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CLEAN AIR. HEALTHY COMMUNITIES.

November 18, 2024

Alabama Department of Environmental Management
PO Box 301643
Montgomery, AL 36110-1463

Submitted via email to: airmail@adem.alabama.gov

Re: ADEM's Draft Major Source Operating Permit to Transcontinental Gas Pipe Line Company, LLC for the Compressor Station 82, Air Permit No. 503-3045

We are submitting these comments on behalf of MEJAC, Mobile Environmental Justice Action Coalition, and GASP ("Commenters") regarding the Alabama Department of Environmental Management ("ADEM") proposal to issue a renewal of to the Title V Major Source Operating Permit No. 503-3045 ("Proposed Permit") to Transcontinental Gas Pipe Line Company, LLC ("Transco" and "Facility") for the Compressor Station 82 located at 5600 Rock Creek Road, Coden, Mobile, Alabama ("Transcontinental Compressor Station 82"),[1] which is "within 100

[1] ADEM, Notice of Proposed Title V Major Source Operating Permit and Request for Comments, Facility/Permit No. 503-3045 (Oct. 18, 2024), https://adem.alabama.gov/newsEvents/notices/oct24/10transcontinental.html; ADEM, Draft Major Source Operating Permit Transcontinental Gas Pipe Line Company, LLC – Station 82 ("Draft Permit"), Air Permit No. 503-3045, https://adem.alabama.gov/newsEvents/notices/oct24/pdfs/10transcontinental-permit.pdf [hereinafter "Draft Permit"]; ADEM, Draft Statement of Basis Transcontinental Gas Pipe Line Company, LLC – Compressor Station 82, https://adem.alabama.gov/newsEvents/notices/oct24/pdfs/10transcontinental-

km of the Breton Wildlife Area [Breton National Wildlife Refuge[2]], the nearest [Clean Air Act] Class I Area."[3]

ADEM's Draft Statement of Basis ("Draft SOB") provides the following summary information about this facility, "Transco operates a compressor station for the transmission of pipeline natural gas (SIC 4922) located in Coden, Mobile County. Natural gas enters the Facility, and compressors boost the pressure of the gas for transmission in the pipeline downstream of the facility. The gas compressors are driven by stationary natural gas-fired turbines."[4]

MEJAC was formed in 2013 by Africatown residents in partnership with regional stakeholders and advocates. MEJAC's mission is to engage and organize with Mobile's most threatened communities in order to defend the inalienable rights to clean air, water, soil, health, and safety; to promote environmental justice; and to take direct action when the government fails to do so, ensuring community self-determination.

GASP is a nonprofit organization with a mission to advance healthy air and environmental justice in the Greater Birmingham area and throughout Alabama through education, advocacy, and collaboration. That mission includes actively engaging impacted communities on air pollution issues, reviewing air pollution permits, and addressing concerns related to air quality, including environmental justice issues. GASP advocates for more robust public participation and community involvement in matters that affect community members, such as this proposed permit action in Mobile County.

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analysis.pdf [hereinafter "Draft SOB"]; Williams, Application for Title V Permit Renewal (Major Source Operating Permit No. 503-3045), Transcontinental Gas Pipe Line Company, LLC, Compressor Stations 82 (Aug. 2024), https://lf.adem.alabama.gov/WebLink/DocView.aspx?id=105498137&dbid=0&cr=1 [hereinafter "Permit Application"].

[2] U.S. Fish & Wildlife Service, Breton National Wildlife Refuge, https://www.fws.gov/refuge/breton.

[3] ADEM Preconstruction Analysis for Transcontinental Gas Pipe Line Corp. (Transco), Station 82, Mobile County (Coden, AL), Permit No. 503-3045-X003 at pdf 18 (Nov. 4, 1997, subsequently marked "VOID" at pdf 17), https://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30041374&dbid=0&cr=1; Breton National Wildlife Refuge.

[4] Draft SOB at 1.

Background

ADEM's SOB provides additional summary detail on the Facility as follows:

> All yard piping, including the pigging and filtering equipment, and most of the other equipment in natural gas service (e.g. compressors, engine fuel gas systems, and gas meters) must be depressurized (blown down) during maintenance. Most venting activities are intermittent and only performed during scheduled maintenance-related activities and upset/emergency situations. Significant sources of air pollutants at this facility include:
>
> **Emission Unit Nos. 001 – 002:** Two (2) 6,546 hp Solar Taurus T7000 Natural Gas-fired Combustion Turbines (Mainline Unit Nos. 1 – 2)
>
> **Emission Unit No. 003:** One (1) 15,675 hp Solar Mars T15000 Natural Gas-fired Combustion Turbine (Mainline Unit No. 3)
>
> **Emission Unit No. 004:** One (1) 1,478 hp Waukesha L7042GL, 4-stroke, Lean-burn (4SLB) Spark Ignition (SI) Natural Gas-fired Emergency Reciprocating Engine (Auxiliary Unit No. 1)[5]

The facility-wide potential to emit for the various air pollutants is seen in the below table.[6]

Plant-Wide Potential to Emit (PTE)

Pollutant	PTE (TPY)
$PM/PM_{10}/PM_{2.5}$	6.99
NO_x	276.76
CO	124.67
SO_2	3.57
VOC	11.44
Total HAP	1.55
CO_2e	130,382.00

Additionally, ADEM's Draft SOB explained that while "[t]he facility is a major source under PSD regulations because the facility-wide potential emissions of NOx exceed 250 TPY," the various emission units are subject to synthetic minor emission limitations as follows:

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[5] Draft SOB at 1.
[6] Draft SOB at 3.

> Mainline Unit Nos. 1 and 2 were installed in 1994, and are each subject to a synthetic minor NO_X emission limitation of 25.4 lb/hr that was established at the time of their installation to avoid undergoing a PSD review. Mainline Unit No. 3 was installed in 1998, and is subject to a synthetic minor NO_X emission limitation of 11.97 lb/hr and a synthetic minor CO emission limitation of 14.57 lb/hr. Auxiliary Unit No. 1 was installed in 1998, and is subject to a synthetic minor NO_X emission limitation of 7.32 lb/hr and a synthetic minor CO emission limitation of 8.63 lb/hr. Additionally, Auxiliary Unit No. 1 is subject to a 500 hour per year operational limitation that was established at the time of installation in order to avoid undergoing a PSD review.[7]

NO_X emissions have known health effects, which are a precursor to ground-level ozone which is associated with respiratory disease and asthma attacks. NO_X also reacts with ammonia, moisture and other compounds to form particulates that can cause and/or worsen respiratory diseases, aggravate heart disease, and lead to premature death.[8]

CO emissions are also known to have health effects, indeed, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain.[9] "[W]hen CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina."[10]

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[7] Draft SOB at 3.
[8] *See generally* EPA, "Effects of NO_2, Heath Effects," https://www.epa.gov/no2-pollution/basic-information-about-no2.
[9] *See generally* EPA, "What are the harmful effects of CO?," https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution.
[10] *Id.*

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Comments

1. While We Appreciate the Permitting History Information ADEM Includes in the Draft SOB, the Draft SOB Does Not Provide Details on Where to Find the Historical Permitting Documents.

The Draft SOB includes a table—excerpted below—of the previously issued construction and operating permits for this Facility. Commenters appreciate the improvement in ADEM's Title V permit practice by including the summary information provided in this table.

Issuance No./Permit No.	Issuance Date	Effective Date	Expiration Date	Amendments/ Modifications (Where Applicable)	PSD Significant Emission Rates Exceeded (Y/N)
AP X001 - MLU 1 - (new) - NO_x SMS emission limit established	August 25, 1993	--	--	--	N
AP X002 – MLU 2 - (new) - NO_x SMS emission limit established	August 25, 1993	--	--	--	N
AP X003 - MLU 3 - (new) - NO_x and CO SMS emission limit established	March 31, 1998	--	--	--	N
AP X004 - AUX 1 - (new) - NO_x and CO SMS emission limit, and operating hours limit established	March 31, 1998	--	--	--	N
Initial Title V MSOP	March 15, 2000	March 15, 2000	March 14, 2005	--	--
1st Title V MSOP Renewal	January 25, 2005	March 15, 2005	March 14, 2010	Administrative Amendment- February 26, 2009 - Name Change	--
2nd Title V MSOP Renewal	March 15, 2010	March 15, 2010	March 14, 2015	--	--
3rd Title V MSOP Renewal	June 16, 2015	June 16, 2015	March 14, 2020	--	--
4th Title V MSOP Renewal	February 4, 2020	March 15, 2020	March 14, 2025	--	--

However, as EPA's Administrator directed ADEM in his Order regarding the UOP Facility, notably missing from ADEM's Draft SOB are the "direct citation[s] to the NSR permit[s] and permitting record establishing those limits…includ[ing] a copy of the documents" in the "current permitting record for this Title V permit

renewal,"[11] which can be "provide[d] [via] direct links to documents."[12] As EPA's Administrator further explained in the UOP Order, "[w]hile other portions of the record, like the renewal application, are easily located in the eFile system, the public and the EPA cannot be expected to locate an unidentified NSR permitting decision in a permit record spanning hundreds of documents when the permit does not provide any citation to the actual NSR permitting decisions."[13] Such direction is especially relevant here, where the Facility eFile contains 397 entries, some of which contain multiple documents as explained below.

While it appears there are some historical documents in eFile for this Facility,[14] many of the historical documents are consolidated together into large files and the eFile file names provide no clues on what documents are in the electronic file. Moreover, the issuance dates for the construction permits listed in the above table do not match up with the document dates in the historical files reviewed.[15] Therefore, ADEM's response must include specific citations—including links to specific file name in eFile of where the actual NSR permitting decisions for the four emitting units can be found.

2. ADEM's Failure to Identify the Location Where the Historical Construction Permits Are Found Prevents Commenters with the Opportunity to Review and Comment on Issues Related to Those Permits.

ADEM has not provided the public with an opportunity to review all documents regarding its proposed action, thwarting public notice and comment. There may be significant issues regarding the four construction permits and ADEM's associated analyses for those permits that were issued for this Facility that must be addressed in permitting action. For example, does the Proposed Title V Permit contain all the provisions necessary from the underlying construction permits, are there specific assumptions or conditions in ADEM's analyses for the construction permits that must be included in the Proposed Permit to make those conditions compliant with the Act and the Alabama SIP, what information did the Facility submit in its application and is it consistent with the current application and Proposed Permit. ADEM's failure to identify the historical construction permits and record means that Commenters, the public, and EPA have been

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[11] *In the Matter of UOP LLC*, Order on Petition No. IV-2021-6 at 15 (Apr. 27, 2022) [hereinafter "*UOP Order*"].
[12] *UOP Order* at 15.
[13] *UOP Order* at 15.
[14] ADEM eFile Name 12307 503-3045 097 ENGA MOG ALL PRE 2005, https://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30041374&dbid=0&cr=1.
[15] ADEM eFile Name 12307 503-3045 ENGA MOG ALL PRE 2005, https://lf.adem.alabama.gov/WebLink/DocView.aspx?id=30041374&dbid=0.
(for example, for Permit No. 503-3045-X002, one document appears to show issuance date of August 10, 1993, not the August 25, 1993, which is noted as the date in the Draft SOB for this action).

prevented from the opportunity to review and identify aspects of those permits and their records that must be addressed in the Proposed Permit. We urge ADEM to renotice this permit and provide the public with this missing information so that Commenters, the public and EPA can meaningfully engage in ADEM's proposed action for this Facility.

3. ADEM's Environmental Justice Discussion, ADEM's Failure to Disclose its Environmental Justice Analysis, and ADEM's Failure to Engage with the Adjacent Disadvantaged Community Are All Inadequate.

"Environmental justice" is defined as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."[16] Discrimination by a recipient of federal funds, including ADEM, is prohibited by Title VI of the Civil Rights of 1964. Title VI of the Civil Rights Act of 1964 prohibits the use of federal funds by recipients that discriminate on the basis of race, color or national origin. As a recipient of federal funds for programs delegated to it by the EPA, ADEM has a legal duty to protect civil rights.[17]

Furthermore, the EPA Administrator's recent Title V Order "encourages ADEM to thoughtfully consider and respond to such [environmental justice] comments in the future. In permitting cases where there are potential EJ concerns, EPA has recommended enhanced outreach and proactive community engagement throughout the permitting process. These types of practices are valuable because they help ensure that the communities affected by the permitting decision are provided with meaningful opportunities to provide input."[18]

In order to fulfill that duty and ensure compliance with its obligations under Title VI, as well as address environmental justice generally and as requested in this

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[16] EPA, Environmental Justice, www.epa.gov/environmentaljustice.

[17] *In the Matter of United States Steel Corporation - Granite City Works*, Order on Petition No. V-2011-02 at 6 (Dec. 3, 2012) (Noting that "focused attention to the adequacy of monitoring and other compliance assurance provisions is warranted" when the area around the facility "is home to a high density of low-income and minority populations and a concentration of industrial activity, and thus raises potential environmental justice concerns."); EJ in Air Permitting – Principles for Addressing Environmental Justice Concerns in Air Permitting at 4 (Dec. 2022) [hereinafter "*EJ in Air Permitting*"], https://www.epa.gov/system/files/documents/2022-12/Attachment%20-%20EJ%20in%20Air%20Permitting%20Principles%20.pdf, (noting that "if initial screening indicates that the permitting action will have a disproportionate effect on the basis of race, color, or national origin…then it may be necessary to conduct an analysis of disparate impacts under federal non-discrimination laws, including Title VI").

[18] *In the Matter of Plains Marketing LP, Mobile Terminal at Magazine Point, et al*, Order on Petition Nos. IV-2023-1 & IV-2023-3 at 21 (Sept. 18, 2023), https://www.epa.gov/system/files/documents/2023-09/plains-marketing-et-al.-order-09-18-2023.pdf.

comment, ADEM must conduct an analysis of the community surrounding this source and the impact of the source's permitted emissions on that community prior to issuing this permit. In the Draft SOB for this action, ADEM considers environmental justice as follows:[19]

> **Environmental Justice Screen**
>
> The Draft Permit contains emission limits based on state and federal regulations that are protective of human health and the environment. In addition, the Department has robust public engagement that utilizes a number of tools, such as EPA's EJ Screen: Environmental Justice Screening and Mapping Tool, to ensure that local residents and stakeholders are provided a meaningful opportunity to participate in the permitting process.
> (http://www.adem.alabama.gov/Moreinfo/pubs/ADEMCommunityEngagement.pdf).

ADEM "analysis" is completely inadequate, especially as ADEM neither provides the results of the information it gathered by using EJScreen nor does ADEM perform an analysis regarding that information. ADEM also failed to say anything about what impact the information it gathered could have on the Proposed Permit and the surrounding community. Simply stating ADEM's use of the EPA EJScreen in the SOB is insufficient to ensure environmental justice and civil rights protections. According to EPA: "EJScreen provides EPA with a nationally consistent dataset and approach for combining and comparing environmental and demographic indicators. It is a useful *first step* in understanding environmental justice concerns that communities face."[20] ADEM's approach – which doesn't even rise to the level of attaching or summarizing that analysis – is tantamount to the "checking the box" approach on environmental justice (as well as protection of civil rights) that has already been condemned by the Fourth Circuit Court of Appeals.[21]

ADEM must look at the information provided in the EJScreen and determine whether additional community outreach, analyses, and/or permit terms are needed to address EJ and other concerns in the adjacent community as a result of this permitting action.[22] ADEM has the policies and discretion to take such actions when considering the adequacy of monitoring and other compliance assurance provisions during its permitting process.[23]

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[19] Draft SOB at 8.
[20] Letter from KC Becker, EPA Region 8, Regional Administrator, to Shaun McGrath, Director of Environmental Health and Protection, Colorado Department of Public Health and Environment, EPA Objection to Suncor Energy, Inc. Plant 2 Title V Operating Permit (March 25, 2022) at pdf 7 (emphasis added), https://www.epa.gov/system/files/documents/2022-03/epa-suncor-plant-2-title-v-objection-letter-2022-03-25.pdf [hereinafter "Suncor Objection"].
[21] *Friends of Buckingham v. State Air Pollution Control Board*, 947 F.3d 68, 92 (4th Cir. 2020).
[22] *See* Suncor Objection at 8 (listing various community outreach activities permitting authorities such as ADEM can take before and during the public notice process); *EJ in Air Permitting* at 2-5.
[23] *See generally* ADEM Community Engagement (Aug. 2024), https://www.adem.alabama.gov/moreinfo/commEngagement.cnt.

ADEM's Draft SOB acknowledges that it "has a robust public engagement that utilizes a number of tools … to ensure that local residents and stakeholders are provided a meaningful opportunity to participate in the permitting process."[24] Despite there being local residents near the proposed facility, ADEM did nothing to engage those residents. Before taking final action on the Permit Applicant's request, ADEM should undertake and provide for public review a complete EJ analysis, including involving the disadvantaged community residents that live within 5 km of the source[25] and, if necessary, use the available tools to engage with the community surrounding this facility regarding their concerns with this source's emissions and to ensure any final permit issued to it contains the terms and conditions necessary to address those concerns and any other adverse or disparate impacts the source may have on the community. Moreover, while a permit must contain emission limits based on state and federal regulations that are protective of human health and the environment, a permit may need additional provisos to address community concerns. Thus, it is important that ADEM use the tools available and engage with local residents and stakeholders, ensuring a dialog regarding the proposed changes at this facility providing the impacted community with a meaningful opportunity to participate in the permitting process. Only by listening *directly* from those impacted will ADEM be able to design permits that address the impacted community's concern.

There are more than 1,300 impacted community residents within 5 km of this proposed facility, and MEJAC welcomes the opportunity to partner with ADEM to ensure that a meaningful dialog occurs. Such efforts adhere to ADEM's policies and federal law requirements, while also aligning with the types of efforts that EPA has acknowledged that permitting authorities can take to address EJ issues in air permitting.[26]

4. ADEM Must Identify Its Authority for Creating Synthetic Minor Emission Limits.

There are several issues regarding the inadequacy of the synthetic minor emission limits.[27] For example, the Proposed Permit suggests that ADEM's

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[24] Draft SOB at 8.

[25] EPA EJ Screen Report 5 km Ring Centered at *30.398823, -88.172400* at 3 (Nov. 14, 2024) (attached as Ex. 1).

[26] *See* EJ in Air Permitting: Principles for Addressing Environmental Justice Concerns in Air Permitting (Dec. 2022), https://www.epa.gov/system/files/documents/2022-12/Attachment%20-%20EJ%20in%20Air%20Permitting%20Principles%20.pdf. EPA provides a number of techniques to address EJ in air permitting, including "fully examining all relevant statutory and regulatory authorities, including discretionary authorities, to develop permit terms and conditions to address or mitigate identified air quality impacts to the extent feasible." *Id.* at 4. EPA also notes that recipients of federal funds, such as ADEM, have an obligation under federal civil rights laws to avoid adverse and discriminatory effects of their permitting programs. *Id.*

[27] *See generally*, US EPA Inspector General, *Improving Air Quality: EPA Should Conduct More Oversight of Synthetic Minor-Source Permitting to Assure Permits Adhere to EPA Guidance*, Report

authority for creating the synthetic minor emission limits for NO_X and CO comes from its Prevention of Significant Deterioration ('PSD") major source regulations.[28] This is incorrect, there is no authority in the PSD regulations to establish synthetic minor permits and emission limits. Indeed, ADEM does not provide a specific citation within its PSD regulations, instead cites to them globally. ADEM must correct these misstatements and provide discussion and citations to the correct program authority, including an explanation of the technical basis for establishing the synthetic minor NO_X and CO emission limits at the various emitting units.[29] This is essential as the authority ADEM relies on will identify the criteria and procedures necessary to ensure the conditions of the Proposed Permit address the relevant applicable requirements and ensure that the emission limitations are federally and practically enforceable.[30]

5. ADEM Must Revise the Proposed Permit's Reporting Permit Provisos to Require that the Permit Applicant Report Compliance Information and Plans to ADEM to Provide for Transparency and Allow for Citizen Enforcement.

The proposed permit fails to require that the Permit Applicant submit its records to ADEM. For example, for the records regarding sulfur content of the fuel, the Proposed Permit merely provides that the records be maintained either on-site or off-site:[31]

> The permittee shall maintain records of the most current fuel tariff sheet as required by 40 CFR §60.334(h)(3)(i), on-site in a permanent form suitable for inspection for at least five (5) years (2 years on-site and 3 years off-site) from the date of generation of each record.

Similarly, the Proposed Permit provisos for Emission Unit No. 004—which include provisions for either the manufacture's operation requirements or the source-specific maintenance plan as well as the information required by "40 CFR Part 63, Subparts A and ZZZZ … [regarding the] date of each occurrence, measurement, maintenance, corrective action, report, or record"—only require that this information be retained on-site.[32] Moreover, the source-specific maintenance plan must be included in a revised Permit Application, available for public notice and

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No. 21-P-0175 (July 8, 2021), https://www.epaoig.gov/reports/audit/epa-should-conduct-more-oversight-synthetic-minor-source-permitting-assure-permits [hereinafter "EPA 2021 OIG Report on Synthetic Minor Permitting"].

[28] Draft SOB at 3; Draft Permit at 11, 12 (Permit Proviso 1.c), 15, 16 (Permit Proviso 1.c), 19, 20 (Permit Proviso 1.c).

[29] UOP Order at 15.

[30] *See generally* EPA 2021 OIG Report on Synthetic Minor Permitting at 4.

[31] Proposed Permit at 13, 18,

[32] Proposed Permit at 23.

comment, and included in any final Title V Permit issued to the Facility. While the underlying applicable requirement may not require that the compliance information be submitted to ADEM, ADEM must not rely on those provisions and its periodic onsite inspections to ensure continuous compliance at the Facility. The public must have access to all compliance information to assess compliance and have the ability provided under the Clean Air Act for citizen enforcement.

ADEM must revise the Proposed Permit and require that all records and plans be submitted and reported to ADEM. The public must have access to review this information to determine whether the source is in compliance and be able to take citizen enforcement action as needed.

6. The Permit Applicant's Reliance on Vendor Data Must be Updated with Performance Test Data.

The turbines in question are not new, the construction permits were issued many years ago and initial (and likely subsequent) performance tests were completed. The Permit Applicant's continued reliance on vendor data,[33] which is not included and documented in the Permit Application, is misplaced. ADEM must require that the Permit Applicant update the Application to reflect actual source test data from the Facility.

7. The Proposed Permit Reliance on Unspecified Alternative Test Methods Fails to Ensure that the Proposed NO_X and CO Emission Limits are Practically Enforceable.

