Modi, Beena J <beena.j.modi@wv.gov>

RE: [EXTERNAL] R30-09900118-2020(SM01)

1 message

Adams, Tina N. <TAdams3@marathonpetroleum.com> Tue, Dec 7, 2021 at 12:52 PM
To: "Modi, Beena J" <beena.j.modi@wv.gov>

Yes, that is what I want to confirm that Section 5.3.1 does not make testing mandatory as long as we follow the other requirements. I have no other comments.

Thanks,

Tina

From: Modi, Beena J <beena.j.modi@wv.gov>
Sent: Tuesday, December 7, 2021 12:48 PM
To: Adams, Tina N. <TAdams3@marathonpetroleum.com>
Subject: Re: [EXTERNAL] R30-09900118-2020(SM01)

Are you referring to the testing in condition 5.3.1? If so, testing is required according to condition 5.1.6 which says if you do not install and configure the engine and control device according to the manufacturer's emission-related written instruction, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year.

So, if you operate the certified engine according to the manufacturer's instructions and do not change the settings, you will not have to test.

On Tue, Dec 7, 2021 at 10:08 AM Adams, Tina N. <TAdams3@marathonpetroleum.com> wrote:

> Hello Beena,
>
> Thank you for the draft Title V revision for the Propane Cavern for review. I would like to verify that the information provided under the Testing section is only there if performance tests in-use are conducted and not a requirement to conduct performance tests.
>
> *Tina*

From: Modi, Beena J <beena.j.modi@wv.gov>
Sent: Friday, December 3, 2021 8:26 AM
To: Adams, Tina N. <TAdams3@marathonpetroleum.com>
Subject: [EXTERNAL] R30-09900118-2020(SM01)

Hi Tina,

Please review the attached documents and let me know your comments by Dec 9th.

Thanks,

Beena Modi

Modi, Beena J <beena.j.modi@wv.gov>

Re: [EXTERNAL] R30-09900118-2020(SM01)

1 message

McCumbers, Carrie <carrie.mccumbers@wv.gov> Tue, Dec 7, 2021 at 10:53 AM
To: "Modi, Beena J" <beena.j.modi@wv.gov>

Beena,

Is she referring to the testing in condition 5.3.1? If so, testing is required according to condition 5.1.6 which says if you do not install and configure the engine and control device according to the manufacturer's emission-related written instruction, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year. So, if they operate the certified engine according to the manufacturer's instructions and do not change the settings, they will not have to test.

Thanks,
Carrie

On Tue, Dec 7, 2021 at 10:09 AM Modi, Beena J <beena.j.modi@wv.gov> wrote:

---------- Forwarded message ---------
From: **Adams, Tina N.** <TAdams3@marathonpetroleum.com>
Date: Tue, Dec 7, 2021 at 10:08 AM
Subject: RE: [EXTERNAL] R30-09900118-2020(SM01)
To: Modi, Beena J <beena.j.modi@wv.gov>
Cc: Ewing, Bill <wjewing@marathonpetroleum.com>

Hello Beena,

Thank you for the draft Title V revision for the Propane Cavern for review. I would like to verify that the information provided under the Testing section is only there if performance tests in-use are conducted and not a requirement to conduct performance tests.

Tina

From: Modi, Beena J <beena.j.modi@wv.gov>
Sent: Friday, December 3, 2021 8:26 AM
To: Adams, Tina N. <TAdams3@marathonpetroleum.com>
Subject: [EXTERNAL] R30-09900118-2020(SM01)

Hi Tina,

Please review the attached documents and let me know your comments by Dec 9th.

> Thanks,
>
> Beena Modi

Modi, Beena J <beena.j.modi@wv.gov>

RE: [EXTERNAL] R30-09900118-2020(SM01)

1 message

Adams, Tina N. <TAdams3@marathonpetroleum.com> Thu, Nov 18, 2021 at 1:14 PM
To: "Modi, Beena J" <beena.j.modi@wv.gov>

The fire pump is less than 30 l/cyl (4.5 l/cyl).

Thanks,

Tina

From: Modi, Beena J <beena.j.modi@wv.gov>
Sent: Thursday, November 18, 2021 12:49 PM
To: Adams, Tina N. <TAdams3@marathonpetroleum.com>
Subject: [EXTERNAL] R30-09900118-2020(SM01)

Hi Tina,

A 95HP diesel fired emergency use fire pump manufactured in June 2016 was installed at the Cavern in October 2016. The engine is subject to 40 CFR 63 Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants (HAP) for Stationary Reciprocating Internal Combustion Engines (ICE)" due to its potential HAP emissions and 40 CFR 60 Subpart IIII "Standards of Performance for Stationary Compression Ignition ICE" due to the year of construction. 40 CFR 63.6590(c)(6) provides that compliance with Subpart ZZZZ for new emergency engines will meet by complying with Subpart IIII with no further requirements under Subpart ZZZZ. On September 20, 2016, MPC received a determination (PD16-044) from DAQ that a permit under 45CSR13 was not required for installation and operation of the fire pump engine at the Cavern.

Is this fire pump ≥30 l/cyl?

Can you let me know which Engine category you follow?

Thanks,

Beena Modi

51_37094_0.pdf
842K

Modi, Beena J <beena.j.modi@wv.gov>

Completeness Determination, R30-09900118-2020

1 message

Modi, Beena J <beena.j.modi@wv.gov> Mon, Oct 4, 2021 at 5:43 PM
To: jmrichert@marathonpetroleum.com, tadams3@marathonpetroleum.com

Your Title V application for a significant permit modification of the above referenced facility was received by this Division on September 30, 2021. After review of said application, it has been determined that the application is administratively complete as submitted.

The applicant has the duty to supplement or correct the application. An applicant who fails to submit any relevant facts or who has submitted incorrect information in any permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit modification.

The submittal of a complete application shall not affect the requirement that any source have all **preconstruction permits** required under the rules of the Division.

If during the processing of this application it is determined that additional information is necessary to evaluate or take final action on this application, a request for such information will be made in writing with a reasonable deadline for a response. The source's ability to operate without a Title V permit modification in accordance with 45CSR§30-4.1.a.2. (if applicable), shall be in effect from the date of startup of the proposed changes until the final permit modification is issued, provided that the applicant submits any requested additional information by the deadline specified. This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 6.1.d of 45CSR30 and as required by paragraph 4.1.b, the applicant fails to submit any additional information identified as being needed to process the application by the deadline specified in writing.

Please remember, **failure of the applicant to timely submit information required or requested to process the application may cause the Application Shield (if applicable) to be revoked.** Should you have any questions regarding this determination, please contact me.

