



DEPARTMENT ORDER

**The University of Maine System  
 Cumberland County  
 Portland, Maine  
 A-464-71-Q-R/A (SM)**

**Departmental  
 Findings of Fact and Order  
 Air Emission License Renewal  
 and After-the-Fact Amendment**

**FINDINGS OF FACT**

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

**I. REGISTRATION**

A. Introduction

The University of Maine System (USM-Portland) has applied to renew their Air Emission License permitting the operation of emission sources associated with their educational facility.

USM-Portland has also requested an amendment to their license in order to replace Boilers #1-3 listed on air emission license A-464-71-M-R, dated September 30, 2010, with new Boilers #1-3, and install a new generator, Heat Plant Generator.

The equipment addressed in this license is located at their Portland Campus with a site address of 25 Bedford Street, Portland, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

**Boilers**

<b>Equipment</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type, % sulfur</b>	<b>Date of Manuf.</b>	<b>Stack #</b>	<b>Location</b>
Boiler #1*	20.664	20,259 scf/hr	Natural gas, negl.	2015	1A	39 Durham St.
		142 gal/hr	Distillate fuel, 0.5%			
Boiler #2*	20.664	20,259 scf/hr	Natural gas, negl.	2015	1B	39 Durham St.
		142 gal/hr	Distillate fuel, 0.5%			
Boiler #3*	6.199	6,077 scf/hr	Natural gas, negl.	2015	1C	39 Durham St.
		43 gal/hr	Distillate fuel, 0.5%			

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>	<u>Stack #</u>	<u>Location</u>
Glickman Boiler #1**	1.0	980.4 scf/hr	Natural gas, negl.	1993	3	314 Forest Ave.
Glickman Boiler #2**	1.0	980.4 scf/hr		1993	4	314 Forest Ave.
Glickman Boiler #3**	1.0	980.4 scf/hr		2003	5	314 Forest Ave.
Glickman Boiler #4**	1.0	980.4 scf/hr		2004	16	314 Forest Ave.
Science Boiler #1**	1.0	980.4 scf/hr		2002	12	70 Falmouth St.
Science Boiler #2**	1.0	980.4 scf/hr		2002	13	70 Falmouth St.
Science Boiler #3**	1.5	1,471 scf/hr		2002	21	70 Falmouth St.
Science Boiler #4**	1.0	980.4 scf/hr		2006	14	70 Falmouth St.

\*New in this license. Boilers #1-3 replace Boilers #1, #2, and #3 listed on air emission license A-464-71-M-R.

\*\*Renamed for better identification of units

### Generators

<u>Equipment*</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Rated Output (kW)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>	<u>Stack #</u>	<u>Location</u>
Payson Generator	0.66	50	4.7 gal/hr	Distillate fuel, 0.0015%	1999	9	96 Falmouth St.
Science A Generator	3.01	175	22 gal/hr	Distillate fuel, 0.0015%	2011	10	70 Falmouth St.
Glickman Generator	3.08	300	22.5 gal/hr	Distillate fuel, 0.0015%	1992	11	314 Forest Ave.
Science C Generator	5.62	450	5,507 scf/hr	Natural gas, negl.	2002	15	70 Falmouth St.
Garage Generator	0.86	80	9.15 gal/hr	Propane, negl.	2003	17	88 Bedford St.
Wishcamper Generator	0.81	60	790 scf/hr	Natural gas, negl.	2007	20	46 Bedford St.
Heat Plant Generator**	1.36	128	9.9 gal/hr	Distillate fuel, 0.0015%	2015	24	39 Durham St.

\*Renamed for better identification of units

\*\*New in this license

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396, diesel fuel oil numbers 1 or 2, as defined in ASTM D975, kerosene, as defined in ASTM D3699, biodiesel as defined in ASTM D6751, or biodiesel blends as defined in ASTM D7467.