The Proposed Permit is inadequate to determine whether references to test methods are permissible. Specifically, the emission monitoring provisos for Emission Units Nos. 001, 002, and 003 allow for "emission testing during the permit term…using either an approved EPA Reference Method for that pollutant" or "utilizing a portable analyzer in accordance with a protocol/method approved in advance by the Air Division."[34] As EPA has explained, it is "problematic" for permitting authorities ADEM to fail to identify the methods and "approve[] an alternative test method or monitoring procedure entirely outside of the permitting process *and* the title V permit was not updated (following the appropriate procedures) to specify the test method or monitoring now being used to demonstrate compliance. Among other reasons, this would be problematic because the title V permit would no longer 'set forth,' 'include,' or 'contain' the monitoring necessary to assure compliance with all applicable requirements and permit terms. 42 U.S.C. § 7661c(a), (c); 40 C.F.R. §

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[33] *See e.g.*, Permit Application at pdf 27 (Vendor Data for CO), pdf 27 (no data for NO_X, relies on permit limit), pdf 31 (Vendor Data for CO), pdf 31 (no data for NO_X, relies on permit limit), pdf 35 (Vendor Data for NO_X and CO), pdf 39 (Vendor Data for NO_X and CO).

[34] Proposed Permit at 13, 20

70.6(a), (a)(3), (c)."[35] ADEM's Proposed Permit language indicating that the Facility should use an "approved EPA Reference Method" does not specify what those methods are. Additionally, the Proposed Permit language allows for the Air Division to use its discretion and approve use of a portable analyzer without including the specific requirements for such analyzer, allowing compliance to be based on a yet to be specific test method. The Proposed Permit is also ambiguous as to whether testing is required at both Unit No. 1 and 2, or whether the facility can conduct testing at just one of the Units and use those results to demonstrate compliance at both Units. All of which creates uncertainty and ambiguity in compliance and enforcement.

The lack of specificity in the Proposed Permit undermines the effectiveness and enforceability of the NO_X and CO emission limitations, which ADEM has attempted to use to restrict potential to emit ("PTE") for the turbines below the PSD and Title V applicability thresholds. ADEM must revise the Proposed Permit and include the specific test methods the Facility must follow for demonstrating compliance and escaping major source status.

8. The Proposed Permit Fails to Include the Required Preservation Mode Status Plan.

A primary purpose of Title V was to increase public involvement in air quality regulation. The Title V program is meant to "make it easier for the public to learn what requirements are being imposed on sources to facilitate public participation in determining what future requirements to impose."[36] Citizens possess the right to enforce federally enforceable provisions under the CAA.[37] "Citizen enforceability is intrinsically tied to federal enforceability and was seen by Congress as vitally important to the success of the CAA."[38] A draft permit must include all applicable emission limits and standards and must also include all monitoring, reporting and recordkeeping requirements to assure compliance with those standards.[39] ADEM's SIP permitting regulations include authority for the Director to require source-specific plans for individual facilities.[40] The SIP regulations also provide that sources that are not currently operating but may

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[35] *In the Matter of Salt River Project Agricultural Improvement and Power District, Desert Basin Generating Station*, Petition No. IX-2022-3 at 19 (July 28, 2022), https://www.epa.gov/system/files/documents/2022-08/SRP%20Desert%20Basin%20Order_7-28-22.pdf.
[36] 56 Fed. Reg. 21712, 21713 (May 10, 1991).
[37] *See* 42 U.S.C. §7604.
[38] Joyce M. Martin, *Crossroads for Federal Enforcement of the Clean Air Act*, 6 Duke Environmental Law & Policy Forum 77-104 (1996), https://scholarship.law.duke.edu/delpf/vol6/iss1/2.
[39] *See* CAA §§ 502(a) and 504(a), 42 U.S.C. §§7661a(a) and 7661c(a) and 57 Fed. Reg. 32,250, 32,251 (July 21,1992) (EPA final action promulgating the part 70 rule).
[40] ADEM Admin. Code r. 335-3-14-.03(1)(e) (providing the Director with the authority to "require the [permit] applicant to furnish…further plans" which here is the Preservation Mode Plan).

restart, due so in accordance with the relevant legal requirements.[41] Thus, this Facility's Preservation Mode Plan is required by the SIP regulations as an applicable requirement.

Here, the Proposed Permit fails to include the requirements the Facility is required to follow while in preservation mode status. The Draft SOB explains that "Mainline Unit Nos. 1 and 2 have not operated for production purposes since 2012, and Mainline Unit No. 3 since 2002 …and [a]ccording to Transco, each unit was put in preservation mode after their last respective operation."[42] The Facility set up a "procedure [that] entails purging the fuel system, capping and sealing all oil lines, fuel lines, and engine openings, and applying a crystalline preservation powder." The Draft SOB further explains that "[o]n October 16, 2019, Transco submitted a Solar Turbines specification document titled 'Preservation, Turbomachinery Air Side and Fuel Systems' that outlines the preservation mode process."[43] While ADEM's Draft SOB explains that "Transco is required to follow this process for as long as the units are non-operational," ADEM does not propose including the preservation provisions in the Proposed Permit for the Facility to adhere to while in preservation mode. Furthermore, it does not appear that ADEM reviewed and approved the provisions of the plan. Because this plan is not in the Proposed Permit there is no way for the public, EPA and ADEM to enforce the preservation mode procedures. ADEM's Draft SOB explains that the "preservation mode plan may be found in the Department's e-file system at www.adem.alabama.gov under the file name 12307 503-3045 097 10-16-2019 CORR MOG MAINTENANCE PLAN." ADEM's Draft SOB does not discuss how or whether the Facility has been following the preservation mode plan for the past five years. Moreover, the Permit Applicant failed to attach to its permit application the Preservation Mode Plan. As such, the Proposed Permit must be amended to include provisos that reflect the requirements of and include the Preservation Mode Plan as an attachment to the Proposed Permit. The public must be given the opportunity to review the revised permit provisos.

Further, because the Preservation Mode Plan is required to be *implemented* under the SIP requirements, it must be attached to the permit application and included as part of the permit requirements. Furthermore, the Facility requested to

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[41] *See e.g.*, ADEM Admin. Code r. 335-3-14-.01(1)(c) (making clear an air permit is required for sources that are not currently operating and may restart); *see also* ADEM Admin. Code r. 335-3-14-.03(1)(a) (Requiring that the Director deny a permit if a source's operations are not expected to operate in compliance with the regulations. In this case, the Facility has indicated that the provisions in the Preservation Mode Plan are necessary to preserve the Facility's equipment and ensure that when it restarts it can meet the legal requirements. Therefore, rather than deny (or revoke) the Facility's authorization to construction and operate given via the SIP construction permits, the Preservation Mode Plan provisions are necessary to ensure this Facility's restarted operations are in compliance with the regulations.).

[42] Draft SOB at 2.

[43] Draft SOB at 2.

follow the Preservation Mode Plan while not operating. In order for the Preservation Mode Plan to be practically enforceable, the Draft Permit must, as a threshold matter, incorporate the Preservation Mode Plan. Accordingly, ADEM must revise the Draft Permit to include the Preservation Mode Plan in its entirety and update the provisos for the emissions units to include the requirements of the Plan attached to an updated permit application, and then renotice the Draft Permit to allow the public to review and comment.

9. ADEM Proposed Permit Fails to Include Specific Provisos for Startup Events.

Emissions from natural gas-fired combustion turbines will vary depending on the operation of the turbine and temperature.[44] Other states recognize this variability and require different emission limitations and work practice requirements during startup events.[45] The Proposed Permit includes requirements for operations during "Startup" as follows:

> During periods of startup, 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.[46]

ADEM's Draft SOB does not explain whether it has information regarding the number of startup events and emissions from these events from the Permit Applicant that form the basis for the 30 minute work practice requirement. ADEM's response must address this. The Proposed Permit also lacks monitoring, recordkeeping and reporting of the Facility's compliance with the 30 minute and other requirements for each event—the Final Permit must include these requirements. Further, while the Proposed Permit contains a time limit for a single startup event, it does not contain an overall limit on the number of hours for all startup events. The Final Permit should include an overall time limit per year. We

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[44] Commenters note that this is not necessarily an issue of excluding non-normal operations like startup and shutdown from the normal emission limitation requirements, but rather ensuring that the emissions from the non-normal events can meet the normal emission limitations, and if that cannot be demonstrated via source specific test results, then the permit must include work practice standards and/or emission limitations that cover the non-normal events.

[45] *See e.g.*, Connecticut Department of Energy & Environmental Protection, Bureau of Air Management, Title V Operating Permit, Algonquin Gas Transmission, LLC, Title V Permit Number 043-0020-TV (Nov. 8, 2019) (attached as Ex. 2) [herein after "Connecticut Permit"]; *see also* Commonwealth of Virginia, Virginia Department of Environmental Quality, Title V Permit, Columbia Pipeline Group, Strasburg Compressor Station (July 29, 2020) (attached as Ex. 3) [hereinafter "Virginia Permit"].

[46] Proposed Permit at 21, Proviso 2(e)(ii).

also urge ADEM to consider including an alternative emission limit for startup events.[47]

Additionally it is unclear whether ADEM has ever required that Facility conduct source testing to see whether emissions during the startup period meet the emission limitations for normal operations. ADEM's response must indicate if this testing was done whether the Facility demonstrated compliance with the overall emission limitations during the startup period. If source specific testing for startup events has not yet been conducted, ADEM must require it when the Facility resumes operations. Related to this, it is unclear with there is source specific test data demonstrating that emissions during shutdown events meet the emission limitation that applies during normal operations, ADEM must address this and revise the Permit requirements as needed consistent with our comments regarding startup.

We also encourage ADEM to consider additional work practice standards for the startup events, which are required by other permitting agencies, and will minimize emissions.[48] ADEM must include an overall hour limitation in the Final Permit for the startup events, which is based on emission calculation methodology derived from source test data demonstrated representative of emissions from this Facility. The Final Permit must require tracking, recording and reporting those hours.

10. The Compliance Proviso for Emission Testing for the Opacity Requirements is not Enforceable.

Consistent with the requirements of the Alabama SIP, the Proposed Permit requires that the "[t]he permittee shall not discharge more than one six-minute average opacity greater than 20% in any 60-minute period from this unit. At no time shall the permittee discharge a six-minute average opacity of particulate emissions greater than 40% from this unit."[49] All title V permits must "set forth . . .

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[47] Requirements on the limited number of hours for startup/shutdown are seen in other state permits. *See e.g.*, Connecticut Permit at 10 (startup emission limits), 11 (work practice and time constraints during startup), 11-12 (demonstration of compliance requirements for startup emission limits), 12 (record keeping and reporting requirements for startup), 18 (definition of "startup event"), 18 (duration limitations for startup events, 18 and 17 minutes), 20 (allowable short term emissions during startup events), 21 (allowable short term emissions at steady state (for startup events at all temperatures, lb/event), 28 (monitoring requirements for startup event), 30 (requirements to make and keep records of startup events), 35 (requirement to minimize emissions during startup); *see also* Virginia Permit at 8 (requirements for work practices during startup), 8 (requirement to use electric starts to reduce the volume of gas vented to the atmosphere during startup), 10 and 11 (requirement to record duration of operational mode, and operate facility to as to minimize frequency and duration of startup), 14 (limitation on the number of startup events per year), 35 (requirement for reporting of excess emissions that occur during startups), 38 (work practice standards during startup).

[48] *Id.*

[49] Proposed Permit at 12, 16, 20; ADEM Admin. Code r. 335-3-4-.01(1).

monitoring . . . requirements to assure compliance with the permit terms and conditions."[50] However, the compliance for these provisos is vague and does not specify how the permittee applies the compliance provision. The compliance provisos merely indicates that "[i]f testing is required, opacity shall be determined by 40 CFR Part 60, Appendix A, Method 9."[51] This ambiguous and vague provision does not ensure that the 20% and 40% opacity requirements are met, and thus fails to "set forth" the "monitoring sufficient to assure compliance" with the Alabama SIP's opacity rules as required by 42 U.S.C 7661c(c).[52] There are no provisions in the Proposed Permit and no reported information for the public to rely on to ascertain whether visible emissions from the Facility's turbines and gravel roads comply with these opacity limits. ADEM's Final Permit must be enforceable by the public, EPA and ADEM, and ADEM must include provisos that make clear when and how the Permittee must show compliance with the opacity requirement, including frequency of testing, record keeping and reporting requirements.

Conclusion

For the reasons discussed above, we strongly encourage ADEM require that the Permit Applicant supplement it Permit Application with the missing information, revise the Proposed Permit and Draft SOB in response to our comments, and renotice this Proposed Permit providing the public with all information necessary to review a revised Proposed Permit and determine whether it complies with the requirements of the Title V regulations, Clean Air Act and the Alabama SIP. Please feel free to contact us if you have any questions.

Sincerely,

Ramsey Sprague
President
Mobile Environmental Justice Action Coalition
Ramsey@MEJACoalition.org
(251) 593-2488

Jilisa Milton
Director
GASP
JMilton@gaspgroup.org
(205) 701-4277

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[50] 42 U.S.C. § 7661c(c); 40 C.F.R. § 70.6(c)(1).
[51] Proposed Permit at 12, 17, 22..
[52] *In the Matter of Lucid Energy Delaware, LLC Frac Cat Compressor Station et al*, Petition Nos. VI-2022-5 & VI-2022-11 at 17 (Nov. 16, 2022), https://www.epa.gov/system/files/documents/2022-11/Lucid%20Energy%20Delaware%20Order_11-16-22.pdf.

Enclosures

cc: Jeaneanne Gettle, Acting Regional Administrator, EPA Region 4, Gettle.Jeaneanne@epa.gov

Denisse Diaz, Director, Air and Radiation Division, EPA Region 4, Diaz.Denisse@epa.gov

Brad Akers, Manager, Air Permitting Section, EPA Region 4, Akers.Brad@epa.gov

JJ England, Monique Hudson, and Debashis Ghose, Office of Regional Counsel, EPA Region 4, England.Jj@epa.gov, Hudson.Monique@epa.gov, and Ghose.Debashis@epa.gov

List of Exhibits

1. EPA EJ Screen Report 5 km Ring Centered at 30.398823, -88.172400 (Nov. 13, 2024).

2. Connecticut Department of Energy & Environmental Protection, Bureau of Air Management, Title V Operating Permit, Algonquin Gas Transmission, LLC, Title V Permit Number 043-0020-TV (Nov. 8, 2019).

3. Commonwealth of Virginia, Virginia Department of Environmental Quality, Title V Permit, Columbia Pipeline Group, Strasburg Compressor Station (July 29, 2020).

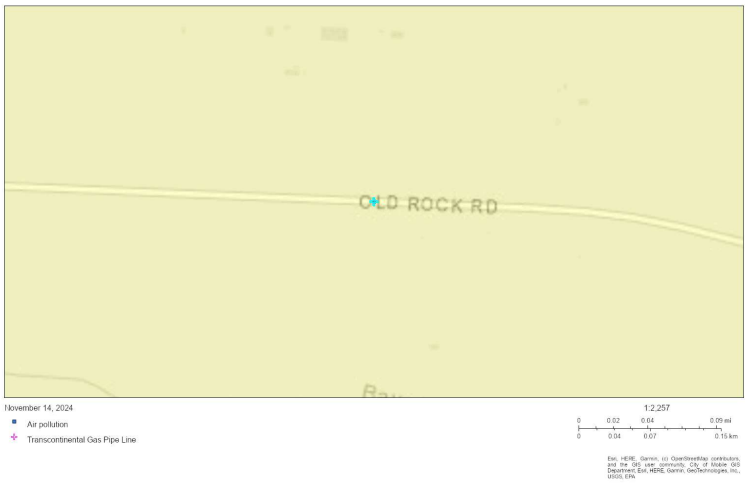
Exhibit 1

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Transcontinental Gas Pipe Line

5 kilometers Ring Centered at 30.398822,-88.172402
Population: 1,354
Area in square miles: 30.32



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	90%
Vietnamese	6%
Other Asian and Pacific Island	4%
Total Non-English	10%

COMMUNITY INFORMATION

- Low income: 48 percent
- People of color: 19 percent
- Less than high school education: 21 percent
- Limited English households: 2 percent
- Unemployment: 1 percent
- Persons with disabilities: 21 percent
- Male: 51 percent
- Female: 49 percent
- 75 years — Average life expectancy
- $25,373 — Per capita income
- Number of households: 437
- Owner occupied: 80 percent

BREAKDOWN BY RACE

- White: 81%
- Black: 3%
- American Indian: 0%
- Asian: 4%
- Hawaiian/Pacific Islander: 0%
- Other race: 3%
- Two or more races: 1%
- Hispanic: 8%

BREAKDOWN BY AGE

From Ages 1 to 4	5%
From Ages 1 to 18	23%
From Ages 18 and up	77%
From Ages 65 and up	18%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	0%
Speak Other Indo-European Languages	0%
Speak Asian-Pacific Island Languages	100%
Speak Other Languages	0%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, American Community Survey (ACS) 2018-2022. Life expectancy data comes from the Centers for Disease Control.

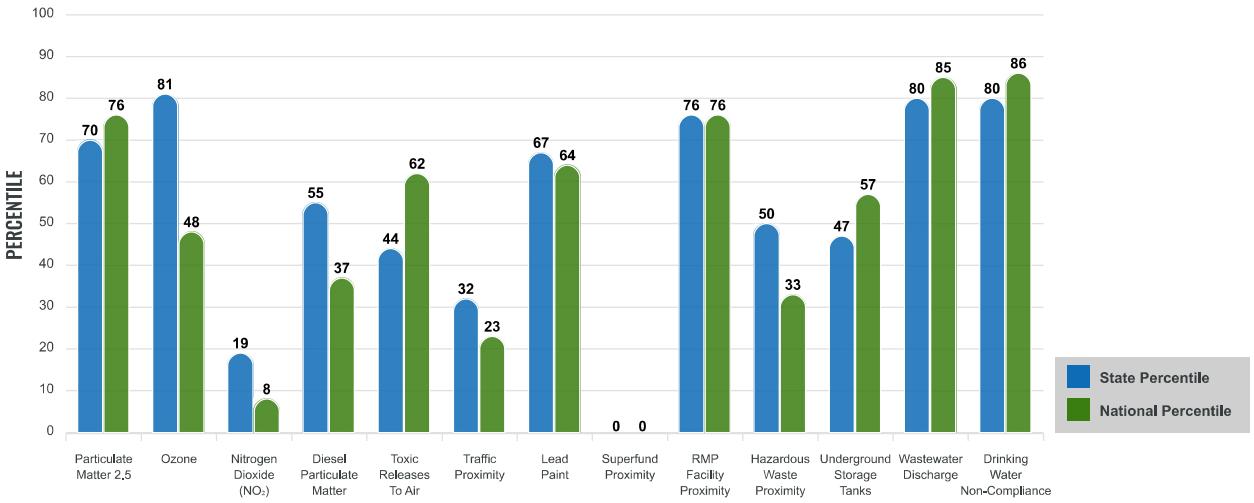
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

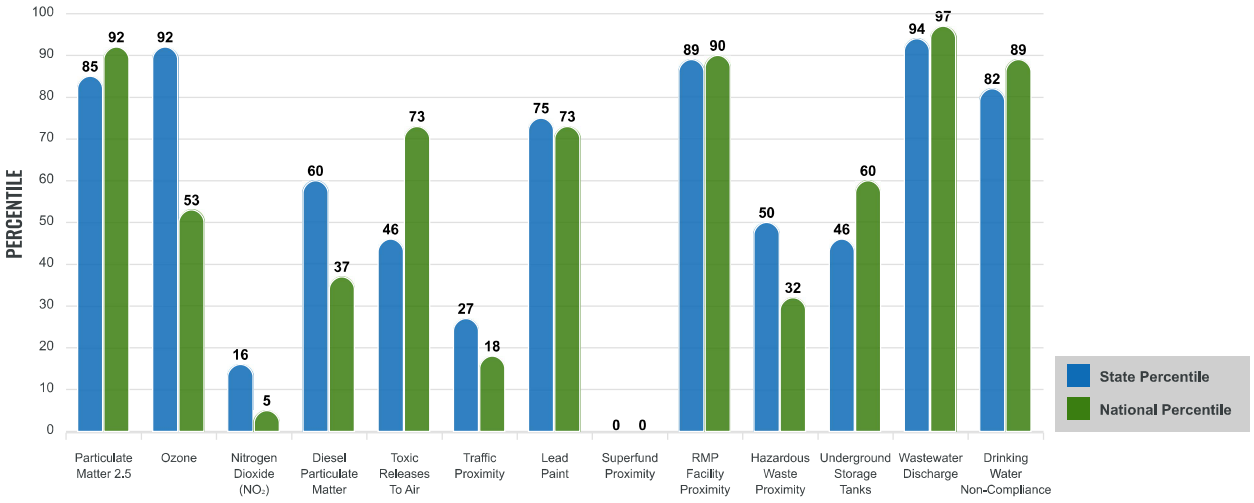
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low income, percent persons with disabilities, percent less than high school education, percent limited English speaking, and percent low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



Report for 5 kilometers Ring Centered at 30.398822,-88.172402

Report produced November 14, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 ($\mu g/m^3$)	9.09	8.74	67	8.45	76
Ozone (ppb)	56.6	54.1	83	61.8	31
Nitrogen Dioxide (NO_2) (ppbv)	2.4	5.1	11	7.8	3
Diesel Particulate Matter ($\mu g/m^3$)	0.0804	0.115	39	0.191	20
Toxic Releases to Air (toxicity-weighted concentration)	540	21,000	33	4,600	48
Traffic Proximity (daily traffic count/distance to road)	47,000	630,000	21	1,700,000	11
Lead Paint (% Pre-1960 Housing)	0.22	0.19	68	0.3	51
Superfund Proximity (site count/km distance)	0	0.099	0	0.39	0
RMP Facility Proximity (facility count/km distance)	0.89	0.36	85	0.57	78
Hazardous Waste Proximity (facility count/km distance)	0.12	0.74	36	3.5	19
Underground Storage Tanks (count/km^2)	0.25	1.9	34	3.6	38
Wastewater Discharge (toxicity-weighted concentration/m distance)	1500000	23000	99	700000	99
Drinking Water Non-Compliance (points)	19	4.1	90	2.2	97
SOCIOECONOMIC INDICATORS					
Demographic Index USA	1.42	N/A	N/A	1.34	60
Supplemental Demographic Index USA	2.35	N/A	N/A	1.64	85
Demographic Index State	1.4	1.49	53	N/A	N/A
Supplemental Demographic Index State	2.39	1.95	77	N/A	N/A
People of Color	19%	38%	36	40%	35
Low Income	48%	38%	68	30%	79
Unemployment Rate	0%	6%	29	6%	23
Limited English Speaking Households	2%	1%	85	5%	65
Less Than High School Education	21%	13%	79	11%	83
Under Age 5	5%	6%	53	5%	53
Over Age 64	18%	19%	52	18%	57

*Diesel particulate matter index is from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	42
Air Pollution	8
Brownfields	0
Toxic Release Inventory	4

Other community features within defined area:

Schools	0
Hospitals	0
Places of Worship	5

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 5 kilometers Ring Centered at 30.398822,-88.172402

Report produced November 14, 2024 using EJScreen Version 2.3

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	24%	23%	58	20%	86
Heart Disease	7.9	6.9	71	5.8	87
Asthma	10.5	10.8	47	10.3	61
Cancer	7.1	6.7	58	6.4	62
Persons with Disabilities	20.6%	17.2%	71	13.7%	86

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	67%	13%	98	12%	97
Wildfire Risk	83%	12%	95	14%	89

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	18%	18%	56	13%	74
Lack of Health Insurance	16%	10%	84	9%	86
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access Burden	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Report for 5 kilometers Ring Centered at 30.398822,-88.172402

Report produced November 14, 2024 using EJScreen Version 2.3

Exhibit 2

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

BUREAU OF AIR MANAGEMENT
TITLE V OPERATING PERMIT

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-33 of the Regulations of Connecticut State Agencies (RCSA) and pursuant to the Code of Federal Regulations (CFR), Title 40, Part 70.

