

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

EFFECTIVE DATE: January 20, 2012

ISSUED TO

**ANR STORAGE COMPANY  
EXCELSIOR COMPRESSOR STATION**

State Registration Number (SRN): B7196

LOCATED AT

4963 State Road Northeast, Kalkaska, Michigan 49649

**RENEWABLE OPERATING PERMIT**

Permit Number: MI-ROP-B7196-2012

Expiration Date: January 20, 2017

Administratively Complete ROP Renewal Application Due Between  
July 20, 2015 and July 20, 2016

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

**SOURCE-WIDE PERMIT TO INSTALL**

Permit Number: MI-PTI-B7196-2012

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

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Janis Denman, Cadillac District Supervisor

# TABLE OF CONTENTS

<b>AUTHORITY AND ENFORCEABILITY .....</b>	<b>3</b>
<b>A. GENERAL CONDITIONS.....</b>	<b>4</b>
Permit Enforceability .....	4
General Provisions.....	4
Equipment & Design .....	5
Emission Limits.....	5
Testing/Sampling .....	5
Monitoring/Recordkeeping .....	6
Certification & Reporting .....	6
Permit Shield .....	7
Revisions .....	8
Reopenings.....	8
Renewals.....	9
Stratospheric Ozone Protection .....	9
Risk Management Plan.....	9
Emission Trading .....	9
Permit To Install (PTI).....	10
<b>B. SOURCE-WIDE CONDITIONS .....</b>	<b>11</b>
<b>C. EMISSION UNIT CONDITIONS .....</b>	<b>11</b>
EMISSION UNIT SUMMARY TABLE.....	11
EUEXGLYDEH .....	12
<b>D. FLEXIBLE GROUP CONDITIONS.....</b>	<b>16</b>
FLEXIBLE GROUP SUMMARY TABLE.....	16
FGEXCOMP .....	17
FGEXGEN.....	19
<b>E. NON-APPLICABLE REQUIREMENTS .....</b>	<b>21</b>
<b>APPENDICES .....</b>	<b>22</b>
Appendix 1. Abbreviations and Acronyms.....	22
Appendix 2. Schedule of Compliance.....	23
Appendix 3. Monitoring Requirements .....	23
Appendix 4. Recordkeeping .....	23
Appendix 5. Testing Procedures .....	23
Appendix 6. Permits to Install.....	23
Appendix 7. Emission Calculations .....	23
Appendix 8. Reporting .....	24

## AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or is state only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

## A. GENERAL CONDITIONS

### Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in federally enforceable Source-Wide PTI No. MI-PTI-B7196-2012 pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

### General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
  - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
  - c. Inspect, at reasonable times, any of the following:
    - i. Any stationary source.
    - ii. Any emission unit.
    - iii. Any equipment, including monitoring and air pollution control equipment.
    - iv. Any work practices or operations regulated or required under the ROP.
  - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq.,

and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

### Equipment & Design

9. Any 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 Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

### Emission Limits

11. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
  - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
  - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
  - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.<sup>1</sup> **(R 336.1901(a))**
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> **(R 336.1901(b))**

### Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

## Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
  - a. The date, location, time, and method of sampling or measurements.
  - b. The dates the analyses of the samples were performed.
  - c. The company or entity that performed the analyses of the samples.
  - d. The analytical techniques or methods used.
  - e. The results of the analyses.
  - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

## Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
  - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
  - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
  - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
  - a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
  - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. 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 appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor 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 conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA. **(R 336.1912)**

## Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
  - a. The applicable requirements are included and are specifically identified in the ROP.
  - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
  - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
  - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
  - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
  - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
  - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
  - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
  - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

## Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

## Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
  - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
  - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
  - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

## Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

## Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR, Part 82, Subpart F.
37. If the permittee is subject to 40 CFR, Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR, Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

## Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR, Part 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR, Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall comply with the requirements of 40 CFR, Part 68, no later than the latest of the following dates as provided in 40 CFR, Part 68.10(a):
- June 21, 1999,
  - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
  - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR, Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR, Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR, Part 68)**

## Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

## Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.<sup>2</sup> **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.<sup>2</sup> **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.<sup>2</sup> **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.<sup>2</sup> **(R 336.1201(4))**

### **Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

## C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

### EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUEXCOMP-A	Compressor engine A, a natural gas fired, reciprocating, internal combustion Ingersoll Rand 410-KVR-TE engine rated at 3750 hp.	10/28/1981, 1997	FGEXCOMP
EUEXCOMP-B	Compressor engine B, a natural gas fired, reciprocating, internal combustion Ingersoll Rand 410-KVR-TE engine rated at 3750 hp.	10/28/1981, 1997	FGEXCOMP
EUEXGEN-A	Generator engine A, a natural gas fired, reciprocating, internal combustion Caterpillar G399 engine rated at 490 hp.	10/28/1981	FGEXGEN
EUEXGEN-B	Generator engine B, a natural gas fired, reciprocating, internal combustion Caterpillar G399 engine rated at 490 hp.	10/28/1981	FGEXGEN
EUEXGLYDEH	Glycol dehydration unit	9/1/1989	NA

**EUEXGLYDEH  
 EMISSION UNIT CONDITIONS**

**DESCRIPTION:** Glycol Dehydration Unit

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** Condenser and thermal oxidizer

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Volatile Organic Compounds (VOC)	108.0 pounds per day <sup>2</sup>	As determined at the end of each calendar month	EUEXGLYDEH	VI.6.	R 336.1702(a)
2. Volatile Organic Compounds (VOC)	18.3 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EUEXGLYDEH	VI.6.	R 336.1702(a)
3. Benzene	Less than 0.90 megagrams (0.992 Tons) per year	Calendar year	EUEXGLYDEH	VI.7.	40 CFR 63.1274(d)(2)

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NA	NA		NA	NA	NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The glycol dehydration unit shall not be operated unless it is equipped with a thermal oxidizer or a condenser. The condenser or thermal oxidizer, including any associated monitoring equipment, shall be operated properly.<sup>2</sup> **(R 336.1702(a), R 336.1910)**
2. When the glycol dehydration unit is controlled by the condenser, the condenser exhaust temperature shall be 120°F or less.<sup>2</sup> **(R 336.1702(a), R 336.1901)**
3. The glycol dehydration unit shall not be operated unless the glycol separator is installed and operating properly. A properly operating glycol separator will volatize organic compounds out of the rich glycol stream and route them to the glycol regenerator reboiler burner or thermal oxidizer.<sup>2</sup> **(R 336.1702(a), R 336.1901)**
4. When the glycol dehydration unit is controlled by a thermal oxidizer, the thermal oxidizer shall have an operating temperature of at least 1400°F and VOC destruction efficiency shall be at least 95%.<sup>2</sup> **(R 336.1702(a))**

