KEEP PERMIT AT SITE

AI #

CONTROL NO. B- 05100

State of Maryland

Lawrence J. Hogan, Jr.
Governor

Boyd K. Rutherford
Lt. Governor

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

[ ] Construction Permit

[X] Part 70 Operating Permit

PERMIT NO. 24-043-0006

DATE ISSUED May 1, 2016

PERMIT FEE To be paid in accordance with COMAR 26.11.02.19B

EXPIRATION DATE April 30, 2021

LEGAL OWNER & ADDRESS

Mack Trucks, Inc
13302 Pennsylvania Avenue
Hagerstown, Maryland 21742

SITE

Same

SOURCE DESCRIPTION

Truck Engine and transmission manufacturing facility.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Management Administration

(NOT TRANSFERABLE)

MACK TRUCKS, INC
13302 PENNSYLVANIA AVENUE, HAGERSTOWN, MD
PART 70 OPERATING PERMIT NO. 24-043-00006

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Mack Trucks, Inc. Hagerstown Plant is located at 13302 Pennsylvania Avenue, Hagerstown, Washington County, Maryland. The plant is located in air quality control Area I. The plant manufactures truck engines and transmissions. The applicable Standard Industrial Classification (SIC) codes are 3714 and 3519. The manufacturing process includes metal working activities, surface coating operations, material storage, and final testing. Research and development activities in support of the manufacturing operations are conducted in the Engineering and Research section of the manufacturing building. Minor sources at the facility include metal grinding, heat treating, and diesel engines to power fire pumps. The Permittee generally operates three shifts per day, five days a week.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
005HWB-1	043-0006-5-0576	One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.	July 2005
005HWB-2	043-0006-5-0577	One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.	July 2005
005HWB-3	043-0006-5-0578	One (1) 16.8 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. Each chamber is rated at 16.8 MMBtu/hr, one fires gas, the other fires backup fuel oil only. Only one chamber operates at a time.	July 2005
005HWB-4	043-0006-5-0579	One (1) 8.6 MMBtu/hr hot water boiler capable of firing natural gas or distillate oil.	July 2005
001STB-5	043-0006-5-0585	One (1) 3.36 MMBtu/hr steam boiler capable of firing natural gas only.	August 2005
001 Temp N	043-0006-5-0645	One (1) 8.375 MMBtu/hr boiler firing natural gas only.	July 26, 2015
002PB-2	043-0006-6-0449	One (1) manual paint spray booth equipped with fabric filters for particulate emission control.	1972

002PB-3	043-0006-6-0694	One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.	January 2012
002PB-4	043-0006-6-0695	One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.	January 2012
002PK-1	043-0006-6-0697	One (1) paint kitchen for automatic paint distribution.	January 2012
002PB-5	043-0006-6-0716	One (1) manual paint booth associated with the new axle manufacturing line to be constructed during 2015.	TBD – 2015
002X-1	043-0006-9-0106	Eight (8) engine test cells for production testing.	December 2005
003ER-3	043-0006-9-0107	Fifteen (15) engine test cells for engineering and research. Twelve (12) cells were constructed in 1961 and three (3) cells were constructed in 1973. One (1) of these test cells is used exclusively for transmission/gear box testing.	1961 (12 cells) 1973 (3 cells)
003ETC-1 through 003ETC-8	043-0006-9-0157	Eight (8) engine test cells for engineering and research used for testing truck engines up to 785 brake HP.	December 2005
007QEPP	043-0006-9-0182	One (1) warm engine short test station for production testing of engines.	December 2008
007QEPP	043-0006-9-0183	One (1) warm engine short test station for production testing of engines.	December 2008

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARMA	Air and Radiation Management Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant

tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable

terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the

Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.
b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required b y (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the

Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for

gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;
b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.

f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping, and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Reference: COMAR 26.11.03.06C(5)(g)]

Table IV – 1	
1.0	**Emissions Unit Number(s):** Facility – Wide
1.1	**Applicable Standards/Limits:** A. Control of Hazardous Air Pollutant Emissions The Permittee shall limit the premises-wide emission of Hazardous Air Pollutants (HAPs) to less than 10 tons per year for any individual HAP and less than 25 tons per year for total HAPs for any period of 12 consecutive months. **[Reference: Permit to Construct 043-9-0157N issued on July 26, 2004, condition A(5)]** B. Control of VOC Equipment Leaks (1) "A Person subject to this regulation shall comply with all of the following requirements: (a) Visually inspect all components on the premises for leaks at least once each calendar month. (b) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.

Table IV – 1	
	(c) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours. (d) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part. (e) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings. (f) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence." **[Reference: COMAR 26.11.19.16C]** (2) "Exceptions. Components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown." **[Reference: COMAR 26.11.19.16D]**
1.2	**Testing Requirements:** A. Control of Hazardous Air Pollutant Emissions See Section 1.4, Record Keeping Requirements. B. Control of VOC Equipment Leaks See Section 1.3, Monitoring Requirements.
1.3	**Monitoring Requirements:** A. Control of Hazardous Air Pollutant Emissions See Section 1.4, Record Keeping Requirements. B. Control of VOC Equipment Leaks The Permittee shall inspect the installation for VOC leaks at least once each calendar month following the requirements specified in Section 1.1B.

Table IV – 1	
1.4	**Record Keeping Requirements:** A. Control of Hazardous Air Pollutant Emissions The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request. **[Reference: COMAR 26.11.02.19C and as indicated below]** The Permittee shall keep, for each calendar month, records of the following emissions data for the source, which shall be updated by no later than the 30th day of the following month: **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157 issued on August 11, 2015, condition E(1)(c)-(g)]** (1) Current and applicable Material Safety Data Sheets (MSDS) and/or manufacturer specification sheets showing the chemical composition, including HAP composition, of each coating, solvent, or other material used in the installations identified below; (2) The following material usage data for each group of installations identified below, for each calendar month and each rolling 12-month period: (a) The amount of diesel fuel combusted by the production engine test cells (ARMA Registration No. 043-0006-9-0106); (b) The amount of diesel fuel combusted by the E&R engine test cells under ARMA Registration Nos. 043-0006-9-0107 and 9-0157; (c) The amount of fuel combusted be the two (2) warm engine short test (WEST) engine test cells under ARMA Registration Nos. 043-0006-9-0182 and 9-0183; (d) The amount used and identity of each paint, coating, and organic solvent used by the paint spray booths and paint kitchen (ARMA Registration Nos. 043-0006-6-0449, 6-0694, 6-0695, 6-0697, and 6-0716) (3) The following HAP emissions data, for each calendar month and each rolling 12-month period: (a) The total emissions of all HAPs; (b) The emissions of any individual HAP that is discharged at a rate of more than one (1) ton per year; and (c) Supporting calculations for (a) and (b) above and an explanation of the methodology used to make the calculations.

Table IV – 1	
	B. Control of VOC Equipment Leaks The Permittee shall maintain a VOC leak detection and repair log that includes the name of the person conducting the inspection, the date of the inspection, results of the inspection, a list of leaks by tag identification number, a description of all leaks discovered, the date and nature of all leak repairs, and identity of components that cannot be repaired within 48 hours.
1.5	**Reporting Requirements:** A. Control of Hazardous Air Pollutant Emissions The Permittee shall submit to the Department annual reports due on April 1 of each year providing the HAP emissions from the facility for the previous calendar year. The report shall contain: (1) For each month of the previous calendar year, the total consumption of paint or coating and organic solvents that contain HAPs. (2) For each month of the covered period, the total HAP emissions, and the emissions of any individual HAP that is discharged at a rate in excess of one (1) ton per year, for that month and a cumulative total for the previous 12 consecutive months. (3) Supporting calculations for the information required by (1) and (2) above. **[Reference: Permit to Construct 043-9-0157N issued on July 26, 2006, conditions A(4) and F(1)(e)-(g)]** B. Control of VOC Equipment Leaks See Section 1.4, Record Keeping Requirements.

Table IV – 2	
2.0	**Emissions Unit Number(s) – Boilers (Multi-Fuel Capabilities)** **005HWB-1 - ARMA Registration No. 043-0006-5-0576** One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. **005HWB-2 - ARMA Registration No. 043-0006-5-0577** One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. **005HWB-3 - ARMA Registration No. 043-0006-5-0578** One (1) 16.8 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. Each chamber is rated at 16.8 MMBtu/hr, one fires gas, the other fires back up fuel oil only. Only one (1) chamber operates at a time. **005HWB-4 - ARMA Registration No. 043-0006-5-0579** One (1) 8.6 MMBtu/hr hot water boiler capable of firing natural gas or distillate oil.
2.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20% opacity." **[Reference: COMAR 26.11.09.05A(1)]** (2) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period." **[Reference: COMAR: 26.11.09.05A(3)]** ***The requirements of B. below apply to ARMA Registration Nos. 043-006-5-0576, 5-0577, and 5-0578 only.*** B. Control of Particulate Matter Emissions (1) "A person may not cause or permit particulate matter caused by the combustion of solid fuel or residual oil in any fuel burning equipment erected on or after January 17, 1972, to be discharged into the atmosphere in excess of the amounts

Table IV – 2

shown in Figure 2." **[Reference: COMAR 26.11.09.06A(2))]**

Note: As per Figure 2, for boilers with a maximum rated heat input of less than 25 million Btu per hour, the limit is 0.40 pounds of particulate matter per million Btu heat input

(2) "Exceptions. The requirements in Figure 1 and Figure 2 of this chapter do not apply to fuel burning equipment burning gas or distillate oil." **[Reference: COMAR 26.11.09.06A(3)(c)]**

C. Control of Sulfur Oxides

(1) "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations (1) In Areas I, II, V, and VI: (b) Residual fuel oils, 2.0 percent; (c) Distillate fuel oils, 0.3 percent." **[Reference: COMAR 26.11.09.07A(1)(b) and (c)]**

Note: Though the regulation states the limit for residual fuel oil is 2.0 percent, the sulfur content of all fuel oils was limited to 0.3 percent in a prior permit to construct. This limit still applies. **[Reference: Permit to Construct No. 043-0006-5-0576 through 5-0579N issued on June 16, 2005]**

(2) "On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph." **[Reference: 40 CFR §60.42c(d)]**

Note: By complying with COMAR 26.11.09.07A(1)(a), Mack Trucks, Inc. will be in compliance with 40CFR §60.42c(d).

D. Control of Nitrogen Oxides

(1) "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:

(a) Submit to the Department an identification of each affected installation, the rated heat input capacity of

Table IV – 2	
	each installation, and the type of fuel burned in each installation; (b) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis; (c) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request; (d) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (e) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request." **[Reference: COMAR 26.11.09.08E]** (2) "Requirements for Space Heaters. (a) A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall: (i) Submit to the Department a list of each affected installation on the premises and the type of fuel used in each installation; (ii) Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience; (iii) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department; (iv) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (v) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. (b) A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when

Table IV – 2	
	the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation." **[Reference: COMAR 26.11.09.08F]** E. Operational Limitations (1) New Source Review synthetic minor limitation. In order to limit the sulfur dioxide and nitrogen oxides emissions from the 8.6 million Btu/hr boiler, 16.8 million Btu/hr boiler, and the two 14.7 million Btu/hour boilers to less than 40 tons per year: (a) The number of hours combusting fuel oil shall be limited to less than 4,380 hours per year for any consecutive 12 month period for any of the above-referenced boilers. (b) The residual fuel oil combusted by the boilers shall be limited to No. 4 residual fuel oil. (c) The annual average sulfur content of the residual and distillate fuel oil combusted by the 16.8 million Btu/hr boiler and the two 14.7 million Btu/hour boilers shall be limited to less than 0.3 percent by weight for any consecutive 12 month period. (2) The Permittee shall only burn natural gas, distillate oil, or No. 4 residual oil (including on-specification used oil). The limitation on fuel use shall apply unless the Permittee applies for and receives an approval or permit from the Department to burn an alternate fuels. **[Reference: COMAR 26.11.02.09]**
2.2	**Testing Requirements:** A. Control of Visible Emissions See Section 2.3, Monitoring Requirements. B. Control of Particulate Matter Emissions See Section 2.3, Monitoring Requirements. C. Control of Sulfur Oxides See Section 2.3, Monitoring Requirements. D. Control of Nitrogen Oxides See Section 2.3, Monitoring Requirements. E. Operational Limitations See Section 2.4, Record Keeping Requirements.