Sincerely,

Beena Modi

Title V Permit Engineer

Beena.j.modi@wv.gov

Catlettsburg Refining, LLC
A subsidiary of Marathon Petroleum Company LP
11631 U.S. Route 23
P.O. Box 1492
Catlettsburg, KY 41129
Tel: 606.921.6200
Fax: 606.921.3500

September 30, 2021

Director
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

ELECTRONIC SUBMITTAL – DEPAirQualityReports@wv.gov

RE: Marathon Petroleum Company, LP; Neal Propane Cavern
Permit No. R30-09900118-2020
Significant Revision Application

Dear Director:

Marathon Petroleum Company LP (MPC) owns and operates a propane storage cavern (Cavern) in Neal, West Virginia. The facility currently operates in accordance with West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality (DAQ) Title V Operating Permit R30-09900118-2020, issued January 2, 2020.

A 95HP diesel fired emergency use fire pump manufactured in June 2016 was installed at the Cavern in October 2016. The engine is subject to 40 CFR 63 Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants (HAP) for Stationary Reciprocating Internal Combustion Engines (ICE)" due to its potential HAP emissions and 40 CFR 60 Subpart IIII "Standards of Performance for Stationary Compression Ignition ICE" due to the year of construction. 40 CFR 63.6590(c)(6) provides that compliance with Subpart ZZZZ for new emergency engines will meet by complying with Subpart IIII with no further requirements under Subpart ZZZZ. On September 20, 2016, MPC received a determination (PD16-044) from DAQ that a permit under 45CSR13 was not required for installation and operation of the fire pump engine at the Cavern.

DAQ considers the Cavern, MPLX Terminal and Storages LLC's Butane Cavern in Kenova, WV, and Catlettsburg Refining, LLC's Catlettsburg Refinery in Catlettsburg, KY to be a single source for Clean Air Act permitting purposes and considers the Cavern to be a major source of HAPs requiring an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30. It has come to our attention that while a permit was not required under 45CSR13 to construct the engine, the facility's Title V permit required a modification under 45CSR30. Because the engine triggers 40 CFR Part 60 regulations, DAQ considers the Title V modification to be classified as a significant modification. Please find attached the significant modification application to incorporate the engine and regulatory requirements of Subpart IIII into the Cavern's Title V permit.

Note the following attachments listed in Section 6 of the application form are not applicable to this modification and are not included.

- Attachment A – Business Confidentiality Claims
- Attachment F – Schedule of Compliance Form(s)
- Attachment G – Air Pollution Control Device Form(s)
- Attachment H – Compliance Assurance Monitoring Form(s)

If upon your review, you determine that any additional information is needed or if you have any questions regarding the planned changes, please contact Tina Adams at 606-921-3389 or TAdams3@marathonpetroleum.com.

Respectfully,

SIGN HERE

Jay M.G. Richert

Jay M. Richert
Deputy Assistant Secretary

Attachments
tna/wje/gdn
tna wje BDN

WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

Received
September 30, 2021
WV DEP/Div of Air Quality

TITLE V PERMIT REVISION APPLICATION

PLEASE CHECK TYPE OF TITLE V PERMIT REVISION:

- ☐ ADMINISTRATIVE AMENDMENT
- ☐ MINOR MODIFICATION
- ☑ SIGNIFICANT MODIFICATION
- ☐ OFF-PERMIT CHANGE
- ☐ OPERATIONAL FLEXIBILITY [502(B)(10) CHANGES]
- ☐ REOPENING

TITLE V PERMIT NUMBER:
R30- 09900118-2020

WHEN DID OR WHEN WILL THE CHANGES OCCUR?
MM/DD/YYYY : **October 2016**

SIC CODES: PRIMARY: 4247 **SECONDARY:** 2911

Refer to "Title V Revision Guidance" (Appendix A, "Title V Permit Revision Flowchart"), for type of revision, and to Section 7 of this Application for Application Completeness and Ability to Operate information

Section 1: General Information

a. Name of Applicant ***(As registered with the WV Secretary of State's Office)*****:**	**b. Facility Name or Location:**
Marathon Petroleum Company, LP By: MPC Investment, LLC, general partner	Neal Propane Cavern

b. Contact Information		
Responsible Official: Jay M. Richert		Title: Deputy Assistant Secretary
Street or P.O. Box: P. O. Box 1492		
City: Catlettsburg	State: KY	Zip: 41129
Telephone Number: (606) 921 - 6200	Fax Number: (606) 921 - 3500	E-mail: jmrichert@marathonpetroleum.com
Environmental Contact: Tina N. Adams, PE		Title: Advanced HES Professional
Street or P.O. Box: P. O. Box 1492		
City: Catlettsburg	State: KY	Zip: 41129
Telephone Number: (606) 921 - 3389	Fax Number: (606) 921 - 6921	E-mail: tadams3@marathonpetroleum.com
Application Preparer: Same as Environmental Contact		Title:
Company:		
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number: ( ) -	Fax Number: ( ) -	E-mail:
Person to contact if we have questions regarding this Application: Tina N. Adams		

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 2: Revision Information

a. Description of Changes Associated with this Permit Revision

Provide a general description of changes to the facility.

Addition of a 95HP stationary diesel fueled engine to power a firewater pump

b. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☑ No

If Yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY"*** guidance as **ATTACHMENT A.**

c. Provide a **Plot Plan(s**) if new emission points were added since latest revision, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the new/modified stationary source(s) is located as **ATTACHMENT B.** For instructions, refer to "***Plot Plan - Guidelines***"**.**

d. Provide a detailed **Process Flow Diagram(s)** if new emission points were added since latest revision, showing each new/modified process or emissions unit as **ATTACHMENT C.** Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

e. Emission Units Table

Fill out the **Emission Units Table** for new and/or modified equipment and provide it as **ATTACHMENT D**.

f. Emission Units Form(s)

For each new and/or modified emission unit(s) with applicable requirement(s) listed in the **Emission Units Table**, fill out and provide an **Emission Unit Form(s)** as **ATTACHMENT E**.

Are you in compliance with all facility-wide applicable requirements? ☑ Yes ☐ No

For each new and/or modified emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.

g. Control Devices

For each new and/or modified control device listed in the **Emission Units Table**, fill out and provide an **Air Pollution Control Device Form(s)** as **ATTACHMENT G**.

For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Part 70 Major Source Threshold level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. If applicable, please check appropriate box in Section 3(a) below, fill out and provide these forms for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 3: New Applicable Requirements

a. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
☐ SIP	☐ FIP
☐ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☑ Section 111 NSPS (Subpart(s) IIII)	☑ Section 112(d) MACT standards (Subpart(s) ZZZZ)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR26)
☐ CAIR SO_2 Trading Program (45CSR41)	

b. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which apermit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

45CSR7-To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations: This rule does not apply since this facility does not emit smoke, particulate matter, or other gaseous matter. Also, this facility does not meet the definition of a manufacturing process in 45CSR7-2.20.