D. Application Classification

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Significant Emission Levels</u>
PM	6.0	2.6	-3.4	100
PM <sub>10</sub>	6.0	2.6	-3.4	100
SO <sub>2</sub>	27.6	13.4	-14.2	100
NO <sub>x</sub>	22.5	7.3	-15.2	100
CO	4.9	4.5	-0.4	100
VOC	1.0	0.4	-0.6	50
CO <sub>2e</sub>	<100,000	<100,000	<100,000	100,000

This modification will not cause emission increases that exceed the significant emission levels for any pollutant; therefore, this application is determined to be a renewal with a minor modification and has been processed as such. The Department has determined the facility is a minor source, and the application has been processed through Major and Minor Source Air Emission License Regulations, 06-096 C.M.R. ch. 115 (as amended). With the annual fuel limits on Boilers #1-3 and on Glickman Boilers #1-4 and Science Boilers #1-4 combined, and the annual operating hour restrictions on the generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. With the annual fuel limit on Boilers #1-3 and on Glickman Boilers #1-4 and Science Boilers #1-4 combined, and the annual operating hour restrictions on the generators, the facility is licensed below major source thresholds for hazardous air pollutants (HAP) and is considered 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 C.M.R. ch. 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

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.

### B. Boilers #1-3

USM-Portland operates Boilers #1-3 for steam and heat as replacements for the former Boilers #1-3. From this point on in this license, all references to Boilers #1-3 shall mean the *new* Boilers #1-3. Boilers #1 and #2 are rated at 20.664 MMBtu/hr and Boiler #3 is rated at 6.199 MMBtu/hr. Boilers #1-3 are all capable of firing natural gas and distillate fuel. Boilers #1-3 were all manufactured and installed in 2015 and exhaust through their own stacks, Stacks 1A, 1B, and 1C, respectively.

#### 1. BACT Findings

The following is a summary of the BACT determination for Boilers #1-3, by pollutant. Boilers #1-3 will be using natural gas as their primary fuel source with distillate fuel as a back-up only; therefore, the BACT determination was done based on Boilers #1-3 firing natural gas.

##### a. Particulate Matter (PM & PM<sub>10</sub>)

Units with high combustion efficiency firing fuels with low ash content exhibit low particulate matter emissions. The most stringent PM/PM<sub>10</sub> control method demonstrated for boilers is the use of low ash fuel such as natural gas. The Department finds good combustion controls with a limit of 0.05 lb/MMBtu constitute BACT for PM/PM<sub>10</sub> emissions from Boilers #1-3 firing natural gas.

b. Sulfur Dioxide (SO<sub>2</sub>)

Sulfur dioxide is formed from the oxidation of sulfur in fuel. The options to control SO<sub>2</sub> emissions from fuel combustion include low sulfur fuel and add-on treatment of the combustion exhaust gases.

Based on review of similarly sized and licensed sources in Maine, add-on controls for SO<sub>2</sub> emissions from boilers of similar size firing natural gas were not identified. Due to the inherently low sulfur content of natural gas, additional SO<sub>2</sub> control from natural gas combustion is not economically feasible.

The Department finds good combustion controls with a limit of 0.01 lb/hr constitute BACT for SO<sub>2</sub> emissions from Boilers #1-3 firing natural gas.

c. Nitrogen Oxides (NO<sub>x</sub>)

Formation of nitrogen oxides occurs by three different mechanisms. The formation of thermal NO<sub>x</sub> arises from the thermal dissociation and subsequent reaction of nitrogen (N<sub>2</sub>) and oxygen (O<sub>2</sub>) in the combustion air. Prompt NO<sub>x</sub> is formed through the early reactions of nitrogen molecules in the combustion air and hydrocarbon radicals in the fuel. The third type is fuel-bound NO<sub>x</sub>.

Options for controlling NO<sub>x</sub> emissions from the boilers include combustion control, selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), flue gas recirculation (FGR), and low-NO<sub>x</sub> burners.

Additional control technology for these boilers is considered economically infeasible. Review of recent, similar projects did not identify any required add-on controls. USM-Portland proposed as BACT low-NO<sub>x</sub> burners with flue gas recirculation to inject the gas into fuel lean and fuel rich zones, improving combustion and minimizing NO<sub>x</sub> emissions.

The Department finds the use of low-NO<sub>x</sub> burners with flue gas recirculation and good combustion controls with limits of 0.65 lb/hr for Boilers #1 and #2 each and 0.19 lb/hr for Boiler #3 constitutes BACT for NO<sub>x</sub> emissions from Boilers #1-3.

d. Carbon Monoxide (CO)

The formation of CO occurs as a result of incomplete combustion of the fuel. Control of CO is accomplished by providing adequate fuel residence time and sufficiently high temperature in the combustion zone to ensure complete combustion. These control factors, however, also tend to result in higher emissions of NO<sub>x</sub>. The firing of natural gas results in low emissions of CO under full load or ideal conditions, although operation at lower loads generally increases emissions because of inefficient combustion.

