ARKANSAS
ENERGY & ENVIRONMENT

February 14, 2022

Via email to: Charles.King@armtecdefense.com
jackie.brian@armtecdefense.com & First Class Mail

Charles King
Director: Environmental, Health, Safety
Armtec Countermeasures Co.
P.O. Box 3297
East Camden, AR 71711

Re: Notice of Final Permitting Decision; Permit No. 1865-AOP-R10

Dear Mr. King,

After considering the application, any public comments, and other applicable materials as required by APC&EC Reg.8.211 and Ark. Code Ann. § 8-4-101 *et seq*., this notice of final permitting decision is provided for:

> Armtec Countermeasures Co.
> Highland Industrial Park, Building M-7
> East Camden, AR 71701
>
> Permit Number: 1865-AOP-R10
>
> Permitting Decision: approval with permit conditions as set forth in final Permit No. 1865-AOP-R10
>
> Accessing the Permitting Decision and Response to Comments, if any:
> https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/1865-AOP-R10.pdf.
>
> Accessing the Statement of Basis:
> https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/1865-AOP-R10-SOB.pdf.

The permitting decision is effective on the date stated in the attached Certificate of Service unless a Commission review has been properly requested under Arkansas Pollution Control & Ecology Commission's Administrative Procedures, Regulation No. 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as

provided under Chapter Six of Regulation No. 8. Such a request shall be in the form and manner required by Reg.8.603, including filing a written Request for Hearing with the Commission secretary at 3800 Richards Rd, North Little Rock, Arkansas 72117. If you have any questions about filing the request, please call the Commission at 501-682-7890.

This permit is your authority to construct, operate, and maintain the equipment and control apparatus as set forth in your application initially received on 10/27/2021.

Sincerely,

William K. Montgomery
Associate Director, Office of Air Quality, Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118-5317

Enclosure: Certificate of Service
cc: cgarland@trinityconsultants.com

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that the final permit decision notice has been mailed by first class mail to Armtec Countermeasures Co., P.O. Box 3297, East Camden, AR, 71711, on this 14th day of February, 2022.

Cynthia Hook, AA, Office of Air Quality

DIVISION OF ENVIRONMENTAL QUALITY

OPERATING AIR PERMIT

PERMIT NUMBER: 1865-AOP-R10

IS ISSUED TO:
Armtec Countermeasures Co.
Highland Industrial Park, Building M-7
East Camden, AR 71701
Calhoun County
AFIN: 07-00033

PURSUANT TO THE REGULATIONS OF THE ARKANSAS OPERATING AIR PERMIT PROGRAM, REGULATION 26: THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

February 14, 2022 AND February 13, 2027

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality

February 14, 2022
Date

Armtec Countermeasures Co.
Permit #: 1865-AOP-R10
AFIN: 07-00033

Table of Contents

List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	Arkansas DEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
HAP	Hazardous Air Pollutant
Hp	Horsepower
lb/hr	Pound Per Hour
NESHAP	National Emission Standards (for) Hazardous Air Pollutants
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter Equal To Or Smaller Than Ten Microns
$PM_{2.5}$	Particulate Matter Equal To Or Smaller Than 2.5 Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Armtec Countermeasures Co.
AFIN:	07-00033
PERMIT NUMBER:	1865-AOP-R10
FACILITY ADDRESS:	Highland Industrial Park, Building M-7 East Camden, AR 71701
MAILING ADDRESS:	P.O. Box 3297 East Camden, AR 71711
COUNTY:	Calhoun County
CONTACT NAME:	Charles King
CONTACT POSITION:	Director: Environmental, Health, Safety
TELEPHONE NUMBER:	(870) 574-4233
REVIEWING ENGINEER:	Sarah Neoh
UTM North South (Y):	Zone 15: 3721134.97 m
UTM East West (X):	Zone 15: 528482.16 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Armtec Countermeasures Company (Armtec) is located at Building M-25 in the Highland Industrial Park, East Camden, Calhoun County, Arkansas. Armtec manufactures and tests explosive ordnance and disposes of explosive/pyrotechnic waste in open thermal treatment units. This permitting action renews the facility's Title V permit with the following revision:

- The emissions scenario for SN-03A is no longer valid and will now be removed from the permit. The RCRA permit was updated to scenario SN-03B since the last permit renewal.

The changes in this permit do not affect permitted emissions.

Process Description

Main Plant

The facility manufactures magnesium/Teflon flares. Hexane and acetone are used as solvents in the production process. All of the solvent emissions are grouped together as SN-01 for the purposes of this permit. Acetone is used as the solvent during the mixing of the raw materials used to make the powder. Hexane is used to wash the acetone from the mix. The mixing/washing process generates a liquid stream of mixed hexane and acetone. This mixture is sent to the "tank farm" area where the hexane is recovered for reuse and the acetone is emitted to the atmosphere. Hexane fumes are generated during the pre-drying process and the vacuum tumbling process. A hexane recovery system collects the exhaust vapor stream from the vacuum tumblers and condenses the hexane from that stream for reuse. Acetone is also used as a general cleanup solvent for the process equipment. All acetone and hexane used in the process eventually evaporates, so emissions may be determined by material balance through the use of purchase records.

