West Virginia Department of Environmental Protection

Earl Ray Tomblin
Governor

Division of Air Quality

Randy C. Huffman
Cabinet Secretary

Permit to Construct

R13-3260

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

Antero Resources Corporation
Sandstrom Water Treatment Facility
017-00157

William F. Durham
Director

Issued: DRAFT

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Facility Location:	Greenwood, Doddridge County, West Virginia
Mailing Address:	1615 Wynkoop Street, Denver, CO 80202
Facility Description:	Water Treatment Facility
NAICS Codes:	213112
UTM Coordinates:	509.222 km Easting • 4,346.659 km Northing • Zone 17
Permit Type:	Construction
Description of Change:	Water treatment facility designed to treat wastewater associated with shale development to an effluent water purity suitable for surface discharge or reuse with future oil and gas operations.

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

This permit does not affect 45CSR30 applicability, the source is a nonmajor source subject to 45CSR30.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
GEN-1	1E	Emergency Generator	2015	1,194 HP	None
H-2185A	2E	Boiler	2015	276.5 MMBTU/hr	None
H-2185B	3E	Boiler	2015	276.5 MMBTU/hr	None
U-1080	4E	Thermal Oxidizer	2015	3 MMBTU/hr	NA
TK-1055A	4E	Clarifier Tank A	2015	562,000 gal	1C
TK-1055B	4E	Clarifier Tank B	2015	562,000 gal	1C
TK-1060A	4E	Clarifier Pump Tank A	2015	23,000 gal	1C
TK-1060B	4E	Clarifier Pump Tank B	2015	23,000 gal	1C
TK-1065	4E	Oil Collection Tank	2015	13,500 gal	1C
TK-1070	4E	Equalization Tank	2015	1,030,000 gal	1C
TK-2010	4E	Solids Clarifier Tank	2015	435,000 gal	1C
TK-2015	4E	Clarifier Effluent Tank	2015	12,000 gal	1C
TK-2020	4E	Sludge Holding Tank	2015	103,000 gal	1C
TK-2030	4E	Sludge Filtrate Tank	2015	8,200 gal	1C
TK-2040	4E	Thermal Feed Tank	2015	1,400,000 gal	1C
TK-2130	4E	Barometric Condenser Hot Well	2015	107,000 gal	1C
TK-2140	4E	Recovered Water Tank	2015	230,000 gal	1C
TK-2160	4E	Disposal Centrate Tank	2015	7,560 gal	1C
E-2076	4E	Deaerator Vent Condenser	2015	1,500 sq. ft.	1C
TK-2120	20E	Process Distillate Level Tank	2015	5,575 gal	None
TK-2500	21E	Post Treatment Tank 1	2015	770,000 gal	None
TK-2550	22E	Post Treatment Tank 2	2015	770,000 gal	None
TK-2555	23E	Post Treatment Tank 3	2015	406,100 gal	None
TK-2515	24E	Post Treatment Effluent Tank	2015	12,000 gal	None
TK-2520	25E	Post Treatment Sludge Tank	2015	1,270 gal	None
TK-4115	26E	Methanol Bulk Storage Tank	2015	8,000 gal	None
TK-4180	27E	Sulfuric Acid Storage Tank	2015	6,000 gal	None
CT-2335	28E	Cooling Tower Basin	2015	34,5000 gpm	None

* All pumping units at the facility are electric-powered and have no associated emissions.

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1.1. Control Devices

Emission Unit	Pollutant	Control Device	Control Efficiency
TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160	Volatile Organic Compounds	Thermal Oxidizer (4E)	98 %
	Hazardous Air Pollutants		98 %

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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

2.2. 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
dscm	Dry Standard Cubic Meter
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
M	Thousand
MACT	Maximum Achievable Control Technology
MDHI	Maximum Design Heat Input
MM	Million
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour
NA	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
$PM_{2.5}$	Particulate Matter less than 2.5 µm in diameter
PM_{10}	Particulate Matter less than 10µm in diameter
Ppb	Pounds per Batch
Pph	Pounds per Hour
Ppm	Parts per Million
Ppm_V or ppmv	Parts per Million by Volume
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
VOL	Volatile Organic Liquids

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2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation*;

2.4. Term and Renewal

2.4.1. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3260, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;
[45CSR§§13-5.11 and 10.3.]