45CSR21-To Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds: The only potentially applicable sections of this regulation are 45CSR§21-26 for Leaks from Petroleum Refinery Equipment and 45CSR§21-40 for Other Facilities that Emit Volatile Organic Compounds. The propane cavern does not meet the definition of a petroleum refinery in 45CSR§21-2.55, since this facility is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through the redistillation, cracking, or reforming of unfinished petroleum derivatives; so 45CSR§21-26 does not apply. The propane cavern's aggregate maximum theoretical VOC emissions are below 100 TPY, so 45CSR§21-40 does not apply.

45CSR27-To Prevent and Control the Emissions of Toxic Air Pollutants: This facility does not meet the definition of "chemical processing unit" in 45CSR§27-2.4 since the propane stored in the cavern is below 5% benzene by weight, thus this rule does not apply.

40 CFR 64-Compliance Assurance Monitoring: This facility does not have any pollutant-specific emission units that satisfy the requirements of 40CFR§64.2(a), thus CAM does not apply.

☒ **Permit Shield Requested** *(not applicable to Minor Modifications, Off-Permit Changes, or for Operational Flexibility)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

c. Suggested Title V Draft Permit Language

Provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit as **ATTACHMENT I**. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e. g. 45CSR§7-4.1)) for those requirements being added / revised.

See Attachment I

d. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number
None		

e. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number
None		

Section 4: Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY	For Off-Permit Changes: Provide Total Aggregated Emissions Increase Since Last Permit/Modification
VOC	0.06	
NOx	2.33	
CO	0.64	
PM	0.08	
SO2	0.85	

Provide **Supporting Emission Calculations/Estimations** as **ATTACHMENT J**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 5: Certification of Information

a. Certification For Use Of Minor Modification Procedures ***(Required Only for Minor Modification Requests)*** ***NA***

Note:	*This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed):	NA *(Please use blue ink)*	Date:	/ / *(Please use blue ink)*
Named (typed):		Title:	

***b.* Certification of Truth, Accuracy and Completeness and Certification of Compliance**
(Required For All Revision Requests)

Note:	*This Certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.*

Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Jay M. Richert | Title: Deputy Assistant Secretary

Responsible official's signature:

Signature: Jay M.G. Richert (SIGN HERE) Signature Date: 9/30/21

(Please use blue ink)

Received
September 30, 2021
WV DEP/Div of Air Quality

Note: Please check all applicable attachments included with this permit application:

NA	ATTACHMENT A: Business Confidentiality Claims
✔	ATTACHMENT B: Plot Plan(s)
✔	ATTACHMENT C: Process Flow Diagram(s)
✔	ATTACHMENT D: Emission Units Table
✔	ATTACHMENT E: Emission Unit Form(s)
NA	ATTACHMENT F: Schedule of Compliance Form(s)
NA	ATTACHMENT G: Air Pollution Control Device Form(s)
NA	ATTACHMENT H: Compliance Assurance Monitoring Form(s)
✔	ATTACHMENT I: Suggested Title V Draft Permit Language
✔	ATTACHMENT J: Supporting Emission Calculations/Estimations

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

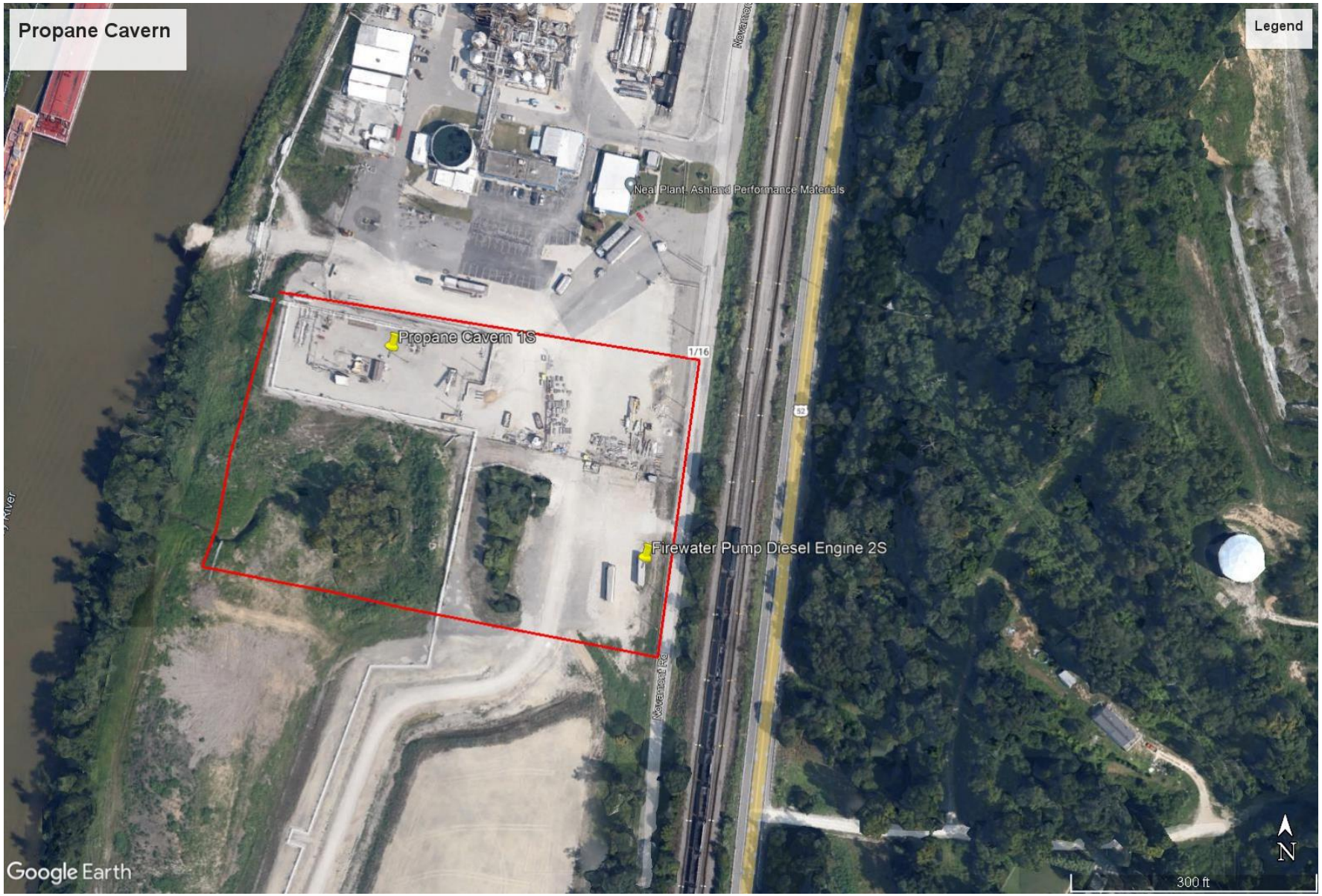
Section 7: Application Completeness and Ability to Operate information for different types of Title V Permit revisions

(Refer to "Title V Revision Guidance" for more information)