The following is a summary of the primary hexane/acetone emissions sources associated with the flare production.

- Mixing Bays:
  - 4 mixing bays at the main facility, with 2 mixers in each bay.
  - An additional composition mixer at the M-75 Building.

- Pre-Dryers:
  - 2 bays, 1 pre-dryer in each, vibratory bed-type dryer with a heated vapor pull-off system.

- Vacuum Tumblers:
  - 2 bays with one vacuum tumbler (heated water jacket) in each bay

- Tank Farm:
  - 2 each 2250 gallon vertical acetone/hexane tanks
  - 2 each 2150 gallon vertical acetone/hexane tanks

- 1 each 1850 gallon vertical hexane tank
- 1 each 2100 gallon horizontal. hexane tank
- 1 each 6100 gallon horizontal hexane tank
- 1 each 6100 gallon horizontal acetone tank
- 1 each 6100 gallon horizontal acetone/water tank with air sparger
- 1 each 6200 gallon horizontal water/acetone tank with air sparger
- 1 each 1037 gallon horizontal acetone tank
- 2 each 1037 gallon horizontal acetone/water tanks

R-1/R-15 Area

The R-1/R-15 area is located several miles away from the main plant. The function of the R-15 facility is to dispose of explosives and explosives-contaminated wastes. The waste material is placed in four Open Thermal Treatment Units (OTTUs) and ignited. The OTTUs are grouped as SN-03.

The R-l area contains a small research facility. This research facility contains mixing, drying, and tumbling equipment and emissions are included as part of SN-01. The R-l Area Research and Development Facility produces lab scale blends of flare powders. The area contains a small mixer with a capacity of about 1 kg and a larger mixer with a capacity of about 10 kg.

The flares are tested in several areas around the main facility and at the R-l facility. There are two tunnel testing areas and two ejection testing areas. The flare testing sources are grouped as SN-02.

There are numerous small natural gas fueled boilers and water heaters (grouped as SN-04) at the facility. An emergency generator (SN-05) is located at the facility.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective March 14, 2016
Rules of the Arkansas Plan of Implementation for Air Pollution Control, Rule 19, effective August 6, 2020
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective March 14, 2016
40 C.F.R. 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

This facility is classified as a minor source of greenhouse gas emissions because it has the potential to emit less than 100,000 tpy CO_2e or less than 100 tpy mass basis combined greenhouse gases.

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	31.0	4.7
		PM_{10}	22.2	3.8
		$PM_{2.5}$	See Note*	
		SO_2	0.4	0.4
		VOC	114.9	227.3
		CO	9.3	15.4
		NO_X	5.3	17.6
		Total HAPs	N/A	9.93
Air Contaminants ***		Acetone***	N/A	350.0
01	Process Solvents	VOC Total HAPs** Acetone***	112.5 N/A N/A	225.0 9.50 350.0
02	Ordnance Testing	PM PM_{10} SO_2 VOC CO NOx Total HAPs	2.6 1.8 0.1 0.2 0.4 0.1 N/A	0.6 0.4 0.1 0.1 0.1 0.1 0.01
$03A_1$	Open Thermal Treatment Units (Scenario A: 500 lb/day)	Removed as of R13		
$03B_1$	Open Thermal Treatment Units (Scenario B: 1000 lb/day)	PM PM_{10} SO_2 VOC CO NOx Total HAPs	28.0 20.0 0.1 1.3 4.2 0.5 N/A	2.7 2.0 0.1 0.2 0.4 0.1 0.01

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
04	Natural Gas Fired Boilers	PM	0.3	1.3
		PM_{10}	0.3	1.3
		SO_2	0.1	0.1
		VOC	0.5	1.9
		CO	3.3	14.5
		NOx	4.0	17.2
		Total HAPs	N/A	0.40
05	Emergency Generator	PM	0.1	0.1
		PM_{10}	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.4	0.1
		CO	1.4	0.4
		NOx	0.7	0.2
		Total HAPs	N/A	0.01

*$PM_{2.5}$ limits are source specific, if required. Not all sources have $PM_{2.5}$ limits.
**HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
***Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permit No. 750-A was issued to Tracor Aerospace on April 5, 1985. This was the initial permit for the R-1/R-15 area. In the permit, the facility was limited to burning no more than 100 lb of waste per 24-hour period. Emission levels were not quantified at this time.

Permit No. 750-AR-1 was issued to Tracor Aerospace on April 7, 1988. This modification was issued in order to allow for the operation of two additional open burn pits (for a total of four) and to allow for the burning of up to 100 lb of waste per pit per day, for a total of 400 lb waste burned per day. Emission levels were not quantified at this time.