Table IV – 2	
2.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall periodically have a qualified person visually observe the emissions from each boiler stack while the boiler is combusting oil. The observation shall be made at least once every 168 hours of operation with oil. If visible emissions are observed, the Permittee shall then conduct an EPA Reference Method 9 observation. If non-compliant visible emissions are confirmed by the Method 9 observation, the Permittee shall: (1) inspect the equipment to determine the cause; (2) perform all necessary repairs and/or adjustments to the equipment within 48 hours; (3) document in writing the results of the inspections and the repairs and/or adjustments made to the equipment; and (4) continue to perform an EPA Method 9 daily until the visible emissions have been brought into compliance. **[Reference: COMAR 26.11.03.06C(3)]** ***The requirements of B. below apply to ARMA Registration Nos. 043-006-5-0576, 5-0577, and 5-0578 only.*** B. Control of Particulate Matter Emissions The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize particulate matter emissions. **[Reference: COMAR 26.11.03.06C]** C. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil. **[Reference: COMAR 26.11.09.07C]** The Permittee shall not accept deliveries of fuel oil with a sulfur content greater than that allowed by the regulation. The Permittee shall obtain from the supplier a fuel analysis stating the sulfur content of each delivery of residual fuel oil accepted by the source. **[Reference: COMAR 26.11.03.06C(3)]** D. Control of Nitrogen Oxides If the facility must comply with the NOx RACT requirements of COMAR 26.11.09.08E instead of COMAR 26.11.09.08F, the Permittee shall do the following for each of the boilers: (1) Perform a combustion analysis for each boiler at least once each calendar year and optimize combustion based on the analysis; (2) Maintain the results of the combustion analysis at the site for at least 5 years and make this data available to the Department

Table IV – 2	
	and the EPA upon request; (3) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (4) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. **Note:** An annual combustion analysis is not required in any calendar year that the above-referenced boilers qualify as a space heater, provided that the Permittee provides proper notification and develops and implements an alternative written operating and maintenance plan to minimize NOx emissions in accordance with COMAR 26.11.09.08F. **Note:** In order to be considered a space heater, the fuel burning equipment must burn 60% of its annual fuel between October 31 and March 31 of the following year. **[Reference: COMAR 26.11.09.01B(20)]** E. Operational Limitations See Section 2.4, Record Keeping Requirements.
2.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall: (1) Maintain a log of maintenance performed that relates to combustion performance; **[Reference: COMAR 26.11.03.06C(3)]** (2) Maintain records of the visible emissions observations, document any incidence of visible emissions and any corrective action taken by the Permittee, and maintain documentation that the observations were conducted by a certified observer. **[Reference: COMAR 26.11.03.06C(3)]** ***The requirements of B. below apply to ARMA Registration Nos. 043-006-5-0576, 5-0577, and 5-0578 only.*** B. Control of Particulate Matter Emissions The Permittee shall maintain records of routine maintenance to demonstrate that the equipment is being kept in good working order. **[Reference: COMAR 26.11.03.06C(3)]**

Table IV – 2	
	C. Control of Sulfur Oxides (1) The Permittee shall maintain from the oil supplier records of the fuel oil used by the facility indicating the sulfur content of the oil complies with the standard. **[Reference: COMAR 26.11.09.07C]** (2) The Permittee shall maintain records of the analyses of the fuel oil used by the facility indicating the sulfur content of the fuel oil is less than 0.3 percent. **[Reference: COMAR 26.11.03.06C(3) and 40 CFR §60.46c]** D. Control of Nitrogen Oxides The Permittee shall maintain for at least five (5) years: (1) Records of annual fuel use; **[Reference: COMAR 26.11.09.08K(3)]** (2) Records of the combustion optimization if compliance is demonstrated by meeting the requirements of COMAR 26.11.09.08E. (3) Records of NOx combustion optimization training program attendance for each operator; (4) Monthly records of fuel usage for each boiler. **[Reference: COMAR 26.11.03.06C]** E. Operational Limitations (1) The Permittee shall maintain monthly records of the average sulfur content of the fuel oil combusted by each boiler. **[Reference: Permits to Construct 043-5-0576 through –0579 N issued on June 16, 2005]** (2) The Permittee shall demonstrate that the annual average sulfur content of the fuel oil combusted by three (3) of the boilers (ARMA Registration Nos. 043-0006-5-0576, 5-0577, and 5-0578) is less than 0.3 percent by weight for any consecutive 12 month period. **[Reference: Permits to Construct 043-5-0576 through –0579 N issued on June 16, 2005]** (3) Maintain a monthly cumulative record of fuel consumption by type of fuel and hours of operation by type of fuel for a rolling period of 12-consecutive months for each of the above-referenced boilers. **[Reference: Permits to Construct 043-5-0576 through –0579 N issued on June 16, 2005]**

Table IV – 2	
	(4) Maintain monthly records of the fuel consumption by type of fuel and hours of operation by type of fuel for each of the above-referenced boilers; **[Reference: Permits to Construct 043-5-0576 through –0579 N issued on June 16, 2005]**
2.5	**Reporting Requirements:** A. Control of Visible Emissions The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III - "Report of Excess Emissions and Deviations." ***The requirements of B. below apply to ARMA Registration Nos. 043-006-5-0576, 5-0577, and 5-0578 only.*** B. Control of Particulate Matter Emissions See Section 2.4, Record Keeping Requirements. C. Control of Sulfur Oxides No later than 30 days after the end of each half-year period, a semi-annual report including the following information shall be submitted to the Department and the EPA in accordance with 40 CFR 60 Subpart Dc: **[Reference: Permits to Construct 043-5-0576 through –0579 N issued on June 16, 2005 and 40 CFR Part 60, Subpart Dc]** (1) Hours of operation for each boiler; (2) Records of the amounts of each fuel combusted; (3) For distillate oil, a fuel supplier certification consisting of: (a) The name of the oil supplier; (b) A statement from the oil supplier that the oil complies with specifications for No. 2 distillate fuel oil; and (c) A certified statement signed by the Permittee stating that the records of fuel supplier certifications submitted represent all of the distillate fuel oil combusted during the semiannual period. (4) For residual oil, a fuel supplier certification consisting of: (a) The name of the oil supplier, (b) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected company or whether the sample was drawn from oil in storage at the supplier's or oil refiner's company, or other location; (c) The sulfur content of the oil from which the shipment

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	came (or of the shipment itself); (d) The method used to determine the sulfur content of the oil; and (e) A certified statement signed by the Permittee stating that the records of fuel supplier certifications submitted represent all of the residual fuel oil combusted during the semiannual period. D. Control of Nitrogen Oxides Submit annual reports on the fuel combustion and operating rates of the boilers for the previous calendar year, which shall be due the following April 1. **[Reference: COMAR 26.11.03.06C]** E. Operational Limitations See Section 2.4, Record Keeping Requirements.

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3.0	**Emissions Unit Number(s): Boilers – Natural Gas Fired Only** **001STB-5 - ARMA Registration No. 043-0006-5-0585** One (1) 3.36 MMBtu/hr steam boiler capable of firing natural gas only. **001 Temp N - ARMA Registration No. 043-0006-5-0645** One (1) 8.375 MMBtu/hr boiler firing natural gas only.
3.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.09.05A(1)]** (2) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period." **[Reference: COMAR: 26.11.09.05A(3)]**

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B. Control of Nitrogen Oxides

(1) "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:

(a) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each installation;

(b) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;

(c) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

(d) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(e) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08E]

(2) "Requirements for Space Heaters.

(a) A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:

(i) Submit to the Department a list of each affected installation on the premises and the type of fuel used in each installation;

(ii) Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;

(iii) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;

(iv) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

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	(v) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request. (b) A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation." **[Reference: COMAR 26.11.09.08F]**
3.2	**Testing Requirements:** A. Control of Visible Emissions See Section 3.4, Record Keeping Requirements. B. Control of Nitrogen Oxides See Section 3.3, Monitoring Requirements.
3.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions. **[Reference: COMAR 26.11.03.06C]** B. Control of Nitrogen Oxides If the facility must comply with the NOx RACT requirements of COMAR 26.11.09.08E instead of COMAR 26.11.09.08F, the Permittee shall do the following for each boiler: (1) Perform a combustion analysis for each boiler at least once each calendar year and optimize combustion based on the analysis; (2) Maintain the results of the combustion analysis at the site for at least 5 years and make this data available to the Department and the EPA upon request; (3) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (4) Prepare and maintain a record of training program attendance

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	for each operator at the site, and make these records available to the Department upon request. **Note:** An annual combustion analysis is not required in any calendar year that any of the above-referenced boilers qualify as a space heater, provided that the Permittee provides proper notification and develops and implements an alternative written operating and maintenance plan to minimize NOx emissions in accordance with COMAR 26.11.09.08F **Note:** In order to be considered a space heater, the fuel burning equipment must burn 60% of its annual fuel between October 31 and March 31 of the following year. **[Reference: COMAR 26.11.09.01B(20)]**
3.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall: (1) Maintain a log of maintenance performed that relates to combustion performance. **[Reference: COMAR 26.11.03.06C(3)]** (2) Maintain records of the visible emissions observations, document any incidence of visible emissions and any corrective action taken by the Permittee, and maintain documentation that the observations were conducted by a certified observer. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Nitrogen Oxides The Permittee shall maintain for at least five (5) years: (1) Records of annual fuel use; **[Reference: COMAR 26.11.09.08K(3)]** (2) Records of the combustion optimization if compliance is demonstrated by meeting the requirements of COMAR 26.11.09.08E. (3) Records of NOx combustion optimization training program attendance for each operator; (4) Monthly records of fuel usage for each boiler. **[Reference: COMAR 26.11.03.06C]**

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3.5	**Reporting Requirements:** A. Control of Visible Emissions The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III - "Report of Excess Emissions and Deviations." B. Control of Nitrogen Oxides Submit annual reports on the fuel combustion and operating rates of the boilers for the previous calendar year, which shall be due the following April 1. **[Reference: COMAR 26.11.03.06C]**

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4.0	**Emissions Unit Number(s) Paint Spray Booths** **002PB-2 (ARMA Registration No. 043-0006-6-0449)** One (1) manual paint spray booth equipped with fabric filters for particulate emission control. **002PB-3 (ARMA Registration No. 043-0006-6-0694)** One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven. **002PB-4 (ARMA Registration No. 043-0006-6-0695)** One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven. **002PK-1 (ARMA Registration No. 043-0006-6-0697)** One (1) paint kitchen for automatic paint distribution. **002PB-5 (ARMA Registration No. 043-0006-6-0716)** One (1) manual paint booth associated with the new axle manufacturing line to be constructed during 2015.
4.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.06.02C(1)]**

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(2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.
[Reference: COMAR 26.11.06.02A(2)]

Conditions (3) and (4) only apply to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.

(3) "In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.09.05A(1)]**

(4) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."
[Reference: COMAR 26.11.09.05A(3)]

B. Control of Particulate Matter Emissions
"A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)]**

C. Control of Nitrogen Oxides
Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.

(1) "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation."
[Reference: COMAR 26.11.09.08B(5)(a)]

(2) "The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department." **[Reference: COMAR 26.11.09.08B(5)(b)]**

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(3) "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:
- (a) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;
- (b) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;
- (c) Maintain and make available to the Department upon request, the written in-house operator training program;
- (d) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
- (e) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08J]

D. Control of VOC

(1) Good Operating Practices
- (a) "A person who is subject to this section shall implement good operating practices to minimize VOC emissions into the atmosphere."
- (b) "Good operating practices shall, at a minimum, include the following:
  - (i) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;
  - (ii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;
  - (iii) Minimize spills of VOC-containing cleaning materials;
  - (iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines;
  - (v) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;
  - (vi) As practical, scheduling of operations to

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minimize color or material changes when applying VOC coatings or other materials by spray gun;

(vii) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and

(viii) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC."

(c) " A person subject to this regulation shall:

(i) Establish good operating practices in writing;

(ii) Make the written operating practices available to the Department upon request; and

(iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training."

[Reference: COMAR 26.11.19.02I(2)]

(2) Equipment Cleanup.

(a) "A person subject to this section shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process and coating application equipment, including containers, vessels, tanks, lines, and pumps."

(b) "Reasonable precautions for equipment cleanup shall, at a minimum, include the following:

(i) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;

(ii) Preparing written standard operating procedures for frequently cleaned equipment, including when practical, provisions for the use of low-VOC or non-VOC materials and procedures to minimize the quantity of VOC materials used;

(iii) Using enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods where practical that reduce or eliminate VOC emissions; and

(iv) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and

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process equipment."
[Reference: COMAR 26.11.19.02I(3)]

(3) VOC Storage and Transfer.
(a) A person subject to this section who stores VOCs shall, at a minimum, install conservation vents or other vapor control measures on storage tanks with a capacity of 2,000 gallons or more to minimize VOC emissions.
(b) A person subject to this section shall, at a minimum, utilize vapor balance, vapor control lines, or other vapor control measures when VOCs are transferred from a tank truck into a stationary storage tank with a capacity greater than 10,000 gallons and less than 40,000 gallons that store VOCs or materials containing VOCs, other than gasoline, that have a vapor pressure greater than 1.5 psia.
[Reference: COMAR 26.11.19.02I(4)]

(4) "Emission Standards. A person subject to this regulation may not exceed the applicable VOC emission standards (expressed in terms of mass of VOC per volume of coating excluding water and exempt compounds, as applied) of the following table when applying a metal parts and products coating:

Coating Type	Baked		Air-Dried	
	Lbs/gal	Kg/L	Lbs/gal	Kg/L
General, one-component	2.3	0.275	2.8	0.340
General, multi-component	2.3	0.275	2.8	0.340
Adhesion promoter	4.0	0.479	4.0	0.479
Prefabricated architectural one component and multi-component	2.3	0.280	3.5	0.420
Military specification	2.3	0.280	2.8	0.340
Extreme high-gloss; extreme performance; heat-resistant; high performance architectural; repair coating; solar absorbent; or touch up coating	3.0	0.360	3.5	0.420
Camouflage, electric-insulating varnish; etching filler; high temperature; metallic; mold-seal; pan backing; pretreatment; silicone release and vacuum-metalizing	3.5	0.420	2.8	0.420

[Reference: COMAR 26.11.19.08D(2)]

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	Condition (5) applies to ARMA Registration Nos. 043-0006-6-0694, 6-0695, and 6-0697 only. (5) The total VOC emissions from these emission units shall be less than 40 tons in any consecutive 12-month period. **[Reference: Permit to Construct Nos. 043-0006-6-0694 through 6-0697, condition C(2), issued October 4, 2013]**
4.2	**Testing Requirements:** A. Control of Visible Emissions See Section 4.3, Monitoring Requirements. B. Control of Particulate Matter Emissions See Section 4.4, Record Keeping Requirements. C. Control of Nitrogen Oxides ***Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.*** See Section 4.4, Record Keeping Requirements. D. Control of VOC The Permittee shall test, when requested by the Department, the VOC content of any materials used on the process line using test methods prescribed by 40 CFR Part 60, Appendix A, Method 24. **[Reference: COMAR 26.11.01.04]**
4.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall conduct monthly one-minute visual observation of the paint booths exhaust. The visual observation must be conducted while the paint booth is in operation. If visible emissions greater than 20% opacity limit are observed during any observation, the Permittee must inspect the paint line for cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the paint line. If visible emissions have not been eliminated, the Permittee shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the paint line. **[Reference: COMAR 26.11.03.06(C)]** B. Control of Particulate Matter Emissions See Section 4.4, Record Keeping Requirements.

