



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Department of Veterans Affairs  
Medical & Regional Office Center  
Kennebec County  
Augusta, Maine  
A-372-71-Q-M (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Minor Revision**

**FINDINGS OF FACT**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

**I. REGISTRATION**

**A. Introduction**

The Department of Veterans Affairs Medical & Regional Office Center (DVA) was issued Air Emission License A-372-71-O-R/A on April 25, 2011, permitting the operation of emission sources associated with their medical and regional office center. The license was subsequently amended on July 19, 2013 (A-372-71-P-A).

DVA has requested a minor revision to their license in order to remove the requirement for the DVA to test for PM<sub>2.5</sub> in Boiler 4. DVA is subject to test for PM<sub>2.5</sub> as required in license A-372-71-O-R/A Condition (17)(E), which states:

“DVA shall perform an initial performance test for Boiler 4 to demonstrate compliance with the PM, NO<sub>x</sub>, CO and VOC emission limits specified in Condition 17(B) using approved EPA test methods. DVA shall also test for PM<sub>2.5</sub> emissions.”

Due to the location of the original sample point not being suitable to perform the initial performance test, the sampling ports are being moved to a point on a horizontal duct prior to reaching the stack. An associated stack test vendor working with DVA to move the sampling ports does not believe the new location will be a suitable location for testing of PM<sub>2.5</sub> (which contains condensables).

Also included in this minor revision is the removal of No. 6 fuel oil as a fuel source for Boilers #1, #2 and #3, Boilers #1, #2 and #3 to fire distillate oil rather than just No. 2 fuel oil, the addition of emissions from the Fire Pump since it is no

longer considered an insignificant activity, a change in the solvent used in the parts washer, and added language for federal regulations 40 CFR Part 63, Subpart JJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, applicable to Boilers #1 - #4 and 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applicable for Generators #1, #2, #5 - #9 and the Fire Pump.

The equipment addressed in this license is located at #1 VA Center in Augusta, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

**Boilers**

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur *</u>	<u>Const. Date</u>	<u>Post Combustion Ctrl Eqpmnt</u>	<u>Stack #</u>
Boiler #1 *	50.2	359	Distillate **, 0.5%	1997	FGR Burner	239
Boiler #2 *	75.1	536	Distillate **, 0.5%	1997	FGR Burner	239
Boiler #3 *	25.6	183	Distillate **, 0.5%	1997	FGR Burner	239
Boiler #4	38.0	3.6 tons/hr	Biomass @ 37% moisture	2011	Multiclone, ESP	239

\* Boilers #1, #2 and #3 no longer fire No. 6 fuel oil as was previously licensed in A-372-71-O-R/A (dated April 25, 2011).

\*\* Distillate fuel allows for the facility to fire either No. 2 fuel oil, diesel fuel or a mixture of the two.

**Generators**

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Install. Date</u>	<u>Stack #</u>
Generator #1	1.60	11.7	Diesel, 0.0015% S	1996	G1
Generator #2 (R)	1.85	13.5	Diesel, 0.0015% S	1978	G2
Generator #4	6.20	44.9	Diesel, 0.0015% S	1991	G4
Generator #5	1.30	9.10	Diesel, 0.0015% S	1991	G5
Generator #6 *	0.43	3.10	Diesel, 0.0015% S	1990	G6
Generator #7	1.20	8.76	Diesel, 0.0015% S	1997	G7
Generator #8 **	4.67	36.3	Diesel, 0.0015% S	2004	G8
Generator #9	2.44	17.8	Diesel, 0.0015% S	2010	G9
Fire Pump (A)	0.85	6.22	Diesel, 0.0015% S	2002	F1

- (R) Generator #2 is no longer in service nor at the site as was licensed in A-372-71-P-A (dated July 19, 2013). Generator #9 was installed to replace Generator #2.
- \* Generator #6 is considered an insignificant activity pursuant to 06-096 CMR 115, Appendix B(B)(3) and is listed for inventory purposes only. However, the generator may still be subject to federal regulation 40 CFR Part 63, Subpart ZZZZ.
- \*\* Generator #8 was previously named Generator #3 in license A-372-71-O-R/A (dated April 25, 2011). The unit remains the same except for its designated name and stack name. The name designation change occurred in license in A-372-71-P-A (dated July 19, 2013).
- (A) Previously the Fire Pump was licensed only for inventory purposes because it was considered an insignificant activity. However, due to amendments to 06-096 CMR 115, this no longer applies the Fire Pump is included in the license.