Permit No. 1865-AOP-R0 was issued to Marconi Aerospace on January 19, 2000. This was the initial air permit for this existing Title V flare production facility. This permit quantified emissions of VOC and hexane from the flare production process. Acetone emissions were omitted from the permit application by the permittee, and were not included in the permit at this time. The ordnance testing process was also omitted from the permit application. Emissions were permitted at 80.0 tpy of VOC and 80.0 tpy hexane.

Permit #1865-AOP-R1 was issued November 12, 2002. This was the initial modification to the operating air permit for this facility. This modification allowed an increased hexane usage at the facility and included acetone emissions, which were omitted from the previous permit. This modification also updated the permit to include a separate facility within the same industrial park, which is also operated by BAE for the purpose of research and development, and for the disposal of undesirable flare material by burning in open pits. This separate facility was previously permitted in minor source air permit No. 750-AR-1. This modification also incorporated a change to the CSN assigned to the facility. The plant was previously assigned a CSN for Ouachita County, when it is actually located in Calhoun County. A new CSN for Calhoun County of 07-0033 was assigned to this permit. This was the CSN previously assigned to the R1/R-15 area. Due to the inclusion of the previously unpermitted ordnance testing emissions, previously unpermitted acetone emissions, and the increase in hexane solvent usage, permitted emissions in this modification increased by 85.6 tpy of PM/PM_{10}, 5.7 tpy NO_x, 1.7 tpy CO, 145.0 tpy VOC, 145.0 tpy hexane, 0.35 tpy hydrogen fluoride, and 0.05 tpy fluorine.

Permit #1865-AOP-R2 was issued February 2, 2006. This permitting action served as a renewal of the Title V permit. Additionally the facility increased the amount of ordnance tested from 20,000 lbs/year to 40,000 lbs/year. Boilers and process heaters that were previously listed as insignificant sources along with a new 2.1 MMBTU/hr boiler were listed as a new source, SN-04. The Insignificant Activities List was updated to include the following: a 2.1 MMBTU/hr Hot Water Boiler; a 0.84 MMBTU/hr Boiler; the usage of primer, ink, ink thinner and sealant; the usage of acetone for cleaning purposes. Lastly, SN-02 hourly emissions increased due to updated emission factors. Permitted emissions increased by 12.0 tons/year (tpy) of PM/PM_{10}, 0.1 tpy of SO_2, 0.4 tpy of VOC, 5.1 tpy of CO, 8.4 tpy of NOx, 0.34tpy of HF, 0.01 tpy of F, and 20.25 tpy of Acetone.

Permit #1865-AOP-R3 was issued on September 5, 2007. This permitting action allowed the addition of another slurry mixing bay with two Morehouse Cowles mixers (SN-01). The addition

of the bay and mixers to the M-75 production area was needed to reduce the amount of explosive handling. This modification did not increase the current permitted emission rates.

Permit #1865-AOP-R4 was issued on April 14, 2008. This permit modification was for the addition of a blend area with a High Shear mixer (SN-01) at the R-1 facility. The current capacity required personnel to make multiple mixes to obtain sufficient working quantities. The additional blend area with a larger mixer directly reduced the usage of the smaller mixer. Throughput and permitted emission rates remained the same.

The permit was also modified to allow the facility to substitute iso-hexane for n-hexane during the production of flares. Permitted Hexane emission rate decreased to 9.5 ton/year (tpy). The VOC emissions remained at 225 tpy.

Permit #1865-AOP-R5 was issued on February 24, 2011. This permit modification was to construct and operate a separate upgraded blend area to the R-1 Research & Development facility to include a 10 kg high shear mixer. Annual permitted emissions remained the same.

Permit #1865-AOP-R6 was issued on May 23, 2012. This modification renewed the existing permit. There were no physical changes at the facility; however, permitted emission limits were revised for SN-02A, SN-02B, SN-02C, and SN-03. Permitted limits were based on AP-42 factors for these sources rather than mass balance estimates of the products of combustion and ordnance testing. Permitted emission limits decreased as follows: 95.1 tons/year (tpy) $PM_{10,}$ 94.3 tpy PM, 6.3 tpy NOx, 2.93 tpy HF, and 0.07 tpy F. Permitted emissions increased as follows: 0.2 tpy SO_2, 0.8 tpy VOC, and 2.2 tpy CO.

Permit #1865-AOP-R7 was issued on December 30, 2014. This permit modification updated and clarified the conditions associated with the Natural Gas Fired Boilers (SN-04). The previous permit noted the inclusion of 17 boilers permitted as SN-04. This modification included the existing process boilers and water heaters listed in the previous permit as insignificant activities and allowed for possible future changes involving small boilers. Total permitted emission rates increased as follows: 0.6 tons/year (tpy) PM_{10}/PM, 7.3 tpy CO, 8.7 tpy NO_X, and 0.4 tpy of Total HAPs.

