF ALL VALVES ASSOCIATED WITH A PROCESS UNIT ARE FOUND TO BE LEAKING FOR FIVE CONSECUTIVE QUARTERLY INSPECTIONS. QUARTERLY INSPECTIONS MUST BE RESUMED IF DURING THE ANNUAL INSPECTION, MORE THAN 2% OF THE VALVES ARE FOUND TO BE LEAKING.

23. EACH LEAKING AFFECTED DEVICE OR FLANGE SHALL BE REPAIRED WITHIN TWO WORKING DAYS AFTER DETECTION OF SUCH LEAK, EXCEPT AS PROVIDED IN RULE 443, SECTION 303.2. THE REPAIRS SHALL BE SUCH THAT THERE WILL BE A NO LEAK CONDITION.
24. FOR EACH ESSENTIAL AFFECTED DEVICE OR FLANGE FOUND TO BE LEAKING THAT CANNOT BE BROUGHT INTO COMPLIANCE WITH RULE 443, SECTION 303.1, THE FOLLOWING ACTIONS SHALL BE TAKEN:
- A. IF AFTER EFFORTS TO REPAIR IN ACCORDANCE WITH RULE 443, SECTION 303.1 WITHOUT SHUTTING DOWN ARE COMPLETED AND THE LEAK RATE IS LESS THAN 10 DROPS PER MINUTE, OR THE DETECTABLE HYDROCARBON CONCENTRATION IS LESS THAN 10,000 PPM (EXPRESSED AS METHANE), BUT MORE THAN THE LEAK DEFINITION VALUE AS MEASURED WITHIN 1 CENTIMETER OF THE SOURCE, ALL OF THE FOLLOWING ACTIONS SHALL BE TAKEN:
 - (1) WITHIN TWO WORKING DAYS OF DISCOVERY OF NON-REPAIRABILITY, THE AIR POLLUTION CONTROL OFFICER SHALL BE GIVEN NOTICE OF THE DATE THE ESSENTIAL AFFECTED DEVICE OR FLANGE WILL BE REPAIRED; AND
 - (2) WITHIN TWO WORKING DAYS OF REPAIR, THE AIR POLLUTION CONTROL OFFICER SHALL BE NOTIFIED OF THE DATE OF REPAIR; AND
 - (3) INSPECTION OF SUCH ESSENTIAL AFFECTED DEVICE OR FLANGE SHALL BE MADE MONTHLY UNTIL SUCH ESSENTIAL AFFECTED DEVICE OR FLANGE IS RETURNED TO A NO LEAK CONDITION; AND
 - (4) REPAIRS TO BRING SUCH ESSENTIAL AFFECTED DEVICE OR FLANGE TO A NO LEAK CONDITION SHALL BE COMPLETED AT THE NEXT PROCESS TURNAROUND OR PLANT SHUTDOWN OR WITHIN SIX MONTHS, WHICHEVER IS THE SHORTER LENGTH OF TIME.
 - B. IF AFTER EFFORTS TO REPAIR IN ACCORDANCE WITH RULE 443, SECTION 303.1 WITHOUT SHUTTING DOWN ARE COMPLETED AND THE LEAK RATE IS 10 DROPS PER MINUTE OR GREATER, OR APPEARANCE OF A VISIBLE MIST CONTINUES, OR THE DETECTABLE HYDROCARBON EMISSIONS ARE 10,000 PPM (EXPRESSED AS METHANE) OR GREATER, MEASURED WITHIN 1 CENTIMETER OF THE SOURCE, ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN:
 - (1) LEAK MINIMIZATION REPAIRS SHALL BE MADE WITHIN TWO DAYS WHICH REDUCES THE LEAKAGE RATE TO