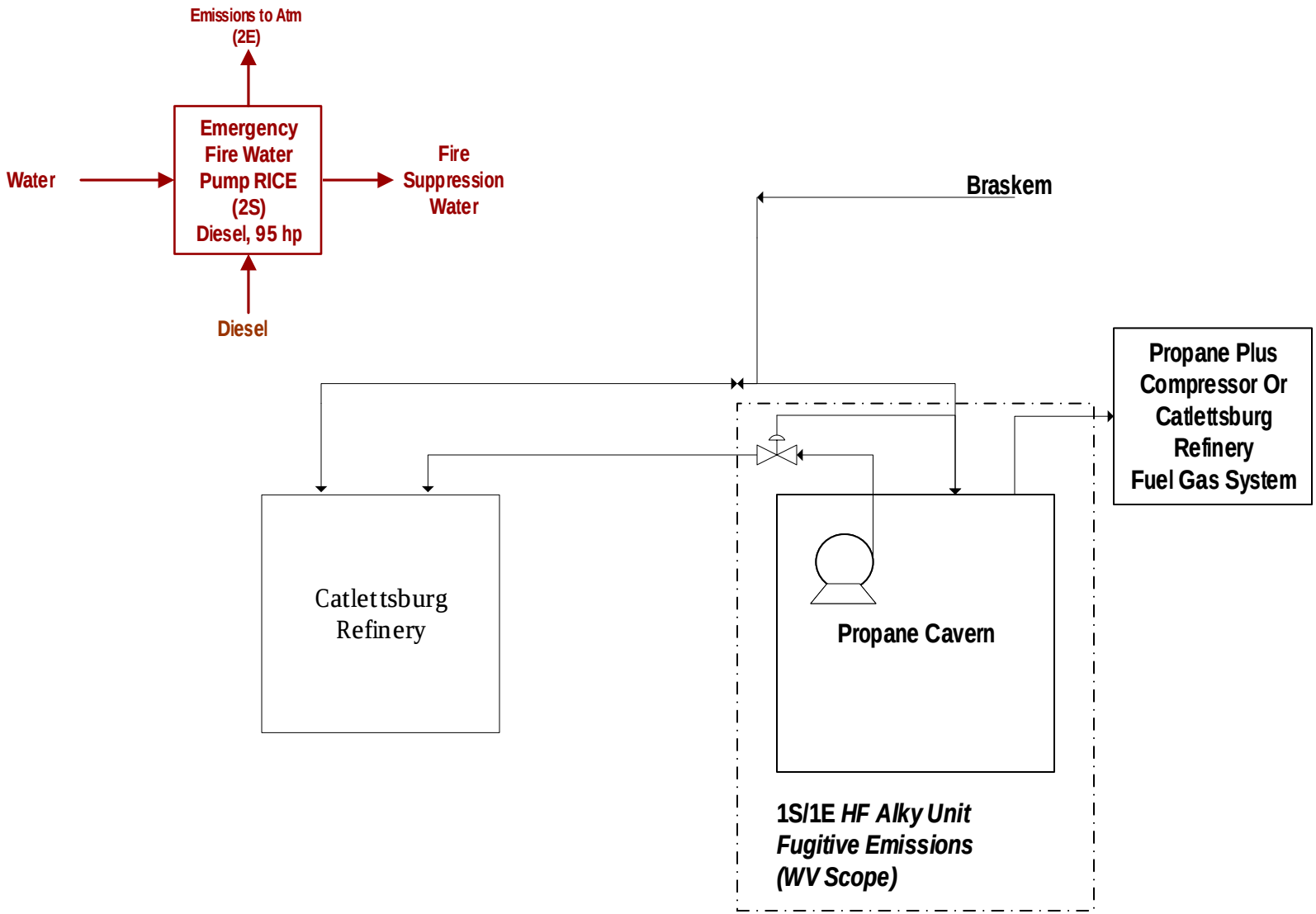
Type of Revision	Application/Notification Requirements	Ability to Operate
Administrative Amendment	☐ Description of change ☐ Supplemental information (rationale) ☐ Certification of application and compliance (Section 5(b))	Upon submittal of the application
Minor Modification	☐ Description of change ☐ Associated change in emissions ☐ Sample Calculations/estimations for determining emissions ☐ List of new applicable requirements associated with changes ☐ List of R13/R14 permits associated with the changes ☐ Suggested draft permit language ☐ Certification for use of Minor Modification (Section 5(a)) ☐ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After seven (7) days from the submittal of the application, or upon issuance of the R13/R14 permit (if any), whichever is later
Significant Modification	☑ Description of change ☑ Associated change in emissions ☑ Sample Calculations/estimations for determining emissions ☑ List of R13/R14 permits associated with the changes ☑ List of new applicable requirements associated with changes ☑ Request for permit shield ☑ Updated drawings, plot plans, process flow diagrams, etc. ☑ Certification of application and compliance (Section 5(b))	Upon issuance of the modified Title V permit (if changes either conflict with, or are prohibited by existing Title V Permit terms/ conditions), OR upon obtaining of proper R13/ R14 Permit for first 12 months (if changes neither conflict with, nor are prohibited by existing Title V Permit terms/conditions)
Off-Permit Changes	☐ Notification/application to DAQ and U.S.E.P.A. within 2 business days of the change ☐ Description of the change ☐ The date on which the change will occur or has occurred ☐ Pollutants and amounts emitted ☐ Sample Calculations/estimations for determining emissions ☐ Any new applicable requirements that will apply to changes ☐ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After two (2) days from the submittal of the application
Operational Flexibility	☐ Notification/application submitted to DAQ and U.S.E.P.A. in advance (7 days prior to making changes) ☐ Description of the change ☐ The date on which the change is to occur ☐ Permit terms and conditions affected by the change ☐ Certification of application and compliance (Section 5(b)) ***No Permit Shield***	After seven (7) days from the submittal of the application/notification to DAQ and EPA
Reopening	☐ Description of change ☐ List of new applicable requirements associated with changes ☐ Suggested draft permit language ☐ Certification of application and compliance (Section 5(b))	Ability to operate is not reflected by the changes

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT B
PLOT PLAN



Attachment C: Propane Cavern Process Flow Diagram



ATTACHMENT D - Title V Equipment Table

(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
2E	NA	2S	Firewater Pump Diesel Engine	95 HP	2016

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	Emission unit name:	List any control devices associated with this emission unit:
2S	**Firewater Pump Diesel Engine**	**NA**

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Base Cummins 170 HP diesel engine derated to 95HP by Cummins Firepower using an engine control module for emergency firefighting certified to NFPA requirements.