Permit #1865-AOP-R8 was issued on May 4, 2017. This permitting action was to renew and modify the facility's permit. The emission sources SN-02A, SN-02B, and SN-02C were grouped together as SN-02, SN-03 was updated with a new potential scenario pending the approval of a modification to the facility's RCRA permit, and an additional composition mixer was added to the list of emission points grouped under SN-01. Permitted annual emission changes from this modification are as follows: increase of 0.8 tpy PM, increase of 0.7 tpy PM_{10}, increase of 1.0 tpy VOC, increase of 0.1 tpy CO, increase of 9.52 tpy Total HAPs, increase of 3.5 tpy Acetone and decrease of 9.52 tpy of n-Hexane.

Permit #1865-AOP-R9 was issued on July 23, 2018. This permitting action added an installed emergency generator (SN-05) to the permit. This source and the applicable requirements from NSPS Subpart JJJJ were added. The permitted annual emission changes from this modification are

as follows: an increase of 0.1 tpy PM, PM_{10}, SO_2, and VOC, an increase of 0.4 tpy CO, an increase of 0.2 tpy NO_X, and an increase of 0.01 tpy Total HAPs.

SECTION IV: SPECIFIC CONDITIONS

SN-01 & SN-01-R1
Process Solvent Emissions & R-1 Area R& D Facility

Source Description

This source accounts for all of the process solvent emissions due to the usage of VOC and acetone in the flare production process. All of the VOC and acetone used at the plant is eventually emitted to the atmosphere. Emissions occur primarily during the mixing and flare drying processes. It is assumed that all purchased VOC and acetone is emitted to the atmosphere.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #3. [Reg.19.501 *et seq.*, and 40 C.F.R. § 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Process Solvents	VOC	112.5	225.0

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #3 and #4. [Reg.18.801, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Process Solvents	Acetone Total HAPs	N/A N/A	350.0 9.50

3. The permittee will maintain monthly records of the amount of process solvents purchased each month. The permittee shall calculate the annual VOC emissions using a mass balance and shall assume all of the VOC received at the facility is emitted. These records shall be updated by the 15th day of the month following the month to which the records pertain. A rolling 12 month total and each individual month's data shall be kept on site and updated monthly, and be made available to Department personnel upon request. A report of these records shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. Part 70.6]

4. The permittee will maintain monthly records of the amount acetone purchased each month. The permittee shall calculate the annual acetone emissions using a mass balance and shall

assume all of the acetone received at the facility is emitted. These records shall be updated by the 15th day of the month following the month to which the records pertain. A rolling 12 month total and each individual month's data shall be kept on site and updated monthly, and be made available to Department personnel upon request. This condition will monitor the acetone lost to the atmosphere by assuming that the amount of acetone purchased equals the amount of acetone emitted. A report of these records shall be submitted to the Department in accordance with General Provision #7. [Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-02 (SN-02A, 02B, 02C)
Ordnance Testing

Source Description

Flares are tested in several areas of the main plant and the R-1 Facility. There are two tunnel testing areas and two ejection testing areas. These flare testing emission points are grouped as SN-02.

Specific Conditions

5. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #7. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Pollutant	lb/hr	tpy
SN-02	PM_{10}	1.8	0.4
	SO_2	0.1	0.1
	VOC	0.2	0.1
	CO	0.4	0.1
	NO_X	0.1	0.1

6. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #7. [Reg.18.801 and Ark. Code Ann.§ 8-4-203 as referenced by Ark. Code Ann.§ § 8-4-304 and 8-4-311]

SN	Pollutant	lb/hr	tpy
SN-02	PM	2.6	0.6
	Total HAPs	N/A	0.01

7. The permittee shall not test more than 40,000 pounds of ordnance material at SN-02 during any consecutive 12-month period. [Reg.19.705 Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

8. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #7. These records shall be updated by the 15th day of the month following the month to which the records pertain. A 12-month rolling total and each individual months data shall be maintained on-site and provided to Department personnel upon request. A report of these records shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

9. An exemption from the opacity limitation of Reg.19.503(B) has been granted by the ADEQ Director for this source. The operation of SN-02A through SN-02C shall be conducted in

such a manner as to cause no nuisance to the surrounding community. The Department reserves the right to rescind this exemption if, at any time, the emissions from the operations become a nuisance to the surrounding community. [Reg.19.505(B) and 40 C.F.R. § 52 Subpart E]

SN-03
Open Thermal Treatment Units (OTTUs) – R-15 Area

Source Description

The function of the R-15 facility is to dispose of explosives and explosives-contaminated wastes. The waste material is placed in four Open Thermal Treatment Units (OTTUs) and ignited. The OTTUs are grouped as SN-03.