Title V Permit Number	043-0020-TV
Client/Sequence/Town/Premises Numbers	555/1/43/5
Date Issued	November 8, 2019
Expiration Date	November 8, 2024

Corporation:

Algonquin Gas Transmission, LLC

Premises Location:

252 Shunpike Road, Cromwell, CT 06416

Name of Responsible Official and Title:

Kerry Puckett, Vice President, Gas Transmission Operations

All the following attached pages, 2 through 52, are hereby incorporated by reference into this Title V permit.

/s/Tracy R. Babbidge for
Betsey C. Wingfield
Deputy Commissioner

11/8/2019
Date

TABLE OF CONTENTS

All conditions in Sections III, IV, and VI of this Title V permit are enforceable by both the Administrator and the commissioner unless otherwise specified. Applicable requirements and compliance demonstration are set forth in Section III of this Title V permit. The Administrator or any citizen of the United States may bring an action to enforce all permit terms or conditions or requirements contained in Sections III, IV, and VI of this Title V permit in accordance with the Clean Air Act, as amended.

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation/Acronym	*Description*
^{o}F	Degree Fahrenheit
ASC	Actual Stack Concentration
bhp	Break Horse Power
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalents
EU	Emissions Unit
EPA	Environmental Protection Agency
ERC	Emission Reduction Credit
FLER	Full Load Emission Rate
g	Grams
gr	Grams
GEU	Grouped Emissions Unit
GHG	Green House Gases
HAP	Hazardous Air Pollutant
Hp	Horse power
hr	Hour
lb	Pound
MASC	Maximum Allowable Stack Concentration
MMBtu	Million British Thermal Units
MMscf	Million square cubic feet
N_2O	Nitrogen Oxide
NO_x	Nitrogen Oxides
NSR	New Source Review
O_2	Oxygen
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns
$PM_{2.5}$	Particulate Matter less than 2.5 microns
Ppm	Parts per million
ppmvd	Parts per million, volumetric basis dry
RACT	Reasonable Available Control Technology

LIST OF ABBREVIATIONS/ACRONYMS, continued

Abbreviation/Acronym	*Description*
RCSA	Regulations of Connecticut State Agencies
RICE	Reciprocating Internal Combustion Engines
scf	Standard Cubic Feet
SIC	Standard Industrial Classification Code
SO_2	Sulfur Dioxide
SOx	Sulfur Oxides
STD	Standard
VOC	Volatile Organic Compound

Section I: Premises Information/Description

A. PREMISES INFORMATION

Nature of Business: Transport natural gas via pipeline
Primary SIC: 4922

Facility Contact and Mailing Address: Mr. Reagan M. Mayces
Algonquin Gas Transmission, LLC
P.O. Box 1642
Houston, TX 77251-1642

Telephone Number: (713) 627-4790

B. PREMISES DESCRIPTION

Algonquin Gas Transmission, LLC (Algonquin) transports natural gas via underground pipelines from New Jersey through southern New England to eastern Massachusetts or in reverse. At several points along the pipeline, the natural gas must be recompressed to ensure that it continues to move along the pipeline and can be delivered to customers at serviceable pressures. The natural gas is compressed at the Cromwell Compressor Station by one electric motor driven compressor and five natural gas fired turbine driven centrifugal compressors. The natural gas used to fuel the gas fired units comes from Algonquin's pipeline. The Cromwell Compressor Station is one of three Algonquin compressor stations located in Connecticut.

The facility consists of the following natural gas fired combustion turbines:

- Two 4,700 hp Solar Centaur 40-T4702 turbines
- One 6,130 hp Solar Centaur 50-6102 turbine
- One 7,700 hp Solar Taurus 60-7802 turbine
- One 15,900 hp Solar Mars 100-16002 turbine

Ancillary equipment includes a natural gas fired emergency generator. In addition, there are three natural gas fired fuel gas heaters, a natural gas fired boiler, several natural gas fired space heaters, sources of gas releases, piping component fugitives, a parts washer and storage tanks subject to premises-wide applicable requirements. The facility is not a major source of Hazardous Air Pollutants (HAPs).

The Cromwell Compressor Station is a Title V source located in a serious ozone non-attainment area as defined in RCSA §22a-174-1. The Cromwell Compressor Station exceeds the major source threshold for NOx, VOC and CO.

Section II: Emissions Units Information

A. EMISSIONS UNITS DESCRIPTION

Emissions units are set forth in Table II.A. It is not intended to incorporate by reference these NSR Permits or Regulations into this Title V permit.

TABLE II.A: EMISSIONS UNITS DESCRIPTION

Emissions Unit	Emissions Unit Description	Control Unit Description	Permit or Regulation Number
EU-7	4,700 hp Natural Gas Fired Solar Centaur 40-T4702 Turbine Construction Date: November 15, 1982	Dry Low NOx combustor	Permit No. 043-0005 RCSA §22a-174-22e 40 CFR Part 60 Subpart GG
EU-8	4,700 hp Natural Gas Fired Solar Centaur 40-T4702 Turbine Construction Date: November 15, 1982	Dry Low NOx combustor	Permit No. 043-0006 RCSA §22a-174-22e 40 CFR Part 60 Subpart GG
EU-9	15,900 hp Natural Gas Fired Solar Mars 100-16002 Turbine Construction Date: June 2015	Dry Low NOx combustor Oxidation Catalyst	Permit No. 043-0031 RCSA §22a-174-22e 40 CFR Part 60 Subpart KKKK
EU-11	6,130 hp Natural Gas Fired Solar Centaur 50-6102 Turbine Construction Date: May 2019	Dry Low NOx combustor Oxidation Catalyst	Permit No. 043-0036 RCSA §22a-174-22e 40 CFR Part 60 Subpart KKKK
EU-10	7,700 hp Natural Gas Fired Solar Taurus 60-7802 Turbine Construction Date: May 2019	Dry Low NOx combustor Oxidation Catalyst	Permit No. 043-0035 RCSA §22a-174-22e 40 CFR Part 60 Subpart KKKK
EU-6	1,175 bhp Natural Gas Fired Waukesha VGF48GL Emergency Generator Construction Date: October 2015	None	RCSA §22a-174-3b(e) RCSA §22a-174-22e 40 CFR Part 60 Subpart JJJJ

Section II: Emissions Units Information

B. OPERATING SCENARIO IDENTIFICATION

The Permittee shall be allowed to operate under the following Standard Operating Scenarios (SOS) without notifying the commissioner, provided that such operations are explicitly provided for and described below in this section. There are no Alternate Operating Scenarios for the premises.

Natural gas fired turbines: The standard use of the turbines is to compress natural gas.

Emergency generator: The standard use of the emergency generator is to provide emergency power for operations at the facility in case of utility power outage, brownout, maintenance or other emergency.

C. GROUPED EMISSIONS UNITS DESCRIPTION

TABLE II.C: GROUPED EMISSIONS UNITS DESCRIPTION

Grouped Emissions Units (GEU)	Grouped Emissions Unit Description
GEU-1	EU-7, EU-8: Two Solar Natural Gas Turbines
GEU-2	EU-9, EU-10 and EU-11: Three Solar Natural Gas Turbines

Section III: Applicable Requirements and Compliance Demonstration

The following contains summaries of applicable regulations and compliance demonstration for each identified Emissions Unit and Operating Scenario, regulated by this Title V permit.

A. GROUPED EMISSIONS UNIT 1 (GEU-1): Two Solar Turbines

- EU-7: Solar Centaur 40-T4702 Natural Gas Turbine (Permit No. 043-0005)
- EU-8: Solar Centaur 40-T4702 Natural Gas Turbine (Permit No. 043-0006)
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart GG

1. Fuel Type, Fuel Consumption and Fuel Sulfur Content

a. Limitation or Restriction

i. Fuel Type: Natural Gas [Permit Nos. 043-0005 and 043-0006]

ii. Maximum Fuel Consumption for each Turbine over any Consecutive 12 Months Period: 411 MMscf [Permit Nos. 043-0005 and 043-0006]

iii. Maximum Natural Gas Sulfur Content: 20.0 grains/100 scf [Permit Nos. 043-0005 and 043-0006]

b. Monitoring and Testing Requirements

The Permittee shall use gas metering devices to continuously monitor fuel feed to each turbine. [Permit Nos. 043-0005 and 043-0006]

c. Record Keeping Requirements

i. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption in units of standard cubic feet for each turbine. The consecutive 12 month fuel consumption shall be determined by adding the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month. [Permit Nos. 043-0005 and 043-0006]

ii. The Permittee shall keep records of a current valid purchase contract, tariff sheet, or transportation contract which demonstrates the maximum total sulfur content of the natural gas burned in the combustion turbines. [Permit Nos. 043-0005 and 043-0006]

iii. The Permittee shall keep all records for a period of no less than five years and shall submit such records to the commissioner upon request. [Permit Nos. 043-0005 and 043-0006]

d. Reporting Requirements

i. The Permittee shall notify the commissioner in writing of a deviation from an operational parameter no later than ten days after such exceedance commenced. [Permit Nos. 043-0005 and 043-0006]

ii. The notification shall include the following:

(A) A description of the circumstances surrounding the cause or likely cause of such deviation.

(B) A description of all corrective actions and preventive measures taken and/or planned with respect to such deviation and the dates of such actions and measures.

(C) The Quantity of excess emissions occurring at that event.

(D) The duration of the event.

2. PM_{10}, SOx, NOx, VOC and CO

a. Limitation or Restriction

i. The Permittee shall operate and maintain each turbine in accordance with the manufacturer's specifications and written recommendations. [Permit Nos. 043-0005 and 043-0006]

ii. The Permittee shall operate and maintain each turbine and air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction. [Permit Nos. 043-0005 and 043-0006]

iii. The Permittee shall properly operate the control equipment at all times that the turbines are in operation and emitting air pollutants. [Permit Nos. 043-0005 and 043-0006]

iv. The Permittee shall not cause or allow each turbine to exceed the emission limits stated herein at any time, as determined in accordance with the applicable averaging periods defined in Section III.A.2 of this Title V permit or as specified in an approved stack test protocol.

An exceedance of the emission limits due to an emergency, malfunction or cleaning shall not be deemed a "Federally Permitted Release," as that term is used in 42 U.S.C. 9601(10).

[Permit Nos. 043-0005 and 043-0006]

(A) Short Term Emission Limits: These short term emission limits do not apply during periods of startup and shutdown, unless otherwise noted. Emission limits are for each turbine.

(1) Turbine Inlet Temperatures above 0^oF

(a) PM_{10}: 0.33 lb/hr

(b) SOx: 0.18 lb/hr

(c) NOx: 7.78 lb/hr, 0.15 lb/MMBtu, 42.0 ppmvd @ 15% O_2

(d) VOC: 0.32 lb/hr

(e) CO: 5.64 lb/hr

(2) Startup and Shutdown Emission Limits (at all temperatures)

(a) NOx: Startup: 0.78 lb/event*

(b) NOx: Shutdown: 0.37 lb/event*

(c) CO: Startup: 76.7 lb/event*

(d) CO: Shutdown: 33.6 lb/event*

- *The startup/shutdown values were calculated using Solar information and adjusted to account for site specific temperature, flowrate and startup/shutdown information.*

(B) Annual Emission Limits

(1) PM_{10}: 1.40 tons per 12 consecutive months

(2) SO_2: 0.8 tons per 12 consecutive months

(3) NOx: 31.7 tons per 12 consecutive months

(4) VOC: 1.5 tons per 12 consecutive months

(5) CO: 22.9 tons per 12 consecutive months

v. The Permittee shall minimize emission during periods of startup and shutdown by the following work practices and time constraints: [Permit Nos. 043-0005 and 043-0006]

(A) lb/event means "one startup" or "one shutdown;"

(B) The duration of startup shall not exceed 10 minutes for a hot, warm or cold startup;

(C) The duration of shutdown shall not exceed 10 minutes; and

(D) Emissions during these periods shall be countered towards the annual emission limits stated herein.

vi. Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using the most recent approved stack test results for that pollutant, or if unavailable, emission factors from the following sources: [Permit Nos. 043-0005 and 043-0006]

(A) Turbine Inlet Air Temperatures Above 0 ^oF

(1) PM_{10}: 6.73 lb/MMscf – AP42 Table 3.1-1, dated 4/00

(2) SO_2: 3.47 lb/MMscf – AP42 Table 3.1-1, dated 4/00

(3) NOx: 154.07 lb/MMscf – Manufacturer's data

(4) VOC: 6.27 lb/MMscf – AP42 Table 3.1-1, dated 4/00, adjusted with manufacturer's data

(5) CO: 111.66 lb/MMscf – Manufacturer's data

(B) Startup and Shutdown

(1) NOx: Startup: 0.79 lb/event*

(2) NOx: Shutdown: 0.37 lb/event*

(3) CO: Startup: 76.7 lb/event*

(4) CO: Shutdown: 33.6 lb/event*

* *The startup/shutdown emissions factors were calculated using Solar information and best engineering judgement.*

vii. The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

[Permit Nos. 043-0005 and 043-0006]

b. Monitoring and Testing Requirements

i. The Permittee shall conduct recurrent stack testing for each turbine for NOx within five years from the previous stack test to demonstrate compliance with the NOx limits in Section III.A.2.a of this Title V permit. [Permit Nos. 043-0005 and 043-0006]

ii. The commissioner retains the right to require stack testing of any pollutant at any time to demonstrate compliance. [Permit Nos. 043-0005 and 043-0006]

c. Record Keeping Requirements

i. The Permittee shall calculate and record the monthly and consecutive 12 month PM_{10}, SOx, NOx, VOC and CO emissions, including startup and shutdown, in units of tons for each turbine. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days at the end of the previous month.

[Permit Nos. 043-0005 and 043-0006]

ii. The Permittee shall keep records of the occurrence and duration of any startup, shutdown or malfunction in the operation of each stationary gas turbine; or any malfunction of the air pollution control equipment [40 CFR §60.7(b)]. Such records shall contain the following information:

[Permit Nos. 043-0005 and 043-0006]

(A) Type of event (startup, shutdown or malfunction);

(B) Equipment affected;

(C) Date of event;

(D) Duration of event (minutes);

(E) Fuel being used during the event; and

(F) Total NOx and CO emissions emitted (lb) during the event.

iii. The Permittee shall keep records of stack testing results. [Permit Nos. 043-0005 and 043-0006]

iv. The Permittee shall keep records of manufacturer's information for each low NOx burner.

[Permit Nos. 043-0005 and 043-0006]

d. Reporting Requirements

i. The Permittee shall submit annual emission inventory statements as requested by the commissioner. [Permit Nos. 043-0005 and 043-0006]

ii. The Permittee shall notify the commissioner in writing of a deviation from an emission limit (short-term and/or long term) or operational parameter, used as a surrogate, as follows: [Permit Nos. 043-0005 and 043-0006]

(A) For any other regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.

iii. The notification shall include the following:

(A) A description of the circumstances surrounding the cause or likely cause of such deviation; and

(B) A description of all corrective actions and preventive measures taken and/or planned with respect to such deviation and the dates of such actions and measures.

(C) The quantity of excess emissions occurring during the event.

(D) The duration of the event.

3. Hazardous Air Pollutants (HAPs) [STATE ONLY REQUIREMENTS]

a. Limitation or Restriction

Each turbine shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any Hazardous air pollutant (HAP) emitted and listed in RCSA §22a-174-29. [Permit Nos. 043-0005 and 043-0006]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.A.3.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(l)(K)(ii))]

c. Record Keeping Requirements

i. The Permittee shall make and keep records of the Actual Stack Concentration (ASC) and MASC calculations for each turbine to show compliance with RCSA §22a-174-29. [Permit Nos. 043-0005 and 043-0006]

ii. The Permittee shall keep all records for a period of no less than five years and shall submit such records to the commissioner upon request. [Permit Nos. 043-0005 and 043-0006]

d. Reporting Requirements

i. The Permittee shall notify the commissioner in writing of a deviation from an emission limit (short-term and/or long term) or operational parameter, used a s a surrogate, as follows:

[Permit Nos. 043-0005 and 043-0006]

(A) For any hazardous air pollutant, no later than 24 hours after such exceedance commenced.

ii. The notification shall include the following:

(A) A description of the circumstances surrounding the cause or likely cause of such deviation;

(B) A description of all corrective actions and preventive measures taken and/or planned with respect to such deviation and the dates of such actions and measures;

(C) The quantity of excess emissions occurring during the event; and

(D) The duration of the event.

4. Opacity

a. Limitation or Restriction

Opacity shall not exceed 10% during any six minute block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9 for each turbine. [Permit Nos. 043-0005 and 043-0006]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.A.4.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.A.4.a of this Title V permit.

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

5. NOx – RCSA §22a-174-22e

a. Limitation or Restriction

i. The Permittee shall not cause or allow an emission unit to exceed the applicable emissions limitations specified in RCSA §22a-174-22e and Section III.A.5.a.ii of this Title V permit unless the Permittee undertakes one of the following actions: [RCSA §22a-174-22e(d)(1)]

(A) Implements an alternative compliance mechanism in accordance with RCSA §22a-174-22e(g);

(B) Operates under a case-by-case RACT determination in accordance with RCSA §22a-174-22e(h); or

(C) Ceases operation in accordance with RCSA §22a-174-22e(f).

ii. The Permittee shall comply with the following emissions limitations: [RCSA §§22a-174-22e(d)(4)(A) and (C), and 22a-174-22e(d)(16)]

(A) Until May 31, 2023: 55 ppmvd, corrected to 15% O_2

(B) On and after June 1, 2023: 40 ppmvd, corrected to 15% O_2

b. Monitoring and Testing Requirements

i. The Permittee shall conduct periodic emissions testing for each turbine in GEU-1 in accordance with RCSA §22a-174-22e(l). [RCSA §22a-174-22e(l)(1)(A) and (C)]

ii. The Permittee of an existing emission unit shall conduct initial emission test on a date during Phase 1 that is no more than 63 calendar months following the date of the last emission test performed pursuant to former RCSA §22a-174-22(k). [RCSA §§22a-174-22e(l)(2) and (l)(4)]

iii. The Permittee of an existing emission unit shall conduct the emission test following the initial emissions test on a date after May 31, 2023 and no later than June 1, 2025. Subsequently, the Permittee shall conduct emission tests within 63 calendar months following the date the previous emission test was conducted or the date the previous emission test was required to be conducted, whichever is earlier. [RCSA §22a-174-22e(l)(5)]

iv. The Permittee shall conduct each emission test in accordance with RCSA §22a-174-5 and compliance with the emissions limitations of RCSA §22a-174-22e in accordance with RCSA §22a-174-22e(l)(6).

[RCSA §22a-174-22e(l)(6)]

v. The Permittee shall demonstrate compliance with the emission limitations using sampling and analytical procedures under 40 CFR Part 60, Appendix A or, under procedures in RCSA §22a-174-5(d). Sampling shall be conducted when the emission unit is at normal operating temperature and, unless allowed otherwise by the commissioner in a permit or order, is operating at or above 90 percent of maximum capacity, except as prescribed by RCSA §§22a-174-22e(l)(7)(A) and (B).

