West Virginia Department of Environmental Protection
Division of Air Quality

Earl Ray Tomblin
Governor

Randy C. Huffman
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

Union Carbide Corporation
Technology Park Operations
Group 1 of 2
R30-03900004-2015

William F. Durham
Director

Issued: July 15, 2015 • Effective: July 29, 2015
Expiration: July 15, 2020 • Renewal Application Due: January 15, 2020

Permit Number: **R30-03900004-2015 (Group 1 of 2)**
Permittee: **Union Carbide Corporation**
Facility Name: **Technology Park Operations**
Mailing Address: **P.O. Box 8361, South Charleston, WV 25303**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	South Charleston, Kanawha County, West Virginia
Mailing Address:	P.O. Box 8361 South Charleston, WV 25303
Telephone Number:	304-747-7000
Type of Business Entity:	Corporation
Facility Description:	The research and development groups provide technology for the development of new products, process technology for manufacturing, and support for existing products and processes.
SIC Codes:	2869
UTM Coordinates:	438.7 km Easting • 4,245.5 km Northing • Zone 17

Permit Writer: Mike Egnor

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
Polyolefins Process R&D					
1000	P1	Monomer Purification System #1	1987	N/A	73F
1100	P1	Monomer Purification System #2	1988	N/A	73F
1200	P1	Monomer Purification System #3	1988	N/A	73F
1300	P1	Monomer Purification System #4	1988	N/A	73F
1400	P1	Monomer Purification System #5	1988	N/A	73F
100	P1	Reactor System 1	< 1975	N/A	73F
200	P1	Reactor System 2	< 1975	N/A	73F
300	P1	Reactor System 3	< 1975	N/A	73F
400	P1	Reactor System 4	< 1975	N/A	73F
500	P1	Reactor System 5	1978	N/A	73F
600	P1	Reactor System 6	1987	N/A	73F
700	P1	Reactor System 7	1988	N/A	73F
RXNS	P1	Process Additives Storage/Feed Vessels	1997	N/A	73F
773A	P1	Process Analyzers	N/A	N/A	73F
ST8	ST8	Propane Storage Tank	1979	1,000 gal	
ETTR	P1	Tank Truck	N/A	N/A	73F
BG6	P1	Storage Tank	<1984	<20,000 gal	
1101	P1	Storage Tank	1992	<20,000 gal	
1201	P1	Storage Tank	1994	<20,000 gal	
1301	P1	Storage Tank	1995	<20,000 gal	
1401	P1	Storage Tank	1995	<20,000 gal	
Bldg 773	B773	R&D Lab Activities	N/A	N/A	
Bldg 774	B774	R&D Lab Activities	N/A	N/A	
Bldg 794	B794	R&D Bench Scale Lab Activities	N/A	N/A	
EG9	GV9	Building 773 Stationary Natural Gas Fueled Emergency Generator (Spark Ignition)	Prior to 2007	45 KW (60 hp)	

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
EG13	GV13	Bulk Gas Area Stationary Propane Fueled Emergency Generator (Spark Ignition)	2010	30 hp	
SB1	BV1	Natural Gas Fueled Boiler #1	2012	3.3 MMBtu/hr	
SB2	BV2	Natural Gas Fueled Boiler #2	2012	3.3 MMBtu/hr	
SB3	BV3	Natural Gas Fueled Boiler #3	2012	3.3 MMBtu/hr	
Polyolefins Process R&D Control Devices					
73F (F003)	P1	Building 773 Flare	1994	21 MMBTU/hr 2,100 lbs/hr mass loading	N/A

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-1858	09/28/1995

2.0 General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr *or* lb/hr	Pounds per Hour
LDAR	Leak Detection and Repair
m	Thousand
MACT	Maximum Achievable Control Technology
mm	Million
mmBtu/hr	Million British Thermal Units per Hour
mmft^3/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour
NA *or* N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10μm in diameter
pph	Pounds per Hour
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c. **[45CSR§30-5.1.b.]**

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration. **[45CSR§30-4.1.a.3.]**

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3. **[45CSR§30-6.3.b.]**

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time. **[45CSR§30-6.3.c.]**

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. **[45CSR§30-5.1.f.3.]**

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a 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 permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 C.F.R. §61.145(b) and 45CSR34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. Reserved.