Specific Conditions

10. The permittee shall not exceed the emission rates set forth in the following table. The facility's RCRA permit daily burn rate limits have been changed and scenario B is now active. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #12, #13 and #15. [Reg.19.501 *et seq*. and 40 C.F.R. Part 52, Subpart E]

Scenario	Pollutant	lb/hr	tpy
A	Removed in R10		
B	PM_{10}	20.0	2.0
	SO_2	0.1	0.1
	VOC	1.3	0.2
	CO	4.2	0.4
	NO_x	0.5	0.1

11. The permittee shall not exceed the emission rates set forth in the following table. The facility's RCRA permit daily burn rate limits have been changed and scenario B is now active. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #12, #13, and #15. [Reg.18.801, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Scenario	Pollutant	lb/hr	tpy
A	Removed in R10		
B	PM	28.0	2.7
	Total HAPs	N/A	0.01

12. The facility's RCRA permit has been amended. To operate under the scenario B conditions, the permittee must keep proof of the finalized RCRA permit on file.

[Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by §§ -4-304 and 8-4-311, and 40 C.F.R. § 70.6]

13. While operating under scenario B, the permittee shall not burn more than 1000 lb of waste at SN-03 during any consecutive 24-hour period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

14. The permittee shall maintain daily records which demonstrate compliance with Specific Condition #13. These records shall be maintained on-site and shall be made available to Department personnel upon request. A report of these records shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705 and 40 C.F.R. Part 52 Subpart E]

15. While operating under scenario B, the permittee shall not burn more than 192,000 lb of wastes at SN-03 during any consecutive 12-month period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

16. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #15. These records shall be updated by the 15th day of the month following the month to which the records pertain. A 12-month rolling total and each individual month's data shall be maintained on-site and provided to Department personnel upon request. A report of these records shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705 and 40 C.F.R. Part 52 Subpart E]

17. An exemption from the opacity limitation of Reg.19.503(B) has been granted by the ADEQ Director for this source. The operation of SN-03 shall be conducted in such a manner as to cause no nuisance to the surrounding community. The Department reserves the right to rescind this exemption if, at any time, the emissions from the operations become a nuisance to the surrounding community. [Reg.19.505(B) and 40 CFR Part 52 Subpart E]

SN-04
Natural Gas Fired Boilers

Source Description

The Natural Gas Fired Boilers are a group of boilers with a combined firing rate of 40.00 MMBtu/hr.

Specific Conditions

18. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #21, #22 and #22. [Reg.19.501 *et seq*. and 40 C.F.R. Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.3	1.3
SO_2	0.1	0.1
VOC	0.5	1.9
CO	3.3	14.5
NO_x	4.0	17.2

19. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #21, #22 and #22. [Reg.18.801, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Pollutant	lb/hr	tpy
PM	0.3	1.3
Total HAPs (products of natural gas combustion)	N/A	0.40

20. The permittee shall not cause to be discharged to the atmosphere from the natural gas fired boilers gases which exhibit an opacity greater than 5%. The opacity shall be measured in accordance with EPA Reference Method 9 as found in 40 CFR 60 Appendix A. Compliance shall be demonstrated by only emitting products of combustion of natural gas in the Natural Gas Boilers (SN-04). [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

21. The permittee shall not exceed a throughput of 40.0 MMBtu/hr of natural gas heat input for all equipment designated at SN-04. Compliance shall be demonstrated through compliance

with Specific Condition #22 . [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

22. The permittee shall maintain an updated list of all equipment and associated firing rates designated under SN-04. The permittee shall update the list immediately after a change, keep records onsite and make the records available to Department personnel upon request. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311, and 40 C.F.R. Part 52, Subpart E]

23. The permittee shall not construct, reconstruct, install, or modify a natural gas fueled boiler that has a total heat input capacity greater than 10 MMBtu/hr input without submitting the appropriate application and obtaining the Department's prior approval. [Reg.19.304, Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

SN-05 - Emergency Generator

Source Description

A Cummins four stroke rich burn natural gas fired emergency generator with a brake horsepower rating of 153.2.

Specific Conditions

24. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 26. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.1	0.1
SO_2	0.1	0.1
VOC	0.4	0.1
CO	1.4	0.4
NO_x	0.7	0.2

25. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 26. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Pollutant	lb/hr	tpy
PM	0.1	0.1
Total HAPs	N/A	0.01

26. The permittee shall not operate SN-05 more than 500 hours per year. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

27. The permittee shall maintain records of the hours of operation of SN-05 each month. These records shall be updated by the 15th day of the month following the month that the records represent, be kept on site, and made available to Department personnel upon request and in accordance with General Provision 7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]

NSPS Subpart JJJJ Conditions

28. SN-05 is subject to 40 C.F.R. § 60 Subpart JJJJ. The permittee shall comply with all applicable provisions of 40 C.F.R. § 60 Subpart JJJJ which includes, but is not limited to, Specific Conditions #29 through #38. [Reg.19.304 and 40 C.F.R. § 60 Subpart JJJJ]

29. The provisions of 40 C.F.R. Part 60 Subpart JJJJ are applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP). For the purposes of 40 C.F.R. Part 60 Subpart JJJJ, the date that construction commences is the date the engine is ordered by the owner or operator. [Reg.19.304 and 40 C.F.R. § 60.4230(a)(4)(iv)]

30. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified. [Reg.19.304, 40 C.F.R. § 60.4233(e), and Table 1 to 40 C.F.R. § 60 Subpart JJJJ]

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_x	CO	VOC[d]	NO_x	CO	VOC[d]
Emergency	HP≥130	1/1/2009	2.0	4.0	1.0	160	540	86

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

[b]Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X + HC.