The CO emission controls that are technologically feasible include combustion control and the use of an oxidation catalyst. Catalytic oxidation reactors for CO control operate in a relatively narrow temperature range of 700° F to 1100° F. If operating within this temperature range, CO emissions could potentially be reduced by 65-90%. At lower temperatures, when CO is typically higher due to inefficient combustion, the CO conversion falls off rapidly; at higher temperatures, damage to the catalyst may occur.

Based on review of similarly sized and licensed sources in Maine, none were found to employ a CO control catalyst.

The Department finds that good combustion controls with limits of 1.70 lb/hr for Boilers #1 and #2 each and 0.51 lb/hr for Boiler #3 constitutes BACT for CO emissions from Boilers #1-3.

e. Volatile Organic Compounds (VOC)

As with CO, VOCs are emitted from boilers firing natural gas as a result of incomplete combustion of fuel in the form of unburned hydrocarbons. An oxidation catalyst is an effective control for VOC emissions, with potential for VOC emissions reduction of 85-90%. However, such measures are economically unfeasible. Control of VOCs can be accomplished by providing adequate fuel residence time and high temperature in the combustion zone to ensure complete combustion.

The Department finds the use of good combustion controls with limits of 0.11 lb/hr for Boilers #1 and #2 each and 0.03 lb/hr for Boiler #3 constitutes BACT for VOC emissions from Boilers #1-3.

2. Emission Limits

The BACT emission limits for Boilers #1-3 when firing natural gas were based on the following:

PM/PM <sub>10</sub>	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO <sub>2</sub>	–	0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
NO <sub>x</sub>	–	32 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
CO	–	84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
Opacity	–	06-096 C.M.R. ch. 101 and 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boilers #1-3 when firing distillate fuel were based on the following:

- PM/PM<sub>10</sub> – 0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
- SO<sub>2</sub> – 0.5 lb/MMBtu based on firing distillate fuel with a maximum sulfur content of 0.5% by weight
- 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 for Boilers #1-2 and 0.34 lb/1000 gal based on AP-42, Table 1.3-3, dated 5/10 for Boiler #3
- Opacity – 06-096 C.M.R. ch. 101 and 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Boilers #1-3 are the following:

<u>Unit</u>	<u>Fuel</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Boilers #1-3 [each]	Natural gas	PM	0.05
Boilers #1-3 [each]	Distillate fuel	PM	0.08

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Boilers #1-2 [each] Natural gas	1.03	1.03	0.01	0.65	1.70	0.11
Boilers #1-2 [each] Distillate fuel	1.65	1.65	10.41	2.95	0.74	0.03
Boiler #3 Natural gas	0.31	0.31	0.01	0.19	0.51	0.03
Boiler #3 Distillate fuel	0.50	0.50	3.12	0.89	0.22	0.02

Visible emissions from Boilers #1-3 when firing natural gas shall each not exceed 10% opacity on a six-minute block average basis.

Visible emissions from Boilers #1-3 when firing distillate fuel shall each not exceed 20% opacity on a six-minute block average basis.

USM-Portland shall be limited to a heat input of 52,500 MMBtu/year on a 12-month rolling total basis for Boilers #1-3 combined. Fuel use shall be converted to heat input on a monthly and 12-month rolling total basis using heating values of 0.00102 MMBtu/scf for natural gas and 0.14 MMBtu/gal for distillate fuel.

Fuel Sulfur Content Requirements

Boilers #1-3 are licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of

July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in Boilers #1-3 shall not exceed 0.0015% by weight (15 ppm).

3. Periodic Monitoring

Periodic monitoring for Boilers #1-3 shall include recordkeeping to document fuel use and heat input both on a monthly and 12-month rolling total basis. Documentation shall include the type and amount of fuel used and sulfur content of the fuel, if applicable.