2.5.2. 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;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

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 administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records 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.

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2.7. Duty to Supplement and Correct Information

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.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

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; and

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.

2.12. Emergency

2.12.1. An "emergency" means any situation arising from sudden and reasonable 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

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improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. 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 Section 2.12.3 are met.

2.12.3. 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. 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 must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should 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.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

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2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. **[45CSR§13-10.1.]**

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

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 defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

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3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency 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, suffer, allow or permit 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.
[40CFR§61.145(b) and 45CSR§34]

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. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

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.]

3.2. Monitoring Requirements

[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 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as 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. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

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 sixty (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; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **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§4. *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.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** 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, or mailed first class 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
Charleston, WV 25304-2345

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. Operating Fee

3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, 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. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made

immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.4.2. In accordance with 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found attached to the Certified Emissions Statement (CES) Invoice.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

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4.0. Source-Specific Requirements

4.1.1. **Record of Monitoring.** 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.

4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.

4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11.]

4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.
b. Steps taken to minimize emissions during the event.
c. The duration of the event.
d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded

e. The cause of the malfunction.
f. Steps taken to correct the malfunction.
g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.1.5. The permittee shall install, maintain, and operate all above-ground piping, valves, pumps, etc. that service lines in the transport of potential sources of regulated air pollutants to minimize any fugitive escape of regulated air pollutants (leak). Any above-ground piping, valves, pumps, etc. that shows signs of excess wear and that have a reasonable potential for fugitive emissions of regulated air pollutants shall be replaced.

4.1.6. The permittee shall monitor and maintain quarterly records (calendar year) for each facility component that was inspected for fugitive escape of regulated air pollutants. Each component shall operate with no detectable emissions, as determined using audio-visual-olfactory (AVO) inspections, USEPA 40CFR60 Method 21, USEPA alternative work practice to detect leaks from equipment using optical gas imaging (OGI) camera (ex. FLIR camera), or some combination thereof. AVO inspections shall include, but not limited to, defects as visible cracks, holes, or gaps

in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. If permittee uses USEPA Method 21, then no detectable emissions is defined as less than 500 ppm in accordance with Method 21. If permittee uses an OGI camera, then no detectable emissions is defined as no visible leaks detected in accordance with USEPA alternative OGI work practices.

If any leak is detected, the permittee shall repair the leak as soon as possible. The first attempt at repair must be made within five (5) calendar days of discovering the leak, and the final repair must be made within fifteen (15) calendar days of discovering the leak. The permittee shall record each leak detected and the associated repair. The leak will not be considered repaired until the same monitoring method or a more detailed instrument determines the leak is repaired.

Delay of repair of a closed vent system for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. You must complete repair of such equipment by the end of the next shutdown. **[45CSR§13-5.11.]**

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5.0. Source-Specific Requirements (Emergency Generator, 1E)

5.1. Limitations and Standards

5.1.1. Maximum emissions from the 1,194 hp natural gas fired emergency generator, MTU/Detroit Diesel 12V2000 G85 (1E) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	12.64	3.16
Carbon Monoxide	6.84	1.71

5.1.2. **Maximum Yearly Operation Limitation.** The maximum yearly hours of operation for the 1,194 hp natural gas fired emergency generator, MTU Detroit Diesel 12V2000 G85 (1E) shall not exceed 500 hours per year. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

5.1.3. Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.
[40CFR§60.4205(b)]

5.1.4. Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.
[40CFR§60.4202(a)]

5.1.5. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.
[40CFR§60.4207(b)]

5.1.6. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.
[40CFR§60.4206]

5.1.7. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power.

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The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.
[40CFR§60.4211(c)]

5.1.8. If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.
[40CFR§60.4211(g)(3)]

5.2. Recordkeeping Requirements

5.2.1. To demonstrate compliance with permit conditions 5.1.1 - 5.1.2, the permittee shall maintain records of the hours of operation of the 1,194 hp natural gas fired emergency generator, MTU/Detroit Diesel 12V2000 G85 (1E). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

5.3. Testing Requirements

5.3.1. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.
[40CFR§60.4212]

5.4. Reporting Requirements

5.4.1. See Facility-Wide Reporting Requirements Section 3.5 and 40CFR60 Subpart IIII.

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6.0. Source-Specific Requirements (Boilers, 2E, 3E)

6.1. Limitations and Standards

6.1.1. Each boiler (2E, 3E) shall be designed or constructed with a maximum design heat input of no greater than 276.5 MMBtu/hr. Compliance with this limit for each boiler (2E, 3E) shall be satisfied by limiting the annual consumption of natural gas to 1,886.4 MM cubic feet, measured as a 12 month rolling total.
[45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.]