[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

31. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine. [Reg.19.304 and 40 C.F.R. § 60.4234]

32. For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. [Reg.19.304 and 40 C.F.R. § 60.4236(c)]

33. If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section. [Reg.19.304 and 40 C.F.R. § 60.4243(a)]

    a. If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate. [Reg.19.304 and 40 C.F.R. §60.4243(a)(2)]
        i. If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance. [Reg.19.304 and 40 C.F.R. §60.4243(a)(2)(ii)]

34. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section. [Reg.19.304 and 40 C.F.R. §60.4243(b)]

    a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section. [40 C.F.R. §60.4243(b)(1)]

35. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [Reg.19.304 and 40 C.F.R. § 60.4243(d)]
    a. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 C.F.R. §60.4243(d)(1)]
    b. You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2). [40 C.F.R. §60.4243(d)(2)]

i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 C.F.R. §60.4243(d)(2)(i)]

ii. Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [40 C.F.R. §60.4243(d)(2)(ii)]

iii. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [40 C.F.R. §60.4243(d)(2)(iii)]

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 and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. §60.4243(d)(3)]

i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 C.F.R. §60.4243(d)(3)(i)]

1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 C.F.R. §60.4243(d)(3)(i)(A)]
2. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [40 C.F.R. §60.4243(d)(3)(i)(B)]
3. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [40 C.F.R. §60.4243(d)(3)(i)(C)]
4. The power is provided only to the facility itself or to support the local transmission and distribution system. [40 C.F.R. §60.4243(d)(3)(i)(D)]
5. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility

commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 C.F.R. §60.4243(d)(3)(i)(E)]

36. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233. [40 C.F.R. § 60.4243(e)]

37. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section. [Reg.19.304 and 40 C.F.R. § 60.4245(a)]
    a. All notifications submitted to comply with this subpart and all documentation supporting any notification. [40 C.F.R. §60.4245(a)(1)]
    b. Maintenance conducted on the engine. [40 C.F.R. §60.4245(a)(2)]
    c. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable. [40 C.F.R. §60.4245(a)(3)]
    d. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards. [40 C.F.R. §60.4245(a)(4)]

38. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator 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. [Reg.19.304 and 40 C.F.R. §60.4245(b)]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Armtec Countermeasures Co. will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Reg.19.704, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Reg.19.410(B) and 40 C.F.R. § 52 Subpart E]

3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Department within sixty (60) calendar days after completing the testing. [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

4. The permittee must provide:

    a. Sampling ports adequate for applicable test methods;
    b. Safe sampling platforms;
    c. Safe access to sampling platforms; and
    d. Utilities for sampling and testing equipment.

    [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Reg.19.303 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Reg. 26 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Title VI Provisions

7. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 C.F.R. § 82 Subpart E]

    a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to § 82.106.
    b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
    c. The form of the label bearing the required warning must comply with the requirements pursuant to § 82.110.
    d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.

8. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 C.F.R. § 82 Subpart F]

    a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
    b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
    c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
    d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to § 82.166. ("MVAC like appliance" as defined at § 82.152)
    e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.156.
    f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

9. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 C.F.R. § 82 Subpart A, Production and Consumption Controls.

10. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 C.F.R. § 82 Subpart B, Servicing of Motor Vehicle Air Conditioners.

    The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B

does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

11. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 C.F.R. § 82 Subpart G.

SECTION VII: INSIGNIFICANT ACTIVITIES

The Division of Environmental Quality deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and Regulation 19 Appendix A. Group B insignificant activities may be listed but are not required to be listed in permits. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated October 27, 2021. [Reg.26.304 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
Misc. Coatings, Adhesives, and Inks Usage	A-13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and Reg.26.701(B)]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Division of Environmental Quality takes final action on the renewal application. The Division of Environmental Quality will not necessarily notify the permittee when the permit renewal application is due. [Reg.26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and Reg.26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit.

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing 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.