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.7. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.8. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.9. **Risk Management Plan.** This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.10. The permitted facility must be operated in accordance with information filed in the Permit Application R13-1858.
[45CSR13, Permit No. R13-1858 – (Condition GR.3.)]

3.2. Monitoring Requirements

3.2.1. Reserved.

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any

testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code § 22-5-4(a)(15), 45CSR§6-7.1., 45CSR§6-7.2., and 45CSR13]
[CO-R21-97-36 – (Condition IV.10.) (State Enforceable Only)]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual certification to the USEPA as required in 3.5.5 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Phone: 304/926-0475
FAX: 304/926-0478

If to the US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4.
[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. There is no compliance plan since the permittee's Responsible Official certified compliance with all applicable requirements in the Title V renewal application.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

3.7.2.1. **45CSR27 – *To Prevent and Control the Emissions of Toxic Air Pollutants*.** The emissions of Toxic Air Pollutants at this facility are lower than the threshold values in 45CSR27 Table A, so the facility is not subject to the Best Available Technology requirements.

3.7.2.2. **40 C.F.R. Part 63 Subparts F, G, and H – *National Emission Standards for Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry*.** The permittee's facility is a research and development facility. As such, the facility is exempt from the requirements of Subparts F, G, and H, in accordance with the exemption provided at 40 C.F.R. §63.100(j)(1).

3.7.2.3. **40 C.F.R. Part 64 – *Compliance Assurance Monitoring* (CAM).** In accordance with 40 C.F.R. §64.2(b)(1)(vi), CAM does not apply to any emission unit controlled by the Polyolefins R&D flare 73F due to the fact that a continuous compliance determination method is already specified by current Title V permit R30-03900004-2010, condition 5.2.1. This condition requires continuous monitoring and recording of flare temperature in order to demonstrate compliance with the VOC limits (4.16 pph and 18.2 tpy) of condition 5.1.4.

3.7.2.4. **45CSR10 - *To Prevent and Control Air Pollution from the Emission of Sulfur Oxides*.** The emission units in the following table are not subject to 45CSR10:

Emission Unit ID	Emission Unit Description	Rationale for Non-applicability of 45CSR10
EG6	Portable Building 773 Gasoline-fired Emergency Generator, ≈ 10-hp	Internal combustion engines, including gas turbines and emergency generators, are not subject to 45CSR10 as per Director's verbal guidance.
EG9	Building 773 Natural gas-fired Emergency Generator, 45-kW (equiv. to 60-hp)	Internal combustion engines, including gas turbines and emergency generators, are not subject to 45CSR10 as per Director's verbal guidance.
EG11	Portable Natural Gas or Propane-fired Emergency Generator, 13 kW (equiv. to 17.4-hp)	Internal combustion engines, including gas turbines and emergency generators, are not subject to 45CSR10 as per Director's verbal guidance.
EG13	West Bulk Gas Propane-fired Emergency Generator, 13 kW (30 hp @ 3,600 rpm)	Internal combustion engines, including gas turbines and emergency generators, are not subject to 45CSR10 as per Director's verbal guidance.

The Natural Gas Boilers (SB1, SB2, and SB3) are each less than 10 MMBTU/hr. 45CSR§10-10.1 exempts them from Sections 3 and 6 through 8 of 45CSR10. Therefore there are no applicable requirements from this rule.

3.7.2.5. **40 C.F.R. Part 63 Subpart ZZZZ - *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.*** This MACT applies to stationary RICE, which according to §63.6675 is not mobile. According to the application, the generators identified by Emission Unit IDs EG6 and EG11 are moveable by hand and do not stay in one location for more than 12 months; therefore, this regulation does not apply to these generators.