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- THE RATE STATED IN RULE 443, SUBSECTION 303.2.A AND SUCH ESSENTIAL AFFECTED DEVICE SHALL BE SUBJECT TO THE PROVISIONS OF RULE 443, SUBSECTION 303.2.A; OR
- (2) THE EMISSIONS FROM THE LEAK SHALL BE REDUCED BY 90% WITHIN TWO WORKING DAYS BY THE USE OF AN EMISSION CONTROL DEVICE, AS DETERMINED BY THE METHODS SPECIFIED IN RULE 443, SECTION 501.3 AND 501.4; OR
- (3) A PETITION FOR A VARIANCE SHALL BE FILED IN ACCORDANCE WITH RULE 602, *BREAKDOWN CONDITIONS: EMERGENCY VARIANCE*.
25. IF COMPLYING WITH RULE 443, SECTIONS 303.1, 303.2.A, 303.2.B.1, AND 303.2.B.2, THE FACILITY SHALL BE EXEMPT FROM THE PROVISIONS OF RULE 602, *BREAKDOWN CONDITIONS: EMERGENCY VARIANCES*.
26. INACCESSIBLE AFFECTED DEVICES AND FLANGES SHALL BE EXEMPT FROM THE PROVISIONS OF RULE 443, SECTION 302, PROVIDED:
- A. THE NUMBER OF INACCESSIBLE AFFECTED DEVICES AND FLANGES SUBJECT TO THIS SECTION DOES NOT EXCEED 5% OF THE TOTAL NUMBER OF AFFECTED DEVICES OR FLANGES ASSOCIATED WITH A PROCESS UNIT SUBJECT TO RULE 443, SECTION 302; AND
- B. A LIST OF THE INACCESSIBLE AFFECTED DEVICES AND FLANGES, INCLUDING LOCATION, SUBJECT TO THIS SECTION IS MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST; AND
- C. THE REASON WHY THE AFFECTED DEVICE OR FLANGE IS INACCESSIBLE IS PROVIDED WITH THE LIST PREPARED PURSUANT TO RULE 443, SECTION 304.2; AND
- D. THE INACCESSIBLE AFFECTED DEVICES OR FLANGES ARE INSPECTED ANNUALLY.
27. ANY LEAK ORIGINALLY IDENTIFIED BY THE AIR POLLUTION CONTROL OFFICER SHALL CONSTITUTE A VIOLATION OF RULE 443.
28. UNLESS OTHERWISE STATED, THE PERFORMANCE TESTS FOR DEMONSTRATING COMPLIANCE WITH THE REQUIREMENTS OF THIS PERMIT TO OPERATE SHALL BE THE FOLLOWING:
- A. **VOC MASS EMISSION RATE AND CONTROL EFFICIENCY:** EXCEPT WHERE OTHERWISE SPECIFIED, THE VOC MASS EMISSION RATE AND CONTROL EFFICIENCY SHALL BE DETERMINED IN ACCORDANCE WITH EPA METHOD 18, 25 OR 25A; EPA METHOD 1 OR 1A; EPA METHOD 2, 2A, 2B OR 2C; EPA METHOD 3; AND EPA METHOD 4 (WHICHEVER COMBINATION IS MOST APPLICABLE).
- B. **CAPTURE/COLLECTION EFFICIENCY:** CAPTURE/COLLECTION EFFICIENCY SHALL BE DETERMINED BY USING EPA *GUIDELINES FOR DEVELOPING COLLECTION EFFICIENCY PROTOCOLS*, 55 FEDERAL REGISTER 26865, JUNE 29, 1990. INDIVIDUAL COLLECTION EFFICIENCY TEST RUNS SUBJECT TO THE EPA TECHNICAL GUIDELINES SHALL BE DETERMINED BY:
- (1) EPA METHODS 204, 204A, 204B, 204C, 204E AND/OR 204F; OR
- (2) THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT "PROTOCOL FOR DETERMINING VOLATILE ORGANIC COMPOUND (VOC) CAPTURE EFFICIENCY; OR
- (3) ANY OTHER METHOD APPROVED IN WRITING BY THE U.S. EPA, THE CALIFORNIA AIR RESOURCES BOARD, AND THE AIR POLLUTION CONTROL OFFICER.
- C. **VOC CONCENTRATION IN WASTEWATER:** THE TOTAL VOC CONCENTRATION IN WASTEWATER SHALL BE DETERMINED IN ACCORDANCE WITH EPA METHOD 305 OR METHOD 25D.
- D. **VAPOR PRESSURE:** VAPOR PRESSURE OF A VOC SHALL BE DETERMINED IN ACCORDANCE WITH ASTM METHOD D2879-86 OR MAY BE OBTAINED FROM THE MOST CURRENT EDITION OF STANDARD REFERENCE TEXTS, INCLUDING, BUT NOT LIMITED TO:
- (1) *THE VAPOR PRESSURE OF PURE SUBSTANCES*, BOUBLIK, FRIED AND HALA: ELSEVIER SCIENTIFIC PUBLISHING COMPANY, NEW YORK;
- (2) *PERRY'S CHEMICAL ENGINEER'S HANDBOOK*, MCGRAW-HILL BOOK COMPANY;



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(3) *CRC HANDBOOK OF CHEMISTRY AND PHYSICS*, CHEMICAL RUBBER PUBLISHING COMPANY;

(4) *LANGE'S HANDBOOK OF CHEMISTRY*, JOHN DEAN, EDITOR, MCGRAW-HILL BOOK COMPANY.