Manufacturer:	Model number:	Serial number:
Cummins Firepower	**CFP5E-F10**	**74000793**

Construction date: (MM/DD/YYYY)	Installation date: (MM/DD/YYYY)	Modification date(s): (MM/DD/YYYY)
June 2016	**October 2016**	**NA**

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

95 HP (71 KW)

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
5.1 gallons	**44,600 gallons**	**8760**

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel?	If yes, is it?
__**X**_Yes ___ No	_ _ Indirect Fired __X Direct Fired
Maximum design heat input and/or maximum horsepower rating: **95 HP**	Type and Btu/hr rating of burners: **NA**

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel (#2 Fuel Oil)	**15 ppm**		**138,700 BTU/gal**

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	**0.15**	**0.64**
Nitrogen Oxides (NO_X)	**0.53**	**2.33**
Lead (Pb)	**0**	**0**
Particulate Matter ($PM_{2.5}$)	**0.02**	**0.08**
Particulate Matter (PM_{10})	**0.02**	**0.08**
Total Particulate Matter (TSP)	**0.02**	**0.08**
Sulfur Dioxide (SO_2)	**0.19**	**0.85**
Volatile Organic Compounds (VOC)	**0.01**	**0.06**
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	**6.59 E-04**	**2.89 E-03**
Toluene	**2.89 E-04**	**1.27 E-03**
Xylenes	**2.01 E-04**	**8.83 E-04**
1,3 Butadiene	**2.76 E-05**	**1.21 E-04**
Formaldehyde	**8.33 E-04**	**3.66 E-03**
Acetaldehyde	**5.48 E-04**	**2.40 E-03**
Acrolein	**6.53 E-05**	**2.87 E-04**
Naphthalene	**5.99 E-05**	**2.63 E-04**
PAH (excluding Naphthalene)	**5.88 E-05**	**2.58 E-04**
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Emission Factors derived from:

- **Cummins Fire Power ULSD EPA Tier 3 Emission Data (June 2014)**
- **AP-42 Stationary Internal Combustion Sources: Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines (10/96)**
- **AP-42 Stationary Internal Combustions Sources: Table 3.3-2 Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines (10/96)**

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter,this information should also be included.

40 CFR 60.4211(a) – Operate according to manufacturer's instructions and meet 40 CFR Part 1068

40 CFR 60.4202(d) – Emission Limits (Table 4, 95 HP, model year 2016)

40 CFR 60.4211(c) – Purchase an engine certified to the emission standards

40 CFR 60.4207(b) – Use diesel fuel that meets the requirements of 40 CFR 1090.305

40 CFR 60.4211(f) – Limits on operational hours to maintain emergency use status

40 CFR 60.4211(g)(2) – Requirements for maintenance plans

40 CFR 60.4209(a) – Requirements for installing a non-resettable hour meter

40 CFR 60.7214(b) – Requirements for recording operational hours

_ **X** _ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shallbe used to demonstrate compliance. If the method is based on a permit or rule, include the condition numberor citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

40 CFR 60.4211(a) –Recordkeeping of manufacturer's instructions and maintenance

40 CFR 60.4202(d) – Recordkeeping of manufacturer's certification

40 CFR 60.4211(c) – Recordkeeping of manufacturer's certification

40 CFR 60.4207(b) – Recordkeeping of supplier's fuel certification

40 CFR 60.4211(f) – Recordkeeping of operational hours and reason for use

40 CFR 60.4211(g)(2) – Maintenance records

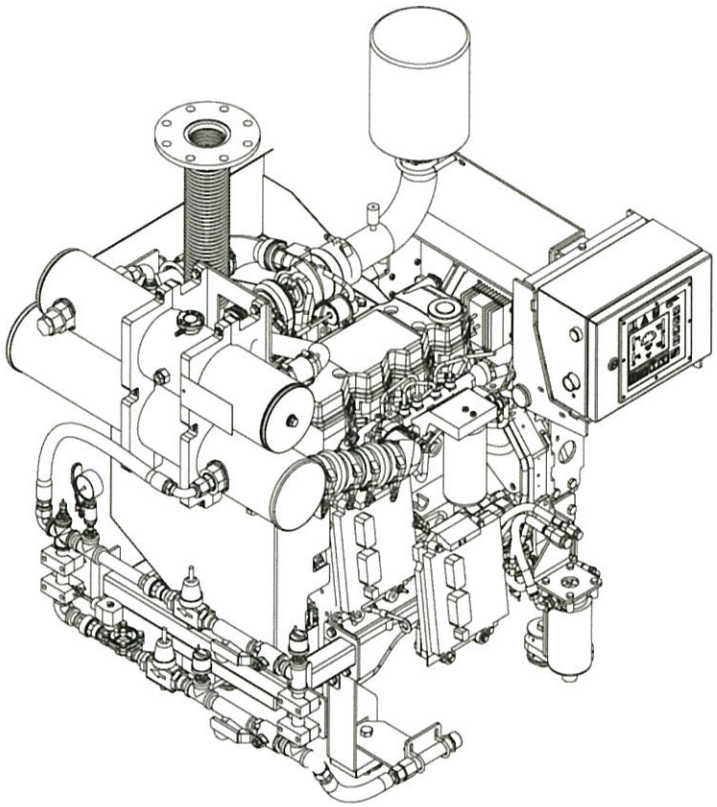
40 CFR 60.4209(a) – Recordkeeping of manufacturer's certification

40 CFR 60.4214(b) – Recordkeeping of manufacturer's certification

Are you in compliance with all applicable requirements for this emission unit? **X**_Yes _No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

Cummins / Fire Power	**Engine Specification Sheet** **Cummins Fire Power** De Pere, WI 54115 http://www.cumminsfirepower.com	**Basic Engine Model** **CFP5E-F10** F20, F30, F40, F50 Curve Number: **FR - 91601** Revision Date: **June 2014**



Operating Speed (RPM)

Model	1470		1760		1900		2100		2350		2600	
CFP5E-F50	113	(84)	129	(96)	135	(101)	146	(109)	150	(112)	148	(110)
CFP5E-F40	113	(84)	123	(92)	129	(96)	136	(101)	143	(107)	141	(105)
CFP5E-F30	104	(78)	118	(88)	121	(90)	125	(93)	130	(97)	129	(96)
CFP5E-F20	94	(70)	107	(80)	110	(82)	113	(84)	118	(88)	117	(87)
CFP5E-F10	84	(63)	95	(71)	98	(73)	101	(75)	105	(78)	104	(78)

Ratings are: **HP** (kW)