### C. Application Classification

This amendment will not increase emissions of any pollutant. Therefore, this amendment is determined to be a minor revision and has been processed as such. With the fuel limits on the boilers, and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and hazardous air pollutants (HAP) and is therefore considered a synthetic minor and an area source of HAP.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

### A. PM<sub>2.5</sub> Testing

Air emission license A-372-71-O-R/A dated April 25, 2011 permits the operation of Boiler #4, a biomass boiler constructed in 2011. Under A-372-71-O-R/A, Specific Condition 17(E) states that DVA must perform an initial performance

test for Boiler #4 to demonstrate compliance with the PM, NO<sub>x</sub>, CO and VOC emission limits specified in the license, as well as to test for PM<sub>2.5</sub>.

Official operation of Boiler #4 began in 2013. Upon analyzing the suitability of the existing stack test sample ports for testing, it was determined that the location in use was unsuitable. The unsuitability was due to DVA being required to manually control a steam relief valve during Boiler #4 performance testing in order to ensure that the boiler load remained somewhat consistent through the duration of testing because the facility load fluctuates during the day and the unit shares a common stack with other facility boilers. This manual coordination of the steam relief valve in combination with the fact that the relief stream exited directly adjacent to the stack sample ports were the factors that led to moving the sampling ports location.

As a result, the sampling location for performance testing was moved to the Boiler #4 horizontal breaching, which is an area where samples can be taken before entering the combined stack. However, this location was not suitable to accurately test PM<sub>2.5</sub> due to the pollutant including condensables, because it is a horizontal duct. Since there is no emission limit for PM<sub>2.5</sub> in license A-372-71-O-R/A and the previous testing requirement was for informational purposes only, the Department has determined that the requirement to test PM<sub>2.5</sub> should be removed.

#### B. Boilers #1, #2 and #3

Boilers #1, #2 and #3 were previously licensed to fire No. 6 fuel oil as the primary fuel and No. 2 fuel as a back-up. DVA no longer uses No. 6 fuel oil and wishes to remove No. 6 fuel oil as a fuel source for Boilers #1-#3. Boilers #1 - #3 now fire distillate oil (i.e. No. 2 fuel oil, diesel fuel, or a mixture of the two). PM/PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission limits for Boilers #1, #2 and #3 in license A-372-71-O-R/A (dated April 25, 2011) were based on firing No. 6 fuel oil, therefore the new emissions limits for the boilers firing distillate oil are shown below. Opacity limits remain the same and are based on the limits contained in 40 CFR Part 60, Subpart Dc.

##### 1. BACT/BPT Findings

The BACT/BPT emission limits for the boiler were based on the following:

PM/PM <sub>10</sub>	- 0.08 lb/MMBtu based on 06-096 CMR 115, BPT
SO <sub>2</sub>	- Based on firing ASTM D396 compliant No. 2 fuel oil (0.5% sulfur); 0.5 lb/MMBtu
NO <sub>x</sub>	- 20 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
CO	- 5 lb/1000 gal based on AP-42, Table 1.3-1, dated 5/10
VOC	- 0.2 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10

The BACT/BPT emission limits for the boilers are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	4.02	4.02	25.28	7.17	1.79	0.07
Boiler #2	6.01	6.01	37.82	10.73	2.68	0.11
Boiler #3	2.05	2.05	12.89	3.66	0.91	0.04

DVA shall continue to be limited to 1,800,000 gallons of distillate oil based on a 12-month rolling total.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), distillate oil fired at the facility shall be ASTM D396 compliant No. 2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, the facility shall fire distillate oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, the facility shall fire distillate oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

2. 40 CFR Part 63, Subpart JJJJJ

Boilers #1, #2 and #3 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The units are considered existing oil boilers.