- E. **VOC CONTENT:** VOC WEIGHT PERCENT OF PROCESS FLUIDS SHALL BE DETERMINED BY ASTM METHOD E-168, E-169, E-260 OR EPA METHOD 24.
- F. **LEAK DETECTION:** EPA METHOD 21 SHALL BE USED TO DETERMINE THE EXISTENCE OF A LEAK.
- G. **DETERMINATION OF EXEMPT PERFLUOROCARBON COMPOUNDS:** IF ANY OF THE PERFLUOROCARBONS ARE BEING CLAIMED AS EXEMPT COMPOUNDS, THE PERSON MAKING THE CLAIM MUST STATE IN ADVANCE WHICH COMPOUNDS ARE PRESENT, AND THE EPA-APPROVED TEST METHOD USED TO MAKE THE DETERMINATION OF THESE COMPOUNDS.
29. THE FACILITY SHALL NOTIFY THE AIR POLLUTION CONTROL OFFICER AT LEAST ONE WEEK IN ADVANCE OF THE DATE AND TIME OF ANY FUGITIVE EMISSIONS MONITORING PERFORMED FOR THE PURPOSES OF SATISFYING CONDITONS IN SMAQMD RULE 443.

EMISSION TESTING

30. A SOURCE TEST SHALL BE PERFORMED ON THE EMISSION UNITS AND/OR EMISSION POINTS SHOWN BELOW, TO DEMONSTRATE COMPLIANCE WITH THE EMISSION LIMITS AND EMISSION FACTOR SPECIFIED IN CONDITION NO. 7 AND CALCULATED BY THE METHOD SPECIFIED IN CONDITON NO. 8, AT LEAST ONCE DURING EACH CALENDAR YEAR, UNLESS NOTED PER THE REQUIREMENT OF CONDITION NO. 31, UNDER THE FOLLOWING CONDITIONS:
- A. VOC MASS EMISSIONS SHALL BE DETERMINED FOR THE FOLLOWING EMISSION POINTS:

EMISSION SOURCE ID	EMISSION POINT	TEST METHODS
1012	ESTER DRYER	EPA METHODS 1 – 4 & EPA METHOD 18 OR METHOD 25
1020	GLYCERINE EVAPORATOR	EPA METHODS 1 – 4 & EPA METHOD 18 OR METHOD 25

- B. IF EPA METHOD 25 IS PERFORMED TO DETERMINE VOC MASS EMISSIONS FOR STREAMS THAT ARE KNOWN TO CONTAIN METHANOL, METHANOL SHALL ALSO BE MEASURED USING EITHER EPA METHOD 18 OR EPA METHOD 308. A MOLECULAR WEIGHT OF 32 SHALL BE USED FOR METHANOL AND A MOLECULAR WEIGHT OF 16 SHALL BE USED FOR NON-METHANOL VOC IN ALL CALCULATIONS.
- C. IF EPA METHOD 18 IS PERFORMED TO DETERMINE VOC MASS EMISSIONS, THE INDIVIDUAL MOLECULAR WEIGHTS OF EACH VOC IDENTIFIED IN THE EXHAUST STREAM SHALL BE ACCOUNTED FOR IN ALL CALCULATIONS.
- D. A SOURCE TEST PLAN SHALL BE SUBMITTED TO THE AIR POLLUTION CONTROL OFFICER FOR WRITTEN APPROVAL AT LEAST 30 DAYS BEFORE THE SCHEDULED DATE OF THE SOURCE TEST. THE SOURCE TEST PLAN SHALL INCLUDE, BUT NOT BE LIMITED TO, THE PROPOSED OPERATING CONDITIONS DURING THE SOURCE TEST, THE SPECIFIC PROTOCOL BEING USED AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.
- E. SOURCE TESTS SHALL BE PERFORMED BETWEEN MAY 15 AND SEPTEMBER 30. IF THE SOURCE TEST IS CONDUCTED OUTSIDE OF THIS TIME PERIOD, SOURCE TEST RUNS SHALL BE CONDUCTED WHILE THE OUTSIDE AMBIENT TEMPERATURE IS 80°F OR HIGHER.
- F. SOURCE TEST RUNS SHALL COINCIDE WITH THE WORST CASE OPERATING SCENARIO APPROVED BY THE SMAQMD. FOR BATCH PROCESSES OR EQUIPMENT VENTING BATCH PROCESSES, THE DURATION OF THE TEST RUNS SHALL BE THE TIME FROM THE START TO THE COMPLETION OF THE BATCH CYCLE, UNLESS THE TEST RUN IS