5. Sweet natural gas shall be the only fuel supplied to and fired in the glycol dehydration unit. However, the permittee may also incinerate emissions from the glycol separator in the glycol reboiler burner.<sup>2</sup> **(R 336.1301(1)(a), R 336.1702(a), R 336.1901)**
6. The glycol dehydration unit shall not be operated while the thermal oxidizer is malfunctioning for more than 4,500 hours per 12-month rolling time period as determined at the end of each calendar month.<sup>2</sup> **(R 336.1702(a), R 336.1910)**
7. The permittee shall not use stripping gas in the glycol dehydration unit.<sup>2</sup> **(R 336.1702(a))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The glycol dehydration unit shall be equipped with any combination of glycol pump(s) that have a combined capacity no greater than 12.8 gpm.<sup>2</sup> **(R 336.1702(a), R 336.1213(3))**
2. The thermal oxidizer shall be designed and equipped with a temperature monitor to continuously monitor the operating temperature and also be designed and equipped with an alarm system that will alarm if the operating temperature is less than 1400°F.<sup>2</sup> **(R 336.1213(3), (R 336.1702(a), R 336.1201(3))**
3. The glycol condenser shall be designed and equipped with a exhaust gas temperature monitor to continuously monitor the operating temperature and also be designed and equipped with an alarm system that will alarm if the operating temperature is greater than 120°F.<sup>2</sup> **(R 336.1213(3), (R 336.1702(a), R 336.1201(3))**
4. If the glycol dehydration unit is controlled by the thermal oxidizer, then the thermal oxidizer shall maintain a minimum retention time of 0.5 seconds.<sup>2</sup> **(R 336.1702(a))**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The natural gas processed in the glycol dehydration unit shall be analyzed once per calendar year to determine its content and composition using method(s) standard in the natural gas industry, subject to approval by the AQD.<sup>2</sup> **(R 336.1702(a), R 336.1901, R 336.1213(3))**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall monitor the alarm events (alarm actuated because temperature of control equipment was outside the acceptable range) from the primary control device, either the thermal oxidizer or the condenser. The day and time of the alarm event shall be maintained in addition to the corrective action taken that resulted from the alarm event. If the primary control alarm system is not operating properly, then the permittee shall monitor and record the exhaust gas temperature from the control device once per day for all days the glycol dehydration unit is operating. If the alarm system is not operating properly, a written log of the daily control device operating temperatures shall be maintained. **(R 336.1702(a), (R 336.1213(3))**
2. The permittee shall retain calculations, for the thermal oxidizer when controlling the glycol dehydration unit, showing the VOC destruction efficiency is at least 95% by weight. The calculations shall be retained and performed in a manner acceptable to the Air Quality Division. **(R 336.1702(a), R 336.1213(3))**
3. The permittee shall record the hours of operation of the glycol dehydration unit for each calendar month and each 12-month rolling time period. **(R 336.1213(3))**
4. The permittee shall record the primary emission control device for the dehydration unit for each day the unit is in operation. The information shall be available to the AQD upon request no later than the 15<sup>th</sup> of the next calendar month. **(R 336.1213(3))**

5. The permittee shall calculate and record the daily VOC emissions from the glycol dehydration unit at the end of each calendar month, using the method specified in Appendix 7 of this permit. The permittee shall calculate and record the VOC emissions for the calendar month by adding up emissions from the applicable days, and shall calculate and record the annual VOC emissions based on a 12-month rolling time period by summing emissions from the applicable months. The VOC emission records shall be available to the AQD upon request no later than the 15<sup>th</sup> of the next calendar month. **(R 336.1213(3))**
6. The permittee shall determine the annual benzene emissions from the glycol dehydration unit by using either of the procedures listed below. Emissions shall be determined either uncontrolled or with federally enforceable controls in place. The emissions shall be calculated at the end of each calendar year and shall be available to the AQD upon request no later than the following January 15<sup>th</sup>. **(40 CFR 63.1282(a)(2), R 336.1213(3))**
  - a. The permittee may determine benzene emissions using the model GRI-GLYCalc™ Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1); or **(40 CFR 63.1282(a)(2)(i))**
  - b. Alternatively, the permittee may determine the benzene emissions rate in kilograms per hour through direct measurement by performing three runs of Method 18 in 40 CFR part 60, appendix A (or an equivalent method), and averaging the results of the three runs. Annual emissions shall be determined by multiplying the mass rate determined during this stack by the number of hours the unit is operated per year and converting the result to megagrams. **(40 CFR 63.1282(a)(2)(ii))**

See Appendix 7

**VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The semiannual report shall include the log of the control equipment alarm events with the corrective actions taken to bring the control equipment into compliance. **(R 336.1213(3))**

See Appendix 8

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEX008 (condenser)	2 <sup>2</sup>	20 <sup>2</sup>	R 336.1901
2. SVEX009 (oxidizer)	NA	20 <sup>2</sup>	R 336.1901