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to its size, Boiler #3 is not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 Code of Federal Regulation (C.F.R.) Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Due to their size and year of manufacture, Boilers #1-2 are subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

USM-Portland shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #1 and #2 including, but not limited to, the following:

- a. USM-Portland shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boiler and the type of fuel to be combusted. [40 C.F.R. § 60.48c(a)]
- b. USM-Portland shall perform and submit to EPA and the Department an initial performance test within 30 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after the initial start-up of the facility. The performance test shall consist of fuel supplier certification of the sulfur content of the fuel fired in Boilers #1 and #2. The fuel supplier certification must contain the name of the oil supplier and a statement from the oil supplier that the oil complies with ASTM specifications for #2 fuel oil. [40 C.F.R. §§ 60.44c and 60.45c]
- c. USM-Portland shall record and maintain records of the amounts of each fuel combusted during each month with fuel certifications. [40 C.F.R. § 60.48c(g)]



- d. USM-Portland shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period. [40 C.F.R. § 60.48c(j)]
- e. The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I  
5 Post Office Square, Suite 100 (OES04-2)  
Boston, MA 02109-3912  
Attn: Air Compliance Clerk

5. National Emission Standards for Hazardous Air Pollutants (NESHAP):  
40 C.F.R. Part 63, Subpart JJJJJ

Boilers #1-3 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. The units are considered new gas-fired boilers.

Gas-fired boilers are exempt from 40 C.F.R. Part 63, Subpart JJJJJ. However, boilers which fire fuel oil are not. A "gas-fired boiler" is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 C.F.R. § 63.11237]

USM-Portland shall maintain records of the yearly operating hours each boiler fires distillate fuel. If any of the boilers exceed 48 hours firing distillate fuel for periodic testing during a calendar year, those boilers will become subject to all applicable requirements for 40 C.F.R. Part 63, Subpart JJJJJ for new oil-fired boilers, and USM-Portland will be required to notify EPA and the Department of the change within 180 days of the effective date of the fuel switch. [40 C.F.R. § 63.11210(h) and 06-096 C.M.R. ch. 115, BPT]

C. Glickman Boilers #1-4 and Science Boilers #1-4

USM-Portland operates Glickman Boilers #1-4 and Science Boilers #1-4 for steam and heat. Glickman Boilers #1-4 and Science Boilers #1-2 and #4 are each rated at 1.0 MMBtu/hr and Science Boiler #3 is rated at 1.5 MMBtu/hr. All eight boilers fire natural gas. Glickman Boilers #1-4 and Science boilers #1-4 were manufactured in 1993, 1993, 2003, 2004, 2002, 2002, 2002, and 2006, respectively. All eight boilers exhaust through their own stacks.

1. BPT Findings

The BPT emission limits for Glickman Boilers #1-4 and Science Boilers #1-4 were based on the following:

- PM/PM<sub>10</sub> – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO<sub>2</sub> – 0.6 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- NO<sub>x</sub> – 100 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- CO – 84 lb/MMscf based on AP-42, Table 1.4-1, dated 7/98
- VOC – 5.5 lb/MMscf based on AP-42, Table 1.4-2, dated 7/98
- Opacity – 06-096 C.M.R. ch. 101

The BPT emission limits for Glickman Boilers #1-4 and Science Boilers #1-4 are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Glickman Boilers #1-4 and Science Boilers #1-2 and #4 [each]	0.05	0.05	0.01	0.10	0.08	0.01
Science Boiler #3	0.08	0.08	0.01	0.15	0.12	0.01

Visible emissions from Glickman Boilers #1-4 and Science Boilers #1-4 shall each not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period.

USM-Portland shall be limited to 15 MMscf/year of natural gas on a 12-month rolling total basis for Glickman Boilers #1-4 and Science Boilers #1-4 combined.

2. Periodic Monitoring

Periodic monitoring for Glickman Boilers #1-4 and Science Boilers #1-4 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the amount and type of fuel used.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their sizes and years of manufacture, Glickman Boilers #1-4 and Science Boilers #1-4 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

4. National Emission Standards for Hazardous Air Pollutants (NESHAP):  
40 C.F.R. Part 63, Subpart JJJJJ

Glickman Boilers #1-4 and Science Boilers #1-4 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJ. The units are considered existing gas-fired boilers.

Gas-fired boilers are exempt from 40 C.F.R. Part 63, Subpart JJJJJ. However, boilers which fire fuel oil are not. A “gas-fired boiler” is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 C.F.R. § 63.11237]

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010 will be considered an existing boiler under this rule. A boiler which currently fires gaseous fuels, but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

#### D. Generators

The next three sections of this air emission license deal with USM-Portland’s emergency generators, Payson Generator, Science A Generator, Glickman Generator, Science C Generator, Garage Generator, Wishcamper Generator, and Heat Plant Generator. Generator engines are regulated by three different federal regulations: *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ for all engines regardless of manufacture date, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII for compression ignition engines that commenced construction after July 11, 2005 and *Standards of Performance for Spark Ignition Internal Combustion Engines*, Subpart JJJJ for spark ignition engines that commenced construction after June 12, 2006. The generators are grouped by applicable federal regulations and corresponding requirements.