[RCSA §22a-174-22e(7)]

c. Record Keeping Requirements

i. The Permittee shall retain all records and reports produced pursuant to RCSA §22a-174-22e for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records and reports shall be retained at the premises where the emission unit is located. [RCSA §22a-174-22e(j)(1)]

ii. The Permittee shall make and keep the following records on and after May 1, 2018: [RCSA §§22a-174-22e(j)(2)(B), (C), (F) and (G)]

(A) The date and work performed for repairs, replacement of parts and other maintenance;

(B) Records of the dates and times of all emission testing required by RCSA §22a-174-22e, the persons performing the measurements, the testing method used, the operating conditions at the time of testing, and the results of such testing;

(C) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e; and

(D) Any other records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e.

d. Reporting Requirements

Not more than 60 days after the completion of emission tests conducted under RCSA §22a-174-22e(l), the Permittee of such emission unit shall submit a written report of the results of such testing to the commissioner. [RCSA §22a-174-22e(k)(1)]

6. 40 CFR Part 60 Subpart GG – New Source Performance Standard for Stationary Gas Turbine

a. Limitation or Restrictions

i. The Permittee shall not cause to be discharged into the atmosphere, any gases from either of the turbines which contain nitrogen oxides in excess of the allowable NOx emission concentration in 40 CFR §60.332(a)(2). [40 CFR §60.332(c)]

ii. The Permittee shall comply with the fuel sulfur content limit in 40 CFR §60.333(b) for each turbine. [40 CFR §60.333]

b. Monitoring and Testing Requirements

The Permittee is not required to monitor the nitrogen content of the fuel for each turbine because the Permittee uses an F-value equal to zero to calculate STD in 40 CFR §60.332. [40 CFR §60.334(h)(2)]

c. Record Keeping Requirements

The Permittee shall keep records of the fuel quality characteristics in a current, valid purchase contract tariff sheet or transportation contract for the fuel specifying that the maximum total sulfur content is 20 grains of sulfur or less per 100 standard cubic feet. [40 CFR §60.334(h)(3)(i)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

B. GROUPED EMISSIONS UNIT 2 (GEU-2): Three Solar Turbines

- EU-9: Solar Mars 100-16002 Natural Gas Turbine (Permit No. 043-0031)
- EU-11: Solar Centaur 50-6102 Natural Gas Turbine (Permit No. 043-0036)
- EU-10: Solar Taurus 60-7802 Natural Gas Turbine (Permit No. 043-0035)
- Subject to RCSA §22a-174-22e
- Subject to 40 CFR Part 60 Subpart KKKK

1. Fuel Type, Fuel Consumption and Fuel Sulfur Content

a. Limitation or Restriction

i. Fuel Type: Natural Gas [Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. Maximum Fuel Consumption:

(A) EU-9: 1,143 MMscf over any Consecutive 12 Month Period [Permit No. 043-0031]

(B) EU-11: 503.634 MMscf over any Consecutive 12 Month Period [Permit No. 043-0036]

(C) EU-10: 592.23 MMscf over any Consecutive 12 Month Period [Permit No. 043-0035]

iii. Maximum Natural Gas Sulfur Content: 5.0 grains/100 scf
[Permit Nos. 043-0031, 043-0035 and 043-0036]

b. Monitoring and Testing Requirements

The Permittee shall use gas metering devices to continuously monitor fuel feed to each turbine.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

c. Record Keeping Requirements

i. The Permittee shall keep records of monthly and consecutive 12 month fuel consumption in units of standard cubic feet for each turbine. The consecutive 12 month fuel consumption shall be determined by adding the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. The Permittee shall make and keep records of a current valid purchase contract tariff sheet, or transportation contract which demonstrates the maximum total sulfur content of the natural gas burned in each turbine. [Permit Nos. 043-0031, 043-0035 and 043-0036]

iii. The Permittee shall make and keep records of all exceedances of any operating parameter. Such records shall include: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) The date and time of the exceedance;

(B) A detailed description of the exceedance;

(C) The duration of the exceedance; and

(D) Reason and corrective action taken.

iv. The Permittee shall make and keep all records for a period of no less than five years and shall submit such records to the commissioner upon request. [Permit Nos. 043-0031, 043-0035 and 043-0036]

d. Reporting Requirements

i. The Permittee shall notify the commissioner in writing of any exceedance or deviation of an emission limitation or operating parameter, and shall identify the cause or likely cause of such exceedances or deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of

such actions and measures as follows: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) For any hazardous air pollutant, no later than 24 hours after such exceedance commenced; and

(B) For any other regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.

2. $PM/PM_{10}/PM_{2.5}$, SO_2, NOx, VOC, CO and GHG

a. Limitation or Restriction

i. Definitions: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) "Low temperature event" shall be defined as operation of the turbine when the inlet temperature is below 0^oF. [Permit No. 043-0031]

(B) "Low temperature event" shall be defined as operation of the turbine when the inlet air temperature is below 0^oF. [Permit Nos. 043-0035 and 043-0036]

(C) "Shutdown event" shall be defined as the initial lowering of turbine fuel combustion rate beginning once SoLoNOx is inactive and ending at the point which the fuel combustion process has stopped.

(D) "Startup event" shall be defined as the period of time from initiation of fuel combustion until SoLoNOx is active.

(E) "Steady-state" operation shall be defined as operation of the turbine when SoLoNOx is active.

(F) "Transient event" operation shall be defined as any infrequent or unplanned operation of the turbine outside of manufacturer warranty conditions with SoLoNOx inactive, not including startup/shutdown or low temperature events.

ii. The Permittee shall not operate any turbine without the SoLoNOx (control device), except as allowed during startup/shutdown, transient events and low temperature events. [Permit Nos. 043-0031, 043-0035 and 043-0036]

iii. The Permittee shall not bypass the oxidation catalyst at any time. [Permit Nos. 043-0031, 043-0035 and 043-0036]

iv. The Permittee shall operate and maintain each turbine, air pollution control equipment and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, malfunctions and transient events. [Permit Nos. 043-0031, 043-0035 and 043-0036]

v. The Permittee shall operate and maintain each turbine, air pollution control equipment and monitoring equipment in accordance with manufacturer's specifications and written recommendations. [Permit Nos. 043-0031, 043-0035 and 043-0036]

vi. The duration of a startup event shall not exceed 18 minutes. [Permit Nos. 043-0031, 043-0035 and 043-0036]

vii. The duration of a shutdown event shall not exceed 17 minutes.

[Permit Nos. 043-0031, 043-0035 and 043-0036]

viii. The Permittee shall not cause or allow EU-9 to exceed the emission limits stated herein at any time: [Permit No. 043-0031]

Note: The following emission limits apply to EU-9 only.

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Temperatures Above 0 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.95 lb/hr, 0.0066 lb/MMBtu

(b) SO_2: 2.02 lb/hr

(c) NOx: 4.69 lb/hr, 0.032 lb/MMBtu, 9.0 ppmvd @ 15% O_2

(d) CO: 0.40 lb/hr, 25 ppmvd @ 15% O_2

(e) VOC: 0.50 lb/hr

(2) Turbine Inlet Temperatures Between 0 ^{o}F and -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5:}$ 0.98 lb/hr

(b) SO_2: 2.09 lb/hr

(c) NOx: 22.58 lb/hr

(d) CO: 1.64 lb/hr

(e) VOC: 1.02 lb/hr

(3) Turbine Inlet Temperatures Below -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5:}$ 0.98 lb/hr

(b) SO_2: 2.09 lb/hr

(c) NOx: 64.52 lb/hr

(d) CO: 2.45 lb/hr

(e) VOC: 1.54 lb/hr

(B) Allowable Short Term Emissions During Transient Events

(1) NOx: 1.08 lb/minute

(2) CO: 0.82 lb/minute

(3) VOC: 0.05 lb/minute

(C) Allowable Short Term Emissions During Startup and Shutdown Events (at all temperatures)

(1) NOx: Startup: 1.52 lb/event

(2) NOx: Shutdown: 1.76 lb/event

(3) CO: Startup: 146.98 lb/event

(4) CO: Shutdown: 8.04 lb/event

(5) VOC: Startup: 5.30 lb/event

(6) VOC: Shutdown: 2.63 lb/event

(D) Annual Emission Limits

(1) $PM/PM_{10}/PM_{2.5:}$ 3.85 tons per 12 consecutive months

(2) SO_2: 8.17 tons per 12 consecutive months

(3) NOx: 19.38 tons per 12 consecutive months

(4) CO: 33.04 tons per 12 consecutive months

(5) VOC: 3.58 tons per 12 consecutive months

(6) CO_{2e}: 69,113 tons per 12 consecutive months

ix. Demonstration of compliance with the EU-9 emission limits shall be met by calculating the emission rates using the most recent approved stack test results for that pollutant, or if unavailable, emission factors from the following sources: [Permit No. 043-0031]

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Air Temperatures Above 0 ^oF

(a) $PM/PM_{10}/PM_{2.5}$: AP-42, Section 3.1, Table 3.1-2a (April 2000)

(b) SO_2: 0.94 x S lb/MMBtu; Where S: percent sulfur in fuel – AP42, Section 3.1, Table 3.1-2a (April 2000) using Tariff (5.0 gr/100 scf)

(c) NOx: Vendor Guaranteed Emission Rate

(d) VOC: Vendor Guaranteed Emission Rate

(e) CO: Vendor Guaranteed Emission Rate

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

(2) Turbine Inlet Air Temperatures Between 0 °F and -20 °F

(a) $PM/PM_{10}/PM_{2.5:}$ 0.98 lb/hr*

(b) NOx: 22.58 lb/hr*

(c) CO: 1.64 lb/hr*

(d) VOC: 1.02 lb/hr*

(e) SO_2: 2.09 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(3) Turbine Inlet Air Temperatures Below -20 °F

(a) $PM/PM_{10}/PM_{2.5}$: 0.98 lb/hr*

(b) NOx: 64.52 lb/hr*

(c) CO: 2.45 lb/hr*

(d) VOC: 1.54 lb/hr*

(e) SO_2: 2.09 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(4) Startup/Shutdown Events, at all temperatures

(a) NOx: Startup: 1.52 lb/event*

(b) NOx: Shutdown: 1.76 lb/event*

(c) CO: Startup: 146.98 lb/event*

(d) CO: Shutdown: 8.04 lb/event*

(e) VOC: Startup: 5.30 lb/event*

(f) VOC: Shutdown: 2.63 lb/event*

* *The startup/shutdown emission factors were calculated based on, not directly from, information provided by Solar and best engineering judgement. Product Information Letter 170 (PIL170) – Revision 8 (February 21, 2018).*

(5) Transient Events

(a) NOx: 1.08 lb/minute*

(b) CO: 0.82 lb/minute*

(c) VOC: 0.05 lb/minute*

* *The transient event emission factors were calculated based on, not directly from, information provided by Solar and best engineering judgement. Product Information Letter 167 (PIL167) Revision 6 (December 1, 2016) for full load operation at ambient temperature less than or equal to -20 °F.*

x. The Permittee shall not cause or allow EU-10 to exceed the emission limits stated herein at any time: [Permit No. 043-0035]

Note: The following emission limits apply to EU-10 only.

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Air Temperatures Above 0 °F

(a) $PM/PM_{10}PM_{2.5}$: 0.48 lb/hr, 0.0066 lb/MMBtu

(b) SO_2: 1.03 lb/hr

(c) NOx: 2.38 lb/hr, 0.033 lb/MMBtu, 9.0 ppmvd @ 15% O_2

(d) CO: 0.20 lb/hr, 25 ppmvd @ 15% O_2

(e) VOC: 0.25 lb/hr

(2) Turbine Inlet Air Temperatures Between 0 °F and -20 °F

(a) $PM/PM_{10}/PM_{2.5}$: 0.49 lb/hr

(b) SO_2: 1.05 lb/hr

(c) NOx: 11.4 lb/hr

(d) CO: 0.82 lb/hr

(e) VOC: 0.52 lb/hr

(3) Turbine Inlet Air Temperatures Below -20 °F

(a) $PM/PM_{10}/PM_{2.5}$: 0.49 lb/hr

(b) SO_2: 1.05 lb/hr

(c) NOx: 32.5 lb/hr

(d) CO: 1.24 lb/hr

(e) VOC: 0.77 lb/hr

(B) Allowable Short Term Emissions During Transient Events

(1) NOx: 0.54 lb/minute

(2) CO: 0.41 lb/minute

(3) VOC: 0.03 lb/minute

(C) Allowable Short Term Emissions During Startup and Shutdown Events (at all temperatures)

(1) NOx: Startup: 0.80 lb/event

(2) NOx: Shutdown: 0.93 lb/event

(3) CO: Startup: 77.24 lb/event

(4) CO: Shutdown: 4.23 lb/event

(5) VOC: Startup: 5.40 lb/event

(6) VOC: Shutdown: 2.62 lb/event

(D) Annual Emission Limits

(1) $PM/PM_{10}/PM_{2.5}$: 1.99 tons per 12 consecutive months

(2) SO_2: 4.23 tons per 12 consecutive months

(3) NOx: 10.04 tons per 12 consecutive months

(4) CO: 17.28 tons per 12 consecutive months

(5) VOC: 2.64 tons per 12 consecutive months

(6) CO_{2e}: 35,800 tons per 12 consecutive months

xi. Demonstration of compliance with the EU-10 emission limits shall be met by calculating the emission rates using the most recent approved stack test results for that pollutant, or if unavailable, emission factors from the following sources: [Permit No. 043-0035]

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Air Temperatures Above 0 ^oF

(a) $PM/PM_{10}/PM_{2.5}$: AP42 Table 3.1-2a, dated 4/00

(b) SO_2: 0.94 x S lb/MMBtu; Where S: percent sulfur in fuel – AP42, Section 3.1,

Table 3.1-2a (April 2000) using Tariff (5.0 gr/100 scf)

(c) NOx: Vendor Guaranteed Emission Rate

(d) VOC: Vendor Guaranteed Emission Rate

(e) CO: Vendor Guaranteed Emission Rate

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

(2) Turbine Inlet Air Temperatures Between 0 ^{o}F and -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.49 lb/hr*

(b) NOx: 11.4 lb/hr*

(c) CO: 0.82 lb/hr*

(d) VOC: 0.52 lb/hr*

(e) SO_2: 1.05 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(3) Turbine Inlet Air Temperatures Below -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.49 lb/hr*

(b) NOx: 32.5 lb/hr*

(c) CO: 1.24 lb/hr*

(d) VOC: 0.77 lb/hr*

(e) SO_2: 1.05 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(4) Startup/Shutdown Events, at all temperatures

(a) NOx: Startup: 0.80 lb/event*

(b) NOx: Shutdown: 0.93 lb/event*

(c) CO: Startup: 77.2 lb/event*

(d) CO: Shutdown: 4.23 lb/event*

(e) VOC: Startup: 5.40 lb/event*

(f) VOC: Shutdown: 2.62 lb/event*

* *The startup/shutdown emission factors were calculated based on, not directly from, information provided by Solar and best engineering judgement. Product Information Letter 170 (PIL170) – Revision 8 (February 21, 2018)*

(5) Transient Events

(a) NOx: 0.54 lb/minute*

(b) CO: 0.41 lb/minute*

(c) VOC: 0.03 lb/minute*

* *The transient event emission factors were calculated based on, not directly from, information provided by Solar and best engineering judgement. Product Information Letter 167 (PIL167) Revision 6 (December 1, 2016) for full load operation at ambient temperature less than or equal to -20 ^{o}F.*

xii. The Permittee shall not cause or allow EU-11 to exceed the emission limits stated herein at any time: [Permit No. 043-0036]

Note: The following emission limits apply to EU-11 only.

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Air Temperatures Above 0 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.40 lb/hr, 0.0066 lb/MMBtu

(b) SO_2: 0.86 lb/hr

(c) NOx: 1.99 lb/hr, 0.033 lb/MMBtu, 9.0 ppmvd @ 15% O_2

(d) CO: 0.17 lb/hr, 25 ppmvd @ 15% O_2

(e) VOC: 0.21 lb/hr

(2) Turbine Inlet Air Temperatures Between 0 ^{o}F and -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.41 lb/hr

(b) SO_2: 0.87 lb/hr

(c) NOx: 9.43 lb/hr

(d) CO: 0.68 lb/hr

(e) VOC: 0.43 lb/hr

(3) Turbine Inlet Air Temperatures Below -20 ^{o}F

(a) $PM/PM_{10}/PM_{2.5}$: 0.41 lb/hr

(b) SO_2: 0.87 lb/hr

(c) NOx: 26.93 lb/hr

(d) CO: 1.02 lb/hr

(e) VOC: 0.64 lb/hr

(B) Allowable Short Term Emissions During Transient Events

(1) NOx: 0.45 lb/minute

(2) CO: 0.34 lb/minute

(3) VOC: 0.02 lb/minute

(C) Allowable Short Term Emissions During Start and Shutdown Events (at all temperatures)

(1) NOx: Startup: 0.85 lb/event

(2) NOx: Shutdown: 0.97 lb/event

(3) CO: Startup: 82.08 lb/event

(4) CO: Shutdown: 4.45 lb/event

(5) VOC: Startup: 5.26 lb/event

(6) VOC: Shutdown: 2.58 lb/event

(D) Annual Emission Limits

(1) $PM/PM_{10}/PM_{2.5}$: 1.70 tons per 12 consecutive months

(2) SO_2: 3.60 tons per 12 consecutive months

(3) NOx: 8.62 tons per 12 consecutive months

(4) CO: 18.82 tons per 12 consecutive months

(5) VOC: 2.51 tons per 12 consecutive months

(6) CO_{2e}: 30,481 tons per 12 consecutive months

xiii. Demonstration of compliance with EU-11 emission limits shall be met by calculating the emission rates using the most recent approved stack test results for that pollutant, or if unavailable, emission factors from the following sources: [Permit No. 043-0036]

Section III: Applicable Requirements and Compliance Demonstration

(A) Allowable Short Term Emission Limits at Steady State

(1) Turbine Inlet Air Temperatures Above 0 °F

(a) $PM/PM_{10}/PM_{2.5}$: AP42 Table 3.1-2a, dated 4/00

(b) NOx: Vendor Guaranteed Emission Rate

(c) CO: Vendor Guaranteed Emission Rate

(d) VOC: Vendor Guaranteed Emission Rate

(f) SO_2: 0.94 x S lb/MMBtu; Where S: percent sulfur in fuel – AP42, Section 3.1, Table 3.1-2a (April 2000) using Tariff (5.0 gr/100 scf)

(g) $CO_{2e:}$ 40 CFR Part 98 Subpart C – Tables C-1 and C-2

(2) Turbine Inlet Air Temperatures Between 0 °F and -20 °F

(a) $PM/PM_{10}/PM_{2.5}$: 0.41 lb/hr*

(b) NOx: 9.43 lb/hr*

(c) CO: 0.68 lb/hr*

(d) VOC: 0.43 lb/hr*

(e) $SO_{2e:}$ 0.87 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(3) Turbine Inlet Air Temperatures Below -20 °F

(a) $PM/PM_{10}/PM_{2.5}$: 0.41 lb/hr*

(b) NOx: 26.93 lb/hr*

(c) CO: 1.02 lb/hr*

(d) VOC: 0.64 lb/hr*

(e) $SO_{2:}$ 0.87 lb/hr*

(f) CO_{2e}: 40 CFR Part 98 Subpart C – Tables C-1 and C-2

* *Emission factors were calculated using Solar information and best engineering judgement.*

(B) Startup and Shutdown Events, at all temperatures

(1) NOx: Startup: 0.85 lb/event*

(2) NOx: Shutdown: 0.97 lb/event*

(3) CO: Startup: 82.08 lb/event*

(4) CO: Shutdown: 4.45 lb/event*

(5) VOC: Startup: 5.26 lb/event*

(6) VOC: Shutdown: 2.58 lb/event*

* *The startup/shutdown emissions factors were calculated using Solar information and best engineering judgement. Product Information Letter 170 (PIL 170) – Revision 8 (February 21, 2018)*

(C) Transient Events

(1) NOx: 0.45 lb/minute*

(2) CO: 0.34 lb/minute*

(3) VOC: 0.02 lb/minute*

* *The transient event emission factors were calculated based on, not directly from, information provided by Solar and best engineering judgement. Product Information Letter 167 (PIL 167) – Revision 6 (December 1, 2016) for full load operation at ambient temperature less than or equal to -20 ^{o}F.*

xiv. The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation. [Permit Nos. 043-0031, 043-0035 and 043-0036]

b. Monitoring and Testing Requirements

i. The Permittee shall continuously monitor the oxidation catalyst inlet temperature (^{o}F) for each turbine. The Permittee shall maintain this parameter within the ranges recommended by the manufacturer to achieve compliance with the emission limits in this Title V permit. [Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. The Permittee shall monitor all startup/shutdown, malfunction and transient events for each turbine. [Permit Nos. 043-0031, 043-0035 and 043-0036]

iii. The Permittee shall continuously monitor the turbine inlet air temperature for each turbine. [Permit Nos. 043-0031, 043-0035 and 043-0036]

iv. The Permittee shall monitor the status of the SoLoNOx operation at all times for each turbine. [Permit Nos. 043-0031, 043-0035 and 043-0036]

v. The Permittee shall perform inspections of each turbine and associated control equipment as recommended by the manufacturer. [Permit Nos. 043-0031, 043-0035 and 043-0036]

vi. The Permittee shall perform annual/biennial stack testing for NOx for each turbine to demonstrate compliance with NOx emission limits in accordance with 40 CFR §60.4400.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

vii. Recurrent stack testing for CO and VOC for EU-9 shall be performed within five years from the previous stack test to demonstrate compliance with their respective limits.

[Permit No. 043-0031]

viii. Recurrent stack testing for NOx, CO and VOC for EU-11 and EU-10 shall be performed within five years from the previous stack test to demonstrate compliance with their respective limits.

[Permit Nos. 043-0035 and 043-0036]

ix. The commissioner retains the right to require stack testing of any pollutant at any time to demonstrate compliance. [Permit Nos. 043-0031, 043-0035 and 043-0036]

c. Record Keeping Requirements

i. The Permittee shall calculate and record the monthly and consecutive 12 month PM, PM_{10}, $PM_{2.5}$, SO_2, NOx, CO and VOC emissions in units of tons for each turbine. The consecutive 12 month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. The Permittee shall calculate and record the monthly and consecutive 12 month CO_{2e} emissions for each turbine from the facility using the following methodologies:
[Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) CO_2 emissions from combustion sources shall be determined using the default emission factors found in 40 CFR Part 98 Subpart C – Table C-1.

(B) Methane (CH_4) and nitrous oxide (N_2O) from combustion sources shall be determined using the default emission factors found in 40 CFR Part 98 Subpart C, Table C-2.

(C) Estimated fugitive emissions of CH_4 from piping components shall be determined using the default emission factors found in 40 CFR Part 98 Subpart W, Tables W-3A and W-3B, as appropriate.

(D) Estimated fugitive emissions of CH_4 from gas releases shall be determined using the default emission factors found in 40 CFR Part 98 Subpart W, as appropriate.

iii. The Permittee shall keep on site a record of the vendor guaranteed emission rates for NOx, CO and VOC at inlet air temperature greater than 0 ^oF for each turbine.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

iv. The Permittee shall make and keep records of turbine inlet air temperature for each turbine on a no less frequent basis than hourly while the turbine is operating during the months in which low ambient temperatures are within the realm of reasonability (October, November, December, January, February and March). The Permittee may utilize ambient temperature monitoring data recorded at the nearest observing station which collects National Weather Service (NWS) data for data substitution purposes should the monitoring and recording system which is integral to the turbine malfunction.

[Permit Nos. 043-0031, 043-0035 and 043-0036]

v. The Permittee shall make and keep records of the date and hours of operation when each turbine inlet air temperature is equal to or below 0 ^{o}F and greater than -20 ^{o}F. Such records shall contain the following information: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) Date and time of the event;

(B) Duration of the event, and

(C) Total emissions emitted (lb) during the event.

These emissions shall be counted towards the annual emissions limits in this Title V permit.

vi. The Permittee shall make and keep records of the date and hours of operation for each turbine when the turbine inlet air temperature is below -20 ^{o}F. Such records shall contain the following information: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A Date and time of the event;

(B) Duration of the event, and

(C) Total emissions emitted (lb) during the event.