3.7.2.6. **40 C.F.R. Part 60 Subpart IIII - *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*** This regulation applies to compression ignition internal combustion engines constructed after July 11, 2005 (cf. 40 C.F.R. §60.4200(a)(2))and is not applicable to Technology Park Operations as there are no stationary compression ignition internal combustion engines under UCC ownership/operational control at the Technology Park Operations.

3.7.2.7. **40 C.F.R. Part 60 Subpart JJJJ - *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.*** This regulation applies to stationary spark ignition internal combustion engines manufactured or constructed on or after the various dates specified in 40 C.F.R. §§60.4230(a)(1) through (5). Emergency generators EG6 and EG11 are portable emergency generators manufactured before July 1, 2008 and therefore are not subject to this rule. Emergency Generator EG9 is a stationary generator manufactured prior to July 1, 2008 and has not been modified or reconstructed, therefore EG9 is not subject to 40CFR60 Subpart JJJJ. Emergency Generator EG13 was installed after July 1, 2008 and is subject to 40CFR60 Subpart JJJJ.

3.7.2.8. **40 C.F.R. Part 63 Subpart JJJJJJ – *NESHAP for Hazardous Air Pollutants from Industrial, Commercial and Institutional Boilers Area Sources.*** This regulation does not apply because the boiler fuel is natural gas (§63.11195(e)).

3.7.2.9. **40 C.F.R. Part 60 Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.*** The regulation does not apply to the natural gas fired boilers (SB1, SB2, and SB3) because the maximum design heat input is less than 10 MM BTU/hr.

3.7.2.10. **40 C.F.R. Part 63 Subpart VVVVVV – *NESHAP from Chemical Manufacturing Area Sources.*** The regulation does not apply as 40CFR§63.11494(c)(3) specifically exempts research and development facilities as defined by the Clean Air Act Section 112(c)(7). By letter dated December 6, 2012 from Mr. John A. Benedict, Directorof WVDAQ, it was determined that the PRD Pilot Plant retained its "research or laboratory facility" classification as denoted by Section 112(c)(7) of the 1990 Clean Air Act Amendments and shall remain exempt from Part 63 National Emission Standards for Hazardous Air Pollutants for the selling of scrap resin.

4.0 Source-Specific Requirements [Reserved]

4.1. Limitations and Standards

4.1.1. Reserved.

4.2. Monitoring Requirements

4.2.1. Reserved.

4.3. Testing Requirements

4.3.1. Reserved.

4.4. Recordkeeping Requirements

4.4.1. Reserved.

4.5. Reporting Requirements

4.5.1. Reserved.

4.6. Compliance Plan

4.6.1. Reserved.

5.0 Source-Specific Requirements [Polyolefins Process Research & Development]

5.1. Limitations and Standards

5.1. Limitations and Standards

5.1.1. Reserved.

5.1.2. Reserved.

5.1.3. Reserved.

5.1.4. Emissions to the atmosphere from the flare (73F) shall not exceed 4.16 lbs/hr and 18.2 tons per year of VOCs, except for the exception periods as provided for in 5.1.16. resulting from unavoidable malfunctions of equipment.
[45CSR13, Permit No. R13-1858 (Condition A.1.) (73F)]
[CO-R21-97-36 (Condition III.1. and III.3.) (State Enforceable Only) (73F)]

5.1.5. The composition of the process vent gas to be flared shall be enriched by additional fuels such that the flare temperature shall be 1,400 degrees Fahrenheit or higher.
[45CSR13, Permit No. R13-1858 (Condition A.3.) (73F)]

5.1.6. In the event of unavoidable malfunction of the flare (73F), all reactor feeds to reactors vented to the flare shall be discontinued.
[45CSR13, Permit No. R13-1858 (Condition A.4.) (73F)]