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CONDUCTED UNDER AN ABSOLUTE OR HYPOTHETICAL WORST CASE SCENARIO AS DESCRIBED IN SMAQMD RULE 464, SECTION 411.3. FOR A BATCH CYCLE OR TEST PERIOD GREATER THAN 3 HOURS, A SINGLE TEST RUN CONDUCTED OVER THE DURATION OF THE BATCH CYCLE OR TEST PERIOD USED FOR THE EMISSION DETERMINATION. FOR BATCH CYCLES OR TEST PERIODS LESS THAN OR EQUAL TO 3 HOURS, TESTING SHALL INCLUDE AT A MINIMUM, 3 ONE-HOUR RUNS.

- G. NOTIFY THE AIR POLLUTION CONTROL OFFICER AT LEAST 7 DAYS PRIOR TO THE SOURCE TEST DATE AND START TIME IF THE DATE HAS CHANGED FROM THAT APPROVED IN THE SOURCE TEST PLAN.
 - H. A WRITTEN SOURCE TEST REPORT SHALL BE SUBMITTED TO THE AIR POLLUTION CONTROL OFFICER WITHIN 60 DAYS AFTER COMPLETION OF THE SOURCE TEST.
31. THE SOURCE TEST FOR THE ESTER DRYER SHALL NOT BE REQUIRED AFTER THE COMPLETION OF THE PROCESS DEFINITION WHERE ESTER DRYER EMISSIONS ARE VENTED TO THE APC THERMAL OXIDIZER AND WHEN THE BACKUP MODE OF VENTING TO THE ATMOSPHERE IS PERMANENTLY ELIMINATED.

RECORDKEEPING

- 32. THE FACILITY SHALL RECALCULATE THE TOTAL RESOURCE EFFECTIVENESS (TRE) INDEX VALUE FOR ANY UNIT SUBJECT TO 40 CFR 60 SUBPART NNN AND SUBPART RRR WHENEVER PROCESS CHANGES ARE MADE ACCORDINGLY. EXAMPLES OF PROCESS CHANGES INCLUDE: CHANGES IN PRODUCTION CAPACITY, FEEDSTOCK-TYPE OR CATALYST-TYPE, OR WHENEVER THERE IS A REPLACEMENT, REMOVAL OR ADDITION OF RECOVERY EQUIPMENT. THE TRE SHALL BE RECALCULATED BASED ON TEST DATA OR ON BEST ENGINEERING ESTIMATED OF THE EFFECTS OF THE CHANGE TO THE RECOVERY SYSTEM.
- 33. THE FOLLOWING RECORDS SHALL BE CONTINUOUSLY MAINTAINED ON-SITE FOR THE MOST RECENT FIVE-YEAR PERIOD AND SHALL BE MADE AVAILABLE TO THE AIR POLLUTION CONTROL OFFICER UPON REQUEST. QUARTERLY RECORDS AS SPECIFIED IN THE TABLE BELOW SHALL BE MADE AVAILABLE FOR INSPECTION WITHIN 30 DAYS FOLLOWING THE END OF THE PRECEDING QUARTER.

FREQUENCY	INFORMATION TO BE MAINTAINED
AT ALL TIMES	<ul style="list-style-type: none"> A. CHANGES IN PRODUCTION CAPACITY, FEEDSTOCK TYPE, OR CATALYST TYPE, OR ANY REPLACEMENT, REMOVAL OR ADDITION OF RECOVERY EQUIPMENT FOR A DISTILLATION UNIT OR REACTOR SUBJECT TO 40 CFR 60 SUBPART NNN OR SUBPART RRR. B. ANY RECALCULATION OF THE TRE INDEX VALUE REQUIRED BY 40 CFR 60 SUBPART NNN OR SUBPART RRR. C. SOURCE TEST REPORTS. D. FUGITIVE EMISSION MONITORING REPORTS INCLUDING: <ul style="list-style-type: none"> (1) IDENTITY OF EACH AFFECTED DEVICE OR FLANGE (2) DATE OF INSPECTION (3) LEAK RATE
DAILY	<ul style="list-style-type: none"> E. TYPES AND AMOUNTS OF ORGANIC COMPOUNDS USED AND PRODUCED BY EACH ORGANIC CHEMICAL MANUFACTURING PROCESS UNIT AS REFERENCED IN APPENDIX 'B'.