These emissions shall be counted towards the annual emissions limits in this Tile V permit.

vii. The Permittee shall make and keep records of the occurrence and duration of any startup, shutdown or malfunction event in the operation of each turbine; or any malfunction of the air pollution control equipment [40 CFR §60.7(b)]. Such records shall contain the following information: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) Type of event (startup, shutdown or malfunction);

(B) Equipment affected;

(C) Date of event;

(D) Duration of event (minutes); and

(E) Total emissions emitted (lb) during the event.

These emissions shall be counted towards the annual emissions limits in this Title V permit.

viii. The Permittee shall make and keep records indicating the instances when the SoLoNOx is disabled while the turbine is in operation, not including startup/shutdown or low temperature events. Such record shall include: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) The date and time the SoLoNOx is disabled;

(B) The duration the SoLoNOx is disabled; and

(C) The reason and corrective action taken.

ix. The Permittee shall make and keep records of all transient events for each turbine. Such records shall include, but not be limited to the following: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) Date and time of the event;

(B) Duration of the event, and

(C) Identification of transient event, if such event caused a shutdown of the turbine.

These emissions shall be counted towards the annual emissions limits in this Title V permit.

x. The Permittee shall calculate and record NOx, CO and VOC emissions during transient events for each turbine using emission rates supplied by the manufacturer. These emissions shall be counted towards the annual emissions in this Title V permit. [Permit Nos. 043-0031, 043-0035 and 043-0036]

xi. The Permittee shall make and keep records of all exceedances of any operating parameter. Such records shall include: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) The date and time of the exceedance;

(B) A detailed description of the exceedances;

(C) The duration of the exceedance; and

(D) Reason and corrective action taken.

xii. The Permittee shall maintain records of maintenance/repairs/parts replacement of each turbine. The maintenance records shall include, at a minimum: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) A description of the maintenance activity;

(B) The date the maintenance was performed, and

(C) Cost of service.

xiii. The Permittee shall record the oxidation catalyst inlet temperature (^{o}F) for each turbine at least once every 15 minutes. [Permit Nos. 043-0031, 043-0035 and 043-0036]

xiv. The Permittee shall make and keep records of the inspection and maintenance of the oxidation catalyst for each turbine. The record shall include: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) The name of the person conducting the inspection or maintenance;

(B) The date;

(C) The results or actions, and

(D) The date the catalyst is replaced.

xv. The Permittee shall make and keep records the manufacturer's information for each turbine,

oxidation catalyst and SoLoNOx. [Permit Nos. 043-0031, 043-0035 and 043-0036]

xvi. The Permittee shall keep records of stack testing results for each turbine.

[Permit Nos. 043-0031, 043-0035 and 043-0036]

xvii. The Permittee shall keep copies of all reports and notifications submitted in accordance with Section III.B.2.d of this Title V permit. [Permit Nos. 043-0031, 043-0035 and 043-0036]

xviii. The Permittee shall make and keep records of any applicable requirement as required by 40 CFR Part 60 Subpart KKKK. [Permit Nos. 043-0031, 043-0035 and 043-0036]

xix. The Permittee shall make and keep all records for a period of no less than five years and shall submit such records to the commissioner upon request.

[Permit Nos. 043-0031, 043-0035 and 043-0036]

d. Reporting Requirements

i. The Permittee shall submit all reports as required pursuant to 40 CFR §60.4375.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. The Permittee shall notify the commissioner in writing of any exceedance or deviation of an emission limitation or operating parameter, and shall identify the cause or likely cause of such exceedances or deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows: [Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) For any regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.

iii. The Permittee shall notify the commissioner in writing of any malfunction of the turbine, the air pollution control equipment or the continuous monitoring system. The Permittee shall submit such notification within ten days of the malfunction. The notification shall include the following:
[Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) A description of the malfunction and a description of the circumstances surrounding the cause or likely cause of such malfunction; and

(B) A description of all corrective actions and preventive measures taken and/or planned with respect to such malfunction and the dates of such actions and measures.

iv. The Permittee shall submit the above notifications to the Supervisor of the Compliance Analysis & Coordination Unit, Enforcement Section, Bureau of Air Management; Department of Environmental Protection; 79 Elm Street, 5th Floor; Hartford, CT 06106-5127.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

3. Hazardous Air Pollutants (HAPs) [STATE ONLY REQUIREMENT]

a. Limitation or Restriction

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any Hazardous Air Pollutant (HAP) emitted and listed in RCSA §22a-174-29.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.B.3.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33.
[RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

i. The Permittee shall make and keep records of the Actual Stack Concentration (ASC) and MASC calculations for each of the turbines to show compliance with RCSA §22a-174-29.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

ii. The Permittee shall make and keep all records required by this Title V permit for a period of no less than five years and shall submit such records to the commissioner upon request.
[RCSA §22a-174-33(o)(2)]

d. Reporting Requirements

i. The Permittee shall notify the commissioner in writing of any exceedance or deviation of an emission limitation or operating parameter, and shall identify the cause or likely cause of such exceedance or deviations, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:[Permit Nos. 043-0031, 043-0035 and 043-0036]

(A) For any Hazardous Air Pollutant, no later than 24 hours after such exceedance commenced.

ii. The Permittee shall submit the above notifications to the Supervisor of the Compliance Analysis & Coordination Unit, Enforcement Section, Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, CT 06106-5127.
[Permit Nos. 043-0031, 043-0035 and 043-0036]

4. Opacity

a. Limitation or Restriction

Opacity shall not exceed 10% during any six minute block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9 for each turbine. [Permit Nos. 043-0031, 043-0035 and 043-0036]

b. Monitoring and Testing Requirements

Record keeping specified in Section III.B.4.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

The Permittee shall maintain records sufficient to determine compliance with the limitation or restriction in Section III.B.4.a of this Title V permit.

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever

is earlier. [RCSA §22a-174-33(j)(1)(X)]

5. NOx – RCSA §22a-174-22e

a. Limitation or Restriction

i. The Permittee shall not cause or allow an emission unit to exceed the applicable emissions limitations specified in RCSA §22a-174-22e and Section III.B.5.a.ii of this Title V permit unless the Permittee undertakes one of the following actions: [RCSA §22a-174-22e(d)(1)]

(A) Implements an alternative compliance mechanism in accordance with RCSA §22a-174-22e(g);

(B) Operates under a case-by-case RACT determination in accordance with RCSA §22a-174-22e(h); or

(C) Ceases operation in accordance with RCSA §22a-174-22e(f).

ii. The Permittee shall comply with the following emissions limitations: [RCSA §§22a-174-22e(d)(4)(A) and (C), and 22a-174-22e(d)(16)]

(A) Until May 31, 2023: 55 ppmvd, corrected to 15% O_2

(B) On and after June 1, 2023: 40 ppmvd, corrected to 15% O_2

b. Monitoring and Testing Requirements

The Permittee shall conduct periodic emissions testing for GEU-2 in accordance with 40 CFR Part 60 Subpart KKKK. [RCSA §§22a-174-22e(l)(1)(B)]

c. Record Keeping Requirements

i. The Permittee shall retain all records and reports produced pursuant to RCSA §22a-174-22e for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records and reports shall be retained at the premises where the emission unit is located. [RCSA §22a-174-22e(j)(1)]

ii. The Permittee shall make and keep the following records on and after May 1, 2018: [RCSA §§22a-174-22e(j)(2)(B), (C), (F) and (G)]

(A) The date and work performed for repairs, replacement of parts and other maintenance;

(B) Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e; and

(C) Any other records or reports required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e.

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier. [RCSA §22a-174-33(j)(1)(X)]

6. 40 CFR Part 60 Subpart KKKK - New Source Performance Standard for Stationary Gas Turbines

a. Limitation or Restriction

i. SO_2: 0.060 lb/MMBtu [40 CFR §60.443(a)(2)]

ii. NOx: 25 ppmvd @ 15% O_2 [40 CFR §60.4320(a), Table 1, New turbine firing natural gas > 50 MMBtu/hr and < 850 MMBtu/hr]

iii. The Permittee must operate and maintain each turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. [40 CFR §60.4333]

b. Monitoring and Testing Requirements

The Permittee must perform annual performance tests for each turbine in accordance with 40 CFR §60.4400 to demonstrate continuous compliance. If the NOx emission result from the performance test is less than or equal to 75 percent of the NOx emission limit for any of the turbines, the Permittee may reduce the frequency of subsequent performance tests to once every two years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NOx emission limit for any of the turbines, the Permittee must resume annual performance tests. [40 CFR §60.4340(a)]

c. Record Keeping Requirements

i. The Permittee shall maintain records sufficient to determine compliance with the restriction in Section III.B.6 of this Title V permit. [RCSA §22a-174-33(j)(1)(K)]

ii. The Permittee shall keep records of the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel specifying that the maximum total sulfur content is 20 grains of sulfur or less per 100 standard cubic feet. [40 CFR §60.4365(a)]

d. Reporting Requirements

The Permittee shall comply with the applicable reporting requirements in accordance with 40 CFR §§60.4375 and 60.4395. [40 CFR §§60.4375]

C. EMISSIONS UNIT 6 (EU-6): 1,175 bhp Waukesha Emergency Engine

Classification:

- **Emergency engine operating under RCSA §22a-174-3b(e)**
- **Subject to RCSA §22a-174-22e**
- **Subject to 40 CFR Part 60 Subpart JJJJ**

1. Operational Restrictions, Maximum Hours of Operation and Fuel Type

a. Limitation or Restriction

i. The Permittee shall only operate the emergency engine as defined in RCSA §22a-174-22e. [RCSA §22a-174-3b(a)]

ii. The Permittee shall not cause or allow the engine to operate except during periods of testing and scheduled maintenance or during an emergency and unless the following conditions are met: [RCSA §22a-174-3b(e)(2)]

(A) The Permittee shall operate the engine for a maximum of 300 hours during any 12 month rolling aggregate. [RCSA §22a-174-3b(e)(2)(C)]

b. Monitoring Requirements

Record keeping specified in Section III.C.1.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

i. The Permittee shall make and keep records of the hours of operation for each month and each 12 month rolling aggregate. [RCSA §22a-174-3b(e)(4)]

ii. The Permittee of an emergency engine shall maintain records of the information necessary for the commissioner to determine compliance in this Title V permit. Information sufficient to make such determinations may include the information specified in Section III.C.1.c.i of this Title V permit. All records made to determine compliance with the requirements in this Title V permit shall be: [RCSA §22a-174-3b(e)(3)]

(A) Made available to the commissioner to inspect and copy upon request; and

(B) Maintained for five years from the date such record is created.

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is the earlier. [RCSA §22a-174-33(j)(1)(X)]

2. NOx – RCSA §22a-174-22e

a. Limitation or Restriction

i. The Permittee shall operate the engine as an emergency engine as defined in RCSA §22a-174-22e(a)(13). [RCSA §§22a-174-22e(a)]

ii. The Permittee of an emergency engine shall not operate the emergency engine for routine, scheduled testing or maintenance on any day for which the commissioner has forecast that ozone levels will be "moderate to unhealthy for sensitive groups" or greater. If, subsequent to the initial forecast of "moderate to unhealthy for sensitive groups" or greater, the forecast is revised to "moderate" or lower, the Permittee is no longer prohibited from operating the engine for routine, schedule testing or maintenance for the remainder of that day. The Permittee of an emergency engine may rely on an ozone forecast of "moderate" or lower obtained after 3 p.m. on the preceding day. Subsequent changes to the ozone forecast after 3 p.m. that forecast ozone levels of "moderate to unhealthy for sensitive groups" or greater shall not obligate the Permittee to refrain from operation of the emergency engine at the facility on the following day. The commissioner may exempt, by permit or order, the Permittee of an emergency engine from RCSA §22a-174-22e if such emergency engine is

unattended and the testing is automated and cannot be modified from a remote location. [RCSA §22a-174-22e(d)(14)]

Note: Emergency engines are exempt from the emission limitations of RCSA §22a-174-22e(d)(6). [RCSA §22a-174-22e(c)(5)(A)]

b. Monitoring Requirements

This emergency engine is exempt from the emission testing and monitoring requirements of RCSA §22a-174-22e. Record keeping specified in Section III.C.2.c of this Title V permit shall be sufficient to meet other Monitoring and Testing Requirements pursuant to RCSA §22a-174-33. [RCSA §§22a-174-22e(c)(5)(C) and (D)]

c. Record Keeping Requirements

The Permittee shall make and keep the following records:

i. For an emergency engine not subject to 40 CFR Part 63 Subpart ZZZZ, records of total monthly operating hours of such engine, identifying the dates and operating hours of emergency use and the reason for non-emergency operation. [RCSA §22a-174-22e(j)(2)(A)]

ii. The date and work performed for repairs, replacement of parts and other maintenance. [RCSA §22a-174-22e(j)(2)(B)]

iii. Copies of all documents submitted to the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(F)]

iv. Any other record or report required by an order or permit issued by the commissioner pursuant to RCSA §22a-174-22e. [RCSA §22a-174-22e(j)(2)(G)]

v. The Permittee shall retain all records and reports produced pursuant to RCSA 22a-174-22e for five years. Such records and reports shall be available for inspection at reasonable hours by the commissioner or the Administrator. Such records and reports shall be retained at the premises where each emission unit is located, unless the commissioner approves in writing the use of another location in Connecticut. [RCSA §22a-174-22e(j)(1)]

d. Reporting Requirements

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is the earlier. [RCSA §22a-174-33(j)(1)(X)]

3. 40 CFR Part 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Classification:

- **Non-certified engine**
- **Emergency Spark Ignition Engine constructed after June 12, 2006 where the engine was manufactured on or after January 1, 2009**
- **Pursuant to 40 CFR §63.6590(c), EU-6 meets the requirements of 40 CFR Part 63 Subpart ZZZZ by complying with 40 CFR Part 60 Subpart JJJJ.**

- **The Permittee should re-evaluate the requirements of 40 CFR Part 60 Subpart JJJJ if any of the above conditions change.**

a. Limitation or Restriction

i. The emission rate of NOx, CO and VOC discharged to the atmosphere from the stationary internal combustion engine shall not exceed the respective emission limitation specified in 40 CFR Part 60 Subpart JJJJ - Table 1. [40 CFR §60.4233(e)]

(A) NOx: 2.0 g/hp-hr (160 ppmvd @ 15% O_2)

(B) CO: 4.0 g/hp-hr (540 ppmvd @ 15% O_2)

(C) VOC: 1.0 g/hp-hr (86 ppmvd @ 15% O_2)

ii. The Permittee shall operate and maintain the engine to achieve the emission standards as required in 40 CFR §60.4233 over the entire life of the engine. [40 CFR §60.4234]

iii. The Permittee shall, to the extent practicable, maintain and operate the emergency engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §60.4243(b)(2)(ii)]

iv. The Permittee may operate the emergency stationary RICE 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 Permittee 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 Permittee maintains records indicating that federal, state, o local standards require maintenance and testing of the ICE beyond 100 hours per calendar year. [40 CFR §60.4243(d)(2)(i)]

Note:

- The Permittee must maintain compliance with these operating limitations in order to be considered an emergency engine and maintain exemption from other requirements of 40 CFR Part 60 Subpart JJJJ.
- The 100 hours and any additional approved time used for maintenance checks and readiness testing as described in Section III.C.3.a.iv of this Title V permit shall count towards the hours of operation in Section III.C.1.a.i of this Title V permit.

v. The Permittee shall install a non-resettable hour meter. [40 CFR §60.4237]

b. Monitoring and Testing Requirements

The Permittee shall conduct performance testing every 8,760 hours or three years, whichever comes first, thereafter to demonstrate compliance. Emission testing shall comply with the requirements of 40 CFR §60.4244. [40 CFR §60.4244]

c. Record Keeping Requirements

i. The Permittee shall comply with all record keeping requirements of the General Provisions in 40

CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee must keep records of all notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification. [40 CFR §60.4245(a)(1)]

iii. The Permittee shall keep records of maintenance conducted on the engine. [40 CFR §60.4245(a)(2)]

iv. The Permittee shall keep documentation to demonstrate compliance with the emissions standards in Sections III.C.3.a of this Title V permit. [40 CFR §60.4245(a)(4)]

v. The Permittee shall keep records of the hours of operation of the engine that are recorded using a 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. [40 CFR §60.4245(b)]

d. Reporting Requirements

i. The Permittee shall comply with all reporting requirements of the General Provisions in 40 CFR §§60.1 through 60.19, inclusive, as specified in 40 CFR Part 60 Subpart JJJJ, Table 3. [40 CFR §60.4246]

ii. The Permittee shall submit a copy of each performance test as conducted under 40 CFR §60.4244 within 60 days after the test has been completed. [40 CFR §60.4245(d)]

D. 40 CFR Part 60 Subpart OOOOa - New Source Performance Standard for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015

a. Limitation or Restriction

i. The Permittee must monitor all fugitive emission components, as defined in 40 CFR §60.5430a, in accordance with the following: [40 CFR §60.5397a(a)]

(A) The Permittee must develop an emission monitoring plan that covers the collection of fugitive emissions components within each company-defined area in accordance with the following: [40 CFR §60.5397a(b)]

(1) Fugitive emissions monitoring plans must include the following: [40 CFR §60.5397a(c)]

(a) The Permittee shall conduct surveys at least as frequently as required in 40 CFR §§60.5397a(f)(2) and (g). [40 CFR §60.5397a(c)(1)]

(b) The Permittee shall use Method 21 at 40 CFR Part 60, Appendix A-7, or optical gas imaging. [40 CFR §60.5397a(c)(2)]

(c) Manufacturer and model number of fugitive emissions detection equipment to be used. [40 CFR §60.5397a(c)(3)]

(d) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for

fugitive components that are unsafe to repair. The repair schedule must meet the requirements of 40 CFR §60.5397a(h) at a minimum. [40 CFR §60.5397a(c)(4)]

(e) Procedures and timeframes for identifying fugitive component repairs. [40 CFR §60.5397a(c)(5)]

(f) Records that will be kept and the length of time records will be kept. [40 CFR §60.5397a(c)(6)]

(g) If using optical gas imaging, the plan must also include the elements specified in 40 CFR §§60.5397a(c)(7)(i) through (vii).

(h) If Method 21 at 40 CFR Part 60, Appendix A-7, is used the plan must also include the elements specified in 40 CFR §§60.5397a(c)(8)(i) through (ii).

(i) For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater. [40 CFR §60.5397a(c)(8)]

(2) The fugitive emissions monitoring plan must include the following elements: [40 CFR §60.5397a(d)]

(a) Sitemap [40 CFR §60.5397a(d)(1)]

(b) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences. [40 CFR §60.5397a(d)(2)]

(c) If Method 21 is used, the plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (*e.g.* tagging, identification on a process and instrumentation diagram, etc.). [40 CFR §60.5397a(d)(3)]

(d) The plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with 40 CFR §60.5397a(g)(3)(i), and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 CFR §60.5397a(g)(3)(ii). [40 CFR §60.5397a(d)(4)]

(B) Each monitoring survey shall observe each fugitive emissions components, as defined in 40 CFR §60.5430a, for fugitive emissions. [40 CFR §60.5397a(e)]

ii. Each identified source of fugitive emissions shall be repaired or replaced in accordance with 40 CFR §§60.5397a (h)(1) and (2). [40 CFR §60.5397a(h)]

iii. Each repaired or replaced fugitive emissions components must be resurveyed as soon as possible, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions in accordance with 40 CFR §§60.539a(h)(3)(i) through (iii). [40 CFR §60.5397a(h)]

b. Monitoring Requirements

Record keeping requirements specified in Section III.D. c of this Title V permit shall be sufficient to meet other Monitoring Requirements pursuant to RCSA §22a-174-33. [RCSA §22a-174-33(j)(1)(K)(ii)]

c. Record Keeping Requirements

i. The Permittee shall maintain the applicable records as specified in 40 CFR §60.7(f). [40 CFR §60.5420a(c)]

ii. The Permittee shall maintain records of each monitoring survey as specified in 40 CFR §60.5420a(c)(15). [40 CFR §60.5420a(c)]

d. Reporting Requirements

The Permittee shall submit annual reports as specified in 40 CFR §§60.5420a(b)(7) and (b)(11). [40 CFR §60.5420a(b)]

Section III: Applicable Requirements and Compliance Demonstration

E. PREMISES-WIDE GENERAL REQUIREMENTS

1. **Annual Emission Statements:** The Permittee shall submit annual emission statements requested by the commissioner as set forth in RCSA §22a-174-4(d)(1).

2. **Emission Testing:** The Permittee shall comply with the procedures for sampling, emission testing, sample analysis, and reporting as set forth in RCSA §22a-174-5.

3. **Emergency Episode Procedures:** The Permittee shall comply with the procedures for emergency episodes as set forth in RCSA §22a-174-6.

4. **Reporting of Malfunctioning Control Equipment:** The Permittee shall comply with the reporting requirements of malfunctioning control equipment as set forth in RCSA §22a-174-7.

5. **Prohibition of Air Pollution:** The Permittee shall comply with the requirement to prevent air pollution as set forth in RCSA §22a-174-9.

6. **Public Availability of Information:** The public availability of information shall apply, as set forth in RCSA §22a-174-10.

7. **Prohibition Against Concealment/Circumvention:** The Permittee shall comply with the prohibition against concealment or circumvention as set forth in RCSA §22a-174-11.

8. **Violations and Enforcement:** The Permittee shall not violate or cause the violation of any applicable regulation as set forth in RCSA §22a-174-12.

9. **Variances:** The Permittee may apply to the commissioner for a variance from one or more of the provisions of these regulations as set forth in RCSA §22a-174-13.

10. **No Defense to Nuisance Claim:** The Permittee shall comply with the regulations as set forth in RCSA §22a-174-14.

11. **Severability:** The Permittee shall comply with the severability requirements as set forth in RCSA §22a-174-15.

12. **Responsibility to Comply:** The Permittee shall be responsible to comply with the applicable regulations as set forth in RCSA §22a-174-16.

13. **Particulate Emissions:** The Permittee shall comply with the standards for control of particulate matter and visible emissions as set forth in RCSA §22a-174-18.

14. **Fuel Sulfur Content:** The Permittee shall not use No. 2 heating oil that exceeds fifteen parts per million of sulfur by weight as set forth in CGS §16a-21a(a)(2)(B) .