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	C. Control of Nitrogen Oxides ***Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.*** See Section 4.4, Record Keeping Requirements. D. Control of VOC Prior to using new coating materials, the Permittee shall contact the vendor or examine the MSDS to verify that the coating material meets applicable regulatory standards.
4.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall maintain records of the visible emissions observations, and document any incidence of visible emissions and any correct action taken by the Permittee. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions The Permittee shall maintain records of routine maintenance, including the dates when filter media are changed, to demonstrate that the equipment is being kept in good working order. **[Reference: COMAR 26.11.03.06C(3)]** C. Control of Nitrogen Oxides ***Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.*** The Permittee shall maintain the operator training records required by COMAR 26.11.09.08B(5) and a copy of the written in-house training program. D. Control of VOC (1) The following records shall be maintained on a monthly basis for each coating or coating component, including thinners, that is applied to metal surfaces and updated for the previous month by the 30th day of the current month: **[Reference: COMAR 26.11.03.06C(3)]** (a) Current applicable MSDS or other manufacture specification sheets stating the VOC content in terms of mass of VOC per volume of coating excluding water and exempt compounds, as applied)

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	determined by EPA Method 24 or an equivalent method. (b) Records of the amounts, identity, and MSDS sheet references for each coating or coating component, including reducers or thinning solvents, applied to metal surfaces during the previous month; (c) For any coating that is thinned with a thinning solvent or consists of two or more separate components that are mixed prior to application, the calculated actual *as-applied* VOC content (minus water) in pounds per gallon (grams per liter) of each miscellaneous metal coating, used during the previous month; and (d) Supporting calculations necessary for (c) above. (2) The Permittee shall maintain all written descriptions of "good operating practices" designed to minimize emissions of VOC. ***Condition (3) applies only to ARMA Registration No. 043-0006-6-0716.*** (3) The Permittee shall maintain monthly VOC emissions from ARMA Registration No. 043-0006-6-0716 in tons per month and all supporting calculations. **[Reference: Permit to Construct No. 043-0006-6-0716, Condition E(1)(a), issued June 25, 2015]** ***Condition (4) applies to ARMA Registration Nos. 043-0006-6-0694, 6-0695, and 6-0697 only.*** (4) The Permittee shall maintain records of monthly VOC emissions from this paint system in tons per month and tons per consecutive 12-month period and all supporting calculations. **[Reference: Permit to Construct Nos. 043-0006-6-0694 through 6-0697, condition E(1)(a), issued on October 4, 2013]**
4.5	**<u>Reporting Requirements</u>:** A. <u>Control of Visible Emissions</u> The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations." B. <u>Control of Particulate Matter Emissions</u> The Permittee shall make records available to the Department upon request.

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	C. Control of Nitrogen Oxides ***Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.*** The Permittee shall make records available to the Department upon request. D. Control of VOC The quarterly reporting requirement specified in COMAR 26.11.19.05F(1) will be satisfied by the annual emissions certification report as required by permit condition 8, Section III – Plant-wide Conditions. **[Reference: COMAR 26.11.19.02F(1)]**

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5.0	**Emissions Unit Number(s): Engineering and Research Engine Test Cells** **003ER-3 (ARMA Registration No. 043-0006-9-0107)** Fifteen (15) engine test cells for engineering and research. Twelve (12) cells were constructed in 1961 and three (3) cells were constructed in 1973. One (1) of these test cells is used exclusively for transmission/gear box testing. **003ETC-1 through 003ETC-8 (ARMA Registration No. 043-0006-9-0157)** Eight (8) engine test cells for engineering and research used for testing truck engines up to 785 brake HP.
5.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from and installation or building, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.06.02C(1)]** (2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period." **[Reference: COMAR 26.11.06.02A(2)]**

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B. Control of Particulate Matter Emissions

Condition (1) applies to the test cells that were constructed on or after January 17, 1972 only.

(1) "A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/dscm)."
[Reference: COMAR 26.11.06.03B(1)(a)]

Condition (2) applies to the test cells that were constructed before January 17, 1972 only.

(2) Installations Constructed Before January 17, 1972.

(a) "A person may not cause or permit particulate matter to be discharged from any installation constructed before January 17 1972 in excess of the values determined from Table 1. When the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds (27,200 kilograms) per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

$E = 55.0\ P^{0.11} — 40$	$E = 11.79\ P^{0.11} — 18.14$
E = Maximum weight discharged per hour (lbs)	E = maximum weight discharged per hour (kg)
P = process weight in tons per hour	P = process weight in kilograms per hour"

(b) "For those processes in which the process weight per hour exceeds 60,000 pounds (27,200 kilograms), the maximum allowable weight of particulate matter discharged per hour may exceed that calculated by the above equation provided that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.05 gr/SCFD (115 mg/dscm)."
[Reference: COMAR 26.11.06.3B(1)(b)]

Table 1
Maximum Allowable Weight of Particulate Matter Discharged Per Hour

Process Wt/hr (lbs)	*Maximum Wight Disch/hr*	*Process Wt/hr (lbs)*	*Maximum Wight Disch/hr*	*Process Wt/hr (lbs)*	*Maximum Wight Disch/hr*

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	(lbs)		*(lbs)*		*(lbs)*
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05
450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000 *	40.00

[Reference: COMAR 26.11.06.16, Table 1]

Condition (3) applies to the test cells that were constructed before January 17, 1972 only.

(3) Exception. For any premises for which the Department determines that compliance with §B(1)(a) will cause or exacerbate a violation of the National Ambient Air Quality Standards or Federal Prevention of Significant Deterioration increments, the applicable emission standard is 0.03 gr/SCFD (68.7 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)(c)]**

C. Control of Sulfur Oxides

(1) "All calculations of emissions governed by this regulation shall be adjusted to standard conditions and 7 percent oxygen.

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"PPM" means parts per million by volume." **[Reference: COMAR 26.11.06.05A]**

(2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing more than 500 ppm sulfur dioxide." **[Reference: COMAR 26.11.06.05B(1)]**

(3) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid." **[Reference: COMAR 26.11.06.05B(2)]**

D. Control of Nitrogen Oxides

(1) "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

(a) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;

(b) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;

(c) Maintain and make available to the Department, upon request, the written in-house operator training program;

(d) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and

(e) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08J]

Note: Condition D(1)(d) above only applies to engines that are capable of firing natural gas.

(2) "A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request."
[Reference: COMAR 26.11.09.08K(3)]

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	(3) The Permittee shall limit the combined NOx emissions from ARMA Registration Nos. 043-0006-9-0107 and 9-0157 for any period of 12 consecutive months not to exceed 84.55 tpy. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(2), issued on August 11, 2015]** E. Control of VOC Emissions The Permittee shall limit the combined VOC emissions from ARMA Registration Nos. 043-0006-9-0107 and 9-0157 for any period of 12 consecutive months not to exceed 41.12 tpy. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(2), issued on August 11, 2015]** F. Operational Limitations The engine test cells included in ARMA Registration Nos. 043-0006-9-0107 and 9-0157 may use a combined fuel limit of up to 1,450,000 gallons of fuel per year for any 12 consecutive months, unless the Permittee obtains, from the Department, written authorization for alternative operating procedures. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(3), issued on August 11, 2015]**
5.2	**Testing Requirements:** A. Control of Visible Emissions See section 5.3, Monitoring Requirements. B. Control of Particulate Matter Emissions See Section 5.3, Monitoring Requirements. C. Control of Sulfur Oxides See Section 5.3, Monitoring Requirements. D. Control of Nitrogen Oxides See Section 5.3, Monitoring Requirements. E. Control of VOC Emissions See Section 5.4, Record Keeping Requirements. F. Operational Limitations See Section 5.4, Record Keeping Requirements.

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5.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall have a qualified person observe each stack for visible emissions at least once every 168 hours, if the units are operational. If visible emissions are observed, the Permittee shall then conduct an EPA Reference Method 9 test. If non-compliant visible emissions are confirmed by the Method 9 test, the Permittee shall: (1) determine the cause of the visible emissions; (2) make necessary adjustments to reduce visible emissions; (3) document in writing the results of the inspections and the steps taken to reduce visible emissions; and (4) continue to perform a Method 9 daily until the visible emissions have been brought into compliance. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions See Section 5.4, Record Keeping Requirements. C. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil. **[Reference: COMAR 26.11.09.07C]** D. Control of Nitrogen Oxides The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions. **[Reference: COMAR 26.11.09.08J(1)]** E. Control of VOC Emissions See Section 5.4, Record Keeping Requirements. F. Operational Limitations See Section 5.4, Record Keeping Requirements.
5.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall maintain records of the visible emissions observations, document any incidence of non-compliance, as well as actions taken to reduce visible emissions, and maintain documentation that the observations were conducted by a certified observer. **[Reference:**

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COMAR 26.11.03.06C(3)]

B. Control of Particulate Matter Emissions
The Permittee shall maintain records of performance test data as described in Table IV-5, 5.4F(2) of this permit. **[Reference: COMAR 26.11.03.06C]**

C. Control of Sulfur Oxides
The Permittee shall maintain records of the fuel sulfur content.

D. Control of Nitrogen Oxides
(1) The Permittee shall maintain at the site and make available to the Department upon request the following information:
(a) A copy of the written in-house operator training program; **[Reference: COMAR 26.11.09.08J(3)]**
(b) Operator training attendance records; **[Reference: COMAR 26.11.09.08J(5)]** and
(c) Annual fuel use records. **[Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C(3)]**

(2) The Permittee shall calculate monthly NOx emissions from each installation based on fuel usage and shall maintain a rolling 12-month total of VOC emissions from each installation.

E. Control of VOC Emissions
The Permittee shall calculate monthly VOC emissions from each installation based on fuel usage and shall maintain a rolling 12-month total of VOC emissions from each installation.

F. Operational Limitations
The Permittee shall keep for each calendar month records of the following emissions data for the source, which shall be updated by no later than the 30th day of the following month: **[Reference: Permit to Construct Nos. 043-0006-9-0107 and 9-0157, Part E, Conditions (1)(c)-(g) and (2), issued on August 11, 2015]**
(1) The hours of operation of each registered installation;

(2) Current emissions performance test data for NOx, CO, PM, and hydrocarbons (HC) on each engine tested for emissions of these pollutants at the E&R engine test cells, reported in units of grams/BHP-hr or equivalent; and

(3) For each calendar month and each rolling 12-month period, the following:

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	(a) The amount of fuel combusted by the E&R engine test cells under ARMA Registration No. 043-0006-9-0107; and (b) The amount of fuel combusted by the E&R engine test cells under ARMA Registration No. 043-0006-9-0157.
5.5	**Reporting Requirements:** A. Visible Emissions Limitations The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III - "Report of Excess Emissions and Deviations." B. Control of Particulate Matter Emissions See Section 5.4, Record Keeping Requirements. C. Control of Sulfur Oxides See Section 5.4, Record Keeping Requirements. D. Control of Nitrogen Oxides (1) The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the installation. **[Reference: COMAR 26.11.09.08J(2)]** (2) The Permittee shall include monthly and annual NOx emissions in the Annual Emissions Certification Report. E. Control of VOC Emissions The Permittee shall include VOC emissions in the Annual Emissions Certification Report. F. Operational Limitations The Permittee shall include monthly and annual fuel usage, the hours of operation and the emissions test data in the Annual Emissions Certification Report.

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6.0	**Emissions Unit Number(s): Production Engine Test Cells** **002X-1 ARMA Registration No. 043-0006-9-0106** Eight (8) engine test cells for production testing.
6.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.06.02C(1)]** (2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period." **[Reference: COMAR 26.11.06.02A(2)]** B. Control of Particulate Matter Emissions "A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/DSCM). **[Reference: COMAR 26.11.06.03B(1)(a)]** C. Control of Sulfur Oxides (1) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing more than 500 ppm of sulfur dioxide." **[Reference: COMAR 26.11.06.05B(1)]** (2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid." **[Reference: COMAR 26.11.06.05B(2)]**

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	D. Control of Nitrogen Oxides "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall: (1) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions; **[Reference: COMAR 26.11.09.08J(1)]** (2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; **[Reference: COMAR 26.11.09.08J(2]** (3) Maintain and make available to the Department, upon request, the written in-house operator training program**; [Reference: COMAR 26.11.09.08J(3)]** (4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and **[Reference: COMAR 26.11.09.08J(4)]** (5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request**." [Reference: COMAR 26.11.09.08J(5)]** **Note:** Condition D(4) above only applies to engines that are capable of firing natural gas.
6.2	**Testing Requirements:** A. Control of Visible Emissions See Section 6.3, Monitoring Requirements. B. Control of Particulate Matter Emissions See Section 6.3, Monitoring Requirements. C. Control of Sulfur Oxides See Section 6.4, Record Keeping Requirements. D. Control of Nitrogen Oxides See Section 6.4, Record Keeping Requirements.
6.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall have a qualified person observe each stack for visible emissions at least once every 168 hours, if the units are

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	operational. If visible emissions are observed, the Permittee shall then conduct an EPA Reference Method 9 test. If non-compliant visible emissions are confirmed by the Method 9 test, the Permittee shall: (1) determine the cause of the visible emissions; (2) make necessary adjustments to reduce visible emissions; (3) document in writing the results of the inspections and the steps taken to reduce visible emissions; and (4) continue to perform a Method 9 daily until the visible emissions have been brought into compliance. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions The Permittee shall maintain a preventative maintenance plan for engine test cells. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed. **[Reference: COMAR 26.11.03.06C]** C. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil. **[Reference: COMAR 26.11.09.07C]** D. Control of Nitrogen Oxides See Section 6.4, Record Keeping Requirements.
6.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall maintain records of the visible emissions observations, document any incidence of non-compliance, as well as actions taken to reduce visible emissions, and maintain documentation that the observations were conducted by a certified observer. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions The Permittee shall maintain records of maintenance activities designed to minimize air emissions. **[Reference: COMAR 26.11.03.06C]** C. Control of Sulfur Oxides The Permittee shall maintain records of the diesel fuel sulfur content. **[Reference: COMAR 26.11.03.06C(3)]**

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	D. Control of Nitrogen Oxides The Permittee shall maintain at the site and make available to the Department upon request the following information: (1) A copy of the written in-house operator training program; **[Reference: COMAR 26.11.09.08J(3)]** (2) Operator training attendance records; **[Reference: COMAR 26.11.09.08J(5)]** and (3) Annual fuel use records. **[Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C(3)]**
6.5	**Reporting Requirements:** A. Control of Visible Emissions The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III - "Report of Excess Emissions and Deviations." B. Control of Particulate Matter Emissions See Section 6.4, Record Keeping Requirements. C. Control of Sulfur Oxides The Permittee shall make available records of the diesel fuel sulfur content, if requested by the Department. D. Control of Nitrogen Oxides The Permittee shall make records available to the Department upon request.

