

SUPPLEMENT TO PERMIT NO. 119-97

Shell Western E & P, Inc.
Buckley (Wexford 10 Facility), Michigan

March 10, 1997

GENERAL CONDITIONS

1. Rule 201(1) - The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, 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.
2. Rule 201(4) - If the installation, reconstruction, relocation, or alteration 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 person to whom this permit was issued, 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, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install.
3. Rule 201(6)(a) - If this Permit to Install is issued for a process or process equipment located at a stationary source which is subject to a Renewable Operating Permit pursuant to Rule 210, trial operation is allowed if the equipment performs in accordance with the terms and conditions of this Permit to Install and until the appropriate terms and conditions of this Permit to Install have been incorporated into the Renewable Operating Permit as a modification pursuant to Rule 216 or upon renewal pursuant to Rule 217. Upon incorporation of the appropriate terms and conditions into the Renewable Operating Permit, this Permit to Install shall become void.
4. Rules 201(6)(b)(i) or 216(1)(a)(v)(A) - Except as provided in General Condition No. 3, operation of the process or process equipment is allowed if, not more than 30 days after completion of the installation, construction, reconstruction, relocation, alteration, or modification authorized by this Permit to Install, the person to whom this Permit to Install was issued, or the authorized agent pursuant to Rule 204, notifies the District Supervisor, Air Quality Division, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, alteration, or modification is considered to occur not later than commencement of trial operation of the process or process equipment.
5. Rule 201(6)(b)(ii) - Except as provided in General Condition No. 3, not more than 18 months after completion of the installation, construction, reconstruction, relocation, alteration, or modification authorized by this Permit to Install, the person to whom this permit was issued, or the authorized agent pursuant to Rule 204, shall notify the District Supervisor, Air Quality Division, in writing, of the status of compliance of the process or process equipment with the terms and conditions of the Permit to Install. The notification shall include all of the following:
 - A. The results of all testing, monitoring, and recordkeeping performed to determine the actual emissions from the process or process equipment and to demonstrate compliance with the terms and conditions of the Permit to Install.
 - B. A schedule of compliance for the process or process equipment as described in Rule 119(a).
 - C. A statement, signed by the person owning or operating the process or process equipment, that, based on information and belief formed after reasonable inquiry, the statements and information in the notification are true, accurate, and complete.

6. Rule 201(7) and Section 5510 of Act 451, P.A. 1994 - 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 Departments' rules or the Clean Air Act.
7. Rule 219 - A new owner or operator of the process or process equipment covered by this Permit to Install shall immediately make a written request to the Department for a change of ownership or operational control. The request shall include all of the information required in Rule 219(1)(a), (b) and (c). If the request for a change in ownership or operational control is approved, the terms and conditions of this Permit to Install shall apply to the person or legal entity which hereafter owns or operates the process or process equipment for which this Permit to Install is issued. The written request shall be sent to the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909.
8. Rule 901 - 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.
9. Rule 912 - The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. 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 District Supervisor within 10 days, with the information required in this rule.
10. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future regulations which may be promulgated under Part 55 of Act 451, P.A. 1994.
11. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
12. Operation of this equipment may be subject to other requirements of Part 55 of Act 451, P.A. 1994, and the rules promulgated thereunder.

SPECIAL CONDITIONS

13. Emissions of sulfur dioxide (SO₂) from the facility shall not exceed 20.32 pounds per hour based on a 24-hour average, nor exceed 89 tons per year. This is equivalent to a mass flow rate of hydrogen sulfide to the flare of 10.81 pounds per hour, based on a 24-hour average.
14. Applicant shall monitor, on a monthly basis, the mass flow rate of the hydrogen sulfide entering the plant and going to the flare. The monitoring data shall be submitted to the District Supervisor in

an acceptable format within 30 days following the end of the quarter in which the data were collected.

15. The Hazardous Air Pollutants (HAP), as defined pursuant to section 112(b) of the Clean Air Act, emission rates shall be less than 10 tons per year for any individual HAP or 25 tons per year for any combination of HAPs at this facility. This annual limit shall be based upon a 12-month rolling average as determined at the end of each calendar month.

16. Emissions of Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Oxides of Nitrogen (NOx) from the entire facility shall not exceed 89 tons per year based on a twelve-month rolling period. Compliance with this condition shall be demonstrated by monitoring the fuel consumption of on-site equipment, crude oil/ condensate throughput to the tanks, gallons per minute (gpm) of glycol circulated through gas dehydrators, and hydrocarbon material trucked from the site, and by using this data and the emission factors established in Appendix A to these conditions to calculate emissions.