15. **Sulfur Compound Emissions:** The Permittee shall comply with the requirements for control of sulfur compound emissions as set forth in RCSA §§22a-174-19, 22a-174-19a and 22a-174-19b, as applicable.

16. **Organic Compound Emissions:** The Permittee shall comply with the requirements for control of organic compound emissions as set forth in RCSA §22a-174-20.

17. **Nitrogen Oxide Emissions:** The Permittee shall comply with the requirements for control of nitrogen oxide emissions as set forth in RCSA §22a-174-22e.

18. **Ambient Air Quality:** The Permittee shall not cause or contribute to a violation of an ambient air quality standard as set forth in RCSA §22a-174-24(b).

19. **Open Burning:** The Permittee is prohibited from conducting open burning, except as may be allowed by CGS §22a-174(f).

20. **Asbestos:** Should the premises, as defined in 40 CFR §61.145, become subject to the national emission standard for asbestos regulations in 40 CFR Part 61 Subpart M when conducting any renovation or demolition at this premises, then the Permittee shall submit proper notification as described in 40 CFR §61.145(b) and shall comply with all other applicable requirements of 40 CFR Part 61 Subpart M.

21. **Emission Fees:** The Permittee shall pay an emission fee as set forth in RCSA §22a-174-26(d).

Section IV: Compliance Schedule

TABLE IV: COMPLIANCE SCHEDULE				
Emissions Unit	**Applicable Regulations**	**Steps Required for Achieving Compliance (Milestones)**	**Date by which Each Step is to be Completed**	**Dates for Monitoring, Record Keeping, and Reporting**
		No Steps are required for achieving compliance at this time		

Section V: State Enforceable Terms and Conditions

Only the Commissioner of the Department of Energy and Environmental Protection has the authority to enforce the terms, conditions and limitations contained in this section.

SECTION V: STATE ENFORCEABLE TERMS AND CONDITIONS

A. This Title V permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the emissions units in compliance with all applicable requirements of any other Bureau of the Department of Energy and Environmental Protection or any federal, local or other state agency. Nothing in this Title V permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

B. Nothing in this Title V permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, investigate air pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.

C. Additional Emissions Units

1. The Permittee shall make and submit a written record, at the commissioner's request, within 30 days of receipt of notice from the commissioner, or by such other date specified by the commissioner, of each additional emissions unit or group of similar or identical emissions units at the premises.

2. Such record of additional emissions units shall include each emissions unit, or group of emissions units, at the premises which is not listed in Section II.A of this Title V permit, unless the emissions unit, or group of emissions units, is:

a. an insignificant emissions unit as defined in RCSA §22a-174-33; or

b. an emissions unit or activity listed in *White Paper for Streamlined Development of Part 70 Permit Applications, Attachment A* (EPA guidance memorandum dated July 10, 1995).

3. For each emissions unit, or group of emissions units, on such record, the record shall include, as available:

a. Description, including make and model;

b. Year of construction/installation or if a group, range of years of construction/installation;

c. Maximum throughput or capacity; and

d. Fuel type, if applicable.

D. Odors: The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor that constitutes a nuisance beyond the property boundary of the premises as set forth in RCSA §22a-174-23.

E. Noise: The Permittee shall operate in compliance with the regulations for the control of noise as set forth in RCSA §§22a-69-1 through 22a-69-7.4, inclusive.

F. Hazardous Air Pollutants (HAPs): The Permittee shall operate in compliance with the regulations for the control of HAPs as set forth in RCSA §22a-174-29.

Section VI: Title V Requirements

The Administrator of the United States Environmental Protection Agency and the Commissioner of the Department of Energy and Environmental Protection have the authority to enforce the terms and conditions contained in this section.

SECTION VI: TITLE V REQUIREMENTS

A. SUBMITTALS TO THE COMMISSIONER & ADMINISTRATOR

The date of submission to the commissioner of any document required by this Title V permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this Title V permit, including, but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this Title V permit, the word "day" means calendar day. Any document or action which is required by this Title V permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.

Any document required to be submitted to the commissioner under this Title V permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of the Director; Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

Any submittal to the Administrator of the Environmental Protection Agency shall be submitted per the procedure required by the applicable requirement or otherwise in a computer-readable format and addressed to: U.S. EPA New England, 5 Post Office Square, Suite 100 (Mailcode: 04-2), Boston, Massachusetts 02109, Attn: Air Clerk.

B. CERTIFICATIONS [RCSA §22a-174-33(b)]

In accordance with RCSA §22a-174-33(b), any report or other document required by this Title V permit and any other information submitted to the commissioner or Administrator shall be signed by an individual described in RCSA §22a-174-2a(a), or by a duly authorized representative of such individual. Any individual signing any document pursuant to RCSA §22a-174-33(b) shall examine and be familiar with the information submitted in the document and all attachments thereto, and shall make inquiry of those individuals responsible for obtaining the information to determine that the information is true, accurate, and complete, and shall also sign the following certification as provided in RCSA §22a-174-2a(a)(4):

> "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."

C. SIGNATORY RESPONSIBILITY [RCSA §22a-174-2a(a)]

For purposes of signing any Title V-related application, document, report or certification required by RCSA §22a-174-33, any corporation's duly authorized representative may be either a named individual or any individual occupying a named position. Such named individual or individual occupying a named position is a duly authorized representative if such individual is responsible for the overall operation of one or more manufacturing, production or operating facilities subject to RCSA §22a-174-33 and either:

1. The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding 25 million dollars in second quarter 1980 dollars; or

2. The delegation of authority to the duly authorized representative has been given in writing by an officer of the corporation in accordance with corporate procedures and the following:

i. Such written authorization specifically authorizes a named individual, or a named position, having responsibility for the overall operation of the Title V premises or activity,

ii. Such written authorization is submitted to the commissioner and has been approved by the commissioner in advance of such delegation. Such approval does not constitute approval of corporate procedures, and

iii. If a duly authorized representative is a named individual in an authorization submitted under subclause ii. of this subparagraph and a different individual is assigned or has assumed the responsibilities of the duly authorized representative, or, if a duly authorized representative is a named position in an authorization submitted under subclause ii. of this subparagraph and a different named position is assigned or has assumed the duties of the duly authorized representative, a new written authorization shall be submitted to the commissioner prior to or together with the submission of any application, document, report or certification signed by such representative.

D. ADDITIONAL INFORMATION [RCSA §22a-174-33(j)(1)(X), RCSA §22a-174-33(h)(2)]

The Permittee shall submit additional information in writing, at the commissioner's request, within 30 days of receipt of notice from the commissioner or by such other date specified by the commissioner, whichever is earlier, including information to determine whether cause exists for modifying, revoking, reopening, reissuing, or suspending this Title V permit or to determine compliance with this Title V permit.

In addition, the Permittee shall submit information to address any requirements that become applicable to the subject source and shall submit correct, complete, and sufficient information within 15 days of the applicant's becoming aware of any incorrect, incomplete, or insufficient submittal, during the pendency of the application, or any time thereafter, with an explanation for such deficiency and a certification pursuant to RCSA §22a-174-2a(a)(5).

E. MONITORING REPORTS [RCSA §22a-174-33(o)(1)]

A Permittee, required to perform monitoring pursuant to this Title V permit, shall submit to the commissioner, on forms prescribed by the commissioner, written monitoring reports on March 1 and September 1 of each year or on a more frequent schedule if specified in such permit. Such monitoring reports shall include the date and description of each deviation from a permit requirement including, but not limited to:

1. Each deviation caused by upset or control equipment deficiencies; and

2. Each deviation of a permit requirement that has been monitored by the monitoring systems required under this Title V permit, which has occurred since the date of the last monitoring report; and

3. Each deviation caused by a failure of the monitoring system to provide reliable data.

F. PREMISES RECORDS [RCSA §22a-174-33(o)(2)]

Unless otherwise required by this Title V permit, the Permittee shall make and keep records of all required monitoring data and supporting information for at least five years from the date such data and information were obtained. The Permittee shall make such records available for inspection at the site of the subject source, and shall submit such records to the commissioner upon request. The following information, in addition to required monitoring data, shall be recorded for each permitted source:

1. The type of monitoring or records used to obtain such data, including record keeping;

2. The date, place, and time of sampling or measurement;

3. The name of the individual who performed the sampling or the measurement and the name of such individual's employer;

4. The date(s) on which analyses of such samples or measurements were performed;

5. The name and address of the entity that performed the analyses;

6. The analytical techniques or methods used for such analyses;

7. The results of such analyses;

8. The operating conditions at the subject source at the time of such sampling or measurement; and

9. All calibration and maintenance records relating to the instrumentation used in such sampling or measurements, all original strip-chart recordings or computer printouts generated by continuous monitoring instrumentation, and copies of all reports required by the subject permit.

G. PROGRESS REPORTS [RCSA §22a-174-33(q)(1)]

The Permittee shall, on March 1 and September 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a progress report on forms prescribed by the commissioner, and certified in accordance with RCSA §22a-174-2a(a)(5). Such report shall describe the Permittee's progress in achieving compliance under the compliance plan schedule contained in this Title V permit. Such progress report shall:

1. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has met, and the dates on which they were met; and

2. Identify those obligations under the compliance plan schedule in this Title V permit which the Permittee has not timely met, explain why they were not timely met, describe all measures taken or to be taken to meet them and identify the date by which the Permittee expects to meet them.

Any progress report prepared and submitted pursuant to RCSA §22a-174-33(q)(1) shall be simultaneously submitted by the Permittee to the Administrator.

Section VI: Title V Requirements

H. COMPLIANCE CERTIFICATIONS [RCSA §22a-174-33(q)(2)]

The Permittee shall, on March 1 of each year, or on a more frequent schedule if specified in this Title V permit, submit to the commissioner a written compliance certification certified in accordance with RCSA §22a-174-2a(a)(5) and which includes the information identified in 40 CFR §§70.6(c)(5)(iii)(A) to (C), inclusive.

Any compliance certification prepared and submitted pursuant to RCSA §22a-174-33(q)(2) shall be simultaneously submitted by the Permittee to the Administrator.

I. PERMIT DEVIATION NOTIFICATIONS [RCSA §22a-174-33(p)]

Notwithstanding Section VI.E. of this Title V permit, the Permittee shall notify the commissioner in writing, on forms prescribed by the commissioner, of any deviation from an emissions limitation, and shall identify the cause or likely cause of such deviation, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:

1. For any hazardous air pollutant, no later than 24 hours after such deviation commenced; and

2. For any other regulated air pollutant, no later than ten days after such deviation commenced.

J. PERMIT RENEWAL [RCSA §22a-174-33(j)(1)(B)]

All of the terms and conditions of this Title V permit shall remain in effect until the renewal permit is issued or denied provided that a timely renewal application is filed in accordance with RCSA §§22a-174-33(g), -33(h), and -33(i).

K. OPERATE IN COMPLIANCE [RCSA §22a-174-33(j)(1)(C)]

The Permittee shall operate the source in compliance with the terms of all applicable regulations, the terms of this Title V permit, and any other applicable provisions of law. In addition, any noncompliance constitutes a violation of the Clean Air Act and Chapter 446c of the Connecticut General Statutes and is grounds for federal and/or state enforcement action, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

L. COMPLIANCE WITH PERMIT [RCSA §22a-174-33(j)(1)(G)]

This Title V permit shall not be deemed to:

1. Preclude the creation or use of emission reduction credits or allowances or the trading thereof in accordance with RCSA §§22a-174-33(j)(1)(I) and -33(j)(1)(P), provided that the commissioner's prior written approval of the creation, use, or trading is obtained;

2. Authorize emissions of an air pollutant so as to exceed levels prohibited pursuant to 40 CFR Part 72;

3. Authorize the use of allowances pursuant to 40 CFR Parts 72 through 78, inclusive, as a defense to noncompliance with any other applicable requirement; or

4. Impose limits on emissions from items or activities specified in RCSA §§22a-174-33(g)(3)(A) and -33(g)(3)(B) unless imposition of such limits is required by an applicable requirement.

Section VI: Title V Requirements

M. INSPECTION TO DETERMINE COMPLIANCE [RCSA §22a-174-33(j)(1)(M)]

The commissioner may, for the purpose of determining compliance with this Title V permit and other applicable requirements, enter the premises at reasonable times to inspect any facilities, equipment, practices, or operations regulated or required under such permit; to sample or otherwise monitor substances or parameters; and to review and copy relevant records lawfully required to be maintained at such premises in accordance with this Title V permit. It shall be grounds for permit revocation should entry, inspection, sampling, or monitoring be denied or effectively denied, or if access to and the copying of relevant records is denied or effectively denied.

N. PERMIT AVAILABILITY

The Permittee shall have available at the facility at all times a copy of this Title V permit.

O. SEVERABILITY CLAUSE [RCSA §22a-174-33(j)(1)(R)]

The provisions of this Title V permit are severable. If any provision of this Title V permit or the application of any provision of this Title V permit to any circumstance is held invalid, the remainder of this Title V permit and the application of such provision to other circumstances shall not be affected.

P. NEED TO HALT OR REDUCE ACTIVITY [RCSA §22a-174-33(j)(1)(T)]

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Title V permit.

Q. PERMIT REQUIREMENTS [RCSA §22a-174-33(j)(1)(V)]

The filing of an application or of a notification of planned changes or anticipated noncompliance does not stay the Permittee's obligation to comply with this Title V permit.

R. PROPERTY RIGHTS [RCSA §22a-174-33(j)(1)(W)]

This Title V permit does not convey any property rights or any exclusive privileges. This Title V permit is subject to, and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby, including CGS §4-181a(b) and RCSA §22a-3a-5(b). This Title V permit shall neither create nor affect any rights of persons who are not parties to this Title V permit.

S. ALTERNATIVE OPERATING SCENARIO RECORDS [RCSA §22a-174-33(o)(3)]

The Permittee shall, contemporaneously with making a change authorized by this Title V permit from one alternative operating scenario to another, maintain a record at the premises indicating when changes are made from one operating scenario to another and shall maintain a record of the current alternative operating scenario.

Section VI: Title V Requirements

T. OPERATIONAL FLEXIBILITY AND OFF-PERMIT CHANGES [RCSA §22a-174-33(r)(2)]

The Permittee may engage in any action allowed by the Administrator in accordance with 40 CFR §§70.4(b)(12)(i) to (iii)(B), inclusive, and 40 CFR §§70.4(b)(14)(i) to (iv), inclusive, without a Title V non-minor permit modification, minor permit modification or revision and without requesting a Title V non-minor permit modification, minor permit modification or revision provided such action does not:

1. Constitute a modification under 40 CFR Part 60, 61 or 63;

2. Exceed emissions allowable under the subject permit;

3. Constitute an action which would subject the Permittee to any standard or other requirement pursuant to 40 CFR Parts 72 to 78, inclusive; or

4. Constitute a non-minor permit modification pursuant to RCSA §22a-174-2a(d)(4).

At least seven days before initiating an action specified in RCSA §22a-174-33(r)(2)(A), the Permittee shall notify the Administrator and the commissioner in writing of such intended action.

U. INFORMATION FOR NOTIFICATION [RCSA §22a-174-33(r)(2)(A)]

Written notification required under RCSA §22a-174-33(r)(2)(A) shall include a description of each change to be made, the date on which such change will occur, any change in emissions that may occur as a result of such change, any Title V permit terms and conditions that may be affected by such change, and any applicable requirement that would apply as a result of such change. The Permittee shall thereafter maintain a copy of such notice with the Title V permit. The commissioner and the Permittee shall each attach a copy of such notice to their copy of the Title V permit.

V. TRANSFERS [RCSA §22a-174-2a(g)]

No person other than the Permittee shall act or refrain from acting under the authority of this Title V permit unless such permit has been transferred to another person in accordance with RCSA §22a-174-2a(g).

The proposed transferor and transferee of a permit shall submit to the commissioner a request for a permit transfer on a form provided by the commissioner. A request for a permit transfer shall be accompanied by any fees required by any applicable provision of the general statutes or regulations adopted thereunder. The commissioner may also require the proposed transferee to submit with any such request, the information identified in CGS §22a-6o.

W. REVOCATION [RCSA §22a-174-2a(h)]

The commissioner may revoke this Title V permit on his own initiative or on the request of the Permittee or any other person, in accordance with CGS §4-182(c), RCSA §22a-3a-5(d), and any other applicable law. Any such request shall be in writing and contain facts and reasons supporting the request. The Permittee requesting revocation of this Title V permit shall state the requested date of revocation and provide evidence satisfactory to the commissioner that the subject source is no longer a Title V source.

Pursuant to the Clean Air Act, the Administrator has the power to revoke this Title V permit. Pursuant to the Clean Air Act, the Administrator also has the power to reissue this Title V permit if the Administrator has determined that the commissioner failed to act in a timely manner on a permit renewal application.

Section VI: Title V Requirements

This Title V permit may be modified, revoked, reopened, reissued, or suspended by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(r), CGS §22a-174c, or RCSA §22a-3a-5(d).

X. REOPENING FOR CAUSE [RCSA §22a-174-33(s)]

This Title V permit may be reopened by the commissioner, or the Administrator in accordance with RCSA §22a-174-33(s).

Y. CREDIBLE EVIDENCE

Notwithstanding any other provision of this Title V permit, for the purpose of determining compliance or establishing whether a Permittee has violated or is in violation of any permit condition, nothing in this Title V permit shall preclude the use, including the exclusive use, of any credible evidence or information.

Print for Compliance Certification or Enforcement

Click the button below to generate the appropriate checklist. Be aware that this macro does not work unless you have access to the DEEP D-Drive.

This macro takes anywhere from 2-5 minutes to run. Your computer will look like it is locked up but it is working. Unfortunately the new DEEP virtual computer system makes this process even slower. Please be patient.

Print Enforcement Checklist

Print Compliance Certification

Compliance Certification Table (2018)

Exhibit 3

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE
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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director
(804) 698-4000

Amy Thatcher Owens
Regional Director

July 29, 2020

Mr. Robert Conrad
Operations Manager
Columbia Pipeline Group
34646 Old Valley Pike
Strasburg, Virginia 22657
via email: rconrad@cpg.com

Facility: Strasburg Compressor Station
Location: Shenandoah County
Registration No.: 81286

Dear Mr. Conrad:

Attached is a Title V permit to operate your facility pursuant to 9VAC 5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. This permit incorporates provisions from the permit dated January 31, 2017.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on June 3, 2019 and solicited written public comments by placing a newspaper advertisement in the Northern Virginia Daily on April 28, 2020. The thirty-day required comment period, provided for in 9VAC 5-80-270 expired on May 28, 2020.

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to operate shall not relieve Columbia Gas Transmission, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

To review any federal rules referenced in the attached permit, please refer to the website on which the US Government Publishing Office maintains the text of these rules: www.ecfr.gov, Title 40, Part 70.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact me at Janardan.Pandey@deq.virginia.gov or (540) 574-7817.

Sincerely,

Janardan R. Pandey, P.E.
Air Permit Manager

Attachment: Permit

c: David Taylor, DEQ Air Inspector
Mili R. Patel, Columbia Pipeline Group Senior Environmental Engineer (milipatel@cpg.com)
OAPP – Susan Tripp
Associate Director, Air Permits Branch, Air & Radiation Division, US. EPA Region 3
File DEQ-VRO

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Federal Operating Permit

Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Columbia Gas Transmission, LLC
Facility Name:	Columbia Gas – Strasburg Compressor Station
Facility Location:	367 Radio Station Road Strasburg, Virginia
Registration Number:	81286
Permit Number:	VRO81286

This permit includes the following programs:
Federally Enforceable Requirements - Clean Air Act

August 1, 2020
Effective Date

July 31, 2025
Expiration Date

Deputy Regional Director

July 27, 2020
Signature Date

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Facility Information

Permittee
Columbia Gas Transmission, LLC
700 Louisiana Street, Suite 700
Houston, Texas 77002

Responsible Official
Robert Conrad
Operations Manager

Facility
Columbia Gas – Strasburg Compressor Station
367 Radio Station Road
Strasburg, Virginia 22657

Contact Person
Mili R. Patel
Senior Environmental Engineer
(832) 320-5895

County-Plant Identification Number: 51-171-00078

Facility Description: NAICS 486210 – Pipeline transportation of natural gas

The facility is subject to the following subparts in 40 CFR 60 and 63:

- 40 CFR 60, Subpart JJJJ (*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*)
- 40 CFR 60, Subpart KKKK (*Standards of Performance for Stationary Combustion Turbines*)
- 40 CFR 60, Subpart OOOOa (*Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced after September 18, 2015*)
- 40 CFR 63, Subpart ZZZZ (*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)*)

Columbia Gas – Strasburg Compressor Station is part of Columbia Gas Transmission, LLC (Columbia Gas). The Strasburg natural gas compressor station facility is located two miles north of Strasburg in Shenandoah County. A compressor station, using turbine engines to compress the natural gas, provides the pressure to aid in the transport of the gas through a pipeline. The Strasburg Compressor Station is part of Columbia Gas' interstate gas transmission system. The station includes four turbine engines and an emergency generator. Combustion in the turbines

and generator produces emissions, primarily nitrogen oxides (NO_x), volatile organic compounds (VOC) and carbon monoxide (CO).

The facility is a Title V major source of nitrogen oxides (NO_x) and carbon monoxide (CO). This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a Minor NSR Permit issued on January 31, 2017.

Emission Units

Equipment to be operated consists of:

Fuel Burning Equipment

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description *	PCD ID	Pollutant Controlled	Applicable Permit Date
E03		Solar Titan 130 Turbine (natural gas-fired) (2015)	19,796 hp @ 32°F 161.1 MMBtu/hr (HHV) @ 32°F	N/A	N/A	N/A	1/31/2017
E04		Solar Taurus 70 Turbine (natural gas-fired) (2018)	10,999 hp @ 32°F 90.74 MMBtu/hr (HHV) @ 32°F	N/A	N/A	N/A	1/31/2017
E05		Solar Taurus 70 Turbine (natural gas-fired) (2018)	10,999 hp @ 32°F 90.74 MMBtu/hr (HHV) @ 32°F	N/A	N/A	N/A	1/31/2017
E06		Solar MARS 100 Turbine (natural gas-fired) (2018)	15,565 hp @ 32°F 133.0 MMBtu/hr (HHV) @ 32°F	N/A	N/A	N/A	1/31/2017
G3		Waukesha VGF-L36GL Emergency Generator (natural gas-fired) (2018)	6.83 MMBtu/hr input; 880 brake horsepower (bhp) output	N/A	N/A	N/A	1/31/2017

* The Size/Rated capacity and PCD efficiency is provided for informational purposes only and is not an applicable requirement.