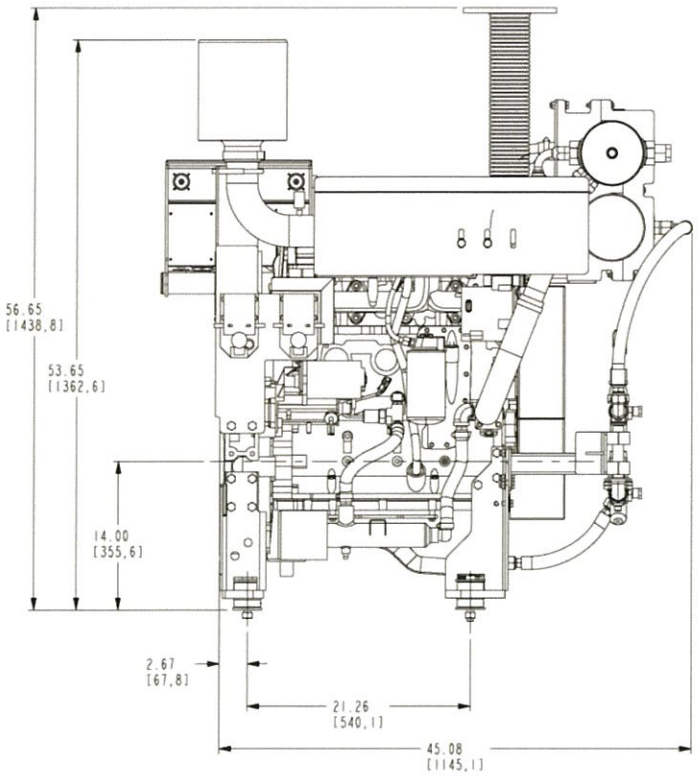
Specifications

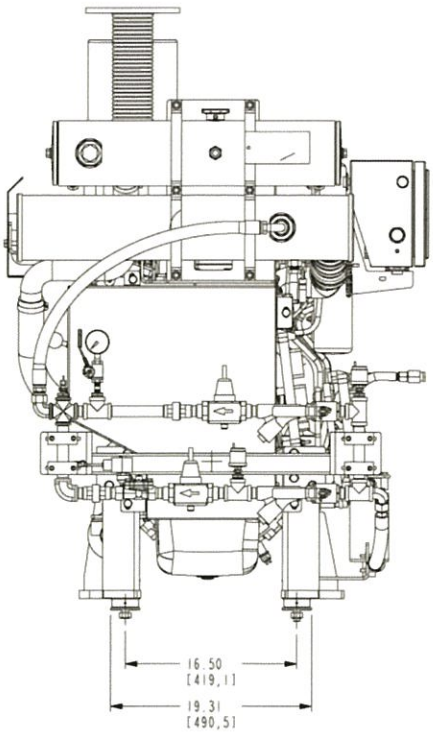
Aspiration	Turbocharged and Charge Air Cooled
Rotation	Counterclockwise from flywheel end
Weight - lb (kg) Est	1340 (603)
Displacement - in^3 (liter)	272 (4.5)
Engine Type	4 Cycle; In-Line, 4 Cylinder
Engine Series	Cummins QSB4.5 Series
Exhaust Emissions	EPA/CARB Tier 3

Equipment	Standard	Optional
Air Cleaner	Disposable, Treated for High Humidity, Indoor Service	~~Heavy Duty, 2 stage with replaceable elements.~~
Alternator	12V-DC, 95 AMPS; With Belt Guard	~~24V-DC, 45 AMPS; With Belt Guard~~
Cooling Loop (Maximum Pressure of 350 PSI)	3/4" diameter for Fresh Water. With alarm sensors and FM Approval.	~~Cu-Ni Construction available for Sea Water applicants~~
Exhaust Protection	Metal Guards on Manifolds and Turbo	N/A
Exhaust Flex Connection	SS Flex, NPT	~~SS Flex, 150# Flange~~
Flywheel Power Take-Off	~~Flywheel~~	Drive Shaft System
Fuel Connections	Fire Resistant Flexible Supply and Return Lines	N/A
Fuel Injection System	Electronic, Direct Injection, High Pressure Common Rail	N/A
Fuel Filter	Primary and Secondary	N/A
Engine Heater	~~120V-AC, 1500 Watts~~	240V-AC, 1500 Watts
Governor, Speed	Constant Speed	N/A
Heat Exchanger	Tube & Shell Type, 60 PSI with NPTF Connections	N/A
Instrument Panel	Digital, NEMA 4X, English and Metric, Tachometer, Hourmeter, Water Temperature, Oil Pressure & Two (2) Voltmeters	~~Optional 316SS Construction, Custom gauges with expansion module~~
Junction Box	Integral with Instrument Panel; For DC Wiring to Engine Controller	N/A
Lube Oil Cooler	Engine Water Cooled, Plate Type	N/A
Lube Oil Filter	Full Flow with By-Pass Valve	N/A
Lube Oil Pump	Gear Driven	N/A
Manual Start	On Instrument Panel	N/A
Overspeed Controls	Electronic with Reset & Test on Instrument Panel	N/A
Raw Water Solenoid Operation	Automatic from Engine Controller & from Emergency Local Control	N/A
Run-Stop Control	On Instrument Panel	N/A
Run Solenoid	~~12V-DC~~	24V-DC
Starters	~~12V-DC~~	24V-DC
Throttle Control	Adjustable Speed Control	N/A
Water Pump	Belt Drive with Guard	N/A

UL ULC FM APPROVED

Marathon Petroleum Co., PO: 4100623403, Catlettsburg Cavern Facility, Enclosed Fire Pump Package, Item: 2000SEHH23456, PES Doc.: 9927106422-ENG rev 00





Engine Ratings Baselines

- Engines are rated at standard SAE conditions of 29.61 in. (7521 mm) Hg barometer and 77°F (25°C) inlet air temperature (approximates 300ft. (91.4 m) above sea level) by the testing laboratory (see SAE Standard J1349).
- A deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m).
- A deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F above 77°F (24°C) ambient temperature.

Certified Power

This Cummins Fire Power fire pump driver is built to comply with NFPA-20, and is UL listed and FM approved.

* Subject to change without notification

For additional information, click the hyperlinks below.