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7.0	**Emissions Unit Number(s): Warm Engine Short Test (WEST) Stations** **007QEPP ARMA Registration Nos. 043-0006-9-0182 and 9-0183** Two (2) warm engine short test (WEST) stations for production testing of engines.
7.1	**Applicable Standards/Limits:** A. Control of Visible Emissions (1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.06.02C(1)]**

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	(2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period." **[Reference: COMAR 26.11.06.02A(2)]** B. Control of Particulate Matter Emissions "A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)(a)]** C. Control of Sulfur Oxides (1) "A person may not cause or permit the discharge into the atmosphere from installation other than fuel-burning equipment of gases containing more than 500 ppm of sulfur dioxide. Installations constructed before January 17, 1972, are limited to not more than 2,000 ppm sulfur dioxide." **[Reference: COMAR 26.11.06.05B(1)]** (2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid." **[Reference: COMAR 26.11.06.05B(2)]** D. Control of Nitrogen Oxides "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall: (1) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions; **[Reference: COMAR 26.11.09.08J(1)]** (2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; **[Reference: COMAR 26.11.09.08J(2]** (3) Maintain and make available to the Department, upon request,

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	the written in-house operator training program**; [Reference: COMAR 26.11.09.08J(3)]** (4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and **[Reference: COMAR 26.11.09.08J(4)]** (5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request**." [Reference: COMAR 26.11.09.08J(5)]** **Note:** Condition D(4) above only applies to engines that are capable of firing natural gas.
7.2	**Testing Requirements:** A. Control of Visible Emissions See Section 7.3, Monitoring Requirements. B. Control of Particulate Matter Emissions See Section 7.4, Record Keeping Requirements. C. Control of Sulfur Oxides See Section 7.3, Monitoring Requirements. D. Control of Nitrogen Oxides See Section 7.3, Monitoring Requirements.
7.3	**Monitoring Requirements:** A. Control of Visible Emissions The Permittee shall have a qualified person observe each stack for visible emissions at least once every 168 hours of operation. If visible emissions are observed, the Permittee shall then conduct an EPA Reference Method 9 test. If non-compliant visible emissions are confirmed by the Method 9 test, the Permittee shall: (1) determine the cause of the visible emissions; (2) make necessary adjustments to reduce visible emissions; (3) document in writing the results of the inspections and the steps taken to reduce visible emissions; and (4) continue to perform a Method 9 daily until the visible emissions have been brought into compliance. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions See Section 7.4, Record Keeping Requirements.

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	C. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil. **[Reference: COMAR 26.11.09.07C]** D. Control of Nitrogen Oxides The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions. **[Reference: COMAR 26.11.03.06C(3)]**
7.4	**Record Keeping Requirements:** The following records shall be maintained on site for a period of at least five (5) years and shall be made available to the Department upon request: **[Reference: COMAR 26.11.02.19C and as indicated below]** A. Control of Visible Emissions The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the visible emissions observations, documentation of any incidence of non-compliance, as well as actions taken to reduce visible emissions, and documentation that the observations were conducted by a certified observer. **[Reference: COMAR 26.11.03.06C(3)]** B. Control of Particulate Matter Emissions The Permittee shall maintain records of the number and types of engines testing in the WEST Stations. These records shall be used to calculate monthly emissions of NOx, PM, CO, and HC from this installation using engine-specific emissions factors. **[Reference: Letter from the Department dated February 10, 2014, approving this method of emissions monitoring, based on a request from the company dated January 27, 2014.]** C. Control of Sulfur Oxides The Permittee shall maintain records of the diesel fuel sulfur content. **[Reference: COMAR 26.11.03.06C(3)]** D. Control of Nitrogen Oxides (1) The Permittee shall maintain at the site and make available to the Department upon request the following information: (a) A copy of the written in-house operator training program; **[Reference: COMAR 26.11.09.08J(3)]** (b) Operator training attendance records; **[Reference: COMAR 26.11.09.08J(5)]** and (c) Annual fuel use records. **[Reference: COMAR 26.11.09.08K(3) and COMAR 26.11.03.06C(3)]**

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	(2) The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the installation. **[Reference: COMAR 26.11.09.08J(2)]** (3) The Permittee shall maintain for at least five (5) years and make available to the Department upon request, daily records of the hours of operation of the warm production engine test cells, a copy of the written in-house training program and operator training attendance records, and annual fuel use records. **[Reference: Permits to Construct 043-0006-9-0182 and 9-0183, COMAR 26.11.09.08J and COMAR 26.11.09.08K(3)]** (4) The Permittee shall maintain records of the number and type of engines tested in the WEST Stations. These records shall be used to calculate monthly emissions of NOx, PM, CO, and HC from this installation using engine-specific emissions factors. **[Reference: Letter from the Department dated February 10, 2014, approving this method of emissions monitoring, based on a request from the company dated January 27, 2014.]**
7.5	**Reporting Requirements:** A. Control of Visible Emissions The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07C occurrences of excess emissions to the Compliance Program of the Air and Radiation Management Administration. B. Control of Particulate Matter Emissions See Section 7.4, Record Keeping Requirements. C. Control of Sulfur Oxides The Permittee shall make available records of the diesel fuel sulfur content, if requested by the Department. **[Reference: COMAR 26.11.03.06C(3)]** D. Control of Nitrogen Oxides The Permittee shall submit an annual certification of emissions for volatile organic compounds (VOC) and nitrogen oxides (NOx). **[Reference: COMAR 26.11.03.06C(3)]**

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

[For Areas I, II, V, and VI]

The affected fuel burning units are subject to the following requirements:

COMAR 26.11.09.05A(1), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20 percent opacity.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and

(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(1)(c), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) No. 2 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The affected units are subject to the following requirements:

(a) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of

emissions from any engine, operating at idle, greater than 10 percent opacity.

(b) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(c) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
(A) Engines that are idled continuously when not in service: 30 minutes
(B) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

[For Distillate Fuel Oil]

(d) COMAR 26.11.09.07A(1)(c), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(e) COMAR 26.11.36.03A(1), which establishes that the Permittee may not operate an emergency generator except for emergencies, testing and maintenance purposes.

(f) COMAR 26.11.36.03A(5), which establishes that the Permittee may not operate an emergency generator for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

(3) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(4) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(5) No. 100 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The affected units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(6) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(7) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(8) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(9) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(c) No. 9 Storage of lubricating oils;

(d) No. 5 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(e) No. 9 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(10) No. 26 Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(11) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(12) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(13) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(14) No. 7 Laboratory fume hoods and vents;

(15) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 4 (New) CNC Machines and Hydraulic Presses for Axle Manufacturing line.

No. 1 (New) Metal Cleaning System for Axle Manufacturing Line.

(16) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. 2 Wet scrubbers for machining operations (Fairbrothers and Associates Models PS30 and PS50)

No. 2 Pangborn abrasive blast unit for metal cleaning that discharges indoors.

No. 3 Dust collectors for machining operations (wet and dry) that use filter media for dust collection and discharge to the interior of the building.

No. 5 Gear Box "only" engine test cells with zero emissions (003ER-3)

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (A) COMAR 26.11.06.08, Nuisance. "An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

   (B) COMAR 26.11.06.09, Odors. "A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created."

   (C) COMAR 26.11.15.05A, Control Technology Requirements. "A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated, any new installation or source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT."

   (D) COMAR 26.11.15.06A(1), Ambient Impact Requirement. "Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health."

   (E) COMAR 26.11.36.03A(1), Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator may not operate the generator except for emergencies, testing, and maintenance purposes."

   (F) COMAR 26.11.36.03A(5), Applicability and General Requirements for Emergency Generators and Load Shaving Units. "The owner or operator of an emergency generator or load shaving unit may not operate the engine for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary."

2. Operating Conditions:

Condition (A) applies to ARMA Registration No. 043-0006-6-0716 only.

(A) To comply with the T-BACT requirements of COMAR 26.11.15.05, The Permittee shall:

(i) Use only water based paints,

(ii) Use an HVLP spray gun, and

(iii) Shall exhaust emissions through the fabric panel filters, or an equivalent emission control, unless prior approval is obtained from the Department.

[Reference: Permit to Construct No. 043-0006-6-0716, Condition C(3), issued on June 25, 2015]

Condition (B) applies to ARMA Registration Nos. 043-0006-6-0694, 6-0695, and 6-0697 only.

(B) To comply with the T-BACT requirements of COMAR 26.11.15.05, The Permittee shall use only water based paints containing no HAPs in these paint systems unless prior approval is obtained from the Department. **[Reference: Permit to Construct Nos. 043-0006-6-0694 through 6-0697, condition C(4), issued October 4, 2013.**

3. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

(b) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(c) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

BACKGROUND

Mack Trucks, Inc. Hagerstown Plant is located at 13302 Pennsylvania Avenue, Hagerstown, Washington County, Maryland. The plant is located in air quality control Area I. The plant manufactures truck engines and transmissions. The applicable Standard Industrial Classification (SIC) codes are 3714 and 3519. The manufacturing process includes metal working activities, surface coating operations, material storage, and final testing. Research and development activities in support of the manufacturing operations are conducted in the Engineering and Research section of the manufacturing building. Minor sources at the facility include metal grinding, heat treating, and diesel engines to power fire pumps. In 2008, construction began on the Warm Engine Short Test (WEST) Stations. The Permittee generally operates three shifts per day, five days a week.

The following table summarizes the actual emissions from Mack Trucks, Inc. based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM_{10} (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2014	45.6	0.1	1.8	9.8	16.3	0.38
2013	43.1	0.1	5.3	9.7	8.6	0.006
2012	58.3	0.1	5.8	11.7	8.5	0.027
2011	52.8	0.1	2.9	11.6	12.2	0.019
2010	40.1	0.1	2.0	9.6	8.3	0.2

The major source threshold for triggering Title V permitting requirements in Washington County is 50 tons per year for volatile organic compounds (VOC), 100 tons per year for nitrogen oxides (NOx), 100 tons per year for any other criteria pollutants, and 10 tons for a single hazardous air pollutant (HAP) or 25 tons per year for total HAPs. Since the potential NOx emissions from the facility are greater than the major source threshold, Mack Trucks, Inc. is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

On July 20, 2012, the Department received a Title V Significant Modification Application to incorporate the following emissions units into the Title V Operating Permit: ARMA Registration Nos. 043-0006-6-0694, 6-0695, 6-0696, and 6-0697. A new Title V Operating Permit was not issued at this time, the Department opted to include this equipment with the next Title V Operating Permit renewal.

The Part 70 Operating Permit renewal application was received by the Department on April 29, 2015. An administrative completeness letter and application shield was sent on May 14, 2015 for the application.

EMISSION UNIT IDENTIFICATION

Mack Trucks, Inc has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 2: Emissions Units Identification

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
005HWB-1	043-0006-5-0576	One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.	July 2005
005HWB-2	043-0006-5-0577	One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.	July 2005
005HWB-3	043-0006-5-0578	One (1) 16.8 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. Each chamber is rated at 16.8 MMBtu/hr, one fires gas, the other fires backup fuel oil only. Only one chamber operates at a time.	July 2005
005HWB-4	043-0006-5-0579	One (1) 8.6 MMBtu/hr hot water boiler capable of firing natural gas or distillate oil.	July 2005
001STB-5	043-0006-5-0585	One (1) 3.36 MMBtu/hr steam boiler capable of firing natural gas only.	August 2005
001 Temp N	043-0006-5-0645	One (1) 8.375 MMBtu/hr boiler firing natural gas only.	July 26, 2015
002PB-2	043-0006-6-0449	One (1) manual paint spray booth equipped with fabric filters for particulate emission control.	1972
002PB-3	043-0006-6-0694	One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.	January 2012
002PB-4	043-0006-6-0695	One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.	January 2012
002PK-1	043-0006-6-0697	One (1) paint kitchen for automatic paint distribution.	January 2012
002PB-5	043-0006-6-0716	One (1) manual paint booth associated with the new axle manufacturing line to be constructed during 2015.	TBD – 2015
002X-1	043-0006-9-0106	Eight (8) engine test cells for production testing.	December 2005

Emissions Unit Number	MDE Registration Number	Emissions Unit Name and Description	Date of Installation
003ER-3	043-0006-9-0107	Fifteen (15) engine test cells for engineering and research. Twelve (12) cells were constructed in 1961 and three (3) cells were constructed in 1973. One (1) of these test cells is used exclusively for transmission/gear box testing.	1961 (12 cells) 1973 (3 cells)
003ETC-1 through 003ETC-8	043-0006-9-0157	Eight (8) engine test cells for engineering and research. Used for testing truck engines up to 785 brake HP.	December 2005
007QEPP	043-0006-9-0182	One (1) warm engine short test station for production testing of engines.	December 2008
007QEPP	043-0006-9-0183	One (1) warm engine short test station for production testing of engines.	December 2008

CHANGES SINCE THE PRIOR TITLE V WAS ISSUED:

- The Permittee identified in the Insignificant Activities list that "Non-contact water (i.e., water that has not been in direct contact with process fluids) cooling towers except as regulated under Section 112 of the Clean Air Act." Is present at the facility. This item is no longer on the Department's Insignificant Activities checklist, and was therefore, left out of this permit.

- On December 4, 2012, the Department issued a letter to Mack Trucks, Inc. (in response to a letter dated August 14, 2012) agreeing to modify the Title V Permit to include the VOC leak requirements in COMAR 26.11.19.16 in the facility-wide portion of the Title V Operating permit upon renewal. VOC Leak requirements can be found in Table IV-1 of this permit.

- On December 18, 2012, the Department issued a letter to Mack Trucks Inc. (in response to the letter dated November 5, 2012) approving the requested administrative change to the Operating Permit (allowing the facility to burn fuels other than diesel in ARMA Registration Nos. 043-0006 -9-0107 and 9-0157). In this letter the Department addresses a second administrative change request stating that the facility needed to come up with an alternative method of monitoring for ARMA Registration Nos. 043-0006-9-0182 and 9-0183.

- On February 10, 2014, the Department issued a letter to Mack Trucks, Inc. approving the requested change in language to a portion of the Title V Operating Permit for ARMA Registration Nos. 043-0006-9-0182 and 9-0183

(based on a letter from Mack Trucks, Inc. dated January 27, 2014). The record keeping requirement (formerly Condition 7.4B) now reads as follows:

> "The Permittee shall maintain records of the number and type of engines tested in the WEST stations. These records shall be used to calculate monthly emissions of NOx, PM, CO, and HC from this installation using engine-specific emissions factors."