Fuel Burning Equipment Requirements – Turbines (E03 through E06) and Emergency Generator (G3)

1. **Fuel Burning Equipment Requirements - (E03 – E06) - Limitations** - Nitrogen Oxide (NO_x) emissions from the turbines shall be controlled by dry low NO_x (SoLoNOx) combustion control technology. The turbines shall be provided with adequate access for inspection. The SoLoNOx technology shall be in operation when the turbines are operating in normal operating mode (above 0 °F and greater than 50% load).
(9VAC5-80-110 and Condition 2 of 1/31/17 Permit)

2. **Fuel Burning Equipment Requirements - (E03 – E06) - Limitations** - Carbon Monoxide (CO) and Volatile Organic Compound (VOC) emissions from the turbines shall be controlled by the use of good combustion practices and proper operation and maintenance in accordance with the manufacturer's operating instructions, at a minimum.
(9VAC5-80-110 and Condition 3 of 1/31/17 Permit)

3. **Fuel Burning Equipment Requirements - (E03 – E06) - Limitations** - The permittee shall operate and maintain each turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.
(9VAC5-80-110 and Condition 4 of 1/31/17 Permit)

4. **Fuel Burning Equipment Requirements - (E03 – E06) - Limitations** - The permittee shall take reasonable precautions to minimize volatile organic compound emissions from the natural gas venting, which shall include the following, at a minimum:

    a. Proper operation and maintenance in accordance with the manufacturer's operating instructions;

    b. Install electric starters to reduce the volume of gas vented to the atmosphere during startup;

    c. Install electric seal gas booster pumps to maintain pressurized holds limiting the number of blowdowns and volume of gas vented to atmosphere following a shutdown; and

    d. Coordinate maintenance activities to reduce the total number of blowdowns.

    (9VAC5-80-110 and Condition 5 of 1/31/17 Permit)

5. **Fuel Burning Equipment Requirements - (G3) - Limitations** -. NO_x, CO, and VOC emissions from the emergency generator engine shall be controlled by proper engine operation in accordance with manufacturer written instructions or procedures developed by the permittee that are approved by the manufacturer, over the entire life of the engine. In addition, the permittee may only change those settings that are approved by the

manufacturer in a manner consistent with good air pollution control practices for minimizing emissions.
(9VAC5-80-110 and Condition 6 of 1/31/17 Permit)

6. **Fuel Burning Equipment Requirements - (E03 – E06, G3) - Limitations** -. The approved fuel for the four turbines and emergency generator is pipeline natural gas. A change in the fuel shall be considered a change in the method of operation of the four turbines and emergency generator and may require a new or amended permit.
(9VAC5-80-110 and Condition 7 of 1/31/17 Permit)

7. **Fuel Burning Equipment Requirements - (E03 – E06, G3) - Limitations** -. The pipeline natural gas shall not exceed a sulfur content of 0.25 grains of sulfur per 100 standard cubic feet on a 12-month rolling average basis, and a sulfur content of 20 grains of sulfur per 100 standard cubic feet at any time.
(9VAC5-80-110, 40 CFR 60.4365(a) and Condition 8 of 1/31/17 Permit)

8. **Fuel Burning Equipment Requirements - (G3) - Limitations** -. The emergency generator engine shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-110 and Condition 10 of 1/31/17 Permit)

9. **Fuel Burning Equipment Requirements – (EO3 – EO6) - Limitations** – The permittee shall comply with the following 40 CFR 60 Subpart KKKK regulated pollutant (i.e. nitrogen oxide per 40 CFR 60.4315) requirements for each turbine. Nitrogen oxide (NO_x) shall not exceed:

   a. 25 ppm at 15 percent O_2 or 1.2 lb/MWh at operating loads of 75% or greater, and

   b. 150 ppm at 15 percent O_2 or 8.7 lb/MWh at operating loads less than 75% of peak load or at temperatures less than 0 degrees F (40 CFR 60.4320).

   (9VAC5-80-110, 9VAC5-50-410, Condition 12 of 1/31/17 Permit and 40 CFR 60 Subpart KKKK)

10. **Fuel Burning Equipment Requirements – (E03) – Limitations** - Short-term emissions from the normal operation of the turbine shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)*	15 ppmvd @ 15% O_2 9.2 lb/hr
Carbon Monoxide*	25 ppmvd @ 15% O_2 9.3 lb/hr
Volatile Organic	5 ppmvd @ 15% O_2

Compounds*	1.1 lb/hr
PM (filterable)	0.3 lb/hr
PM10 (total)	1.1 lb/hr
PM2.5 (total)	1.1 lb/hr
Sulfur Dioxide	9.7 lb/hr

* Emission concentration limits for NO_x, CO, and VOC are applicable in Normal Load (maximum power rating of the turbine at ≥ 0° F). The emission rates in other operating modes, including Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods, are listed in Attachment A.

The permittee shall record the duration of each operational mode in order to calculate emissions, and shall operate the facility so as to minimize the frequency and duration of startup and shutdown events. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 39 and 41.
(9VAC5-80-110 and Condition 13 of 1/31/17 Permit)

11. **Fuel Burning Equipment Requirements – (E03) – Limitations** - Annual emissions from the operation of the turbine shall not exceed the limits specified below:

Nitrogen Oxides (as NO2)	38.9 tons/yr
Carbon Monoxide	86.0 tons/yr
Volatile Organic Compounds	5.0 tons/yr
PM (filterable)	1.3 tons/yr
PM10 (total)	4.7 tons/yr
PM2.5 (total)	4.7 tons/yr
Sulfur Dioxide	0.5 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Annual emissions shall include Normal Load and other operational modes (e.g. Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods). Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 22 and 27.

(9VAC5-80-110 and Condition 14 of 1/31/17 Permit)

12. **Fuel Burning Equipment Requirements – (E04 and E05) – Limitations** - Short-term emissions from the normal operation of each of the turbines shall not exceed the limits specified below:

Nitrogen Oxides (as NO2)*	15 ppmvd @ 15% O2 5.1 lb/hr
Carbon Monoxide*	25 ppmvd @ 15% O2 5.2 lb/hr
Volatile Organic Compounds*	5 ppmvd @ 15% O2 0.6 lb/hr
PM (filterable)	0.2 lb/hr
PM10 (total)	0.6 lb/hr
PM2.5 (total)	0.6 lb/hr
Sulfur Dioxide	5.4 lb/hr

* Emission concentration limits for NO_x, CO, and VOC are applicable in Normal Load (maximum power rating of the turbine at ≥ 0° F). The emission rates in other operating modes, including Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods, are listed in Attachment A.

The permittee shall record the duration of each operational mode in order to calculate emissions, and shall operate the facility so as to minimize the frequency and duration of startup and shutdown events. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 27, 39 and 41.
(9VAC5-80-110 and Condition 15 of 1/31/17 Permit)

13. **Fuel Burning Equipment Requirements – (E04 and E05) – Limitations** - Annual emissions from the combined operation of the turbines shall not exceed the limits specified below:

Nitrogen Oxides (as NO2)	43.8 tons/yr
Carbon Monoxide	91.9 tons/yr
Volatile Organic Compounds	5.5 tons/yr

PM (filterable)	1.5 tons/yr
PM10 (total)	5.3 tons/yr
PM2.5 (total)	5.3 tons/yr
Sulfur Dioxide	0.6 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Annual emissions shall include Normal Load and other operational modes (e.g. Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods). Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 21, and 27.
(9VAC5-80-110 and Condition 16 of 1/31/17 Permit)

14. **Fuel Burning Equipment Requirements – (E06) – Limitations** - Short-term emissions from the normal operation of the turbine shall not exceed the limits specified below:

Nitrogen Oxides (as NO2)*	15 ppmvd @ 15% O2 7.6 lb/hr
Carbon Monoxide*	25 ppmvd @ 15% O2 7.7 lb/hr
Volatile Organic Compounds*	5 ppmvd @ 15% O2 0.9 lb/hr
PM (filterable)	0.3 lb/hr
PM10 (total)	0.9 lb/hr
PM2.5 (total)	0.9 lb/hr
Sulfur Dioxide	8.0 lb/hr

* Emission concentration limits for NO_x, CO, and VOC are applicable in Normal Load (maximum power rating of the turbine at ≥ 0° F). The emission rates in other operating modes, including Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods, are listed in Attachment A.

The permittee shall record the duration of each operational mode in order to calculate emissions, and shall operate the facility so as to minimize the frequency and duration of startup and shutdown events. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 21, 39 and 41.
(9VAC5-80-150 and Condition 17 of 1/31/17 Permit)

15. **Fuel Burning Equipment Requirements – (E06) – Limitations** - Annual emissions from the operation of the turbine shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	32.0 tons/yr
Carbon Monoxide	67.7 tons/yr
Volatile Organic Compounds	4.1 tons/yr
PM (filterable)	1.1 tons/yr
PM10 (total)	3.8 tons/yr
PM2.5 (total)	3.8 tons/yr
Sulfur Dioxide	0.42 tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Annual emissions shall include Normal Load and other operational modes (e.g. Low Temperature mode from < 0° F to -20° F, Low Load operation (<50%), and Startup/Shutdown periods). Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 1, 2, 6, 7, 21, and 27.
(9VAC5-80-110 and Condition 18 of 1/31/17 Permit)

16. **Fuel Burning Equipment Requirements – (G3) – Limitations** - Emissions from the operation of the emergency generator shall not exceed the limits specified below:

NO_x (as NO_2)	3.9 lb/hr	1.0 ton/yr
CO	7.8 lb/hr	1.9 tons/yr
VOC	1.9 lb/hr	0.5 ton/yr

Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Compliance with these emission limits may be determined as stated in Conditions 5, 6, and 8.
(9VAC5-80-110 and Condition 19 of 1/31/17 Permit)

17. **Fuel Burning Equipment Requirements – (G3) - Limitations** – Except where this permit is more restrictive than the applicable requirement, the generator shall be operated in compliance with the requirements of 40 CFR 60 Subpart JJJJ.

(9VAC5-80-110, 9VAC5-50-410, 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ)

18. **Fuel Burning Equipment Requirements – (G3) – Limitations** – The generator must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR Part 60 Subpart JJJJ. No further requirements apply for the generator under 40 CFR Part 63.
(9VAC5-80-110, 9VAC5-60-100 and 40 CFR 63.6590(c))

19. **Fuel Burning Equipment Requirements - (G3) - Limitations** - Emissions from the operation of the generator shall not exceed the limits specified below:

Pollutant	g/HP-hr	OR	ppmvd @ 15% O2
NO_x	2.0		160
CO	4.0		540
VOC, excluding formaldehyde	1.0		86

(9VAC5-80-110, 40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ)

20. **Fuel Burning Equipment Requirements – (E03 – E06) – Limitations** - Visible emissions from the turbines shall not exceed 10 percent opacity as determined by 40 CFR 60, Appendix A, Method 9. This condition applies at all times except during startup, shutdown, and malfunction.
(9VAC5-80-110 and Condition 21 of 1/31/17 Permit)

21. **Fuel Burning Equipment Requirements – (E04 – E06) – Limitations** - Turbines E04 and E05 shall be limited to a combined 400 startup and 400 shutdown events per year. Turbine E06 shall be limited to 200 startup and 200 shutdown events per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-110 and Condition 22 of 1/31/17 Permit)

22. **Fuel Burning Equipment Requirements – (E03) – Limitations** - Turbine E03 shall be limited to 156 startup and 156 shutdown events per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-110 and Condition 23 of 1/31/17 Permit)

23. **Fuel Burning Equipment Requirements – (G3) – Limitations** - The operation of the emergency generator is limited to emergency situations. Emergency situations include emergency generator use to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted. The emergency generator may be operated for the purpose of maintenance checks and readiness

testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine.
(9VAC5-80-110 and Condition 24 of 1/31/17 Permit)

24. **Fuel Burning Equipment Requirements – (G3) – Limitations** – For the generator to be considered an emergency stationary internal combustion engine (ICE) for purposes of 40 CFR 60 Subpart JJJJ, the permittee must operate the emergency stationary ICE according to the requirements in (a) through (c) below. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in (a) through (c) below is prohibited. If the permittee does not operate the engine according to the requirements in (a) through (c) below, the engine will not be considered an emergency engine under 40 CFR 60 Subpart JJJJ and must meet all requirements for non-emergency engines.

    a. There is no time limit on the use of emergency stationary ICE in emergency situations.

    b. The permittee may operate the emergency stationary ICE for the following purpose for a maximum of 100 hours per calendar year: 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 permittee may petition the Environmental Protection Agency for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. Any operation for non-emergency situations as allowed by (c) counts as part of the 100 hours per calendar year allowed by this condition (b).

    c. 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 provided in paragraph (b) of this section. Except as provided in this paragraph, the 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

    (9VAC5-80-110, 40 CFR 60.4243(d) and 40 CFR 63 Subpart ZZZZ)

25. **Fuel Burning Equipment Requirements - (G3) - Limitations** - Visible Emissions from the emergency generator stack shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity.
    (9VAC5-50-80 and 9VAC5-80-110)

26. **Fuel Burning Equipment Requirements (E03 – E06, G3) - Limitations** – At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions:

    The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to the facility's air pollution control equipment and process equipment which affects such emissions:

    a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;

    b. Maintain an inventory of spare parts;

    c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum; and

    d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

    (9VAC5-80-110, 40 CFR 60.4243(b)(2)(ii), 40 CFR 63 Subpart ZZZZ and Condition 66 of the 1/31/17 Permit)

27. **Fuel Burning Equipment Requirements - (E03 – E06, G3) - Monitoring** - The permittee shall use the fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for the natural gas being fired at the natural gas compressor station facility is 20 grains of sulfur or less per 100 standard cubic feet, and has potential sulfur emissions of less than 0.060 lb SO_2/MMBtu heat input. A standard cubic foot is defined as a cubic foot of gas at standard conditions as specified in 40 CFR 72.2 (68° F and 29.92 inches Hg).
    (9VAC5-80-110, 40 CFR 60.4365(a) and Condition 9 of 1/31/17 Permit)

28. **Fuel Burning Equipment Requirements – (G3) – Monitoring** - The emergency generator engine shall be equipped with a non-resettable hour meter to continuously measure hours of operation. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the emergency generator engine is operating.
    (9VAC5-80-110, 40 CFR 60.4237(a) and Condition 11 of 1/31/17 Permit)

29. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring –** For the purposes of Conditions 30 through 34, 36, and 45, fugitive emissions are defined as: Any visible

emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using 40 CFR 60, Appendix A-7, Method 21. (9VAC5-80-110 and 40 CFR 60.5397a(a)).

30. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring –** The permittee shall develop an emissions monitoring plan that covers the collection of fugitive emissions components at the compressor station within each company-defined area in accordance with the following.

    a. Fugitive emissions monitoring plans must include the elements specified in paragraphs i through viii below, at a minimum.

        i. Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by Condition 32.

        ii. Technique for determining fugitive emissions (i.e., 40 CFR 60, Appendix A-7, Method 21, or optical gas imaging).

        iii. Manufacturer and model number of fugitive emissions detection equipment to be used.

        iv. Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. The repair schedule shall meet the requirements of Condition 33 at a minimum.

        v. Procedures and timeframes for verifying fugitive emission component repairs.

        vi. Records that will be kept and the length of time records will be kept.

        vii. If the permittee is using optical gas imaging, the plan must also include the elements specified in 40 CFR 60.5397a(c)(7)(i) through (vii).

        viii. If the permittee is using 40 CFR 60, Appendix A-7, Method 21, the plan must also include the elements specified in 40 CFR 60.5397a(c)(8)(i) and (ii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater.

    b. Each fugitive emissions monitoring plan must include the elements specified in i through iv below, at a minimum, as applicable.

        i. Sitemap.

        ii. A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.

iii. If the permittee is using Method 21, the plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.).

iv. The plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with Condition 32.b.i, and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with Condition 32.c.i.

(9VAC5-80-110 and 40 CFR 60.5397a(b), 40 CFR 60.5397a(c) and 40 CFR 60.5397a(d))

31. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring -** Each monitoring survey shall observe each fugitive emissions component, as defined in 40 CFR 60.5430a, for fugitive emissions.
(9VAC5-80-110 and 40 CFR 60.5397a(e))

32. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring -** A monitoring survey of each collection of fugitive emissions components at a compressor station must be performed at the frequencies specified below in a, with the exceptions noted in b and c.

a. A monitoring survey of the collection of fugitive emissions components at a compressor station within a company-defined area must be conducted at least quarterly after the initial survey. Consecutive quarterly monitoring surveys must be conducted at least 60 days apart.

b. Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of i through iv below.

i. A written plan shall be developed for all of the fugitive emissions components designated difficult-to-monitor. This written plan shall be incorporated into the fugitive emissions monitoring plan required by Condition 30.

ii. The plan shall include the identification and location of each fugitive emissions component designated as difficult-to-monitor.

iii. The plan shall include an explanation of why each fugitive emissions component designated as difficult-to-monitor is difficult-to-monitor.

iv. The plan shall include a schedule for monitoring the difficult-to-monitor fugitive emissions components at least once per calendar year.

c. Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor shall meet the specifications of i through iv below.

i. A written plan shall be developed for all of the fugitive emissions components designated unsafe-to-monitor. This written plan shall be incorporated into the fugitive emissions monitoring plan required by Condition 30.

ii. The plan shall include the identification and location of each fugitive emissions component designated as unsafe-to-monitor.

iii. The plan shall include an explanation of why each fugitive emissions component designated as unsafe-to-monitor is unsafe-to-monitor.

iv. The plan shall include a schedule for monitoring the fugitive emissions components designated as unsafe-to-monitor.

(9VAC5-80-110 and 40 CFR 60.5397a(g))

33. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring -** Each identified source of fugitive emissions shall be repaired or replaced in accordance with a and b below. For fugitive emissions components also subject to the repair provisions of 40 CFR 60.5416a(b)(9) through (12) and (c)(4) through (7), those provisions apply instead to those closed vent system and covers, and the repair provisions of a and b below do not apply to those closed vent systems and covers.

a. Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.

b. If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, or would be unsafe to repair during operation of the unit, the repair or replacement shall be completed during the next scheduled compressor station shutdown, after a planned vent blowdown or within 2 years, whichever is earlier.

c. Each repaired or replaced fugitive emissions component shall be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.

i. For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the permittee may resurvey the repaired fugitive emissions components using either 40 CFR 60, Appendix A-7, Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.

ii. For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph shall be taken of that component or the component shall be tagged for identification purposes. The digital photograph shall include the date that the photograph was taken, shall clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).

iii. Operators that use 40 CFR 60 Appendix A-7, Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in (1) and (2) below.

(1) A fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above background or when no soap bubbles are observed when the alternative screening procedures specified in section 8.3.3 of Method 21 are used.

(2) Operators must use the Method 21 monitoring requirements specified in 40 CFR 60.5397a(c)(8)(ii) or the alternative screening procedures specified in section 8.3.3 of Method 21.

iv. Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in (1) and (2) below.

(1) A fugitive emissions component is repaired when the optical gas imaging instrument shows no indication of visible emissions.

(2) Operators must use the optical gas imaging monitoring requirements specified in Condition 30.a.vii.

(9VAC5-80-110 and 40 CFR 60.5397a(h))

34. **Fuel Burning Equipment Requirements – (E03 – E06) – Monitoring -** For each collection of fugitive emissions components at a compressor station, the permittee shall demonstrate continuous compliance with the fugitive emission standards specified in 40 CFR 60.5397a (Condition 29) according to a through d below.

a. The permittee shall conduct periodic monitoring surveys as required in Condition 32.

b. The permittee shall repair or replace each identified source of fugitive emissions as required in Condition 33.

c. The permittee shall maintain records as specified in Condition 36.

d. The permittee shall submit annual reports for each collection of fugitive emissions components at a compressor station as required in Condition 45.

(9VAC5-80-110 and 40 CFR 60.5415a(h))

35. **Fuel Burning Equipment Requirements – (E03 – E06, G3) - Recordkeeping** - The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to:

    a. Fuel analysis records or supplier certifications sufficient to demonstrate compliance with Conditions 6, 7, and 27.

    b. Annual hours of operation for the emergency generator (G3), calculated monthly as required by Condition 8.

    c. Records to document compliance with applicable emission limits of 40 CFR 60 Subpart KKKK, as required by Condition 9.

    d. Annual emissions calculations for the turbine (E03), calculated monthly as required by Condition 11.

    e. Annual emissions calculations for the turbines (E04 and E05), calculated monthly as required by Condition 13.

    f. Annual emissions calculations for the turbine (E06), calculated monthly as required by Condition 15.

    g. Annual emissions calculations for the emergency generator (G3), calculated monthly as required by Condition 16.

    h. Date, time, and the hours of duration for each turbine's (E03, E04, E05, and E06) operational modes, as follows: Normal Load @ 0 °F, Low Temperature mode from < 0° F to -20° F, and Low Load operation (< 50%) periods.

    i. Annual count of start-up and shutdown events for each of the turbines (E04, E05 and E06), calculated monthly as required by Condition 21.

    j. Annual count of start-up and shutdown events for the turbine (E03), calculated monthly as required by Condition 22.

    k. Results of all performance tests and visible emission evaluations.

    l. Records of malfunctions as required in Condition 55.

    m. Required training including a statement of time, place and nature training provided.

n. Written operating procedures, scheduled and unscheduled maintenance and training records, as required by Conditions 4 and 26.

o. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

p. Maintenance conducted on the generator (G3).

q. If the generator (G3) is not a certified engine, documentation that the engine meets the emission standards.

r. If the generator (G3) does not meet the standards applicable to non-emergency engines, 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.

s. The daily and annual throughput of natural gas (in million cubic feet) for each turbine (E03 – E06). The annual throughput shall be calculated as the sum of each consecutive 12-month period.

t. All fuel supplier certifications.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 40 CFR 60.4245(a) and (b), 40 CFR 63 Subpart ZZZZ and Condition 29 of 1/31/17 Permit)

36. **Fuel Burning Equipment Requirements – (E03 – E06) – Recordkeeping** – The permittee shall maintain the following records. All records required by this subpart shall be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by 40 CFR 60 Subpart OOOOa that are submitted electronically via the EPA's CDX may be maintained in electronic format.

a. The fugitive emissions monitoring plan as required in Condition 30.

b. The records of each monitoring survey as specified in i through ix below.

i. Date of the survey.

ii. Beginning and end time of the survey.

iii. Name of operator(s) performing survey. The permittee shall note the training and experience of the operator.

iv. Monitoring instrument used.

v. When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a compressor station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.

vi. Fugitive emissions component identification when 40 CFR 60, Appendix A-7, Method 21 is used to perform the monitoring survey.

vii. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.

viii. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

ix. Documentation of each fugitive emission, including the information specified in (1) through (12) below.