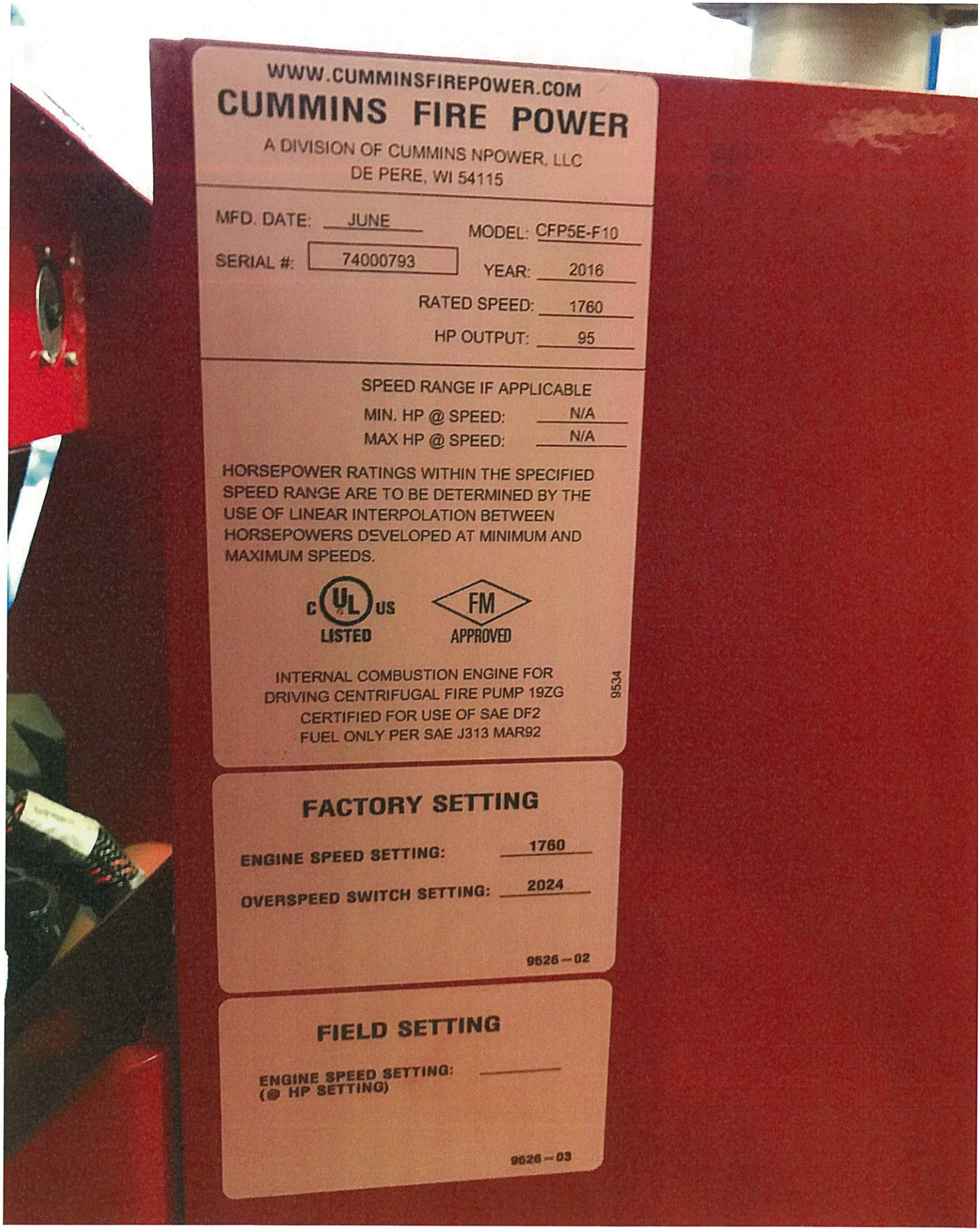
www.cumminsfirepower.com

Service Information (74000793 - QSB4.5 CM850(CM2850))

Manuals | Service Bulletins | Dataplate | Service Tools | Fault Code Search | Symptom Search
Campaigns | TRPs | ATCs | Related Information | Safety

PRINT PRODUCT/ENGINE/SYSTEM DATAPLATE

Product/Engine/System Dataplate - (Original) VIN:		
Marketing Model Name	**Service Model Name**	**EPA Model Name**
QSB4.5	QSB4.5 CM850(CM2850)	GCEXL0275AAG
Shop Order	**Build Plant**	**Build Date**
SO23023	CNS - CONSOLIDATED DIESEL CO.	27 May 2016
Warranty Start Date	**ECM Code**	**Fuel Pump Part #**
Not Available	Z91171	5256608
Fuel Pump Calibration	**Marketing Engine Configuration #**	**Technical Engine Configuration #**
Not Available	D323001CF01	D323001CX03
CPL #	**Customer Number**	**Customer Name**
8725	2254	Not Available


WWW.CUMMINSFIREPOWER.COM
CUMMINS FIRE POWER
A DIVISION OF CUMMINS NPOWER, LLC
DE PERE, WI 54115
MFD. DATE: JUNE
MODEL: CFP5E-F10
SERIAL #: 74000793
YEAR: 2016
RATED SPEED: 1760
HP OUTPUT: 95
SPEED RANGE IF APPLICABLE
MIN. HP @ SPEED: N/A
MAX HP @ SPEED: N/A
HORSEPOWER RATINGS WITHIN THE SPECIFIED SPEED RANGE ARE TO BE DETERMINED BY THE USE OF LINEAR INTERPOLATION BETWEEN HORSEPOWERS DEVELOPED AT MINIMUM AND MAXIMUM SPEEDS.
c UL us LISTED
FM APPROVED
INTERNAL COMBUSTION ENGINE FOR DRIVING CENTRIFUGAL FIRE PUMP 19ZG CERTIFIED FOR USE OF SAE DF2 FUEL ONLY PER SAE J313 MAR92
9534
FACTORY SETTING
ENGINE SPEED SETTING: 1760
OVERSPEED SWITCH SETTING: 2024
9526-02
FIELD SETTING
ENGINE SPEED SETTING: (@ HP SETTING)
9526-03

10166E0005

ATTACHMENT I
SUGGESTED TITLE V DRAFT PERMIT LANGUAGE

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

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
IS	IE	HF Alley Unit Fugitive Emissions (WV Scope)	1980	***NIA***	None
2S	2E	Firewater Pump Diesel Engine	2016	***95 HP***	None

5.0 Firewater Pump Diesel Engine [emission point ID(s): 2E]

5.1. Limitations and Standards

5.1.1. If you are an owner or operator and must comply with the emission standards specified in 40 C.F.R. 60, Subpart IIII, you must do the following, except as the permittee except as permitted under 40 C.F.R. §60.4211(g):

a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

b. Change only those emission-related settings that are permitted by the manufacturer; and

c. Meet the requirements of 40 CFR Parts 1068, as they apply to you.

[40 C.F.R. §60.4211(a) and 45CSR16]

5.1.2. Maximum hourly emissions calculations based on Table 4 of 40 C.F.R. 60, Subpart IIII as specified in 40 C.F.R. §60.4205(c) are specified in the following table:

Pollutant	Lb/hr[1]
Volatile Organic Compounds (VOC) + Nitrogen Oxides (NOx)	0.73
Carbon Monoxide (CO)	0.063

[1]Based on 3.5 g/HP-hr for NMHC+NOx, 0.30 g/HP-hr for CO, and 95 HP-hr

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 60.4205 over the entire life of the engine.
[40 C.F.R. §60.4202(d), 40 C.F.R. §60.4205(c) and 45CSR16]

5.1.3. If you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must comply by purchasing an engine certified to the emission standards in § 60.4204(b), or § 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.
[40 C.F.R. §60.4211(c) and 45CSR16]

5.1.4. Beginning October 1, 2010, the permittee with stationary CI ICE with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.
[40 C.F.R. §60.4207(b) and 45CSR16]

5.1.5. The emergency stationary ICE may be operated according to the requirements in 40 C.F.R. §60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 C.F.R. 60, Subpart IIII, 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 40 C.F.R. §§60.4211(f)(1) through (3), is prohibited. If the engine is not operated according to the requirements in 40 C.F.R. §60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 C.F.R. 60, Subpart IIII and must meet all requirements for non-emergency engines.