- The Department reviewed a letter submitted by Mack Trucks, Inc, to install CNC Machines and Presses at the facility. The Department agreed with Mack Trucks, Inc. that this equipment, as described in the letter dated June 9, 2014, is exempt from Air Quality Permitting at this time. The air-hydraulic presses are exempt per COMAR 26.11.02.10O(5), the self-contained CNC machines are exempt per COMAR 26.11.02.10X and the lubricating oil reservoirs and storage units associated with the CNC machines and presses are exempt per COMAR 26.11.02.10Q(4). This equipment is included in the Insignificant Activities list in this permit.

- The Department reviewed a letter submitted by Mack Trucks, Inc, to install a new welding machine line at the facility. The Department agreed with Mack Trucks, Inc. that this equipment, as described in the letter dated October 14, 2014 meets the exemption requirements of COMAR 26.11.02.10X and is exempt from Air Quality Permitting at this time. This equipment is included in the Insignificant Activities list in this permit.

The following Tables 3 – 5 identify changes to emissions units at the facility in the past five (5) years.

Table 3 - Emissions Units That Have Been Removed From The Facility.

Emissions Unit ID	ARMA Registration No.	Emissions Unit Description	Status
001 Temp N	043-0006-5-0588	One (1) steam boiler rated at 9.9 MMBtu/hr firing natural gas.	Replaced by 043-0006-5-0645. The Emission Unit ID (001 Temp N) is now in use by the new unit.
004-TK-18	043-0006-9-0093	One (1) 10,000 gallon above ground gasoline storage tank equipped with Stage I controls.	This unit was converted to an oil storage tank in 2006 and is included in the insignificant activities list.

Emissions Unit ID	ARMA Registration No.	Emissions Unit Description	Status
004-TK-19	043-0006-9-0080	One (1) 10,000 gallon VOC storage tank for storing cleaning solvent.	This unit was converted to an oil storage tank in 2006 and is included in the insignificant activities list.
002PB-1	043-0006-6-0517	One (1) Koch robotic paint spray booth with integral drying oven and water curtain for particulate emissions control.	This unit has been removed.
---	043-0006-6-0696	One (1) manual paint spray booth.	This unit was never installed.
Temp S (South)	043-0006-5-0587	One (1) 9.9 MMBtu/hr boiler firing natural gas.	Installed: 09/06; Removed: 11/10
Temp S (South) (005 Temp S)	043-0006-5-0616	One (1) Cleaver Brooks steam boiler rated at 8.4 MMBtu/hr firing natural gas.	Installed: 11/10; Removed: 10/12
Temp S (South)	043-0006-5-0632	One (1) 2.1 MMBtu/hr boiler firing natural gas only.	Installed: 10/12; Removed: 02/14
Temp S (South)	043-0006-5-0294	One (1) 8.4 MMBtu/hr boiler firing natural gas.	Installed: 02/14; Removed: 07/14

Table 4 - Emissions Units That Have Been Added To The Facility.

Emissions Unit ID	ARMA Registration No.	Emissions Unit Description	Date of Installation
002PB-3	043-0006-6-0694	One (1) robotic paint spray booth with flash tunnel and electrically heated curing oven.	2012
002PB-4	043-0006-6-0695	One (1) robotic paint spray booth with flash tunnel and electrically heated curing oven.	2012
002PK-1	043-0006-6-0697	One (1) paint kitchen for automatic paint distribution.	2012
002PB-5	043-0006-6-0716	One (1) paint booth for the axle manufacturing line.	2015
001 Temp N	043-0006-5-0645	One (1) 8.375 MMBtu/hr boiler firing natural gas only.	July 26, 2015

Table 5 – Modification To The Description of One (1) Emissions Unit At The Facility.

Emissions Unit ID	ARMA Registration No.	Emissions Unit Description	
003ER-3	043-0006-9-0107	Twenty four (24) engine test cells for engineering and research. Eight (8) of these cells are used exclusively for transmission / gear box testing.	Old description of the unit.
003-ER-3	043-0006-9-0107	Fifteen (15) engine test cells for engineering and research. Twelve (12) cells were constructed in 1961 and three (3) cells were constructed in 1973. One (1) of these test cells is used exclusively for transmission / gear box testing.	New description of the unit.

GREENHOUSE GAS (GHG) EMISSIONS

Mack Trucks, Inc emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. The Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section III of the Part 70 permit.

The following table summarizes the actual GHG emissions from Mack Trucks, Inc based on its Annual Emission Certification Reports:

Table 6: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2014 tpy CO_2e	2013 tpy CO_2e	2012 tpy CO_2e
Carbon dioxide ($CO_{2)}$	1	13,487	13,420	16,186
Methane ($CH_{4)}$	25	31.75	29.75	40
Nitrous Oxide (N_2O)	298	52.75	50.66	60.79
Total GHG CO_2e		**13,571.5**	**13,500.41**	**16,286.79**

FEDERAL REGULATION REVIEW – NEW SOURCE PERFORMANCE STANDARDS (NSPS)

40 CFR Part 60, Subpart Dc – NSPS for Small Industrial-Commercial-Institutional Steam Generating Units.
The two (2) 14.7 and one (1) 16.8 million Btu/hour boilers permitted in June 2005 are subject to New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units 40 CFR Part 60, Subpart Dc.

40 CFR Part 60, Subpart IIII – Stationary Compression Ignition Internal Combustion Engines
Per 40 CFR §60.4200(b), the provisions of this subpart do not apply to engines being tested at a stationary CI ICE test cell/stand.

FEDERAL REGULATION REVIEW – NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

40 CFR Part 63, Subpart MMMM – Surface Coating of Miscellaneous Metal Parts and Products.
Per 40 CFR §63.3881(b), this regulation only applies at a facility that is a major source of HAP emissions. This regulation does not apply to Mack Trucks, Inc.

40 CFR Part 63, Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines
Per 40 CFR §63.6585, the provisions of this subpart do not apply to engines being tested at a stationary RICE test cell/stand.

40 CFR Part 63, Subpart DDDDD – NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.
This regulation only applies to boilers located at major sources of HAP. This regulation does not apply to Mack Trucks, Inc.

40 CFR Part 63, Subpart PPPPP – Engine Test Cells/Stands
The engine test cells are not subject to this regulation as long as the facility is not considered a major source of HAP emissions per 40 CFR §63.9285(c). The Permittee requested a limit on HAP emissions in 2004, to maintain synthetic minor status for HAP emissions.

40 CFR Part 63, Subpart JJJJJJ – NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources.
As indicated in a letter from Mack Trucks, Inc. to the Department dated June 14, 2011 and in a follow up email with Ms. Reid on June 29, 2011, Mack Trucks Inc. is burning natural gas as the primary fuel in all of its boilers. Four (4) boilers

(ARMA Registration Nos. 043-0006-5-0576 through 5-0579) are capable of burning fuel oil as well. These units will only burn distillate oil or residual fuel oil as a back-up if natural gas supplies are interrupted. Provided Mack Trucks, Inc. follows the definition of "Period of natural gas curtailment or supply interruption" found in 40 CFR §63.11237, the requirements of 40 CFR 63, Subpart JJJJJJ will not apply to these boilers as per 40 CFR §63.11195(e).

The two (2) boilers that are capable of firing natural gas only (Emission Units 001STB-5 and 001 Temp N) are not subject to this rule per 40 CFR §63.11195(e).

40 CFR Part 63, Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

According to the application received on November 19, 2009, no paint stripping operations occur in the manufacturing operations and the coatings applied to the manufactured parts do not contain any of the target metal HAPs listed in this subpart (chromium, lead, manganese, nickel, and cadmium). Therefore this subpart does not apply to the facility.

NEW SOURCE REVIEW (NSR) EXPLANATION

Since the initial Title V Operating Permit was issued, several projects have had the potential to trigger NSR. Those projects are discussed below.

1. The installation of four (4) boilers in July 2005 (ARMA Registration Nos. 043-0006-5-0576, through 5-0579). In order to not trigger an NSR review for this project, the company accepted a synthetic minor limitation limiting these boilers to 40 tons per year of NOx and SOx emissions.

2. The installation of 8 engine test cells in December 2005 (ARMA Registration No. 043-0006-9-0157). In order to not trigger an NSR review for that project, the company accepted a synthetic minor limitation limiting these units to 40 tons per year of NOx and VOC emissions for any period of 12 consecutive months. To meet this limit, Mack Trucks, Inc. also took a limit on diesel fuel oil usage. Specifically, Mack Trucks, Inc. could burn up to 1.7 million gallons per year of diesel fuel in all E&R engine test cells (both the existing cells (ARMA Registration No. 043-0006-9-0107) and the 8 new cells (ARMA Registration No. 043-0006-9-0157).

3. On April 22, 2015, as part of an on-going modification process to the engine test cells under ARMA Registration Nos. 043-0006-9-0107 and 043-0006-9-0157, Mack Trucks, Inc. requested to lower the fuel usage limit and accept NOx and VOC emissions limits for these registration numbers in order to avoid triggering major source NNSR for this project. The modification to

these engines includes removing and replacing the control room, replacing the existing dynamometers, replacing the test emission measuring instruments and recording devices, and upgrading the instrumentation controls as needed.

The Department agreed to the new fuel use limit for these engines to 1.45 million gallons per year for any 12 consecutive months.

Mack Trucks, Inc. indicated that they intend to update eight (8) of the fifteen (15) existing engine test cells under ARMA Registration No. 043-0006-9-0107 in the next few years as funds become available.

The Baseline Actual Emissions (BAE) were calculated as the average of the two highest consecutive years in the past five years. In this case, the NOx and VOC emissions were averaged from 2011 and 2012. The BAE for NOx is 44.55 tpy and for VOC is 1.12 tpy. To avoid triggering major source NSR, Mack Trucks, Inc. cannot exceed the following emission limits during any 12 consecutive month period:

a. 84.55 tpy of NOx; and
b. 41.12 tpy of VOC

SYNTHETIC MINOR STATUS – HAZARDOUS AIR POLLUTANTS (HAPs)

In 2004, the Permittee elected to become a synthetic minor source for HAPs. Accordingly, the Permittee is required to keep fuel and material use records demonstrating that the premises-wide emissions of HAPs is less than 10 tons per year for any individual HAP and less than 25 tons per year for total HAPs for any period of 12 consecutive months.

COMPLIANCE ASSURANCE MONITORING (CAM) APPLICABILITY

Mack Trucks, Inc. conducted a Compliance Assurance Monitoring (CAM) analysis for the facility and determined that the facility is not subject to the CAM Rule, 40 CFR Subpart 64.

CAM is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act (CAA) for large emission units that rely on air pollution control equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause or causes of the excursions are corrected.

In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have post-control emissions of at least 100% of the major source amount (for initial CAM submittals); and must not otherwise be exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emission unit.

Mack Trucks, Inc. provided a CAM applicability discussion summarized as follows:

1. "For each boiler, the potential emissions at rated capacity are less than the major source threshold for all pollutants."

2. "For the engine test cells, collectively the potential nitrogen oxides emissions are greater that the major source threshold; however individually that are not. Additionally, add-on control devices are not used for nitrogen oxides reduction."

3. "For the paint booths, potential pre-control particulate emissions are less that major source thresholds for each paint booth. Also, potential VOC emissions are less than major source thresholds given the current coating formulations used in each booth. Furthermore, add-on control devices are not used on any paint booth for VOC reduction."

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements.

Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Emission Units: Facility-Wide

In 2004, Mack Trucks, Inc. elected to become a synthetic minor source for HAPs. Accordingly, Mack Trucks, Inc. is required to keep fuel and material use records for demonstrating that the premises wide emissions of HAPs is less than 10 tons per year for any individual HAP and less than 25 tons per year for total HAPs for any period of 12 consecutive months.

Mack Trucks, Inc. includes HAP emissions in their Annual Emissions Certification Report. The actual emissions of HAPs from Mack Trucks, Inc. have not exceeded 0.4 tpy in the past five (5) years. The yearly emissions can be found in Table 1.

Applicable Standards and Limits:

A. Hazardous Air Pollutant Emissions

The Permittee shall limit the premises-wide emission of Hazardous Air Pollutants (HAPs) to less than 10 tons per year for any individual HAP and less than 25 tons per year for total HAPs for any period of 12 consecutive months. **[Reference: Permit to Construct 043-9-0157N, condition A(5), issued on July 26, 2004]**

Compliance Demonstration

The Permittee shall keep monthly records of Material Safety Data Sheets (MSDS), manufacture specification sheets, material usage data for each group of installations, and the amount and identity of each paint, coating, and organic solvent that contains HAPs.

The Permittee shall keep monthly records of HAP emissions data. The Permittee shall submit annual reports due on April 1 of each year providing the HAP emissions for the facility for the previous year.

Rationale for Periodic Monitoring

The HAP emissions from the premises have been below the limits provided in this section for the past five years. It is not anticipated that HAP emissions will increase with the current equipment. The record keeping and reporting requirements are sufficient to demonstrate compliance.

B. Control of VOC Equipment Leaks

(1) "A person subject to this regulation shall comply with all of the following requirements:

(a) Visually inspect all components on the premises for leaks at least once each calendar month.

(b) Tag any leak immediately so that the tag is clearly visible. The tag shall be made of a material that will withstand any weather or corrosive conditions to which it may be normally exposed. The tag shall bear an identification number, the date the leak was discovered, and the name of the person who discovered the leak. The tag shall remain in place until the leak has been repaired.

(c) Take immediate action to repair all observed VOC leaks that can be repaired within 48 hours.

(d) Repair all other leaking components not later than 15 days after the leak is discovered. If a replacement part is needed, the part shall be ordered within 3 days after discovery of the leak, and the leak shall be repaired within 48 hours after receiving the part.

(e) Maintain a supply of components or component parts that are recognized by the source to wear or corrode, or that otherwise need to be routinely replaced, such as seals, gaskets, packing, and pipe fittings.

(f) Maintain a log that includes the name of the person conducting the inspection and the date on which leak inspections are made, the findings of the inspection, and a list of leaks by tag identification number. The log shall be made available to the Department upon request. Leak records shall be maintained for a period of not less than 2 years from the date of their occurrence."