6.1.2. Maximum emissions from each boiler (2E, 3E) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Nitrogen Oxides	9.95	43.60
Carbon Monoxide	10.23	44.81
Volatile Organic Compounds	1.88	8.22
Particulate Matter-10/2.5	2.59	11.36

6.1.3. NOx emissions emitted to the atmosphere from each boiler (2E, 3E) shall not exceed 0.036 pounds per MMBtu. Compliance with this limit shall be determined on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NOX emission data for the preceding 30 steam generating unit operating days. This limit applies at all times including periods of startup, shutdown, or malfunction.
[40 CFR §60.44b(a), (h), and (i); 40 CFR §60.46b(e)(3)]

6.1.4. Each boiler shall only be fired with pipeline quality natural gas. This condition satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., and 45CSR§10-3.1.e.

6.1.5. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.]

6.2. Monitoring Requirements

6.2.1. At such reasonable times as the Secretary may designate, the permittee shall conduct Method 9 emission observations for the purpose of demonstrating compliance with permit condition 6.1.5. Method 9 shall be conducted in accordance with 40 CFR 60 Appendix A.

6.2.2. The permittee shall record and maintain records of the amount of natural gas consumed by each boiler (2E, 3E) during each day and calculate the annual capacity factor for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity calculated at the end of each calendar month. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.
[40 CFR §60.49b(d)(1)]

6.2.3. For each boiler (2E, 3E), the permittee shall install, operate, certify and maintain a continuous emission monitoring system (CEMS) for measuring NO_x, and diluent gas (CO_2 or O_2) from the exhaust of each boiler in accordance with the applicable Performance Specifications under

Appendix B to Part 60 of Chapter 40 or a NO_X CEMS that meets the requirements of Part 75 of Chapter 40 of the Code of Federal Regulations. A NO_x CEMS installed, operated, maintained and continuing to meet the ongoing requirements of Part 75 of the Chapter 40, may be used for the purpose of demonstrating compliance with the NO_x in Condition 6.1.2, except that the permittee shall also meet the requirements of §60.49b. Such monitor system shall include an automated data acquisition and handling system (DAHS). All required certification tests of the monitoring system must be completed no later than 90 unit operating days or 180 calendar days (whichever is sooner) after initial start-up of each boiler.

The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for NO_x shall be 500 ppm or the value determined according to Section 2.1.2. in Appendix A to Part 75 of Chapter 40.

The CEMS required under this condition shall be operated and data recorded during all periods of operation of the respected boiler except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments

The 1-hour average NO_x emission rates measured by the continuous NO_X monitor required by this condition and required under 40 CFR §60.13(h) shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under permit Condition 6.1.2. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part. Method 7A of Appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

CEMS unit conforming to the specifications of 40 CFR Part 75 shall use unbiased, un-substituted data to demonstrate compliance with the limits as specified in this permit.

For purposes of calculating data averages, the permittee cannot use data recorded during periods of monitoring malfunctions, associated repairs, out of control periods, required quality assurance or control activities. The permittee must use all the data collected during all other periods in assessing compliance with the emission limit permitted in permit condition 6.1.2. Any periods for which the monitoring system is out of control and data are not available for required calculations constitute a deviation from the monitoring requirements. Records of all data collected, calibrations, calibration checks, relative accuracy tests, maintenance preformed, and malfunctions of the CEMS shall be maintained in accordance with Condition 3.4.1 of this permit.
[40 CFR §§60.48b(b) though (f), 45 CSR §40 and 40 CFR §75]

6.3. Testing Requirements

6.3.1. Within 180 days after start-up and a satisfactory performance evaluation of the NOx CEMs, the permittee shall conduct initial performance testing for each boiler (2E, 3E) to demonstrate initial compliance with the hourly CO rate in permit condition 6.1.2. The test shall be conducted at 90 percent or greater of each unit's maximum design heat input, in accordance with Test Method 10B from Appendix A to 40 CFR Part 60, and permit condition 6.1.2. In the test report, the permittee shall include the NO_x measurement from the NO_x CEM for each test run of each test. Records of this testing shall be maintained in accordance with Condition 3.4.1.