A summary of the currently applicable federal 40 CFR Part 63 Subpart JJJJJ requirements is listed below. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however DVA is still subject to the requirements. Notification forms and additional rule information can be found on the following website:

<http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

i. Initial Notification of Compliance

- i. An Initial Notification submittal to EPA was due January 20, 2014. [40 CFR Part 63.11225(a)(2)] DVA submitted the Initial Notification on October 20, 2011 to the EPA and the Department.
- ii. Boiler Tune-Up Program
  - (a) A boiler tune-up program shall be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(1)]
  - (b) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
    1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 36 months from the previous inspection for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for boilers with oxygen trim systems. [40 CFR Part 63.11223(b)(1)]
    2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
    3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 36 months from the previous inspection for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for boilers with oxygen trim systems. [40 CFR Part 63.11223(b)(3)]
    4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
    5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
    6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 CFR Part 63.11223(b)(7)]

- (c) After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
- (d) The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report (called a Notification of Compliance Status) has been submitted.
1. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<b><i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i></b>	
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
- iii. Energy Assessment

Boilers #1, #2 and #3 are subject to the energy assessment requirement as follows:

- (a) A one-time energy assessment shall be performed by a qualified energy assessor on the applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(3)] DVA performed a water and energy audit in June of 2013, that included energy assessments on Boilers #1-#3 that met the following criteria under 40 CFR Part 63, Subpart JJJJJ:

A visual inspection of the boiler system; an evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator; a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures that are within the facility's control; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

[40 CFR Part 63, Table 2(16)]

- (b) A Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

Note: EPA will require submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [63.1125(a)(4)(vi)]

C. Parts Washer

The Safety-Kleen parts washer at DVA now uses No. 2 diesel fuel as the solvent cleaner. Since No. 2 diesel fuel contains less than or equal to 5% VOCs by weight, DVA is exempt from 06-096 CMR 130, *Solvent Cleaners*. [06-096 CMR 130(1)(B)(3)] Should DVA change the solvent in the parts washers such that it becomes subject to 06-096 CMR 130, DVA shall comply with all applicable requirements.

D. 40 CFR Part 63 Subpart JJJJJ - Boiler #4 (Biomass)

Boiler #4 is subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The unit is considered a new biomass-fired boiler with a heat input capacity greater than 30 MMBtu/hr.

A summary of the currently applicable federal 40 CFR Part 63 Subpart JJJJJ requirements is listed below. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however DVA is still subject to the requirements. Notification forms and additional rule information can be found on the following website:

<http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Standards:

- i. Boiler #4 shall meet a PM limit of 0.03 lb/MMBtu. [40 CFR §63.11201(a)]
- ii. DVA shall operate Boiler #4 to minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures and DVA shall conduct a tune-up of the boiler every 5 years as specified in 40 CFR §63.11223 because the boiler utilizes an oxygen trim system. [40 CFR §63.11201(b)]
- iii. DVA has opted to install and operate an electrostatic precipitator control (ESP) and multicyclone on Boiler #4. DVA shall operate the ESP to maintain an opacity to less than or equal to 10% opacity based on daily block average. [40 CFR §63.11201(c)]
- iv. The PM emission limit and opacity standards apply at all times Boiler #4 is operating, except during periods of startup and shutdown. [40 CFR §63.11201(b)]

b. Notifications:

- i. An Initial Notification was submitted by DVA on October 20, 2011 to the EPA and the Department. [40 CFR §63.11225(a)(2)]

- ii. A Notice of Compliance Status shall be submitted to EPA and the Department within 60 days of completing the initial performance stack test. The EPA requires this report to be submitted through their electronic reporting system [40 CFR §63.11225(a)(4)]
- c. Performance Tests:
  - i. An initial performance stack test for PM was conducted on November 8, 2013 within 180 calendar days after startup of Boiler #4. [40 CFR §63.11210 (a) and (d)]
  - ii. DVA is not required to conduct any further subsequent performance tests for PM due to the results of the PM emissions shown from the boiler's initial performance test being less than half of the PM emission limit. [40 CFR §63.11220 (a) and (b)] PM emission results from the three trial runs from the initial performance test were 0.016 lb/MMBtu, 0.015 lb/MMBtu and 0.010 lb/MMBtu. Therefore, the average PM emission limit equals 0.014 lb/MMBtu, which is less than half of the 0.03 lb/MMBtu PM emission limit.
  - iii. DVA shall maintain the operating load of Boiler #4 such that it does not exceed 110% of the average operating load recorded during the initial performance test. [40 CFR Part 63, Subpart JJJJJ, Table 3(7)]
- d. Opacity COMS  
DVA has opted to install a continuous opacity monitoring system (COMS) to show continuous compliance with the opacity operating limit. The COMS will continue to be operated and maintained in accordance with 40 CFR §63.11205(c), §63.11224(c-e) and §63.11221 and 06-096 CMR 117.
- e. Boiler Tune-Up Program
  - i. DVA is not required to conduct an initial performance tune-up on Boiler #4, but is required to complete the applicable 5-year tune-up in accordance with 40 CFR §63.11223 no later than 61 months after the initial startup of Boiler #4 and thereafter. (40 CFR §63.11210(f)) DVA must submit a signed statement in the Notification of Compliance Status report that indicates the facility conducted a tune-up of the boiler. (§63.11214(b))
  - ii. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
    - 1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(1) and (c)]