[Reference: COMAR 26.11.19.16C]

(2) "Exceptions. Components that cannot be repaired as required in this regulation because they are inaccessible, or that cannot be repaired during operation of the source, shall be identified in the log and included within the source's maintenance schedule for repair during the next source shutdown." **[Reference: COMAR 26.11.19.16D]**

Compliance Demonstration

The Permittee shall inspect the installation for VOC leaks at least once each calendar month.

The Permittee shall maintain a VOC leak detection and repair log that includes the name of the person conducting the inspection, the date of the inspection, results of the inspection, a list of leaks by tag identification number, a description of all leaks discovered, the date and nature of all leak repairs, and the identity of components that cannot be repaired within 48 hours.

Rationale for Periodic Monitoring
The Permittee shall monitor for VOC leaks and make necessary repairs in a timely manner. No additional monitoring is required to demonstrate compliance.

Emission Units: 005HWB-1, 005HWB-2, 005HWB-3, and 005HWB-4
Boilers (Multi-Fuel Capabilities)

005HWB-1 ARMA Registration No. 043-0006-5-0576
One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.

005HWB-2 ARMA Registration No. 043-0006-5-0577
One (1) 14.7 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil.

005HWB-3 ARMA Registration No. 043-0006-5-0578
One (1) 16.8 MMBtu/hr hot water boiler capable of firing natural gas, distillate oil, or residual oil. Each chamber is rated at 16.8 MMBtu/hr, one fires gas, the other fires back up fuel only. Only one chamber operates at a time.

005HWB-4 ARMA Registration No. 043-0006-5-0579
One (1) 8.6 MMBtu/hr hot water boiler capable of firing natural gas or distillate oil.

Applicable Standards and Limits:

A. Control of Visible Emissions

(1) "In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20% opacity." **[Reference: COMAR 26.11.09.05A(1)]**

(2) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
   (a) The visible emissions are not greater than 40 percent opacity; and
   (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

[Reference: COMAR 26.11.09.05A(3)]

Compliance Demonstration
The Permittee shall have a qualified person visually observe the emissions from each boiler stack while the boiler is combusting oil every 168 hours of operation. If visible emissions are observed, the Permittee

shall then conduct an EPA Method 9 observation. If non-compliant visible emissions are confirmed by the Method 9 observation, the Permittee shall (1) inspect the equipment to determine the cause; (2) perform all necessary repairs and/or adjustments to the equipment within 48 hours; (3) document in writing the results of the inspections and the repairs and/or adjustments made to the equipment; and (4) continue to perform an EPA Method 9 daily until the visible emissions have been brought into compliance.

The Permittee shall keep maintenance records, records of visible emissions observations, documentation of any incidence of visible emissions and any corrective action taken, and documentation that the observations were conducted by a certified observer. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring
Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring visible emissions.

Condition B. below applies only to ARMA Registration Nos. 043-0006-5-0576, 5-0577, and 5-0578.

B. Control of Particulate Matter Emissions

(1) "The following apply in Areas I, II, V, and VI: (1) New Fuel Burning Equipment. A person may not cause or permit particulate matter caused by the combustion of solid fuel or residual oil in any fuel burning equipment erected on or after January 17, 1972, to be discharged into the atmosphere in excess of the amounts shown in Figure 2."
[Reference: COMAR 26.11.09.06A(2)]

Note: As per Figure 2, for boilers with a maximum rated heat input of less than 25 million Btu per hour, the limit is 0.4 pounds of particulate matter per million Btu heat input.

(2) "Exceptions. The requirements in Figure 1 and Figure 2 of this chapter do not apply to fuel burning equipment burning gas or distillate oil.
[Reference: COMAR 26.11.09.06A(3)(c)]

Compliance Demonstration
The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize particulate matter emissions.

The Permittee shall maintain records of routine maintenance to demonstrate that the equipment is being kept in good working order.

Rationale for Periodic Monitoring
Boilers that are properly operated and maintained should not exceed the applicable particulate matter emission standard. No additional monitoring is necessary.

C. Control of Sulfur Oxides

(1) "A person may not burn, sell, or make available for sale any fuel with a sulfur content by weight in excess of or which otherwise exceeds the following limitations (1) In Areas I, II, V, and VI: (b) Residual fuel oils, 2.0 percent; (c) Distillate fuel oils, 0.3 percent." **[Reference: COMAR 26.11.09.07A(1)(b) and (c)]** '

Note: Though the regulation states the limit for residual fuel oil is 2.0 percent, the sulfur content of al fuel oils was limited to 0.3 percent in a prior permit to construct. This limit still applies. **[Reference Permit to Construct Nos. 043-0006-5-0575 through 5-0579N issued on June 16, 2005]**

(2) "On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph. **[Reference: 40 CFR §60.42c(d)]**

Note: By complying with COMAR 26.11.09.07A(1)(a), Mack Trucks Inc. will be in compliance with 40 CFR §60.42c(d).

Compliance Demonstration
The Permittee shall not accept deliveries of fuel oil with a sulfur content greater than that allowed by the regulation. The Permittee shall obtain from the supplier a fuel analysis stating the sulfur content of each delivery of residual fuel oil by the source.

The Permittee shall submit a semi-annual report to the Department and the EPA in accordance with 40 CFR Part 60, Subpart Dc.

Rationale for Periodic Monitoring
Fuel supplier certifications are sufficient to demonstrate compliance with all applicable fuel sulfur limits.

D. Control of Nitrogen Oxides

(1) "A person who owns or operates fuel-burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:

(a) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each installation;

(b) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;

(c) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;

(d) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(e) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08E]

(2) Requirements for Space Heaters.

(a) A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:

(i) Submit to the Department a list of each affected installation on the premises and the type of fuel used in each installation;

(ii) Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;

(iii) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;

(iv) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and

(v) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request."

(b) "A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation."

[Reference: COMAR 26.11.09.08F]

Compliance Demonstration

The Permittee shall perform a combustion analysis on the boilers at least once a year. The Permittee shall optimize combustion based on the annual combustion analysis.

The Permittee shall maintain on-site, all records of the results of the annual combustion analysis, records of annual fuel use, and records of training program attendance for each operator. The Permittee shall submit the results of the combustion analysis and records of training program attendance to the Department and the EPA upon request.

An annual combustion analysis is not required in any calendar year that the boilers qualify as a space heater, provided that the Permittee provides proper notification and develops and implements an alternative written operating and maintenance plan to minimize NOx emissions in accordance with COMAR 26.11.09.08F.

Rationale for Periodic Monitoring

Records of the annual combustion analysis, annual fuel use, and the operator training records are deemed sufficient to demonstrate compliance with this requirement.

E. Operational Limitations

(1) In order to limit the sulfur dioxide and nitrogen oxide emissions from the 8.6 million Btu/hr boiler, 16.8 million Btu/hr boiler, and the two (2) 14.7 million Btu/hr boilers to less than 40 tons per year:

(a) The number of hours combusting fuel oil shall be limited to less than 4,380 hours per year for any consecutive12 month period for any of the above-referenced boilers.

(b) The residual fuel oil combusted by the boilers shall be limited to No. 4 residual fuel oil.

(c) The annual average sulfur content of the residual and distillate fuel oil combusted by the 16.8 million Btu/hr boiler and the two (2) 14.7 million Btu/hr boilers shall be limited to less than 0.3 percent by weight for any consecutive 12 month period.

(2) The Permittee shall only burn natural gas, distillate oil, or No. 4 residual oil (including on-specification used oil). The limitation on fuel use shall apply unless the Permittee applies for and receives an approval or permit from the Department to burn an alternate fuel. **[Reference: COMAR 26.11.02.09]**

Compliance Demonstration
The Permittee shall maintain records of the hours of operation for each boiler, the records of the amounts of each fuel combusted, and fuel supplier certifications for any distillate or residual oil purchased.

Rationale for Periodic Monitoring
Records of fuel usage and sulfur content are sufficient to monitor the SOx and NOx emissions from these boilers. No additional monitoring is required.

Emission Units: 005HWB-5 and 001 Temp N
Boilers Capable of Firing Natural Gas Only

005HWB-5 ARMA Registration No. 043-0006-5-0585
One (1) 3.36 MMBtu/hr steam boiler capable of firing natural gas.

001 Temp N ARMA Registration No. 043-0006-5-0645
One (1) 8.375 MMBtu/hr boiler firing natural gas only.

Applicable Standards and Limits:

A. Control of Visible Emissions
   (1) "In Areas I, II, V, and VI, a person may not cause or permit the discharge of emissions from any fuel burning equipment other than water in an uncombined form, which is greater than 20 percent opacity."
   [Reference: COMAR 26.11.09.05A(1)]
   (2) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of equipment if:
      (a) The visible emissions are not greater than 40 percent opacity; and
      (b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."
   [Reference: COMAR 26.11.09.05A(3)]

Compliance Demonstration
The Permittee shall properly operate and maintain the boilers in a manner to prevent visible emissions.

The Permittee shall keep maintenance records, records of visible emissions observations, documentation of any incidence of visible emissions and any corrective action taken, and documentation that the observations were conducted by a certified observer. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring
Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring visible emissions.

B. Control of Nitrogen Oxides
(1) "A person who owns or operates fuel burning equipment with a rated heat input capacity of 100 Million Btu per hour or less shall:
(a) Submit to the Department an identification of each affected installation, the rated heat input capacity of each installation, and the type of fuel burned in each installation;
(b) Perform a combustion analysis for each installation at least once each year and optimize combustion based on the analysis;
(c) Maintain the results of the combustion analysis at the site for at least 2 years and make this data available to the Department and the EPA upon request;
(d) Once every 3 years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and
(e) Prepare and maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request."
[Reference: COMAR 26.11.09.08E]

(2) Requirements for Space Heaters.
(a) "A person who owns or operates a space heater as defined in Regulation .01B of this chapter shall:
(i) Submit to the Department a list of each affected installation on the premises and the type of fuel used in each installation;
(ii) Develop an operating and maintenance plan to minimize NOx emissions based on the recommendations of equipment vendors and other information including the source's operating and maintenance experience;
(iii) Implement the operating and maintenance plan and maintain the plan at the premises for review upon request by the Department;
(iv) Require installation operators to attend in-State operator training programs once every 3 years on combustion optimization that are sponsored by the Department, the EPA, ore equipment vendors; and
(v) Prepare and maintain a record of training program attendance for each operator at the site and make these records available to the Department upon request."

(b) "A person who owns or operates an installation that no longer qualifies as a space heater shall inform the Department not later than 60 days after the date when the fuel-burning equipment did not qualify, and shall meet the applicable fuel-burning equipment RACT requirement in this regulation."

Compliance Demonstration

The Permittee shall perform a combustion analysis on the boilers at least once a year. The Permittee shall optimize combustion based on the annual combustion analysis.

The Permittee shall maintain on-site, all records of the results of the annual combustion analysis, records of annual fuel use, and records of training program attendance for each operator. The Permittee shall submit the results of the combustion analysis and records of training program attendance to the Department and the EPA upon request.

An annual combustion analysis is not required in any calendar year that the boilers qualify as a space heater, provided that the Permittee provides proper notification and develops and implements an alternative written operating and maintenance plan to minimize NOx emissions in accordance with COMAR 26.11.09.08F.

Rationale for Periodic Monitoring

Records of the annual combustion analysis, annual fuel use, and the operator training records are deemed sufficient to demonstrate compliance with this requirement.

Emission Units: 002PB-2, 002PB-3, 003PB-4, 002PK-1, and 002PB-5
Paint Spray Booths

002PB-2 ARMA Registration No. 043-0006-6-0449
One (1) manual paint spray booth equipped with fabric filters for particulate emissions control.

002PB-3 ARMA Registration No. 043-0006-6-0694
One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.

003PB-4 ARMA Registration No. 043-0006-6-0695
One (1) robotic paint spray booth equipped with a flash tunnel and an electric drying oven.

002PK-1 ARMA Registration No. 043-0006-6-0697
One (1) paint kitchen for automatic paint distribution.

002PB-5 ARMA Registration No. 043-0006-6-0716
One (1) manual paint booth associated with the axle manufacturing line to be constructed during 2015.

Applicable Standards and Limits:

A. Control of Visible Emissions

(1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which Is greater than 20 percent opacity."
[Reference: COMAR 26.11.06.02C(1)]

(2) "The visible emissions standards is §C of this regulation do not apply to emissions during start-up, and process modifications or adjustments, or occasional cleaning of control equipment, if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."
[COMAR 26.11.06.02A(2)]

Conditions (3) and (4) only apply to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.

(3) "In Areas I, II, V, and V, a person may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20 percent opacity."
[Reference: COMAR 26.11.09.05A(1)]

(4) "Exceptions. Section A(1) and (2) of this regulation do not apply to emissions during load changing, soot blowing, startup, or adjustments or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."
[Reference: COMAR 26.11.09.05A(3)]

Compliance Demonstration
The Permittee shall conduct monthly one-minute visual observation of the paint booths exhaust. The visual observation must be conducted while the paint booth is in operation. If visible emissions greater than 20% opacity limit are observed during any observation, the Permittee must inspect the paint line for cause of visible emissions and perform necessary adjustments or repairs within 24-hours or prior to operating the paint line.

If visible emissions have not been eliminated, the Permittee shall perform daily 18-minute visual observation for opacity in accordance with EPA Reference Method 9 when operating the paint line.

The Permittee shall keep maintenance records, records of visible emissions observations, and documentation of any incidence of visible emissions and any corrective action taken. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring
Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring visible emissions. No additional monitoring is required.

B. Control of Particulate Matter Emissions
"A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)]**

Compliance Demonstration
The Permittee shall maintain records of routine maintenance, including the dates when filter media are changed, to demonstrate that the equipment is being kept in good working order. The Permittee shall make these records available to the Department upon request.

Rationale for Periodic Monitoring
The logs of maintenance activities are sufficient to demonstrate compliance with the particulate matter emissions standard.

C. Control of Nitrogen Oxides
Section C. only applies to the natural gas fired heater associated with ARMA Registration No. 043-0006-6-0716.

(1) "For purposes of this regulation, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation." **[Reference: COMAR 26.11.09.08B(5)(a)]**

(2) "The operator training course sponsored by the Department shall include an in-house training course that is approved by the Department." **[Reference: COMAR 26.11.09.08B(5)(b)]**

(3) "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

(a) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;
(b) Prepare and implement a written in-house training program for good operating and maintenance practices for the particular installation;
(c) Maintain and make available to the Department upon request, the written in-house operator training program;
(d) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and
(e) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08J]

Compliance Demonstration

The Permittee shall maintain the operator training records required by COMAR 26.11.09.08B(5) and a copy of the written in-house training program. The Permittee shall make these records available to the Department upon request.