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and HHH, as they apply to EUEXGLYDEH. **(40 CFR, Part 63, Subparts A and HHH)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FGEXCOMP	Compressor engines A and B	EUEXCOMP-A, EUEXCOMP-B
FGEXGEN	Generator engines A and B	EUEXGEN-A, EUEXGEN-B

**FGEXCOMP  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION** Two Ingersoll Rand Model 410-KVR-TE four-cycle, lean burn, spark ignition, natural gas-fired reciprocating internal combustion engines rated at 3,750 horsepower each

**Emission Unit:** EUEXCOMP-A, EUEXCOMP-B

**POLLUTION CONTROL EQUIPMENT**

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Nitrogen Oxides (NO <sub>x</sub> )	99.2 lbs/hr		Each compressor engine	V.1, VI.1	40 CFR 52.21

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NA	NA	NA	NA	NA	NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall use only sweet natural gas as fuel for the compressor engines.<sup>2</sup> (R 336.1301(1)(a))

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The compressor engines shall be designed so that each engine does not emit more than 12 grams of NO<sub>x</sub> per brake horsepower hour at 100% speed and 100% torque.<sup>2</sup> (40 CFR 52.21)

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The NO<sub>x</sub> emissions from each engine shall be tested by June 30, 2015 and once every five years thereafter. The testing shall be performed in accordance with reference methods approved by the AQD. (R 336.1213(3))

See Appendix 5

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall maintain records of the preventative maintenance performed in accordance with the Preventative Maintenance Plan (PMP). (R 336.1213(3), R336.1911)

**VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Not less than 30 days prior to the anticipated test date, the permittee shall notify the AQD Cadillac District Supervisor and the AQD Technical Programs Unit of the test date. **(R 336.1213(3))**
5. Not less than 30 days prior to any AQD required stack testing, the permittee shall submit the test protocol to AQD District Supervisor and the AQD Technical Programs Unit for approval. **(R 336.1213(3)(a)(ii))**
6. The permittee shall submit a all test results to the AQD Cadillac District Supervisor and the AQD Technical Programs Unit within 60 days following the last date of the NOx emissions test. **(R 336.1213(3)(c))**

See Appendix 8

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEX001	30 <sup>1</sup>	49.2 <sup>1</sup>	R 336.1901
2. SVEX002	30 <sup>1</sup>	49.2 <sup>1</sup>	R 336.1901

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall maintain the engines in accordance with the facility's approved Preventative Maintenance Plan. **(R 336.1213(3))**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).  
<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**FGEXGEN**  
**FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION** Two Caterpillar G399 four-cycle, rich burn, spark ignition, natural gas-fired reciprocating internal combustion engines rated at 490 horsepower each.

**Emission Units:** EUEXGEN-A, EUEXGEN-B

**POLLUTION CONTROL EQUIPMENT**

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Formaldehyde	10.3 ppmvd at 15% O <sub>2</sub>	Continuous	Each generator engine	V.1	40 CFR 63.6602

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NA	NA	NA	NA	NA	NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee must be in compliance with the emission limitations and operating limitations of Subpart ZZZZ of Part 63 at all times after the promulgated compliance date in Subpart ZZZZ of Part 63. **(40 CFR 63.6605(a))**
- The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup, as specified in Tables 1a, 2a, 2c, and 2d to Subpart ZZZZ, apply. **(40 CFR 63.6625(h))**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

- NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- The formaldehyde concentration from each engine shall be tested within 180 days after the promulgated compliance date of Subpart ZZZZ. The initial performance test shall be performed as specified in Item 3 of Table 4 to Subpart ZZZZ of Part 63, Requirements for Performance Tests. **(40 CFR 63.6620, 40 CFR 63.6602, 40 CFR 63.6612)**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

- After the promulgated compliance date of Subpart ZZZZ of Part 63, the permittee shall keep the following records: **(40 CFR 63.6655(a))**

- A copy of each notification and report submitted to comply with Subpart ZZZZ of Part 63, including all documentation supporting any Initial Notification or Notification of Compliance status, according to the requirements of 40 CFR 63.10(b)(2)(xiv)
- Records of the occurrence and duration of each malfunction of the engines of FGEXGEN
- Records of performance tests and performance evaluations as required by 40 CFR 63.10(b)(2)(viii)
- Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning equipment to its normal or usual manner of operation.

**VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. A Notification of Intent to conduct a performance test shall be submitted at least 60 days before that test is scheduled to begin. **(40 CFR 63.6645(g))**
5. A test protocol for any performance test shall be submitted at least 30 days before that test is scheduled to begin **(R336.2001(3))**
6. For the initial compliance demonstration for the formaldehyde concentration limit in Condition I.1 of this Table, a Notification of Compliance Status, including performance test results, before the close of business on the 60<sup>th</sup> day following completion of the performance test. **(40 CFR 63.6645(h))**
7. Semiannual reporting of compliance with the provisions of Subpart ZZZZ of Part 63, containing the information required by 40 CFR 63.6650(c)(1) through (6). The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.6650(a))**

See Appendix 8

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. NA			

**IX. OTHER REQUIREMENT(S)**

1. NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

### E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

<b>Emission Unit/Flexible Group ID</b>	<b>Non-Applicable Requirement</b>	<b>Justification</b>
EUEXGLYDEH	40 CFR 63 Subpart HH (NESHAP HH – for Oil and Natural Gas Production facilities)	This is not applicable because the provisions of this subpart apply to emission points associated with oil and natural gas production facilities. The Excelsior Compressor Station is a part of the ANR gas transmission system not an oil and gas production facility.

## APPENDICES

### Appendix 1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H <sub>2</sub> S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO <sub>2</sub>	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
MDEQ	Michigan Department of Environmental Quality	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter		

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

## Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

## Appendix 3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 6. Permits to Install

The following table lists any PTIs issued since the effective date of previously issued ROP No. MI-ROP-B7196-2006. **This includes any PTIs that were incorporated into the Source-Wide PTI No MI-PTI-B7196-2006 through amendments or modifications and any PTI that remained off-permit until this ROP renewal.**

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
MI-PTI-B7196-2006	Excelsior 6 compressor station	EUEXGLYDEH, FGEXGEN, FGEXCOMP

## Appendix 7. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EURRGLYDEH. Alternative calculations shall be approved by the AQD District Supervisor.

### Glycol Dehydration Unit

Using an emission factor:

**Daily VOC emissions =(Volume of natural gas processed through the system in that day X EF)**

Where EF is an emission factor expressed as pounds of VOC emitted per volume of gas processed; so long as it is mathematically correct it may be expressed in any convenient unit of volume.

The emission factor may be determined using the model GRI-GLY Calc™ Version 3.0 or higher. The EF shall be periodically recalculated, using GlyCalc™, as more current data becomes available. The recalculated EF is subject to approval by the District Supervisor of the AQD.

Alternatively, the EF could be based on results of a stack test approved by the AQD.

**Monthly and 12 Month Emissions:**

VOC emissions per calendar month shall be calculated by summing the emissions from each day of that month. Emissions per 12 month rolling time period shall be calculated by summing the emissions from each month of that time period.

**VOC Destruction Efficiency for the glycol dehydration unit**

$$[1 - (\text{outlet}/\text{inlet})] * 100\% = \% \text{ destruction efficiency}$$

inlet = VOC concentration entering the thermal oxidizer

outlet = VOC concentration exiting the thermal oxidizer

**Appendix 8. Reporting**

**A. Annual, Semiannual, and Deviation Certification Reporting**

The permittee shall use the MDEQ Report Certification form (EQP 5736) and MDEQ Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

**B. Other Reporting**

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.