(1) Location.

(2) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

(3) Number and type of components for which fugitive emissions were detected.

(4) Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.

(5) Instrument reading of each fugitive emissions component that requires repair when 40 CFR 60, Appendix A-7, Method 21 is used for monitoring.

(6) Number and type of fugitive emissions components that were not repaired as required in Condition 33.

(7) Number and type of components that were tagged as a result of not being repaired during the monitoring survey when the fugitive emissions were initially found as required in Condition 33.c.ii.

(8) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the monitoring survey when the fugitive emissions were initially found as required in Condition 33.c.ii. The digital photograph or video must clearly identify the location of the component that must be repaired. Any digital photograph or video required under this paragraph can also be used to meet the requirements under Condition 45.b.v, as long as the photograph or video is taken with the optical gas imaging instrument, includes the date and the latitude and longitude are either imbedded or visible in the picture.

(9) Repair methods applied in each attempt to repair the fugitive emissions components.

(10) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.

(11) The date of successful repair of the fugitive emissions component.

(12) Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

c. If a monitoring survey is waived under Condition 32, the permittee shall maintain records of the average calendar month temperature, including the source of the information, for each calendar month of the quarterly monitoring period for which the monitoring survey was waived.

(9VAC5-80-110, 40 CFR 60.5397a(i), 40 CFR 60.5415a(h)(3) and 40 CFR 60.5420a(c)(15))

37. **Fuel Burning Equipment Requirements – (E03 – E06) - Testing** – Annual Performance Test – Annual tests shall be conducted on each turbine for sulfur dioxide (SO_2) to determine compliance with the limits contained in Condition 7. The permittee may use one of the following three methods (a., b., or c. below) to conduct the performance test:

a. If the permittee chooses to periodically determine the sulfur content of the fuel combusted in the turbine, a representative fuel sample would be collected following ASTM D5287 (incorporated by reference, see 40 CFR 60.17) for natural gas. The fuel analyses may be performed either by the permittee, a service contractor retained by the permittee, the fuel vendor, or any other qualified person. The samples for the total sulfur content of the fuel shall be analyzed using ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see 40 CFR 60.17).

b. 40 CFR 60, Appendix A, Methods 6, 6C, 8, or 20 shall be used to measure the SO_2 concentration (in parts per million (ppm)). In addition, the American Society of Mechanical Engineers (ASME) standard, ASME PTC 9–10–1981–Part 10, “Flue and

Exhaust Gas Analyses," manual methods for sulfur dioxide (incorporated by reference, see 40 CFR 60.17) can be used instead of EPA Methods 6 or 20.

c. 40 CFR 60, Appendix A, Methods 6, 6C, or 8 and 3A, or 20 shall be used to measure the SO_2 and diluent gas concentrations. In addition, the permittee may use the manual methods for sulfur dioxide ASME PTC 19–10–1981–Part 10 (incorporated by reference, see 40 CFR 60.17).

The tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). Tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30 and the test methods and procedures contained in each applicable section or subpart listed in 9VAC5-50-410. The details of the tests are to be arranged with the DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the DEQ within 45 days after test completion and shall conform to the test report format enclosed with this permit. If fuel sampling is used to comply with the annual test for SO_2, then no test protocol or test report is required.
(9VAC5-80-490 E, 9VAC5-80-490 F and 40 CFR 60.4415(a))

38. **Fuel Burning Equipment Requirements – (E03 – E06) – Testing** - The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports, safe sampling platforms, and access at the appropriate locations shall be provided when requested.
(9VAC5-80-110 and Condition 1 of 1/31/17 Permit)

39. **Fuel Burning Equipment Requirements – (E03 – E06) – Testing** - NO_x performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test) on the turbines in accordance with the requirements of 40 CFR 60.4400 to determine compliance with the emission limits contained in Condition 10 (E03), Condition 12 (E04 and E05), and Condition 14 (E06). If the NO_x emission result from the performance test is less than or equal to 75 percent of the NO_x emission limit for the turbine, the permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit for the turbine, the permittee must resume annual performance tests. The details of the tests shall be arranged with the DEQ.
(9VAC5-80-110, 40 CFR 60.4340(a) and Condition 27 of 1/31/17 Permit)

40. **Fuel Burning Equipment Requirements – (G3) – Testing** - The permittee shall conduct performance testing on the emergency generator every 8,760 hours or 3 years, whichever comes first, to demonstrate compliance with the standards in 40 CFR 60 Subpart JJJJ (Condition 19). Performance tests shall be conducted according to the specifications in 40 CFR 60.4244.
(9VAC5-80-110, 40 CFR 60.4243(b)(2)(ii) and 40 CFR 63 Subpart ZZZZ)

41. **Fuel Burning Equipment Requirements – (E03 – E06) - Testing** - No less frequent than once each permit term, and upon request by the DEQ, the permittee shall perform additional performance tests on Unit E03; on Unit E04 or Unit E05; and on Unit E06. Testing shall be conducted for CO using the appropriate EPA Reference Method(s).

    Testing shall be conducted on E03 and on E06 for each permit term. Testing for E04 and E05 may alternate such that testing on one unit (E04 or E05) will satisfy the testing requirements for the other unit (E04 or E05). During the subsequent permit terms, the permittee shall conduct performance testing on the alternate unit (E04 or E05) on a rotating basis.

    Tests shall be conducted to determine compliance with the applicable emission limits contained in Conditions 10, 12, and 14. The details of the tests are to be arranged with the DEQ. The permittee shall submit a test protocol at least 30 days prior to testing. Samples taken as required by this permit shall be analyzed in accordance with 1VAC30-45, Certification for Noncommercial Environmental Laboratories, or 1VAC30-46, Accreditation for Commercial Environmental Laboratories. One copy of the test results shall be submitted to the DEQ within 60 days after test completion and shall conform to the test report format enclosed with this permit.
    (9VAC5-80-110)

42. **Fuel Burning Equipment Requirements – (E03 – E06) – Testing** - Upon request by the DEQ, the permittee shall conduct Visible Emission Evaluations (VEE) from any of all of the four turbines to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the DEQ.
    (9VAC5-80-110 and Condition 28 of 1/31/17 Permit)

43. **Fuel Burning Equipment Requirements - (E03 – E06) - Reporting** - The permittee shall submit a written report of the results of each annual performance test performed in accordance with 40 CFR 60.4340(a) to the DEQ by the 60th day following the completion of the performance test. One copy of the report shall be submitted to the U.S. Environmental Protection Agency at the address specified below:

    Chief, Air Section
    Enforcement & Compliance Assurance Division
    Air, RCRA & Toxics Branch
    U.S. EPA Region 3
    1650 Arch Street - 3ED21
    Philadelphia, PA 19103-2029

    (9VAC5-80-110, 40 CFR 60.4375(b) and Condition 30 of 1/31/17 Permit)

44. **Fuel Burning Equipment Requirements – (G3) – Reporting** - Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231 must submit an initial

notification as required in 40 CFR 60.7(a)(1). The notification must include the information in (a) through (e):

a. Name and address of the owner or operator;

b. The address of the affected source;

c. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

d. Emission control equipment; and

e. Fuel used.

(9VAC5-80-110, 9VAC5-50-410, 40 CFR 60.4245(c) and 40 CFR 63 Subpart ZZZZ)

45. **Fuel Burning Equipment Requirements – (E03 – E06) – Reporting** – The permittee shall submit annual reports containing the information specified in a and b below. The permittee shall submit annual reports following the procedure specified in c below. Annual reports are due no later than January 30th. If the permittee owns or operates more than one affected facility, one report may be submitted for multiple affected facilities provided the report contains all of the information required as specified in a and b below. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. The permittee may arrange with the EPA a common schedule on which reports required by 40 CFR 60 may be submitted as long as the schedule does not extend the reporting period.

    a. The general information specified in i through iv below for all reports.

        i. The company name, facility site name associated with the affected facility, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.

        ii. An identification of each affected facility being included in the annual report.

        iii. Beginning and ending dates of the reporting period.

        iv. A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

    b. For the collection of fugitive emissions components at each compressor station within the company-defined area, the records of each monitoring survey including the

information specified in i through xii below. For the collection of fugitive emissions components at a compressor station, if a monitoring survey is waived under Condition 32, the permittee shall include in the annual report the fact that a monitoring survey was waived and the calendar months that make up the quarterly monitoring period for which the monitoring survey was waived.

i. Date of the survey.

ii. Beginning and end time of the survey.

iii. Name of operator(s) performing survey. If the survey is performed by optical gas imaging, the permittee shall note the training and experience of the operator.

iv. Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.

v. Monitoring instrument used.

vi. Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.

vii. Number and type of components for which fugitive emissions were detected.

viii. Number and type of fugitive emissions components that were not repaired as required in Condition 33.

ix. Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.

x. The date of successful repair of the fugitive emissions component.

xi. Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.

xii. Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

c. The permittee shall submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (https://cdx.epa.gov/).) The permittee shall use the appropriate electronic report in CEDRI for 40 CFR 60 Subpart OOOOa or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (https://www3.epa.gov/ttn/chief/cedri/). If the reporting form specific to 40 CFR 60 Subpart OOOOa is not available in CEDRI at the time that the report is due, the permittee shall submit the report to the EPA at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for at least 90 calendar days, the permittee shall begin submitting all subsequent reports via

CEDRI. The reports shall be submitted by the deadlines specified in 40 CFR 60 Subpart OOOOa, regardless of the method in which the reports are submitted.

(9VAC5-80-110, 40 CFR 60.5397a(j), 40 CFR 60.5415a(h)(4) and 40 CFR 60.5420a(b))

Insignificant Emission Units

46. **Insignificant Emission Units** - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emissions Unit Number	Emissions Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720 B)	Rated Capacity (9VAC5-80-720 C)
A01	Pipeline Liquids Tank	9VAC5-80-720C	-	2,000 gal
A02	Pipeline Liquids Tank	9VAC5-80-720C	-	1,250 gal
A03	Pipeline Liquids Tank	9VAC5-80-720C	-	1,250 gal
A06	Wastewater Tank	9VAC5-80-720C	-	1,000 gal
H1	Fuel Gas Heater #1	9VAC5-80-720C	-	0.75 MMBtu/hr
H2	Fuel Gas Heater #2	9VAC5-80-720C	-	0.30 MMBtu/hr
H3	Fuel Gas Heater #3	9VAC5-80-720C	-	0.25 MMBtu/hr
C01	Used Oil Tank	9VAC5-80-720C	-	300 gal
SH1	Comfort Heaters (24)	9VAC5-80-720C	-	1.728 MMBtu/hr (total)
SH2	Comfort Heaters (35)	9VAC5-80-720C	-	2.386 MMBtu/hr (total)

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110. (9VAC5-80-110)

Permit Shield & Inapplicable Requirements

47. **Permit Shield & Inapplicable Requirements** - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
40 CFR 64	Compliance Assurance Monitoring (CAM)	Strasburg Compressor Station does not use add-on control devices; accordingly, it is not subject to CAM.
40 CFR 60 Subpart GG	Standards of Performance for Stationary Gas Turbines	Per 40 CRR 60.4305(b), turbines subject to 40 CFR 60 Subpart KKKK are exempt from the requirements of 40 CFR 60 Subpart GG
40 CFR 60 Subpart OOOO	Standards of Performance for Crude Oil & Natural Gas Production, Transmission & Distribution	The turbines are not subject to Subpart OOOO per 40 CFR 60.5365 because they are part of a natural gas transmission facility. Strasburg Compressor Station is not involved in natural gas production.
40 CFR 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	The generator is not subject because it is not compression-ignition fired.
40 CFR 63 Subpart HHH	National Emissions Standards for Hazardous Air Pollutants from Natural Gas Transmission & Storage Facilities	Applicable to subject units at major HAP sources; Strasburg Compressor Stations is not a major HAP source
40 CFR 63 Subpart YYYY	National Emissions Standards for Hazardous Air Pollutants from Stationary Combustion Turbines	Applicable to turbines at major HAP sources; Strasburg Compressor Stations is not a major HAP source

There are no applicable Greenhouse Gas (GHG) permitting requirements.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9VAC5-80-110 and 9VAC5-80-140)

General Conditions

48. **General Conditions - Federal Enforceability** - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110)

49. **General Conditions - Permit Expiration**

    a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

    b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

    c. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.

    d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.

    e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

    f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

    (9VAC5-80-80, 9VAC5-80-110 and 9VAC5-80-170)

50. **General Conditions -Recordkeeping and Reporting** - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

a. The date, place as defined in the 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 such analyses; and

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

(9VAC5-80-110)

51. **General Conditions -Recordkeeping and Reporting** - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (9VAC5-80-110)

52. **General Conditions -Recordkeeping and Reporting** - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

    b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

        i. Exceedances of emissions limitations or operational restrictions;

        ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

        iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

    c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

    (9VAC5-80-110)

53. **General Conditions - Annual Compliance Certification** - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

    a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

    b. The identification of each term or condition of the permit that is the basis of the certification;

    c. The compliance status;

    d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

    e. Consistent with subsection 9VAC5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

    f. Such other facts as the permit may require to determine the compliance status of the source; and

    g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

        R3_APD_Permits@epa.gov

    (9VAC5-80-110)

54. **General Conditions - Permit Deviation Reporting** - The permittee shall notify the Valley Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9VAC5-40-50 C or 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for

facilities subject to the monitoring requirements of 9VAC5-40-40 or 9VAC5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to Condition 52 of this permit.
(9VAC5-80-110 F. 2)

55. **General Conditions - Failure/Malfunction Reporting** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Valley Regional Office such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9VAC5-40-50 C or 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 or 9VAC5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Valley Regional Office.
(9VAC5-80-110 and 9VAC5-20-180)

56. **General Conditions - Failure/Malfunction Reporting** - The emission units that have continuous monitors subject to 9VAC5-40-50 C or 9VAC5-50-50 C are not subject to the 14 day written notification.
(9VAC5-20-180 and 9VAC5-50-50)

57. **General Conditions - Failure/Malfunction Reporting** - The emission units subject to the reporting and the procedure requirements of 9VAC5-40-50 C and the procedures of 9VAC5-50-50 C are: Emergency Generator (G3)
(9VAC5-80-110, 9VAC5-20-180 C and 9VAC5-50-50)

58. **General Conditions - Failure/Malfunction Reporting** - Each owner required to install a continuous monitoring system (CMS) or monitoring device subject to 9VAC5-40-41 or 9VAC5-50-410 shall submit a written report of excess emissions (as defined in the applicable subpart in 9VAC5-50-410) and either a monitoring systems performance report or a summary report form, or both, to the board semiannually. All semi-annual reports shall be postmarked by the 30th day following the end of each calendar semi-annual period (June 30th and January 30th). All reports shall include the following information:

    a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9VAC5-40-41 B.6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

    b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

All malfunctions of emission units not subject to 9VAC5-40-50 C or 9VAC5-50-50 C require written reports within 14 days of the discovery of the malfunction.
(9VAC5-80-110, 9VAC5-20-180 C and 9VAC5-50-50)

59. **General Conditions - Severability** - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110)

60. **General Conditions - Duty to Comply** - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110)

61. **General Conditions - Need to Halt or Reduce Activity not a Defense** - 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.
(9VAC5-80-110)

62. **General Conditions - Permit Modification** - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC80-110, 9VAC5-80-190 and 9VAC5-80-260)

63. **General Conditions - Property Rights** - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110)

64. **General Conditions - Duty to Submit Information** - The permittee shall furnish to the Board, within a reasonable time, any information that the Board 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 Board copies of records required to be kept by the permit and, for information

claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9VAC5-80-110)

65. **General Conditions - Duty to Submit Information** - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.
(9VAC5-80-110)

66. **General Conditions - Duty to Pay Permit Fees** - The owner of any source for which a permit under 9VAC5-80-50 through 9VAC5-80-300 was issued shall pay permit fees consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 in addition to an annual permit maintenance fee consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department. The amount of the annual permit maintenance fee shall be the largest applicable base permit maintenance fee amount from Table 8-11A in 9VAC5-80-2340, adjusted annually by the change in the Consumer Price Index.
(9VAC5-80-110, 9VAC5-80-340 and 9VAC5-80-2340)

67. **General Conditions - Fugitive Dust Emission Standards** - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

    d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9VAC5-50-90 and 9VAC5-80-110)

68. **General Conditions - Startup, Shutdown, and Malfunction** - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9VAC5-50-20 E and 9VAC5-80-110)

69. **General Conditions - Alternative Operating Scenarios** - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.
(9VAC5-80-110)

70. **General Conditions - Inspection and Entry Requirements** - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

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

c. Inspect at reasonable times 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 for the purpose of assuring compliance with the permit or applicable requirements.

(9VAC5-80-110)

71. **General Conditions - Reopening for Cause** - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining

permit term of three years or more. Such reopening shall be completed no later than 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 9VAC5-80-80 F. The conditions for reopening a permit are as follows:

a. The permit shall be reopened if the Board or the administrator 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.

b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.

(9VAC5-80-110)

72. **General Conditions - Permit Availability** - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request. (9VAC5-80-110 and 9VAC5-80-150)

73. **General Conditions - Transfer of Permits**

a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.

b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

(9VAC5-80-110 and 9VAC5-80-160)

74. **General Conditions - Permit Revocation or Termination for Cause** - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any

applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9VAC5-80-110, 9VAC5-80-190 C and 9VAC5-80-260)

75. **General Conditions - Duty to Supplement or Correct Application** - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9VAC5-80-110 and 9VAC5-80-80 E)

76. **General Conditions - Stratospheric Ozone Protection** - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9VAC5-80-110 and 40 CFR Part 82)

77. **General Conditions - Asbestos Requirements** - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9VAC5-60-70 and 9VAC5-80-110)

78. **General Conditions - Accidental Release Prevention** - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9VAC5-80-110 and 40 CFR Part 68)

79. **General Conditions - Changes to Permits for Emissions Trading** - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110)

80. **General Conditions - Emissions Trading** - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

(9VAC5-80-110)

State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9VAC5-80-290 concerning review of proposed limits by EPA and draft permits by affected states.

81. **Emission Controls (Formaldehyde)** – Formaldehyde emissions from the turbines (E03, E04, E05, and E06) shall be controlled by good combustion practices, operator training, and maintenance.
(9VAC5-80-110 and Condition 31 of 1/31/17 Permit)

82. **Emission Limits (Formaldehyde)** – Formaldehyde emissions from the operation of the turbines (E03, E04, E05, and E06) shall not exceed the limits specified below.

Formaldehyde (50-00-0):	0.36 lb/hr	1.48 tons/yr

The hourly emissions are combined emissions during normal load at ambient temperatures of 0 °F and greater. Annual emissions are combined emissions during all operating conditions and shall be calculated monthly as the sum of each consecutive 12-month period. These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition 81.
(9VAC5-80-110 and Condition 32 of 1/31/17 Permit)

83. **On-Site Records –** The permittee shall maintain records of emissions data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the DEQ. These records shall include, but are not limited to annual emissions of formaldehyde from the turbines (E03, E04, E05, and E06), calculated monthly as the sum of each consecutive 12-month period, as required by Condition 82.
(9VAC5-80-110 and Condition 33 of 1/31/17 Permit)

Turbines' (E03, E04, E05, and E06) Short-Term Emission Limits in Non-Standard Operating Modes

Turbine (E03) Short-Term Emission Limits in Non-Standard Operating Modes[1]

Operational Mode	Pollutant Emission Rate (lb/hr)		
	NO_x	CO	VOC
Low Temperature (< 0 to -20 °F)	24.19	35.05	2.00
Low Load Operation (< 50%)	20.97	850.77	9.72
Start-up / Shutdown (lb/event)[2]	4.3	384.5	4.4

[1] – Non-standard operating mode is any mode in which the turbine (E03) may operate other than Normal Load.

[2] – The emissions from one event are equal to the sum of the emissions from one start-up and one shutdown.

Turbines (E04 and E05) Short-Term Emission Limits in Non-Standard Operating Modes[1]

Operational Mode	Pollutant Emission Rate (lb/hr)		
	NO_x	CO	VOC
Low Temperature (< 0 to -20 °F)	14.71	21.32	1.22
Low Load Operation (< 50%)	14.45	586.42	6.70
Start-up / Shutdown (lb/event)[2]	1.90	166.50	1.90

[1] – Non-standard operating mode is any mode in which the turbines (E04 and E05) may operate other than Normal Load.

[2] – The emissions from one event are equal to the sum of the emissions from one start-up and one shutdown.

Turbine (E06) Short-Term Emission Limits in Non-Standard Operating Modes[1]

Operational Mode	Pollutant Emission Rate (lb/hr)		
	NO_x	CO	VOC
Low Temperature (< 0 to -20 °F)	21.84	31.66	1.81
Low Load Operation (< 50%)	16.10	653.41	7.47
Start-up / Shutdown (lb/event)[2]	3.10	272.70	3.12

[1] – Non-standard operating mode is any mode in which the turbine (E06) may operate other than Normal Load.

[2] – The emissions from one event are equal to the sum of the emissions from one start-up and one shutdown.

Turbine (E03 - premodification) Short-Term Emission Limits in Non-Standard Operating Modes[1]

Operational Mode	Pollutant Emission Rate (lb/hr)		
	NO_x	CO	VOC
Low Temperature (< 0 to -20 °F)	24.19	35.05	2.00
Very Low Temperature (<-20 °F)	69.10	52.58	2.00
Low Load Operation (< 50%)	20.97	850.77	9.72
Start-up / Shutdown (lb/cycle)[2]	4.3	384.5	4.4

[1] – Non-standard operating mode is any mode in which the turbine (E03) may operate other than Normal Load.

[2] – The emissions from one cycle are equal to the sum of the emissions from one start-up and one shutdown event.

SOURCE TESTING REPORT FORMAT

Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. *Signed by reviewer

Copy of approved test protocol

Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. *For each emission unit, a table showing:

a. Operating rate
b. Test Methods
c. Pollutants tested
d. Test results for each run and the run average
e. Pollutant standard or limit

5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results

1. Detailed test results for each run
2. *Sample calculations
3. *Description of collected samples, to include audits when applicable

Appendix

1. *Raw production data
2. *Raw field data
3. *Laboratory reports
4. *Chain of custody records for lab samples
5. *Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

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* Not applicable to visible emission evaluation