5.1.7. The equipment listed in Attachment 1 shall be vented to the flare (73F) during operation.
[45CSR13, Permit No. R13-1858 (Condition A.5.) (73F)]

5.1.8. No person shall cause, suffer, allow or permit particulate matter to be discharged from the flare (73F) into the open air in excess of 5.7 lbs/hr.
[45CSR§6-4.1. (73F)]

5.1.9. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater.
[45CSR§6-4.3. (73F)]

5.1.10. The provisions of 5.1.9. shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up, or six (6) minutes in any sixty (60)-minute period for stoking operations.
[45CSR§6-4.4. (73F)]

5.1.11. No person shall cause, suffer, allow or permit the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.
[45CSR§6-4.5. (73F)]

5.1.12. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emissions of objectionable odors.
[45CSR§6-4.6. (73F)]

5.1.13. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20%) percent opacity.
[45CSR§7-3.1. (100, 200, 300, 400, 500, 600, and 700)]

5.1.14. The provisions of 5.1.13. above shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40%) percent opacity for any period or periods aggregating no more than five (5) minutes in any (60) minute period.
[45CSR§7-3.2. (100, 200, 300, 400, 500, 600, and 700)]

5.1.15. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1. (100, 200, 300, 400, 500, 600, and 700)]

5.1.16. Except as provided below, the Permittee shall comply with the emission limitations in 5.1.4. resulting from unavoidable malfunctions of equipment as follows:
For the occurrence of excess emissions expected to last more than 7 days, within 1 business day of becoming aware of such occurrence, the Permittee shall supply the Director by letter with the following information:

a. The name and location of the facility;
b. The subject sources that caused the excess emissions;
c. The time and date of first observation of the excess emissions;
d. The cause and expected duration of the excess emissions;
e. For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions; and
f. The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

If the provisions of this condition cannot be satisfied due to repairs made as the result of routine maintenance or in response to the unavoidable malfunction of equipment, the Director may permit the owner or operator of a source subject to this regulation to continue to operate said source for periods not to exceed 10 days upon specific application to the Director. Such application shall be made prior to the making of repairs and, in the case of equipment malfunction, within 24 hours of the equipment malfunction. Where repairs will take in excess of 10 days to complete, additional time periods may be granted by the Director. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. During such time periods, the owner or operator shall take all reasonable and practicable steps to minimize VOC emissions.
[45CSR§21-5.2., 45CSR§21-9.3. (73F)]
[CO-R21-97-36 (Condition III.3.) (State Enforceable Only) (73F)]

5.1.17. Except as provided in Conditions 5.1.4. and 5.1.16., the Permittee shall operate all emission control equipment for emission point 73F at all times when the research activities subject to the provisions of Consent Order R21-97-36 is in operation or when the VOC emitting activity is occurring from the research activities subject to Consent Order R21-97-36. In the event that the control equipment is inoperable, the

research and development unit shall be shut down or the activity shall be discontinued as expeditiously as possible.
[CO-R21-97-36 (Condition IV.7.) (State Enforceable Only) (73F)]

5.1.18. At all times, including periods of start-up, shutdown, and malfunction, the Permittee shall maintain and operate the VOC emitting sources and associated air pollution control devices subject to the provisions of Consent Order R21-97-36 in a manner consistent with good air pollution control practices for minimizing emissions.
[CO-R21-97-36 (Condition III.3.) (State Enforceable Only) (73F)]

5.1.19. The three natural gas boilers (SB1, SB2, and SB3) shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1. (SB1, SB2, SB3)]

5.2. Monitoring Requirements

5.2.1. The permittee shall continuously monitor and record the flare (73F) operating temperature. Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Secretary or his duly authorized representative upon request.
[45CSR13, Permit No. R13-1858 (Condition B.3.) (73F)]