    [40 C.F.R. § 70.6(a)(3)(ii)(A) and Reg.26.701(C)(2)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement,

report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and Reg.26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Reg.26.2 must certify all required reports. The permittee will send the reports electronically using https://eportal.adeq.state.ar.us or mail them to the address below:

Division of Environmental Quality
Office of Air Quality
ATTN: Compliance Inspector Supervisor
5301 Northshore Drive
North Little Rock, AR 72118-5317

[40 C.F.R. § 70.6(a)(3)(iii)(A) and Reg.26.701(C)(3)(a)]

8. The permittee shall report to the Division of Environmental Quality all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Reg.19.601), the permittee will make an initial report to the Division of Environmental Quality by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

      i. The facility name and location;
      ii. The process unit or emission source deviating from the permit limit;
      iii. The permit limit, including the identification of pollutants, from which deviation occurs;
      iv. The date and time the deviation started;
      v. The duration of the deviation;
      vi. The emissions during the deviation;
      vii. The probable cause of such deviations;
      viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and

ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Division of Environmental Quality within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Reg.19.601, Reg.19.602, Reg.26.701(C)(3)(b), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Reg.26.701(E), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and Reg.26.701(F)(1)]

11. 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 to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and Reg.26.701(F)(2)]

12. The Division of Environmental Quality may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and Reg.26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and Reg.26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director 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 must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Division of Environmental Quality may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and Reg.26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 C.F.R. § 70.6(a)(7) and Reg.26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and Reg.26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and Reg.26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Division of Environmental Quality specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and Reg.26.702(A) and (B)]

19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in Reg.26.2. [40 C.F.R. § 70.6(c)(1) and Reg.26.703(A)]

20. The permittee must allow an authorized representative of the Division of Environmental Quality, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and Reg.26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
    d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Division of Environmental Quality. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and Reg.26.703(E)(3)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
    e. Such other facts as the Division of Environmental Quality may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Reg.26.704(C)]

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
    d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion in the following circumstances:

    a. Such an extension does not violate a federal requirement;
    b. The permittee demonstrates the need for the extension; and
    c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

    [Reg.18.314(A), Reg.19.416(A), Reg.26.1013(A), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Division of Environmental Quality approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Division of Environmental Quality may grant such a request, at its discretion under the following conditions:

    a. Such a request does not violate a federal requirement;
    b. Such a request is temporary in nature;
    c. Such a request will not result in a condition of air pollution;
    d. The request contains such information necessary for the Division of Environmental Quality to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
    e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
    f. The permittee maintains records of the dates and results of such temporary emissions/testing.

    [Reg.18.314(B), Reg.19.416(B), Reg.26.1013(B), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion under the following conditions:

    a. The request does not violate a federal requirement;
    b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
    c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

    [Reg.18.314(C), Reg.19.416(C), Reg.26.1013(C), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

27. Any credible evidence based on sampling, monitoring, and reporting may be used to determine violations of applicable emission limitations. [Reg.18.1001, Reg.19.701, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

Appendix A:
40 C.F.R. 60 Subpart JJJJ

Summary of Requirements[1]

40 CFR part 60, subpart JJJJ

Standards of Performance for Emergency Spark Ignition Internal Combustion Engines

For engines with greater than or equal to 100 horsepower
(except gasoline or rich burn liquefied petroleum gas) that commenced construction
after June 12, 2006 and was manufactured on or after January 1, 2009

NOTE: To refer directly to the regulatory text, please go to Subpart JJJJ (scroll down to almost the end of the page).

Emission Standards: 60.4233(e), Table 1

60.4233(e): Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

[1] Disclaimer: The content provided in this software tool is intended solely as assistance for potential reporters to aid in assessing requirements for compliance under the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR Part 60 Subpart JJJJ. Any variation between the rule and the information provided in this tool is unintentional, and, in the case of such variations, the requirements of the rule govern. Use of this tool does not constitute an assessment by EPA of the applicability of the rule to any particular facility. In any particular case, EPA will make its assessment by applying the law and regulations to the specific facts of the case.

Table 1 to Subpart JJJJ of Part 60—NO_X, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
Non-Emergency SI Natural Gas[b] and Non-Emergency SI Lean Burn LPG[b]	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	[c]10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O2.

[b]Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x + HC.

[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

Fuel Requirements: No requirements

Importing/Installing Requirements:

These requirements do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

60.4236(c): For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011

Monitoring, Operation and Maintenance Requirements:

If your engine is 1) less than 130 HP and built on or after 7/1/2008; or
2) 130≤HP<500 and built on or after 1/1/2011; or
3) greater than or equal to 500 HP and built on or after 7/1/2010, and does not meet the standards applicable to non-emergency engines:

60.4237(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Engines Being Operated and Maintained in a Certified Manner:

If you operate and maintain the certified stationary SI ICE and control device according to the manufacturer's emission-related written instructions, you are operating in a certified manner.

General Compliance Requirements:

All Engines 60.4234: Owners and operators of stationary SI ICE must operate and maintain stationary spark ignition internal combustion engine that achieve the emission standards as required in §60.4233 over the entire life of the engine.

60.4243(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per

calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

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

Note: On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 60.4243(d)(2)(ii)-(iii) below. Guidance regarding the impact of the vacatur is available here: https://www3.epa.gov/ttn/atw/icengines/docs/RICEVacaturGuidance041516.pdf.