6.3.2. To determine initial compliance with the emission limits for NO_x required under 40 CFR §60.44b and permit condition 6.1.2, the permittee shall conduct the performance test for each boiler (2E, 3E) as required under 40 CFR §60.8 using the continuous system for monitoring NO_x (NO_x CEMS) under Condition 6.2.3. Such testing shall be conducted within 60 days after achieving the maximum production rate at which the affected unit will be operated, but not later than 180 days after initial startup of the boiler.

NO_x emissions from the steam generating unit are to be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOx emission standards under permit condition 6.1.2 and 40 CFR §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. Such testing shall be conducted in accordance with permit condition 3.3.1 and 40 CFR §60.46b. Records of this testing shall be maintained in accordance with permit condition 3.4.1.
[40 CFR §60.8, §60.46b(c) & (e)(1)]

6.3.3. Compliance with the visible emission requirements of permit condition 6.1.5 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of permit condition 6.1.2. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.]

6.4. Recordkeeping Requirements

6.4.1. The permittee shall maintain records of all monitoring data required by permit condition 6.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

6.4.2. The permittee shall maintain records of the following information for each steam generating unit operating day of each boiler (2E, 3E):

a. Calendar date;

b. The average hourly NO_x emission rates (expressed as NO_2) (lb/MMBtu heat input) measured or predicted;

c. The 30-day average NO_x emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

d. Identification of the steam generating unit operating days when the calculated 30-day average NO_x emission rates are in excess of the NO_x emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

g. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

h. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

i. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

j. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of Part 60.

Such records shall be maintained in accordance with Condition 3.4.1. of this permit.
[40 CFR §60.49b(g)]

6.5. Reporting Requirements

6.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

6.5.2. The permittee shall submit to the Director within 60 days of completion of NO_x CEMS performance evaluation for each boiler (2E, 3E). Two copies of the performance evaluation report for each unit of satisfy Part 60 notification requirements for certifying the NO_x CEMS. A copy of the NO_x CMS Certification Application required by 45 CSR §40-74.3 and 40 CFR §75.63(a)(1) provisions shall be submitted to the Administrator and Director within 45 days of completion of all CEM certification tests, which shall include the information as prescribed in 40 CFR §75.63(b).
[45 CSR §40-73.1., 45 CSR §40-74.3, 40 CFR §60.13(c)(2), 40 CFR §60.49b(b), and 40 CFR §75.63.(a)(1)]

6.5.3. The permittee shall submit semiannual and annual reports to the Director for each boiler (2E, 3E). The reporting period for these reports shall be January 1st through June 30th and July 1st through December 31st. These reports shall contain the recorded information as required in permit condition 6.4.2.
[40 CFR §60.49b(g), (i), & (w)]

6.5.4. The permittee shall operate certified continuous emission monitor systems necessary to attribute ozone season NO_X mass emissions to each unit, in accordance with 40 CFR Part 75, Subpart H. NO_X mass emissions measurements recorded and reported in accordance with 40 CFR Part 75, Subpart H shall be used to determine a unit's compliance with the ozone season NO_X emission limitation.
[45CSR§13-5.11.]

7.0. Source-Specific Requirements (Thermal Oxidizer, 4E)

7.1. Limitations and Standards

7.1.1. The thermal oxidizer (4E) shall be designed or constructed with a maximum design heat input of no greater than 3 MMBtu/hr.

7.1.2. The emission units listed in the following table shall vent to the thermal oxidizer (4E) prior to release to the atmosphere during all operations:

Emission Unit ID	Emission Unit Description	Design Capacity
TK-1055A	Clarifier Tank A	562,000 gal
TK-1055B	Clarifier Tank B	562,000 gal
TK-1060A	Clarifier Pump Tank A	23,000 gal
TK-1060B	Clarifier Pump Tank B	23,000 gal
TK-1065	Oil Collection Tank	13,500 gal
TK-1070	Equalization Tank	1,030,000 gal
TK-2010	Solids Clarifier Tank	435,000 gal
TK-2015	Clarifier Effluent Tank	12,000 gal
TK-2020	Sludge Holding Tank	103,000 gal
TK-2030	Sludge Filtrate Tank	8,200 gal
TK-2040	Thermal Feed Tank	1,400,000 gal
TK-2130	Barometric Condenser Hot Well	107,000 gal
TK-2140	Recovered Water Tank	230,000 gal
TK-2160	Disposal Centrate Tank	7,560 gal
E-2076	Deaerator Vent Condenser	1,500 sq. ft.