5.2.2. Compliance with the emissions limits set forth in Condition 5.1.4. shall be demonstrated by test or monitoring data, approved emission factors, material balances, and/or representative calculations in accordance with 45CSR21.
[CO-R21-97-36, Condition III.1. (73F)]

5.2.3. At least monthly, visual emission checks for the flare (73F) shall be conducted. These checks shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40 CFR 60, Appendix A, Method 22. If no visible emissions are noted during four consecutive monthly observations period, visual emissions may be conducted quarterly commencing with the next calendar quarter. If no visible emissions are noted during the four consecutive calendar quarters, visual checks may be conducted semiannually. If sources of visible emissions are identified during the survey, or at any other time, the permittee shall conduct a 40 CFR 60, Appendix A, Method 9 evaluation within twenty-four (24) hours and restart monthly visual emission checks. A Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions. A record of each visible emission check required above shall be maintained on site in accordance with condition 3.4.2. Said record shall include, but not be limited to, the date, time, name of emission unit, the applicable visible emissions requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer.
[45CSR§30-5.1.c. (73F)]

5.2.4. Reserved.

5.2.5. Compliance with the particulate matter limits established in 5.1.8. for the flare (73F) shall be demonstrated as follows:

i. Demonstrate that natural gas or propane were used as the only supplemental fuel.

ii. Continual compliance shall be demonstrated by maintaining records of fuel usage. Such records shall be maintained on site in accordance with condition 3.4.2. and shall be made available to the Secretary or his duly authorized representative upon request.
[45CSR§30-5.1.c. (73F)]

5.2.6. The VOC loading to the flare shall be monitored and calculated from measurement of VOCs in flare header and gas flow rate.
[45CSR§30-5.1.c. (73F)]

5.3. Testing Requirements

5.3.1. Reserved

5.4. Recordkeeping Requirements

5.4.1. The Permittee shall record on a daily basis the total amount of VOCs vented to the flare. Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Secretary or his duly authorized representative upon request.
[45CSR13, Permit No. R13-1858 (Condition B.2.) (73F)]

5.5. Reporting Requirements

5.5.1. Reserved

5.6. Compliance Plan

5.6.1. There is no compliance plan since the permittee's Responsible Official certified compliance with all applicable requirements in the Title V renewal application.

6.0 40CFR63, Subpart ZZZZ [emission point ID(s): EG9]

6.1 Limitations and Standards

6.1.1 For the emergency engine (EG9), the permittee shall comply with the requirements of 40 C.F.R. 63, Subpart ZZZZ – "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines".

a. The permittee shall meet the following operating requirements:

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

For each…	You must meet the following requirement, except during periods of startup…	During periods of startup you must…
Emergency stationary SI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

b. The permittee shall be in compliance with the general requirements of 40 C.F.R. §63.6605.

c. The permittee shall meet the applicable general provisions specified in Table 8 of 40 C.F.R. 63, Subpart ZZZZ with the exception of §§63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b)-(e), (g) and (h) which do not apply per 40 C.F.R. §63.6645(a)(5).

d. The permittee shall demonstrate continuous compliance with the limits specified in 6.1.1. according to the methods specified in Table 6 of 40 C.F.R. 63, Subpart ZZZZ.

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance with Emission Limitations, and Other Requirements

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
Existing emergency and black start stationary RICE located at an area source of HAP	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

e. The permittee shall install a non-resettable hour meter if one is not already installed.

f. If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[45CSR34, 40 C.F.R. §§63.6603(a), 63.6605, 63.6625(e), (f), (h), and (j), 63.6640(a), 63.6645(a)(5), Table 2d and Table 6]

6.1.2. The permittee must operate the emergency stationary RICE according to the requirements in paragraphs 6.1.2.(1) through (3) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs 6.1.2.(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs 6.1.2.(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs 6.1.2.(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph 6.1.2.(3) counts as part of the 100 hours per calendar year allowed by this paragraph 6.1.2.(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph 6.1.2.(2) of this section. Except as provided in paragraphs 6.1.2.(3)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR34, 40 C.F.R. §§63.6640(f)(1), (2), and (4)]