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

b. The emergency stationary ICE may be operated for any combination of the purposes specified in 40 C.F.R. §§60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 C.F.R. §60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 C.F.R §60.4211(f)(2).

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

2. 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 40 C.F.R. §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.

3. 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.

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 40 C.F.R. §60.4211(f)(2). Except as provided in 40 C.F.R. §60.4211(f)(3)(i), the 50 hours per calendar 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.

1. 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 permittee 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 permittee.

[40 C.F.R. §60.4211(f) and 45CSR16]

5.1.6. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer and you are an owner or operator of a stationary CI 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 to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
[40 C.F.R. §60.4211(g)(2) and 45CSR16]

5.1.7. If you are the owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.
[40 C.F.R. §60.4209(a) and 45CSR16]

5.2. Monitoring Requirements

None

5.3. Testing Requirements

None

5.4. Recordkeeping Requirements

5.4.1. If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.
[40 C.F.R. §60.4214(b) and 45CSR16]

5.5. Reporting Requirements

None

5.6. Compliance Plan

None

ATTACHMENT J
SUPPORTING EMISSION CALCULATIONS/ESTIMATIONS

Cummins CFP5E-F10 Fire Pump
Driver
4 Cycle; 4 Cylinder

1760	RPM
95	HP
5.1	Gal/hr fuel consumption
138700	btu/gal diesel
0.71	mmbtu/hr
8760	hours

Chemical	Source	g/HP-hr	lb/HP-hr	lb/mmbtu	TPY	lb/hr
VOC	Manufacturer[1]	0.062	0.00014		0.06	0.01
NOx	Manufacturer[1]	2.544	0.00561		2.33	0.53
CO	Manufacturer[1]	0.694	0.00153		0.64	0.15
PM	Manufacturer[1]	0.088	0.00019		0.08	0.02
SO2	AP-42[2]		0.00205		0.85	0.19
Benzene	AP-42[3]			9.33E-04	2.89E-03	6.59E-04
Toluene	AP-42[3]			4.09E-04	1.27E-03	2.89E-04
Xylenes	AP-42[3]			2.85E-04	8.83E-04	2.01E-04
Butadiene	AP-42[3]			3.91E-05	1.21E-04	2.76E-05
Formaldehyde	AP-42[3]			1.18E-03	3.66E-03	8.33E-04
Acetaldehyde	AP-42[3]			7.76E-04	2.40E-03	5.48E-04
Acrolein	AP-42[3]			9.25E-05	2.87E-04	6.53E-05
Naphthalene	AP-42[3]			8.48E-05	2.63E-04	5.99E-05
Polycyclic Aromatic Hydrocarbons[4]	AP-42[3]			8.33E-05	2.58E-04	5.88E-05

1 Cummins Fire Power ULSD EPA Tier 3 Emission Data (June 2014)

2 Stationary Internal Combustion Sources: Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines (10/96)

3 Stationary Internal Combustions Sources: Table 3.3-2 Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines (10/96)

4 PAH excludes Naphthalene

Fire Power

EPA Tier 3 Emission Data
Fire Pump NSPS Compliant

CFP5E-F10 Fire Pump Driver

Type: 4 Cycle; In-Line; 4 Cylinder
Aspiration: Turbocharged, Charge Air Cooled

15 PPM Diesel Fuel

		Fuel Consumption		D2 Cycle Exhaust Emissions										Exhaust			
				Grams per BHP - HR					Grams per kW - HR					Temperature		Gas Flow	
RPM	BHP	Gal/Hr	L/hr	NMHC	NOx	NMHC+NOx	CO	PM	NMHC	NOx	NMHC+NOx	CO	PM	°F	°C	CFM	L/sec
1470	84	4.2	15.9											869	465	520	245
1760	95	5.1	19.3											777	414	670	316
1900	98	4.9	18.5											761	405	711	336
2100	101	5.4	20.4	0.062	2.544	2.605	0.694	0.088	0.083	3.411	3.494	0.930	0.117	756	402	774	365
2350	105	5.8	22.0											786	419	862	407
2600	104	5.9	22.3											825	441	905	427
2700	95	5.0	18.9											760	404	860	406

The emissions values above are based on CARB approved calculations for converting EPA (500 ppm) fuel to CARB (15 ppm) fuel.

300-4000 PPM Diesel Fuel

		Fuel Consumption		D2 Cycle Exhaust Emissions										Exhaust			
				Grams per BHP - HR					Grams per kW - HR					Temperature		Gas Flow	
RPM	BHP	Gal/Hr	L/hr	NMHC	NOx	NMHC+NOx	CO	PM	NMHC	NOx	NMHC+NOx	CO	PM	°F	°C	CFM	L/sec
1470	84	4.2	15.9											869	465	520	245
1760	95	5.1	19.3											777	414	670	316
1900	98	4.9	18.5											761	405	711	336
2100	101	5.4	20.4	0.075	2.759	2.834	0.694	0.100	0.1	3.700	3.800	0.930	0.134	756	402	774	365
2350	105	5.8	22.0											786	419	862	407
2600	104	5.9	22.3											825	441	905	427
2700	95	5.0	18.9											760	404	860	406

QSB4.5 Base Model Manufactured by Cummins Inc.
- Using fuel rating 91487

Reference EPA Standard Engine Family: ECEXL0275AAG
Reference CARB Executive Order: **U-R-002-0558**

No special options needed to meet current regulation emissions for all 50 states

Test Methods:

EPA/CARB Nonroad emissions recorded per 40CFR89 (ref. ISO8178-1) and weighted at load points prescribed in Subpart E, Appendix A, for Constant Speed Engines (ref. ISO8178-4, D2).

Diesel Fuel Specifications:

Cetane Number: 40-48
Reference: ASTM D975 No. 2-D

Reference Conditions:

Air Inlet Temperature: 25°C (77°F)
Fuel Inlet Temperature: 40°C (104°F)
Barometric Pressure: 100 kPa (29.53 in Hg)
Humidity: 10.7 g/kg (75 grains H_2O/lb) of dry air; required for NOx correction

Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to maximum allowable limit.

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results.

Revisions:

June 2014: Document Review & Approved.

Revision Date: June 2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2016 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Cummins Inc.**
(U.S. Manufacturer or Importer)

Certificate Number: GCEXL0275AAG-009

Effective Date: 11/04/2015

Expiration Date: 12/31/2016

Byron J. Bunker, Division Director
Compliance Division

Issue Date: 11/04/2015

Revision Date: N/A

Model Year: 2016
Manufacturer Type: Original Engine Manufacturer
Engine Family: GCEXL0275AAG

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 75<=kW<130
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: No Non-After Treatment Devices Installed

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.