Rationale for Periodic Monitoring

Operator logs and training records are sufficient to demonstrate compliance with the NOx requirements.

D. Control of VOC
(1) Good Operating Practices
(a) "A person who is subject to this section shall implement good operating practices to minimize VOC emissions into the atmosphere."
(b) "Good operating practices shall, at a minimum, include the following:
(i) Provisions for training of operators on practices, procedures, and maintenance requirements that are consistent with the equipment manufacturers' recommendations and the source's experience in operating the equipment, with the training to include proper procedures for maintenance of air pollution control equipment;
(ii) Maintenance of covers on containers and other vessels that contain VOC and VOC-containing materials when not in use;
(iii) Minimize spills of VOC-containing cleaning materials;
(iv) Convey VOC-containing cleaning materials from one location to another in closed containers or pipelines;
(v) Minimize VOC emissions from cleaning of storage, mixing, and conveying equipment;

(vi) As practical, scheduling of operations to minimize color or material changes when applying VOC coatings or other materials by spray gun;
(vii) For spray gun applications of coatings, use of high volume low pressure (HVLP) or other high efficiency application methods where practical; and
(viii) As practical, mixing or blending materials containing VOC in closed containers and taking preventive measures to minimize emissions for products that contain VOC."

(c) " A person subject to this regulation shall:
(i) Establish good operating practices in writing;
(ii) Make the written operating practices available to the Department upon request; and
(iii) Display the good operating practices so that they are clearly visible to the operator or include them in operator training."

[Reference: COMAR 26.11.19.02I(2)]

(2) Equipment Cleanup.
(a) "A person subject to this section shall take all reasonable precautions to prevent or minimize the discharge of VOC into the atmosphere when cleaning process and coating application equipment, including containers, vessels, tanks, lines, and pumps."
(b) "Reasonable precautions for equipment cleanup shall, at a minimum, include the following:
(i) Storing all wastes and waste materials, including cloth and paper that are contaminated with VOC, in closed containers;
(ii) Preparing written standard operating procedures for frequently cleaned equipment, including when practical, provisions for the use of low-VOC or non-VOC materials and procedures to minimize the quantity of VOC materials used;
(iii) Using enclosed spray gun cleaning, VOC-recycling systems and other spray gun cleaning methods where practical that reduce or eliminate VOC emissions; and
(iv) Using, when practical, detergents, high-pressure water, or other non-VOC cleaning options to clean coating lines, containers, and process equipment."

[Reference: COMAR 26.11.19.02I(3)]

(3) VOC Storage and Transfer.
(a) A person subject to this section who stores VOCs shall, at a minimum, install conservation vents or other vapor control measures on storage tanks with a capacity of 2,000 gallons or more to minimize VOC emissions.
(b) A person subject to this section shall, at a minimum, utilize vapor balance, vapor control lines, or other vapor control measures when

VOCs are transferred from a tank truck into a stationary storage tank with a capacity greater than 10,000 gallons and less than 40,000 gallons that store VOCs or materials containing VOCs, other than gasoline, that have a vapor pressure greater than 1.5 psia.

[Reference: COMAR 26.11.19.02I(4)]

(4) "Emission Standards. A person subject to this regulation may not exceed the applicable VOC emission standards (expressed in terms of mass of VOC per volume of coating excluding water and exempt compounds, as applied) of the following table when applying a metal parts and products coating:

Coating Type	Baked		Air-Dried	
	Lbs/gal	Kg/L	Lbs/gal	Kg/L
General, one-component	2.3	0.275	2.8	0.340
General, multi-component	2.3	0.275	2.8	0.340
Adhesion promoter	4.0	0.479	4.0	0.479
Prefabricated architectural one component and multi-component	2.3	0.280	3.5	0.420
Military specification	2.3	0.280	2.8	0.340
Extreme high-gloss; extreme performance; heat-resistant; high performance architectural; repair coating; solar absorbent; or touch up coating	3.0	0.360	3.5	0.420
Camouflage, electric-insulating varnish; etching filler; high temperature; metallic; mold-seal; pan backing; pretreatment; silicone release and vacuum-metalizing	3.5	0.420	2.8	0.420

[Reference: COMAR 26.11.19.08D(2)]

Condition (5) applies to ARMA Registration Nos. 043-0006-6-0694, 6-0695, and 6-0697 only.

(5) The total VOC emissions from these emission units shall be less than 40 tons in any consecutive 12-month period. **[Reference: Permit to Construct Nos. 043-0006-6-0694 through 6-0697, condition C(2), issued October 4, 2013]**

Compliance Demonstration

The Permittee shall test, when requested by the Department, the VOC content of any materials used on the process line using test methods prescribed by 40 CFR Part 60, Appendix A, Method 24.

Prior to using new coating materials, the Permittee shall contact the vendor or examine the MSDS to verify that the coating material meets applicable regulatory standards.

The Permittee shall keep the following records: (1) MSDS or other manufacturer specification sheets stating the VOC content in terms of mass of VOC per volume of coating, (2) The amounts, identity, and MSDS sheet references for each coating or coating component, (3) For any coating that is thinned with a thinning solvent or consists of two or more separate components that are mixed prior to application, the calculated actual *as-applied* VOC content (minus water) in pounds per gallon (grams per liter) of each miscellaneous metal coating, used during the previous month; and (4) all supporting calculations necessary.

The Permittee shall maintain monthly VOC emissions from ARMA Registration No. 043-0006-6-0716 in tons per month and all supporting calculations

The Permittee shall maintain records of monthly VOC emissions from this paint system in tons per month and tons per consecutive 12-month period and all supporting calculations for ARMA Registration NOs. 043-0006-6-0694, 6-0695, and 6-0697.

The quarterly reporting requirement specified in COMAR 26.11.19.05F(1) will be satisfied by the annual emissions certification report as required by permit condition 8, Section III – Plant-wide Conditions.

Rationale for Periodic Monitoring
By maintaining material usage records, the Permittee should be able to remain in compliance with all applicable standards.

Emission Units: 003ER-3, and 003ETC-1 through 003ETC-8,
Engineering and Research Engine Test Cells

003ER-3 ARMA Registration No. 043-0006-9-0107
Fifteen (15) engine test cells for engineering and research. Twelve (12) cells were constructed in 1961 and three (3) cells were constructed in 1973. One (1) of these test cells is used exclusively for transmission/gear box testing.

003ETC-1 through 003ETC-8 ARMA Registration No. 043-0006-9-0157
Eight (8) engine test cells for engineering and research used for testing engines up to 785 brake HP.

Applicable Standards and Limits:

A. Control of Visible Emissions

(1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from an installation or building, other than water in an uncombined form, which is greater than 20 percent opacity."
[Reference: COMAR 26.11.06.02C(1)]

(2) The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emission do not occur for more than 6 consecutive minutes in any 60 minute period."
[Reference: COMAR 26.11.06.02A(2)]

Compliance Demonstration

The Permittee shall have a qualified person visually observe the emissions from each boiler stack while the boiler is combusting oil every 168 hours of operation. If visible emissions are observed, the Permittee shall then conduct an EPA Method 9 observation. If non-compliant visible emissions are confirmed by the Method 9 observation, the Permittee shall (1) inspect the equipment to determine the cause; (2) perform all necessary repairs and/or adjustments to the equipment within 48 hours; (3) document in writing the results of the inspections and the repairs and/or adjustments made to the equipment; and (4) continue to perform an EPA Method 9 daily until the visible emissions have been brought into compliance.

The Permittee shall keep maintenance records, records of visible emissions observations, documentation of any incidence of visible emissions and any corrective action taken, and documentation that the observations were conducted by a certified observer. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring

Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring for visible emissions.

B. Control of Particulate Matter Emissions

Condition (1) applies to the test cells that were constructed on or after January 17, 1972 only.

(1) "A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess

of 0.05 gr/SCFD (115 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)(a)]**

Condition (2) applies to the test cells that were constructed before January 17, 1972 only.

(2) Installations Constructed Before January 17, 1972.

(a) "A person may not cause or permit particulate matter to be discharged from any installation constructed before January 17 1972 in excess of the values determined from Table 1. When the process weight per hour falls between two values in the table, the maximum weight discharged per hour shall be determined by linear interpolation. When the process weight exceeds 60,000 pounds (27,200 kilograms) per hour, the maximum allowable weight discharged per hour will be determined by use of the following equation:

$E = 55.0\ P^{0.11} — 40$	$E = 11.79\ P^{0.11} — 18.14$
E = Maximum weight discharged per hour (lbs)	E = maximum weight discharged per hour (kg)
P = process weight in tons per hour	P = process weight in kilograms per hour"

(b) "For those processes in which the process weight per hour exceeds 60,000 pounds (27,200 kilograms), the maximum allowable weight of particulate matter discharged per hour may exceed that calculated by the above equation provided that the concentration of particulate matter in the gases discharged to the atmosphere is less than 0.05 gr/SCFD (115 mg/dscm)."

[Reference: COMAR 26.11.06.3B(1)(b)]

Table 1
Maximum Allowable Weight of Particulate Matter Discharged Per Hour

Process Wt/hr (lbs)	*Maximum Wight Disch/hr (lbs)*	*Process Wt/hr (lbs)*	*Maximum Wight Disch/hr (lbs)*	*Process Wt/hr (lbs)*	*Maximum Wight Disch/hr (lbs)*
50 or less	0.24	1900	4.03	4700	6.45
100	0.46	2000	4.14	4800	6.52
150	0.66	2100	4.24	4900	6.60
200	0.85	2200	4.34	5000	6.67
250	1.03	2300	4.44	5500	7.03
300	1.20	2400	4.55	6000	7.37
350	1.35	2500	4.64	6500	7.71
400	1.50	2600	4.74	7000	8.05

450	1.63	2700	4.84	7500	8.39
500	1.77	2800	4.92	8000	8.71
550	1.89	2900	5.02	8500	9.03
600	2.01	3000	5.10	9000	9.36
650	2.12	3100	5.18	9500	9.67
700	2.24	3200	5.27	10000	10.00
750	2.34	3300	5.36	11000	10.63
800	2.43	3400	5.44	12000	11.28
850	2.53	3500	5.52	13000	11.89
900	2.62	3600	5.61	14000	12.50
950	2.72	3700	5.69	15000	13.13
1000	2.80	3800	5.77	16000	13.74
1100	2.97	3900	5.85	17000	14.36
1200	3.12	4000	5.93	18000	14.97
1300	3.26	4100	6.01	19000	15.58
1400	3.40	4200	6.08	20000	16.19
1500	3.54	4300	6.15	30000	22.22
1600	3.66	4400	6.22	40000	28.30
1700	3.79	4500	6.30	50000	34.30
1800	3.91	4600	6.37	60000 *	40.00

[Reference: COMAR 26.11.06.16, Table 1]

Condition (3) applies to the test cells that were constructed before January 17, 1972 only.

(3) Exception. For any premises for which the Department determines that compliance with §B(1)(a) will cause or exacerbate a violation of the National Ambient Air Quality Standards or Federal Prevention of Significant Deterioration increments, the applicable emission standard is 0.03 gr/SCFD (68.7 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)(c)]**

Compliance Demonstration

The Permittee shall maintain performance test data from the engines for PM emissions.

Rationale for Periodic Monitoring

The records of the particulate matter performance test results for each engine is sufficient to demonstrate compliance.

C. Control of Sulfur Oxides

(1) "All calculations of emissions governed by this regulation shall be adjusted to standard conditions and 7 percent oxygen. "PPM" means parts per million by volume." **[Reference: COMAR 26.11.06.05A]**

(2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing more than 500 ppm sulfur dioxide." **[Reference: COMAR 26.11.06.05B(1)]**

(3) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid." **[Reference: COMAR 26.11.06.05B(2)]**

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil. The Permittee shall maintain the records of the fuel sulfur content.

Rationale for Periodic Monitoring

Based on the sulfur content of non-road diesel fuel (15 ppm) under all operating conditions, SOx emissions in the exhaust stream will be well below the emission standard.

D. Control of Nitrogen Oxides

(1) "A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

(a) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions;

(b) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation;

(c) Maintain and make available to the Department, upon request, the written in-house operator training program;

(d) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and

(e) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request."

[Reference: COMAR 26.11.09.08J]

Note: Condition D(1)(d) above only applies to engines that are capable of firing natural gas.

(2) "A person subject to this regulation shall maintain annual fuel use records on site for not less than 3 years, and make these records available to the Department upon request." **[Reference: COMAR 26.11.09.08K(3)]**

(3) The Permittee shall limit the combined NOx emissions from ARMA Registration Nos. 043-0006-9-0107 and 9-0157 for any period of 12 consecutive months not to exceed 84.55 tpy. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(2), issued on August 11, 2015]**

Compliance Demonstration

The Permittee shall maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions.

The Permittee shall maintain at the site and make available to the Department upon request the following information: (a) a copy of the written in-house operator training program; (b) operator training attendance records; and (c) annual fuel use records

The Permittee shall calculate monthly NOx emissions from each installation based on fuel usage and shall maintain a rolling 12-month total of VOC emissions from each installation.

The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the installation.

The Permittee shall include monthly and annual NOx emissions in the Annual Emissions Certification Report.

Rationale for Periodic Monitoring

By maintaining good operating practices, monthly emissions calculations, and conducting a training program to ensure proper operation, NOx emissions should be sufficiently monitored. No additional monitoring is required to demonstrate compliance.

E. Control of VOC Emissions

The Permittee shall limit the combined VOC emissions from ARMA Registration Nos. 043-0006-9-0107 and 9-0157 for any period of 12 consecutive months not to exceed 41.12 tpy. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(2), issued on August 11, 2015]**

Compliance Demonstration
The Permittee shall calculate monthly VOC emissions from each installation based on fuel usage and shall maintain a rolling 12-month total of VOC emissions from each installation.

The Permittee shall include VOC emissions in the Annual Emissions Certification Report.

Rationale for Periodic Monitoring
Monthly calculations of VOC emissions are sufficient to demonstrate compliance with the emissions limit.