6.2 Monitoring Requirements

6.2.1 None

6.3 Testing Requirements

None

6.4 Recordkeeping Requirements

6.4.1 For Emission Unit ID EG9 the permittee shall comply with recordkeeping requirements of 40 C.F.R. §§63.6655(a), (d), (e), and (f).
[45CSR34, 40 C.F.R. §§63.6655]

6.5 Reporting Requirements

6.5.1. See footnote 2 of Table 2d

6.5.2. The permittee shall report each instance in which they did not meet each operating limitation in 6.1.1.a. These instances are deviations from the operating limitations in this subpart. These deviations must be reported according to the requirements in 40 C.F.R. §63.6650. **[45CSR34, 40 C.F.R. §63.6640(b)]**

6.5.3. The permittee shall report each instance in which they did not meet the requirements in Table 8 of 40 C.F.R. 63, Subpart ZZZZ that applies. **[45CSR34, 40 C.F.R. §63.6640(e)]**

6.6 Compliance Plan

None

7.0 40CFR60, Subpart JJJJ [emission point ID(s): EG13]

7.1. Limitations and Standards

7.1.1. The Permittee shall comply with the emission standards specified in 40 C.F.R. §60.4233(c) by purchasing Emergency Engine (EG13) certified to the emission standards in 40 C.F.R. §60.4231(c) for the same engine class and maximum engine power. The permittee shall operate and maintain the Emergency Engine (EG 13) according to the manufacturer's emission-related written instructions. The Permittee shall keep records of conducted maintenance to demonstrate compliance. The permittee must also meet the requirements as specified in 40 C.F.R. part 1068, subpart A through D, as they apply. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 C.F.R.§60.4233 over the entire life of the engine.
[45CSR16, 40 C.F.R. §§60.4243(a) and (a)(1), §60.4233(c), and §60.4234]

7.1.2. The Permittee shall operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this Condition. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this Condition, is prohibited. If you do not operate the engine according to the requirements in paragraphs (1) through (3) of this Condition, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (2)(i) through (iii) of this Condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (3) of this Condition counts as part of the 100 hours per calendar year allowed by this paragraph (2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100

hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (2) of this Condition. Except as provided in paragraph (3)(i) of this Condition, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR16, 40 C.F.R. §§60.4243(d)(1) through (3)]

7.1.3. The permittee shall install a non-resettable hour meter upon startup of the emergency engine.
[45CSR16, 40 C.F.R. §60.4237(c)]

7.2. Monitoring Requirements

None

7.3. Testing Requirements

None

7.4. Recordkeeping Requirements

7.4.1. The Permittee must keep records of the information in paragraphs (1) through (4) of this Condition.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[45CSR16, 40 C.F.R. §§60.4245(a)(1) through (4)]

7.4.2 The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

[45CSR16, 40 C.F.R. §60.4245(b)]

7.5. Reporting Requirements

None

7.6. Compliance Plan

None

Attachment 1
Polymers Pilot Plant – Equipment Vented to Flare

Equipment Name	Equipment Identification	Current Eq. ID
Ethylene Purification System	1000	
Propylene Purification System	1100	
Butene Purification System	1200	
Hexene Purification System	1300	
Isopentane Purification System	1400	
Reactor System 1	100	
Reactor System 2	200	
Reactor System 3	300	
Reactor System 4	400	
Reactor System 5	500	
Reactor System 6	600	
Reactor System 7	700	
773 Analyzers Fast Purge System	773A	
Ethylene Tank Truck Vent	ETTR	
Propylene Storage Tank Vent	1101	
Butene Storage Tank Vent	1201	
Isopentane Storage Tank Vent	1401	
Hexene Storage Tank Vent	1301	
Reaction Co-catalysts Storage	RXNS	