7.1.3 The Thermal Oxidizer (4E) shall be designed with a minimum residence time of 0.50 seconds and a minimum combustion chamber temperature of 1,500° F on a three (3) hour rolling average. The monitored compliance minimum combustion chamber temperature will be established during the initial compliance testing in accordance with permit condition 7.3.1. Thereafter, this permit shall be administratively updated to insert the compliance value for the monitored minimum combustion chamber temperature into this permit term.

7.1.4. The Thermal Oxidizer (4E) shall be designed and operated to achieve a minimum guaranteed overall control efficiency of 98% for VOC and HAP emissions.

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7.1.5. Emissions from the Thermal Oxidizer (4E) shall not exceed the following limits:

Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
Carbon Monoxide	0.93	4.08
Nitrogen Oxides	1.08	4.50

Compliance with the annual emission limits shall be determined using a rolling 12 month total. A rolling 12 month total shall mean the sum of the current month's production and the previous eleven (11) consecutive months.

7.1.6. The thermal oxidizer (4E) shall be designed for and operated with no visible emissions.

7.2. Monitoring Requirements

7.2.1. In order to demonstrate compliance with the opacity requirements of 7.1.6, the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course.

7.2.2. The permittee shall monitor the presence or absence of a pilot flame using a thermocouple or any other equivalent device, except during SSM events.

7.3. Testing Requirements

7.3.1. For the purposes of establishing a different minimum combustion chamber temperature for the Thermal Oxidizer (4E), the permittee shall conduct performance testing to establish the compliance value for the monitored minimum combustion chamber temperature of the Thermal Oxidizer (4E). This initial compliance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, or within 180 days of start-up, whichever is later.

7.3.2. For the purposes of determining compliance with permit condition 7.1.4, the permittee shall conduct performance testing to show compliance with the destruction efficiency of the Thermal Oxidizer (4E) is at or greater than 98% for total organic compounds. This initial compliance test shall be conducted within 180 days of issuance of permit R13-3260.

7.3.3. Compliance with the visible emission requirements of permit condition 7.2.1 shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of permit condition 7.1.6.

Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§4]

7.4. Recordkeeping Requirements

7.4.1. For the purpose of demonstrating compliance with permit condition 7.1.3, the permittee shall maintain a record of the Thermal Oxidizer (4E) design evaluation. The design evaluation shall include, but not limited to, net heat value calculations, residence time calculations, capture system pressure loss, destruction removal calculations and all supporting concentration calculations.

7.4.2. In order to demonstrate compliance with the temperature requirements of permit condition 7.1.3 the permittee shall monitor and record the combustion chamber temperature in four equally spaced periods per each hour the Thermal Oxidizer (4E) are operated. Said records shall be maintained as required in Section 3.4.1. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

7.4.3. The permittee shall maintain a copy of all test report(s) as conducted in permit condition 7.3.1 and all calculation(s) used to establish a new operating temperature for the Thermal Oxidizer (4E) in accordance with permit condition 3.4.1 with the exception of retention of such records. Thus, such records shall be retained in accordance with permit condition 3.4.1 or until a new temperature is established in accordance with permit condition 5.3.1 whichever is later.

7.4.4. All records required under Section 5.4 shall be maintained as required in permit condition 3.4.1. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official

7.4.5. The permittee shall maintain records of all monitoring data required by permit condition 7.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9.

7.4.6. For the purpose of demonstrating compliance with permit condition 7.2.2, the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.

7.5. Reporting Requirements

7.5.1. Any deviation(s) from the thermal oxidizer design and/or operation criteria in permit condition 7.1.3 shall be recorded in a log that is available for inspection by the Department at any time. A summary of such deviations shall be reported in writing to the Director on a quarterly basis summarizing any deviations that occurred during the previous three months.

7.5.2. The permittee shall submit a written report of the results of testing required in Section 7.3 of this permit before the close of business on the 60th day following the completion of such testing to the Director. Such report(s) shall include all records of the opacity observations or temperatures readings taken during such testing, whichever is appropriate for the required report.