2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
  3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(3) and (c)]
  4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
  5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
  6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 CFR Part 63.11223(b)(7)]
- iii. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)]
- f. Recordkeeping:  
Records in a form suitable and readily available for expeditious review shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]:
- i. Copies of notifications and reports with supporting compliance documentation;
  - ii. Records of conformance with the required work and management practices including: identification of the boiler, the date of tune-up, tune-up procedures, and the manufacturer's specifications to which the boiler was tuned; and documentation of fuel type(s) used monthly by the boiler;
  - iii. Records of the occurrence and duration of each malfunction of the boiler or air pollution control equipment;

- iv. Records of the actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operations; and
  - v. Records of all inspection and monitoring data including the date, place and time of the monitoring event, person conducting the monitoring, technique or method used, operating conditions during the activity, results including date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operations, and maintenance or corrective action take (if applicable).
- g. Reporting:
- i. An annual compliance certification report must be prepared by March 1 of each year and submitted to EPA and the Department upon request. However, if the source experiences any deviations from the applicable requirements during the reporting period, the report must be submitted by March 15. The compliance report shall include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; a description of any deviations and corrective actions; and total fuel use by the boiler for each calendar month within the reporting period. [40 CFR Part 63.11225(b)]
  - ii. Within 60 days after the date of completion of the initial performance test, the performance test data must be submitted electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) or other compatible electronic spreadsheet, if the test method is compatible with ERT. (40 CFR §63.11225(e))
- h. At all times, DVA must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR Part 63.11205(a)]

#### E. Fire Pump

The Fire Pump was first addressed in A-372-71-K-M (dated August 26, 2002) but was only mentioned for inventory purposes because it was considered an insignificant activity. Due to an amended 06-096 CMR 115, the Fire Pump is no longer considered an insignificant activity based on its size and is addressed below. The Fire Pump is rated at 0.85 MMBtu/hr, fires diesel fuel and was manufactured in 2002.

1. BPT Findings

The BPT emission limits for the Fire Pump are based on the following:

- PM/PM<sub>10</sub> - 0.12 lb/MMBtu based on 06-096 CMR 115, BPT
- SO<sub>2</sub> - Combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
- NO<sub>x</sub> - 4.41 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- CO - 0.95 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- VOC - 0.35 lb/MMBtu from AP-42, Table 3.3-1, dated 10/96
- Opacity - 06-096 CMR 101

The BPT emission limits for the Fire Pump are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump	0.10	0.10	0.01	3.76	0.81	0.30

Visible emissions from the Fire Pump shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

The Fire Pump shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. The Fire Pump shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, DVA shall keep records of the total hours of operation and the hours of emergency operation for each unit.

The Fire Pump is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. The Fire Pump is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

F. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is not applicable to the Fire Pump and Emergency Generators #1, #4, #5, #6, #7, #8 and #9. The units are considered existing,

emergency stationary reciprocating internal combustion engines at an area HAP source. However, they are considered exempt from the requirements of Subpart ZZZZ since they are categorized as institutional emergency engines and each engine does not operate or is not contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii).

Operation of emergency engines such that each exceeds 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), would cause the generator(s) to be subject to 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable requirements.

G. Annual Emissions

1. Total Annual Emissions

The tons per year limits for Boilers #1, #2 and #3 were based on a combined 1,800,000 gallons/year of No. 2 fuel oil. Tons per year limits for Boiler #4 and the emergency generators, excluding the Fire Pump, remain the same as in license A-372-71-O-R/A (dated April 25, 2011). Tons per year limits for the Fire Pump were based on an operation of 100 hours/year. DVA shall be restricted to the following annual emissions, based on a 12-month rolling total:

**Total Licensed Annual Emissions for the Facility**

**Tons/year**

(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers #1, #2, #3	10.1	10.1	63.5	18.0	4.5	0.2
Boiler #4	4.7	4.7	3.9	39.0	39.0	2.7
Generator #1	0.05	0.05	0.02	1.77	0.38	0.14
Generator #4	0.19	0.19	0.08	6.84	1.47	0.54
Generator #5	0.04	0.04	0.02	1.37	0.30	0.11
Generator #7	0.04	0.04	0.02	1.32	0.29	0.11
Generator #8	0.14	0.14	0.06	5.15	1.11	0.41
Generator #9	0.07	0.07	0.01	2.69	0.58	0.21
Fire Pump	0.01	0.01	0.01	0.19	0.04	0.01
<b>Total TPY</b>	<b>15.3</b>	<b>15.3</b>	<b>67.6</b>	<b>76.3</b>	<b>47.7</b>	<b>4.4</b>

### III. AMBIENT AIR QUALITY ANALYSIS

DVA previously submitted an ambient air quality impact analysis for air emission license A-372-71-O-R/A (dated April 25, 2011) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for this minor revision.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-372-71-Q-M subject to the conditions found in Air Emission License A-372-71-O-R/A, in amendment A-372-71-P-A and in the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

### SPECIFIC CONDITIONS

All conditions and subparts of conditions not specifically addressed here shall remain in effect as licensed in A-372-71-O-R/A dated April 25, 2011 and in amendment A-372-71-P-A dated July 19, 2013 unless modified by a future licensing action.

**Specific Condition (16) is amended by replacing sections (A), (B) and (C) in air emission license A-372-71-O- R/A, and adding (J) to read as follows:**

**(16) Boilers #1, # 2 and #3**

**A. Fuel**

1. Total fuel use for Boilers #1, #2 and #3 shall not exceed 1,800,000 gal/yr of distillate oil, based on a 12-month rolling total basis. [06-096 CMR 115, BPT]

2. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate oil fired in the boilers shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
3. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate oil with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boilers #1, #2 & #3	PM	0.08	06-096 CMR 115, BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	4.02	4.02	25.28	7.17	1.79	0.07
Boiler #2	6.01	6.01	37.82	10.73	2.68	0.11
Boiler #3	2.05	2.05	12.89	3.66	0.91	0.04

J. 40 CFR Part 63, Subpart JJJJJ [incorporated under 06-096 CMR 115, BACT]

1. A boiler tune-up program should have been implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(1)]
2. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
  - (a) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 36 months from the previous inspection for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for boilers with oxygen trim systems. [40 CFR Part 63.11223(b)(1)]

- (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
  - (c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 36 months from the previous inspection for boilers greater than 5 MMBtu/hr or 72 months from the previous inspection for boilers with oxygen trim systems. [40 CFR Part 63.11223(b)(3)]
  - (d) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
  - (e) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
  - (f) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 CFR Part 63.11223(b)(7)]
3. After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]
  4. The facility shall implement a boiler tune-up program after the initial tune-up and initial compliance report (called a Notification of Compliance Status) has been submitted.
    - (a) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

<b>Boiler Category</b>	<b>Tune-Up Frequency</b>
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
<b><i>New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements</i></b>	
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

- (b) The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]
5. A Notification of Compliance Status shall be submitted to EPA for completing the one-time energy assessment performed by a qualified energy assessor on Boilers #1, #2 and #3 no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]
6. Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

**Specific Condition (17) is amended by replacing section (E) in air emission license A-372-71-O- R/A, and adding (F) to read as follows:**

**(17) Boiler #4**

- E. DVA shall perform an initial performance test for Boiler #4 to demonstrate compliance with the PM, NO<sub>x</sub>, CO and VOC emission limits specified in Condition 17(B) using approved EPA test methods. Tests shall be conducted within 30 days after achieving the normal steam production rate at which the boiler will be operated but not later than 180 days after the initial start-up of the boiler. [06-096 CMR 115, BACT]

F. 40 CFR Part 63, Subpart JJJJJ [incorporated under 06-096 CMR 115, BACT]

a. Standards:

- i. Boiler #4 shall meet a PM limit of 0.03 lb/MMBtu. [40 CFR §63.11201(a)]
- ii. DVA shall operate Boiler #4 to minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures and DVA shall conduct a tune-up of the boiler every 5 years as specified in 40 CFR §63.11223 because it utilizes an oxygen trim system. [40 CFR §63.11201(b)]
- iii. DVA has opted to install and operate an electrostatic precipitator control (ESP) and multicyclone on Boiler #4. DVA shall operate the ESP to maintain an opacity to less than or equal to 10% opacity based on daily block average. [40 CFR §63.11201(c)]
- iv. The PM emission limit and opacity standards apply at all times Boiler #4 is operating, except during periods of startup and shutdown. [40 CFR §63.11201(b)]
- v. DVA shall maintain the operating load of Boiler 4 such that it does not exceed 110% of the average operating load recorded during the initial performance test. [40 CFR Part 63, Subpart JJJJJ, Table 3(7)]

b. Notifications:

- i. An Initial Notification was submitted by DVA on October 20, 2011 to the EPA and the Department. [40 CFR §63.11225(a)(2)]
- ii. A Notice of Compliance Status shall be submitted to EPA and the Department within 60 days of completing the initial performance stack test. The EPA requires this report to be submitted through their electronic reporting system [40 CFR §63.11225(a)(4)]

c. Opacity COMS

DVA has opted to install a continuous opacity monitoring system (COMS) to show continuous compliance with the opacity operating limit. The COMS will continue to be operated and maintained in accordance with 40 CFR §63.11205(c), §63.11224(c-e) and §63.11221 and 06-096 CMR 117.

d. Boiler Tune-Up Program

- i. DVA is not required to conduct an initial performance tune-up on Boiler #4, but is required to complete the applicable 5-year tune-up in accordance with 40 CFR §63.11223 no later than 61 months after the initial startup of Boiler #4 and thereafter. (40 CFR §63.11210(f))

- DVA must submit a signed statement in the Notification of Compliance Status report that indicates the facility conducted a tune-up of the boiler. (§63.11214(b))
- ii. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
    1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(1) and (c)]
    2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
    3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(3) and (c)]
    4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
    5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
    6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 CFR Part 63.11223(b)(7)]
  - iii. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)]

e. Recordkeeping:

Records in a form suitable and readily available for expeditious review shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]:

- i. Copies of notifications and reports with supporting compliance documentation;
- ii. Records of conformance with the required work and management practices including: identification of the boiler, the date of tune-up, tune-up procedures, and the manufacturer's specifications to which the boiler was tuned; and documentation of fuel type(s) used monthly by the boiler;
- iii. Records of the occurrence and duration of each malfunction of the boiler or air pollution control equipment;
- iv. Records of the actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operations; and
- v. Records of all inspection and monitoring data including the date, place and time of the monitoring event, person conducting the monitoring, technique or method used, operating conditions during the activity, results including date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operations, and maintenance or corrective action take (if applicable).

f. Reporting:

- i. An annual compliance certification report must be prepared by March 1 of each year and submitted to EPA and the Department upon request. However, if the source experiences any deviations from the applicable requirements during the reporting period, the report must be submitted by March 15. The compliance report shall include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; a description of any deviations and corrective actions; and total fuel use by the boiler for each calendar month within the reporting period. [40 CFR Part 63.11225(b)]
- ii. Within 60 days after the date of completion of the initial performance test, the performance test data must be submitted electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) or other compatible electronic spreadsheet, if the test method is compatible with ERT. (40 CFR §63.11225(e))

- g. At all times, DVA must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR Part 63.11205(a)]

**Specific Condition (23) is removed from air emission license A-372-71-P-A.**

**The following is a new condition:**

**(24) Fire Pump**

- A. The Fire Pump shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115]
- B. DVA shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. [06-096 CMR 115, BACT]
- C. If the Fire Pump is operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity, DVA shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [06-096 CMR 115, BACT]
- D. The fuel oil sulfur content for the Fire Pump shall be limited to 0.0015% sulfur. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BPT]
- E. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump	0.10	0.10	0.01	3.76	0.81	0.30

- F. Visible emissions from the Fire Pump shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]

Department of Veterans Affairs  
Medical & Regional Office Center  
Kennebec County  
Augusta, Maine  
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Departmental  
Findings of Fact and Order  
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G. The Fire Pump is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency generators are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

DONE AND DATED IN AUGUSTA, MAINE THIS 22 DAY OF May, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Core for  
PATRICIA W. AHO, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-372-71-O-R/A.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/17/2013

Date of application acceptance: 12/17/2013

Date filed with the Board of Environmental Protection:

This Order prepared by Allison M. Hazard, Bureau of Air Quality.