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FREQUENCY	INFORMATION TO BE MAINTAINED
WHEN LEAK IS DETECTED DURING AN INSPECTION REQUIRED BY CONDITION NO. 19.	F. IDENTITY OF EACH AFFECTED DEVICE OR FLANGE. G. DATE OF DETECTION OF LEAK. H. LEAK RATE. I. DATE OF REPAIR. J. LEAK RATE AFTER REPAIR. K. DATE WHEN LEAK FREE. L. DATE WHEN DEVICE OR FLANGE RETURNS TO REGULAR INSPECTION SCHEDULE. M. DATE AND TIME LEAK REPORTED TO THE AIR POLLUTION CONTROL OFFICER (FOR WASTEWATER INDIVIDUAL DRAIN COVERS AND WASTEWATER OIL-WATER SEPARATORS ONLY).
MONTHLY	N. RECORD THE MONTHLY VISUAL INSPECTION OF THE LOCK-AND-KEY TYPE SEAL MECHANISM ON THE ESTER DRYER EXHAUST PIPING TO THE ATMOSPHERE.
QUARTERLY	O. THROUGHPUT OF EACH DEVICE LISTED IN THE TABLE REFERENCED IN CONDITION NO. 6, INCLUDING THE ESTER DRYER AND THE GLYCERINE EVAPORATOR. FOR PROCESS TANKS CONTAINING MATERIALS WITH A VOC COMPOSITE VAPOR PRESSURE GREATER THAN OR EQUAL TO 26 MM HG @ 20°C, THE THROUGHPUT SHALL BE MEASURED BY INSTRUMENTATION. THE INSTRUMENTATION MAY BE LOCATED AT THE PROCESS TANK OR ANOTHER UPSTREAM OR DOWNSTREAM LOCATION THAT IS IN SERIES WITH THE PROCESS TANK. P. CALCULATION OF ROC EMISSIONS FROM THE ESTER DRYER (EMISSION SOURCE ID 1012) BY THE METHOD SPECIFIED IN CONDITION NO. 8.

START-UP

34. THIS AUTHORITY TO CONSTRUCT SHALL SERVE AS A TEMPORARY PERMIT TO OPERATE PROVIDED THAT:
- A. THE EQUIPMENT IS OPERATED IN COMPLIANCE WITH ALL CONDITIONS LISTED WITHIN THE AUTHORITY TO CONSTRUCT.



AUTHORITY TO CONSTRUCT (CONTINUED)

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YOUR APPLICATION FOR THIS AIR QUALITY AUTHORITY TO CONSTRUCT WAS EVALUATED FOR COMPLIANCE WITH SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT (AQMD), STATE AND FEDERAL AIR QUALITY RULES. THE FOLLOWING LISTED RULES ARE THOSE THAT ARE MOST APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. OTHER RULES MAY ALSO BE APPLICABLE.

<u>AQMD RULE NO.</u>	<u>RULE TITLE</u>
201	GENERAL PERMIT REQUIREMENTS
202	NEW SOURCE REVIEW
301	PERMIT FEES – STATIONARY SOURCE
401	RINGELMANN CHART
402	NUISANCE
443	LEAKS FROM SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING
464	ORGANIC CHEMICAL MANUFACTURING OPERATIONS
40 CFR 60	SUBPART VV – STANDARDS OF PERFORMANCE FOR EQUIPMENT LEAKS OF VOC IN SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY
40 CFR 60	SUBPART NNN – STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI) DISTILLATION OPERATIONS
40 CFR 60	SUBPART RRR – STANDARDS OF PERFORMANCE FOR VOC EMISSIONS FROM SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI) REACTOR PROCESSES.
40 CFR 63	SUBPART F – NATIONAL EMISSION STANDARDS FOR ORGANIC CHEMICAL HAZARDOUS POLLUTANTS FROM THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY
40 CFR 63	SUBPART FFFF – NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING

IN ADDITION, THE CONDITIONS ON THIS AUTHORITY TO CONSTRUCT MAY REFLECT SOME, BUT NOT ALL, REQUIREMENTS OF THESE RULES. THERE MAY BE OTHER CONDITIONS THAT ARE APPLICABLE TO THE OPERATION OF YOUR EQUIPMENT. FUTURE CHANGES IN PROHIBITORY RULES MAY ESTABLISH MORE STRINGENT REQUIREMENTS WHICH MAY SUPERSEDE THE CONDITIONS LISTED HERE.

FOR FURTHER INFORMATION PLEASE CONSULT YOUR AQMD RULEBOOK OR CONTACT THE AQMD FOR ASSISTANCE.