7.5.3. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

8.0. Source-Specific Requirements (Truck Unloading Rack)

8.1. Limitations and Standards

8.1.1. The maximum quantity of influent water that shall be loaded (submerged loading) shall not exceed 60,000 barrels per day (2,520,000 gallons per day). Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

8.1.2. The truck unloading rack shall be operated in accordance with the plans and specifications filed in Permit Application R13-3260 and in accordance with permit conditions 4.1.5 and 4.1.6.

8.2. Recordkeeping Requirements

8.2.1. To demonstrate compliance with section 8.1.2, the permittee shall maintain a record of the aggregate throughput for the truck unloading rack on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

8.2.2 All records required under Section 8.2 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

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9.0. Source-Specific Requirements (Cooling Tower Basin (28E), Sludge and Wetcake Disposal)

9.1. Limitations and Standards

9.1.1. The maximum quantity of water processed through the Cooling Tower Basin (28E) shall not exceed 34,500 gallons per minute. Compliance with the Maximum Yearly Operation Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

9.1.2. The Cooling Tower Basin (28E) shall be operated in accordance with the plans and specifications filed in Permit Application R13-3260.

9.2. Recordkeeping Requirements

9.2.1. To demonstrate compliance with section 9.1.2, the permittee shall maintain a record of the aggregate throughput for the cooling tower basin on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

9.2.2. The permittee shall maintain a record of the sludge disposal on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

9.2.3. The permittee shall maintain a record of the wetcake disposal on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

9.2.4 All records required under Section 9.2 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

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10.0. Source-Specific Requirements (Storage Tanks, TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160)

10.1. Limitations and Standards

10.1.1. The permittee shall route all VOC and HAP emissions from the Storage Tanks (TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160) to the thermal oxidizer (4E) listed in Section 7.0 of this permit, prior to release to the atmosphere. The thermal oxidizer (4E) shall be designed to achieve a minimum guaranteed control efficiency of 98% for volatile organic compound (VOC) and hazardous air pollutants (HAP) emissions.

10.1.2. The maximum annual throughput of product to the storage tanks shall not exceed the following:

Storage Tank ID	Storage Tank Description	Maximum Annual Throughput (gal/yr)
TK-1055A/B	Clarifier Tanks A/B	1,052,776,800 (combined)
TK-1060A/B	Clarifier Pump Tanks A/B	1,029,650,400 (combined)
TK-1065	Oil Collection Tank	8,935,200
TK-1070	Equalization Tank	1,029,650,400
TK-2010	Solids Clarifier Tank	1,081,159,200
TK-2015	Clarifier Effluent Tank	1,032,278,400
TK-2020	Sludge Holding Tank	96,710,400
TK-2030	Sludge Filtrate Tank	82,519,200
TK-2040	Thermal Feed Tank	1,032,278,400
TK-2130	Barometric Condenser Hotwell Tank	11,126,952,000
TK-2140	Recovered Water Tank	8,777,520
TK-2160	Disposal Centrate Tank	372,124,800

10.1.3. Emissions from the Storage Tanks (TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160) that are recovered and routed to the thermal oxidizer (4E) shall be designed and operated as specified in the paragraphs (a) through (c).

a. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel.

b. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:

(i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);

(ii) To inspect or sample the material in the unit;

(iii) To inspect, maintain, repair, or replace equipment located inside the unit; or

(iv) To vent liquids, gases, or fumes from the unit through a closed-vent system designed and operated in accordance with the requirements 8.1.7 of this section to a control device.

c. Each Storage Tank (TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160) thief hatch shall be weighted and properly seated. You must select gasket material for the hatch based on composition of the fluid in the storage vessel and weather conditions.
[45CSR§13-5.11]

10.1.4. The facility shall comply with the closed vent system requirements for the Storage Tanks (TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160) as noted below.

a. You must design the closed vent system to route all gases, vapors, and fumes emitted from the material in the Storage Tanks (TK-1055A, TK-1055B, TK-1060A, TK-1060B, TK-1065, TK-1070, TK-2010, TK-2015, TK-2020, TK-2030, TK-2040, TK-2130, TK-2140, TK-2160) to the thermal oxidizer (4E).

b. You must design and operate a closed vent system with no detectable emissions, as determined using olfactory, visual and auditory inspections.

c. You must meet the requirements specified in paragraphs (i) and (ii) of this section if the closed vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device or to a process.