17. Monitoring records and emissions calculations of CO, VOC and NOx shall be kept on file at a location approved by the District Supervisor for a period of two years and made available to the AQD upon request.

18. Monthly records of HAPs emissions for the plant shall be kept on file at a location approved by the District Supervisor and made available to the AQD upon request.

19. Applicant shall operate a continuously burning pilot flame at the flare. In the event that the flame is extinguished, shut-in of all wells feeding the equipment shall commence automatically within one second. Operation of the equipment shall not be restarted unless the pilot flame is reignited and maintained. Pilot fuel shall be only sweet natural gas.

20. Applicant shall vent the dehydrator and storage tanks to an incinerator, a vapor recovery unit or equivalent control system if required in writing by the District Supervisor.

21. Visible emissions from the gas sweetening facility shall not exceed a 6-minute average of 20% opacity except as specified in Rule 301(1)(a).

22. Applicant shall install and maintain fencing, warning signs, and/or other measures as necessary to prevent unauthorized individuals from entering the plant property and buildings.

23. The owner or operator of the source shall conduct all necessary maintenance and make all necessary attempts to keep all components of the process equipment in proper operating condition at all times. The owner or operator of the facility shall maintain a log of all significant maintenance activities conducted and all repairs made to the equipment. This log shall be kept on file at a location approved by the District Supervisor for a period of at least two years and made available to the AQD upon request.

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24. Rules 1001, 1003 and 1004 - Verification of SO_x, CO, NO_x, VOC or HAP emission rates from any equipment at the facility, at owners expense, in accordance with Department requirements, may be required for operating approval. Verification of emission rates includes the submittal of a complete report of the test results. If a test is required, stack testing procedures and the location of stack testing ports must have prior approval by the District Supervisor, Air Quality Division, and the test results shall be submitted within 120 days of the written requirements for such verification.

25. Pursuant to Rule 210(5) applicant shall apply for a Renewable Operating Permit within 12 months of exceeding the major source thresholds defined by Rule 211(1)(a).

APPENDIX A

WEXFORD 10

Oil and Gas Production Facility Equipment and Stack Summary Potential to Emit Calculations

Equipment	Company ID#	Design Rating	Emission Factors				Emissions			Tank & Stack/Vent		
			CO	NOx	VOC ¹	HAP	CO	NOx	VOC ²	Height	Diameter	Orientation
Compressors³ SCC 2-02-002-02												
Nat. Asp.	W10-CM1	HP	tpy/HP	tpy/HP	tpy/HP	-	tpy	tpy	tpy	feet	Feet	V or H
		250	0.0143	0.1135	0.00277	-	3.58	28	0.7	25	0.67	V
Burners SCC 3-10-004-04												
		MBtu/hr	tpy/MBtu	tpy/MBtu	tpy/MBtu							
Inline Heaters	W10-IH1	2000	0.00015	0.000584	0.000012	-	0.3	1	0.0	30	0.67	V
Reboiler-Glycol	W10-RBG	200	0.00015	0.000584	0.000012	-	0.03	0	0.0	15	0.25	V
Reboiler-Amine	W10-RBS	1800	0.00015	0.000584	0.000012	-	0.27	1	0.0	20	1.33	V
Flare	W10-FLR	150	0.00015	0.000584	0.000012	-	0.02	0	0.0	150	0.67	V
Tanks												
Standing Loss		Capacity										
SCC 4-03-011-10		#	bbls			tpy/bbl						
Tanks	W10-TKS	1	400	-	-	0.000037	-	-	0.01	25	12	4"x25'v
Working Loss		Thruput										
SCC 4-03-010-12			bbls/hr									
	W10-TKW		0.5	-	-	0.4544	-	-	0			
Trucking		Thruput										
SCC 4-06-001-32			Mbbls/yr									
	W10-TTK		0	-	-	0.0014	-	-	0			
Dehydrators SCC 3-10-002-27												
Niagaran	W10-DHY	glycol gpm										
		0.67	-	-	25.5	20.7	-	-	31	15	0.33	V
Total Tons/Year							4	31	32			

Notes:

- 1 - VOC factors in this column are non-HAP VOC; but note that all HAPs from these sources are VOCs.
- 2 - This column must be the TOTAL of the VOC column and the HAPs column
- 3 - For compressors and burners, a new row must be added for each individual piece of equipment of this type.

EXAMPLES -

Nat. Asp.	COMP1	750	0.0143	0.1135	0.00277	-	10.7	85	2.1	20	0.5	H
Niagaran	DEHY	0.4	0	0	25.5	20.7	-	-	18	15	0.72	V