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

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

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

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

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

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

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

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

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

(ii) [Reserved]

If using Air-to-Fuel Ratio Controller: 60.4243(g);

60.4243(g): It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

If purchasing certified engine- 60.4243(b) (1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

If purchasing non-certified engine- 60.4243(b)(2) (Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

Performance Testing:

All natural gas engines that use propane as an alternative fuel for more than 100 hrs/yr: 60.4243(e)

60.4243(e): Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

Non- certified Engine: 25<HP≤500- 60.4243(b)(2)(i), 60.4244; >500 HP:- 60.4243(b)(2)(ii), 60.4244

Engines 25<HP≤500-
60.4243(b)(2)(i): If you are an owner or operator of a stationary SI ICE greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

Engines greater than 500 HP-
60.4243(b)(2)(ii): If you are an owner or operator of a stationary SI ICE greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution

control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

Non-Certified Engines >25 HP:

60.4244: Owners and operators of stationary spark ignition internal combustion engine who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8 (c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8 (f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad (Eq. 2)$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad (Eq. 3)$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured

values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RFi= Response factor of compound i when measured with EPA Method 25A.

C_Mi= Measured concentration of compound i in ppmv as carbon.

C_Ai= True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:

Ci_{corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

Ci_{meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:

CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

Compliance Requirements for Engines Being Operated and Maintained in a Non-Certified Manner:

If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to manufacturer's emission-related written instructions, your engine will be considered a non-certified engine.

General Compliance Requirement:

All Engines-
60.4234: Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

60.4243(d): If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response,

and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

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

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

Note: On May 1, 2015, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision vacating paragraphs 40 CFR 60.4243(d)(2)(ii)-(iii) below. Guidance regarding the impact of the vacatur is available here: https://www3.epa.gov/ttn/atw/icengines/docs/RICEVacaturGuidance041516.pdf.

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

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

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

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

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

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

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

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

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

(ii) [Reserved]

If using Air-to-Fuel Ratio Controller: 60.4243(g);

60.4243(g): It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

Engines 100≤HP≤500-
60.4243(a)(2)(ii): If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

Engines greater than 500 HP-
60.4243(a)(2)(iii): If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

Performance Testing Requirements:

All natural gas engine using propane as an alternative fuel for more than 100 hrs/yr-

60.4243(e): Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

Certified Engines: All Certified Engines ≥100 HP: 60.4244; 100≤HP≤500: 60.4243(a)(2)(ii); >500 HP: 60.4243(a)(2)(iii)

All certified engines greater than or equal to 100 HP:
60.4244: Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8 (c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8 (f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{ss}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RFi= Response factor of compound i when measured with EPA Method 25A.

C_Mi= Measured concentration of compound i in ppmv as carbon.

C_Ai= True concentration of compound i in ppmv as carbon.

$$C_{i,corr} = RF_i \times C_{i,meas} \qquad \text{(Eq. 5)}$$

Where:

Ci_{corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

Ci_{meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{i,corr} \qquad \text{(Eq. 6)}$$

Where:

CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

For engines with 100≤HP≤500-
60.4243(a)(2)(ii): If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

For engines greater than 500 HP-
60.4243(a)(2)(iii): If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

Non-certified Engine: All Non-Certified Engines >25 HP: 60.4244;
25<HP≤500: 60.4243(b)(2)(i); >500 HP: 60.4243(b)(2)(ii)

All non-certified engines greater than 25 HP-

60.4244: Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.
(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8 (c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8 (f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

Cd= Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{as}}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RFi= Response factor of compound i when measured with EPA Method 25A.

C_{Mi}= Measured concentration of compound i in ppmv as carbon.

C_{Ai}= True concentration of compound i in ppmv as carbon.

$$C_{corr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:

Ci_{corr}= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

Ci_{meas}= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:

CPeq= Concentration of compound i in mg of propane equivalent per DSCM.

For engines 25<HP≤500-
60.4243(b)(2)(i): If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

For engines greater than 500 HP-
60.4243(b)(2)(ii): If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

Notifications, Reports, and Records Requirement: 60.4245(a),(b); for engines greater than 100 HP and with greater than 15 hours/year for emergency DR: § 60.4245 (e); if natural gas engine and using propane as alternative fuel solely during emergency operations: 60.4243(e)

60.4245(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

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

(2) Maintenance conducted on the engine.

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

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

60.4245(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator 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.

For engines greater than 100 HP and with greater than 15 hours/year for emergency demand response:

§ 60.4245(e): If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in § 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 60.4243(d)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(3)(i).

The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4.

If natural gas engine and using propane as alternative fuel solely during emergency operations-

60.4243(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

General Provisions (40 CFR part 60): 60.4246, Table 3

60.4246: Table 3 to this subpart shows which parts of the General Provisions in §60.1 through§60.19 apply to you.