F. Operational Limitations
The engine test cells included in ARMA Registration Nos. 043-0006-9-0107 and 9-0157 may use a combined fuel limit of up to 1,450,000 gallons of diesel fuel for any 12 consecutive months, unless the Permittee obtains, from the Department, written authorization for alternative operating procedures. **[Reference: Permit to Construct No. 043-0006-9-0107 and 9-0157, Part D(3), issued on August 11, 2015]**

Compliance Demonstration
The Permittee shall keep monthly records of the following: (a) the hours of operation of each registered installation; (b) current emission test data for NOx, CO, PM, and hydrocarbons (HC) on each engine tested for emissions of these pollutants at the E&R engine test cells, reported in units of grams/BHP or equivalent; and (c) for each calendar month and each rolling 12-month period, the amount of fuel combusted by the E&R engine test cells under ARMA Registration No. 043-0006-9-0107 and the E&R engine test cells under ARMA Registration No. 043-0006-9-0157.

Rationale for Periodic Monitoring
Monitoring emissions of NOx, CO, PM and HC monthly in addition to hours of operation and fuel usage should enable the Permittee to remain below the applicable standard. No additional monitoring is required to demonstrate compliance.

Emission Unit: 002X-1
Production Engine Test Cells

002X-1 ARMA Registration No. 043-0006-9-0106
Eight (8) engine test cells for production testing.

Applicable Standards and Limits:

A. Control of Visible Emissions

(1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity." **[Reference: COMAR 26.11.06.02C(1)]**

(2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."
[Reference: COMAR 26.11.06.02A(2)]

Compliance Demonstration

The Permittee shall have a qualified person visually observe the emissions from each boiler stack while the boiler is combusting oil every 168 hours of operation. If visible emissions are observed, the Permittee shall then conduct an EPA Method 9 observation. If non-compliant visible emissions are confirmed by the Method 9 observation, the Permittee shall (1) inspect the equipment to determine the cause; (2) perform all necessary repairs and/or adjustments to the equipment within 48 hours; (3) document in writing the results of the inspections and the repairs and/or adjustments made to the equipment; and (4) continue to perform an EPA Method 9 daily until the visible emissions have been brought into compliance.

The Permittee shall keep maintenance records, records of visible emissions observations, documentation of any incidence of visible emissions and any corrective action taken, and documentation that the observations were conducted by a certified observer. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring

Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring for visible emissions.

B. Control of Particulate Matter Emissions

"A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/DSCM). **[Reference: COMAR 26.11.06.03B(1)(a)]**

Compliance Demonstration

The Permittee shall maintain a preventative maintenance plan for engine test cells. The Permittee shall perform maintenance activities within the timeframes established in the plan and shall maintain a log with records of the dates that maintenance was performed.

The Permittee shall maintain records of maintenance activities designed to minimize air emissions.

Rationale for Periodic Monitoring

Maintenance records are sufficient to determine compliance.

C. Control of Sulfur Oxides

(1) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing more than 500 ppm of sulfur dioxide."
[Reference: COMAR 26.11.06.05B(1)]

(2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid."
[Reference: COMAR 26.11.06.05B(2)]

Compliance Demonstration

The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of fuel oil.

The Permittee shall maintain the records of the diesel fuel sulfur content and make these records available to the Department upon request.

Rationale for Periodic Monitoring

Based on the sulfur content of non-road diesel fuel (15 ppm), under all operation conditions SOx emissions in the exhaust stream will be well below the emission standard. The records of the diesel fuel sulfur content are sufficient to determine compliance.

D. Control of Nitrogen Oxides

"A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

(1) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions; **[Reference: COMAR 26.11.09.08J(1)]**
(2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; **[Reference: COMAR 26.11.09.08J(2]**
(3) Maintain and make available to the Department, upon request, the written in-house operator training program**; [Reference: COMAR 26.11.09.08J(3)]**
(4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and **[Reference: COMAR 26.11.09.08J(4)]**
(5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request**." [Reference: COMAR 26.11.09.08J(5)]**

Note: Condition D(4) above only applies to engines that are capable of firing natural gas.

Compliance Demonstration
The Permittee shall maintain the following information: (a) a copy of the written in-house operator training program; (b) the operator training records; and (c) annual fuel use records. The Permittee shall make these records available to the Department upon request.

Rationale for Periodic Monitoring
By maintaining good operating practices and conducting a training program to ensure proper operation, NOx emissions should be sufficiently monitored. No additional monitoring is required to demonstrate compliance.

Emission Unit: 007QEPP
Warm Engine Short Test (WEST) Stations

007QEPP ARMA Registration Nos. 043-0006-9-0182 and 9-0183
Two (2) warm engine short test (WEST) stations for production testing of engines.

Applicable Standards and Limits:
A. Control of Visible Emissions
(1) "In Areas I, II, V, and VI a person may not cause or permit the discharge of emissions from any installation or building, other than water in an

uncombined form, which is greater than 20 percent opacity."
[Reference: COMAR 26.11.06.02C(1)]

(2) "The visible emissions standards in §C of this regulation do not apply to emissions during start-up and process modification or adjustments, or occasional cleaning of control equipment if:
(a) The visible emissions are not greater than 40 percent opacity; and
(b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."
[Reference: COMAR 26.11.06.02A(2)]

Compliance Demonstration
The Permittee shall have a qualified person visually observe the emissions from each boiler stack while the boiler is combusting oil every 168 hours of operation. If visible emissions are observed, the Permittee shall then conduct an EPA Method 9 observation. If non-compliant visible emissions are confirmed by the Method 9 observation, the Permittee shall (1) inspect the equipment to determine the cause; (2) perform all necessary repairs and/or adjustments to the equipment within 48 hours; (3) document in writing the results of the inspections and the repairs and/or adjustments made to the equipment; and (4) continue to perform an EPA Method 9 daily until the visible emissions have been brought into compliance.

The Permittee shall keep maintenance records, records of visible emissions observations, documentation of any incidence of visible emissions and any corrective action taken, and documentation that the observations were conducted by a certified observer. The Permittee shall report incidents of visible emissions in accordance with condition 4, Section III – "Report of Excess Emissions and Deviations."

Rationale for Periodic Monitoring
Visual observations during operation using EPA Method 9 and record keeping are sufficient for monitoring visible emissions.

B. Control of Particulate Matter Emissions
"A person may not cause or permit particulate matter to be discharged from any installation constructed on or after January 17, 1972 in excess of 0.05 gr/SCFD (115 mg/dscm)." **[Reference: COMAR 26.11.06.03B(1)(a)]**

Compliance Demonstration
The Permittee shall maintain records of the number and types of engines testing in the WEST Stations. These records shall be used to calculate monthly emissions of NOx, PM, CO, and HC from this installation using engine-specific emissions factors.

Rationale for Periodic Monitoring
The Permittee will be conducting emissions tests on each engine. This is sufficient monitoring for particulate matter.

C. Control of Sulfur Oxides

(1) "A person may not cause or permit the discharge into the atmosphere from installation other than fuel-burning equipment of gases containing more than 500 ppm of sulfur dioxide. Installations constructed before January 17, 1972, are limited to not more than 2,000 ppm sulfur dioxide." **[Reference: COMAR 26.11.06.05B(1)]**

(2) "A person may not cause or permit the discharge into the atmosphere from installations other than fuel-burning equipment of gases containing sulfuric acid, sulfur trioxide, or any combination of them greater than 35 milligrams per cubic meter reported as sulfuric acid. Any installation constructed before January 17, 1972, is limited to not more than 70 milligrams per cubic meter of sulfuric acid, sulfur trioxide, or any combination of them, reported as sulfuric acid." **[Reference: COMAR 26.11.06.05B(2)]**

Compliance Demonstration
The Permittee shall maintain records of the diesel fuel sulfur content and make these records available to the Department upon request.

Rationale for Periodic Monitoring
Based on the sulfur content of non-road diesel fuel (15 ppm), under all operating conditions SOx emissions in the exhaust stream will be well below the emission standard. The records of the diesel fuel sulfur content are sufficient to demonstrate compliance.

D. Control of Nitrogen Oxides

"A person who owns or operates any installation other than fuel-burning equipment that causes NOx emissions shall:

(1) Maintain good operating practices as recommended by the equipment vendor to minimize NOx emissions; **[Reference: COMAR 26.11.09.08J(1)]**

(2) Prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the particular installation; **[Reference: COMAR 26.11.09.08J(2]**

(3) Maintain and make available to the Department, upon request, the written in-house operator training program**; [Reference: COMAR 26.11.09.08J(3)]**

(4) Burn only gas in each installation, where gas is available, during the period May 1 through September 30 of each year; and **[Reference: COMAR 26.11.09.08J(4)]**
(5) Maintain operator training attendance records for each operator at the site for at least 2 years and make these records available to the Department upon request**." [Reference: COMAR 26.11.09.08J(5)]**

Note: Condition D(4) above only applies to engines that are capable of firing natural gas.

Compliance Demonstration
The Permittee shall maintain the following information: (a) a copy of the written in-house operator training program; (b) the operator training attendance records; and (c) the annual fuel use records.

The Permittee shall prepare and implement a written in-house training program for all operators of these installations that include instruction on good operating and maintenance practices for the installation.

The Permittee shall maintain and make available to the Department upon request, daily records of the hours of operation of the warm production engine test cells.

The Permittee shall maintain records of the number and type of engines tested in the WEST Stations. These records shall be used to calculate monthly emissions of NOx, PM, CO, and HC from this installation using engine-specific emissions factors.

Rationale for Periodic Monitoring
By maintaining good operating practices and monitoring hours of operation, fuel use records, and emissions test results, the Permittee should be able to maintain compliance with the applicable standards. No additional monitoring is required to demonstrate compliance.

COMPLIANCE SCHEDULE

Mack Trucks, Inc is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Mack Trucks, Inc. is not subject to Acid Rain requirements.

TITLE VI – OZONE DEPLETING SUBSTANCES

Mack Trucks, Inc is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

Mack Trucks, Inc is not subject to the requirements of Section 112(r).

PERMIT SHIELD

Mack Trucks, Inc. did not request a permit shield.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

[For Areas I, II, V, and VI]

The affected fuel burning units are subject to the following requirements:

COMAR 26.11.09.05A(1), which establishes that the Permittee may not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is greater than 20 percent opacity.

Exceptions: COMAR 26.11.09.05A(2) does not apply to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if:

(a) The visible emissions are not greater than 40 percent opacity; and

(b) The visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period.

[For Distillate Fuel Oil]

COMAR 26.11.09.07A(1)(c), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(2) No. 2 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The affected units are subject to the following requirements:

(a) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(b) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(c) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
(A) Engines that are idled continuously when not in service: 30 minutes
(B) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

[For Distillate Fuel Oil]

(d) COMAR 26.11.09.07A(1)(c), which establishes that the Permittee may not burn, sell, or make available for sale any distillate fuel with a sulfur content by weight in excess of 0.3 percent.

(e) COMAR 26.11.36.03A(1), which establishes that the Permittee may not operate an emergency generator except for emergencies, testing and maintenance purposes.

(f) COMAR 26.11.36.03A(5), which establishes that the Permittee may not operate an emergency generator for testing and engine maintenance purposes between 12:01 a.m. and 2:00 p.m. on any day on which the Department forecasts that the air quality will be a code orange, code red, or code purple unless the engine fails a test and engine maintenance and a re-test are necessary.

(3) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(4) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(5) No. 100 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The affected units are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(6) ✓ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(7) ✓ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(8) ✓ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(9) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(c) No. 9 Storage of lubricating oils;

(d) No. 5 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(e) No. 9 The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and

having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(10) No. 26 Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(11) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(12) ✓ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(13) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(14) No. 7 Laboratory fume hoods and vents;

(15) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 4 (New) CNC Machines and Hydraulic Presses for Axle Manufacturing line.

No. 1 (New) Metal Cleaning System for Axle Manufacturing Line.

(16) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. 2 Wet scrubbers for machining operations (Fairbrothers and Associates Models PS30 and PS50)

No. 2 Pangborn abrasive blast unit for metal cleaning that discharges indoors.

No. 3 Dust collectors for machining operations (wet and dry) that use filter media for dust collection and discharge to the interior of the building.

No. 5 Gear Box "only" engine test cells with zero emissions (003ER-3)

STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contains state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

1. Applicable Regulations:

   (A) COMAR 26.11.06.08, Nuisance. "An installation or premises may not be operated or maintained in such a manner that a nuisance or air pollution is created. Nothing in this regulation relating to the control of emissions may in any manner be construed as authorizing or permitting the creation of, or maintenance of, nuisance or air pollution."

   (B) COMAR 26.11.06.09, Odors. "A person may not cause or permit the discharge into the atmosphere of gases, vapors, or odors beyond the property line in such a manner that a nuisance or air pollution is created."

   (C) COMAR 26.11.15.05A, Control Technology Requirements. "A person may not construct, reconstruct, operate, or cause to be constructed, reconstructed, or operated, any new installation or source that will discharge a toxic air pollutant to the atmosphere without installing and operating T-BACT."

   (D) COMAR 26.11.15.06A(1), Ambient Impact Requirement. "Except as provided in §A(2) of this regulation, a person may not construct, modify, or operate, or cause to be constructed, modified, or operated, any new installation or source without first demonstrating to the satisfaction of the Department using procedures established in this chapter that total allowable emissions from the premises of each toxic air pollutant discharged by the new installation or source will not unreasonably endanger human health."

2. Operating Conditions:
   Condition (A) applies to ARMA Registration No. 043-0006-6-0716 only.
   (A) To comply with the T-BACT requirements of COMAR 26.11.15.05, The Permittee shall:
      (i) Use only water based paints,
      (ii) Use an HVLP spray gun, and

(iii) Shall exhaust emissions through the fabric panel filters, or an equivalent emission control, unless prior approval is obtained from the Department.

[Reference: Permit to Construct No. 043-0006-6-0716, Condition C(3), issued on June 25, 2015]

Condition (B) applies to ARMA Registration Nos. 043-0006-6-0694, 6-0695, and 6-0697 only.

(B) To comply with the T-BACT requirements of COMAR 26.11.15.05, The Permittee shall use only water based paints containing no HAPs in these paint systems unless prior approval is obtained from the Department. **[Reference: Permit to Construct Nos. 043-0006-6-0694 through 6-0697, condition C(4), issued October 4, 2013.**

3. Record Keeping and Reporting:

The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

(a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.