(i) Except as provided in paragraph (ii) of this section, you must comply with either paragraph (A) or (B) of this section for each bypass device.

A. You must properly install, calibrate, maintain, and operate a flow indicator at the inlet to the bypass device that could divert the stream away from the control device or process to the atmosphere that sounds an alarm, or initiates notification via remote alarm to the nearest field office, when the bypass device is open such that the stream is being, or could be diverted away from the control device or process to the atmosphere.

B. You must secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.

(ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (i) of this section.
[45CSR§13-5.11]

10.2. Monitoring Requirements

10.2.1. To demonstrate compliance with the closed vent system requirements of permit conditions 10.1.3 and 10.1.4, the permittee shall:

a. Initial requirements. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of start-up. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.

i. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.

ii. In the event that a leak or defect is detected, you must repair the leak or defect as soon as practicable. Grease or another applicable substance must be applied to deteriorating or cracked gaskets to improve the seal while awaiting repair.

iii. Delay of repair of a closed vent system for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emission likely to result from delay of repair. You must complete repair of such equipment by the end of the next shutdown.

b. Continuous requirements. Conduct an annual visual, olfactory, and auditory inspection for defects that could result in air emissions. Defect include, but are not limited to, visible cracks, holes, or gaps in piping, loose connections; liquid leaks, or broken or missing caps or other closure devices.

i. The annual inspection shall be conducted within 365 calendar days from the date of the previous inspection or earlier.
ii. The annual inspection shall include the bypass inspection, conducted according to paragraph (c) of this section.

c. Bypass inspection. Visually inspect the bypass valve during the initial and annual inspection for the presence of the car seal or lock-and-key type configuration to verify that the valve is maintained in the non-diverting position to ensure that the vent stream is not diverted through the bypass device. If an alternative method is used, conduct the inspection of the bypass as described in the operating procedures.

d. Unsafe to inspect requirements. You may designate any parts of the closed vent system as unsafe to inspect if the requirements in paragraphs (i) and (ii) of this section are met. Unsafe to inspect parts are exempt from the inspection requirements of paragraphs (a) and (b) of this section.

i. You determine that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with the requirements.

ii. You have a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

e. Difficult to inspect requirements. You may designate any parts of the closed vent system as difficult to inspect, if the requirements in paragraphs (i) and (ii) of this section are met. Difficult to inspect parts are exempt from the inspection requirements of paragraphs (a) and (b) of this section.

i. You determine that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface.

ii. You have a written plan that requires inspection of the equipment at least once every 5 years.

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10.3. Recordkeeping Requirements

10.3.1. All records required under Section 10.3 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

10.3.2. To demonstrate compliance with permit condition 10.1.2, the permittee shall maintain a record of the aggregate throughput for the storage tanks on a monthly and rolling twelve month total. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

10.3.3. The permittee shall maintain a copy all design records of the process, maintenance records of equipment and any downtime hours associated with the thermal oxidizer (4E).

10.3.4. To demonstrate compliance with the closed vent monitoring requirements, the following records shall be maintained.

i. The initial compliance requirements;

ii. Each annual visual inspection conducted to demonstrate continuous compliance, including records of any repairs that were made as results of the inspection;

iii. Bypass requirements.

a. Each inspection or each time the key is checked out or a record each time the alarm is sounded;

b. Each occurrence that the control device was bypassed. If the device was bypassed, the records shall include the date, time, and duration of the event and shall provide the reason the event occurred. The record shall also include the estimate of emissions that were released to the environment as a result of the bypass.

iv. Any part of the system that has been designated as "unsafe to inspect" in accordance with 10.2.1.d or "difficult to inspect" in accordance with 10.2.1.e.

[45CSR§13-5.11]

10.4. Reporting Requirements

10.4.1. The permittee shall notify the Director of any downtime of the thermal oxidizer in excess of 2%, based on the 12 month rolling total, in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days of the discovery and shall include, at a minimum, the following information: the dates and durations of each downtime event, the cause or suspected causes for each downtime event, any corrective measures taken or planned for each downtime event.

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CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] (please use blue ink) _____ Responsible Official or Authorized Representative _____ Date

Name & Title (please print or type) _____ Name _____ Title

Telephone No. _____ Fax No _____

[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

   (ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

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