#### E. Payson Generator, Glickman Generator, Science C Generator, and Garage Generator

USM-Portland operates the Payson Generator, Glickman Generator, Science C Generator, and Garage Generator as emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. The Payson Generator, Glickman Generator, Science C Generator, and Garage Generator have engines rated at 0.66 MMBtu/hr, 3.08 MMBtu/hr, 5.62 MMBtu/hr, and 0.86 MMBtu/hr, respectively. The Payson Generator and the Glickman Generator fire distillate fuel, the Science C Generator fires natural gas, and the Garage Generator fires propane. The Payson Generator, Glickman Generator,

Science C Generator, and Garage Generator were manufactured in 1999, 1992, 2002, and 2003, respectively.

1. BPT Findings

The BPT emission limits for the Payson Generator and the Glickman Generator are based on the following:

- PM/PM<sub>10</sub> - 0.12 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO<sub>2</sub> - 0.0015 lb/MMBtu based on combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
- NO<sub>x</sub> - 4.41 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
- CO - 0.95 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
- VOC - 0.36 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
- Opacity - 06-096 C.M.R. ch. 101

The BPT emission limits for the Science C Generator and Garage Generator are based on the following:

- PM/PM<sub>10</sub> - 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO<sub>2</sub> - 0.000588 lb/MMBtu based on AP-42, Table 3.2-3, dated 7/00
- NO<sub>x</sub> - 2.27 lb/MMBtu from AP-42, Table 3.2-3, dated 7/00
- CO - 3.51 lb/MMBtu from AP-42, Table 3.2-3, dated 7/00
- VOC - 0.0296 lb/MMBtu from AP-42, Table 3.2-3, dated 7/00
- Opacity - 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the Payson Generator, Glickman Generator, Science C Generator, and Garage Generator are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Glickman Generator	PM	0.12
Science C Generator	PM	0.05

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Payson Generator Distillate fuel	0.08	0.08	0.01	2.91	0.63	0.24
Glickman Generator Distillate fuel	0.37	0.37	0.01	13.58	2.93	1.11
Science C Generator Natural gas	0.28	0.28	0.01	12.76	19.73	0.17
Garage Generator Propane	0.04	0.04	0.01	1.95	3.02	0.03

Visible emissions from the Payson Generator and the Glickman Generator shall each not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

Visible emissions from the Science C Generator and the Garage Generator shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period.

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

Emergency generators are 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.

2. National Emission Standards for Hazardous Air Pollutants (NESHAP):  
40 C.F.R. Part 63, Subpart ZZZZ

The federal regulation *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to the emergency engines listed above. 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 40 C.F.R. Part 63 Subpart ZZZZ since they are categorized as institutional emergency engines and they do not operate or are 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 40 C.F.R. § 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 40 C.F.R. § 63.6640(f)(4)(ii), would cause the engines to be subject to 40 C.F.R. Part 63, Subpart ZZZZ, and require compliance with all applicable requirements.

F. Wishcamper Generator

USM-Portland operates the Wishcamper Generator as an emergency generator. The Wishcamper Generator is a generator set consisting of an engine and an electrical generator. The Wishcamper Generator engine is rated at 0.81 MMBtu/hr and fires natural gas. The Wishcamper Generator was manufactured in August 2007.

1. BPT Findings

The BPT emission limits for the Wishcamper Generator firing natural gas are based on the following:

- PM/PM<sub>10</sub> - 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
- SO<sub>2</sub> - 0.000588 lb/MMBtu based on AP-42, Table 3.2-3, dated 7/00
- NO<sub>x</sub> - 2.27 lb/MMBtu based on AP-42, Table 3.2-3, dated 7/00
- CO - 3.51 lb/MMBtu based on AP-42, Table 3.2-3, dated 7/00
- VOC - 0.0296 lb/MMBtu based on AP-42, Table 3.2-3, dated 7/00
- Opacity - 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the Wishcamper Generator are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM<sub>10</sub></u> <u>(lb/hr)</u>	<u>SO<sub>2</sub></u> <u>(lb/hr)</u>	<u>NO<sub>x</sub></u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Wishcamper Generator Natural gas	0.04	0.04	0.01	1.84	2.84	0.02

Visible emissions from the Wishcamper Generator shall each not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period.

2. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart JJJJ

The Wishcamper Generator was manufactured prior to January 1, 2009, and is therefore not subject to *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart JJJJ.

3. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart ZZZZ

The federal regulation *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ, is applicable to the Wishcamper Generator. The unit is considered a new, emergency stationary reciprocating internal combustion engine at an area HAP source because construction was commenced after June 12, 2006. Therefore, according to 40 C.F.R. Part 63, Subpart ZZZZ, the

Wishcamper Generator shall meet the requirements of 40 C.F.R. Part 63, Subpart ZZZZ by meeting the requirements for the engine in 40 C.F.R. Part 60, Subpart JJJJ and shall have no further requirements under 40 C.F.R. Part 63, Subpart ZZZZ. Since the Wishcamper Generator is not subject to 40 C.F.R. Part 60, Subpart JJJJ, there are no applicable NESHAP requirements for the Wishcamper Generator. [40 C.F.R. §§ 63.6585 and 63.6590(c)(1)]

4. Additional BPT requirements for the Wishcamper Generator

The following requirements shall be considered BPT for the Wishcamper Generator:

- a. The Wishcamper Generator 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 Wishcamper Generator shall be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, USM-Portland shall keep records of the total hours of operation and the hours of emergency operation for the unit. [06-096 C.M.R. ch. 115, BPT]
- b. The Wishcamper Generator 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 Wishcamper Generator 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. [06-096 C.M.R. ch. 115, BPT]

G. Science A Generator and Heat Plant Generator

USM-Portland operates the Science A Generator and Heat Plant Generator as emergency generators. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. The Science A Generator and Heat Plant Generator have engines rated at 3.01 MMBtu/hr and 1.36 MMBtu/hr, respectively. The Science A Generator and the Heat Plant Generator both fire distillate fuel. The Science A Generator and Heat Plant Generator were manufactured in 2011 and 2015, respectively.

1. Heat Plant Generator BACT

USM-Portland is requesting to license a new generator, the Heat Plant Generator, as an emergency generator. The generator is rated at 1.36 MMBtu/hr (128 kW) and fires distillate fuel with a sulfur content of no more than 0.0015% by weight (15 ppm).

USM-Portland proposes to limit the hours of operation in accordance with the Department and EPA requirements. The Heat Plant Generator shall be limited to 100 hours/year, excluding emergency situations, for maintenance checks and

readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity unless the conditions in 40 C.F.R. § 60.4211(f)(3)(i) are met per 40 C.F.R. Part 60, Subpart III.

In addition, USM-Portland proposes to use distillate fuel with a fuel sulfur content not to exceed 0.0015% by weight and to ensure good combustion and maintenance practices for proper operation as BACT for the Heat Plant Generator. Due to these operational requirements, the type of fuel burned, and the relatively small quantities of emissions from the unit, additional control measures would not be economically feasible.

## 2. BACT/BPT Findings

### Science A Generator

The BPT emission limits for the Science A Generator firing distillate fuel are based on the following:

PM/PM <sub>10</sub>	- 0.12 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO <sub>2</sub>	- 0.0015 lb/MMBtu based on combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	- 4.41 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
CO	- 0.95 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
VOC	- 0.36 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
Opacity	- 06-096 C.M.R. ch. 101

### Heat Plant Generator

The BACT emission limits for the Heat Plant Generator firing distillate fuel are based on the following:

PM/PM <sub>10</sub>	- 0.12 lb/MMBtu based on 06-096 C.M.R. ch. 115, BACT
SO <sub>2</sub>	- 0.0015 lb/MMBtu based on combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO <sub>x</sub>	- 4.41 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
CO	- 0.95 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
VOC	- 0.36 lb/MMBtu based on AP-42, Table 3.3-1, dated 10/96
Opacity	- 06-096 C.M.R. ch. 115, BACT



The BPT emission limits for the Science A Generator and the BACT emission limits for the Heat Plant Generator are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Science A Generator	PM	0.12

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Science A Generator Distillate fuel	0.36	0.36	0.01	13.27	2.86	1.08
Heat Plant Generator Distillate fuel	0.16	0.16	0.01	6.00	1.29	0.49

Visible emissions from the Science A Generator shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

Visible emissions from the Heat Plant Generator shall not exceed 20% opacity on a six-minute block average basis.

3. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart ZZZZ

The federal regulation *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)*, 40 C.F.R. Part 63, Subpart ZZZZ, applies to any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. The Science A Generator and Heat Plant Generator are considered new stationary RICE located at an area source of HAP emissions because construction commenced on or after June 12, 2006. Therefore, the generators must meet the requirements of 40 C.F.R. Part 63, Subpart ZZZZ by meeting the requirements of New Source Performance Standards at 40 C.F.R. Part 60, Subpart IIII or 40 C.F.R. Part 60, Subpart JJJJ as applicable. [40 C.F.R. § 63.6590(c)(1)]

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart IIII: Science A Generator and Heat Plant Generator

The federal regulation *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)*, 40 C.F.R. Part 60, Subpart IIII, is applicable to the Science A Generator and the Heat Plant Generator since the units were ordered after July 11, 2005 and manufactured after April 1, 2006. By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for*

*Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60, Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

**There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation.** Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for Maintenance Checks, Readiness Testing, and other non-emergency situations as described below.

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

- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity, unless:

1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
2. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
3. The dispatch follows reliability, emergency operation or similar protocols that follow specific North American Electric Reliability Corporation (NERC), regional, state, public utility commission, or local standards or guidelines.
4. The power is provided only to the facility itself or to support the local transmission and distribution system.
5. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission, or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

b. 40 C.F.R. Part 60, Subpart III Requirements

(1) Manufacturer Certification Requirement

The Science A Generator and Heat Plant Generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the Science A Generator and Heat Plant Generator shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 C.F.R. § 60.4207(b)]

- (3) **Non-Resettable Hour Meter Requirement**  
Non-resettable hour meters shall be installed and operated on the Science A Generator and the Heat Plant Generator. [40 C.F.R. § 60.4209(a)]
- (4) **Operation and Maintenance Requirements**  
The Science A Generator and the Heat Plant Generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by USM-Portland that are approved by the engine manufacturer. USM-Portland may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]
- (5) **Annual Time Limit for Maintenance and Testing**  
As emergency engines, the Science A Generator and the Heat Plant Generator shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in 40 C.F.R. § 60.4211(f)(3)(i) are met). [40 C.F.R. § 60.4211(f)]
- (6) **Initial Notification Requirement**  
No initial notification is required for emergency engines. [40 C.F.R. § 60.4214(b)]
- (7) **Recordkeeping**  
USM-Portland shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meters. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and the hours spent for non-emergency. If the engines are 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 as specified in 40 C.F.R. § 60.4211(f)(3)(i), USM-Portland shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 C.F.R. § 60.4214(b)]
- (8) **Annual Reporting Requirements for Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)**  
If the Science A Generator or the Heat Plant Generator at USM-Portland operate or are 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 40 C.F.R. § 60.4211(f)(3)(i), USM-Portland shall submit an annual report containing the information in 40 C.F.R. § 60.4214(d)(1)(i) through (vii). Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

U.S. Environmental Protection Agency, Region I  
5 Post Office Square, Suite 100 (OES04-2)  
Boston, MA 02109-3912  
Attn: Air Compliance Clerk

[40 C.F.R. § 60.4214(d)]

H. Parts Washer

The parts washer was manufactured and installed in 2015 and has a design capacity of 10 gallons. The parts washer is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 (as amended), and records shall be kept documenting compliance.

I. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a one-hour period.

J. Annual Emissions

1. Total Annual Emissions

USM-Portland shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a heat input limit of 52,500 MMBtu/year of natural gas and distillate fuel combined for Boilers #1-3, a fuel limit of 15 MMscf/year of natural gas for Glickman Boilers #1-4 and Science Boilers #1-4 combined, and 100 hours of non-emergency operation per year each for the Payson Generator, Science A Generator, Glickman Generator, Science C Generator, Garage Generator, Wishcamper Generator, and Heat Plant Generator:

**Total Licensed Annual Emissions for the Facility**  
**Tons/year**  
(used to calculate the annual license fee)

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boilers #1-3*	2.1	2.1	13.2	3.8	2.2	0.1
Glickman Boilers #1-4 and Science Boilers #1-4	0.4	0.4	0.1	0.8	0.6	0.1
Generators (7)	0.1	0.1	0.1	2.7	1.7	0.2
<b>Total TPY</b>	<b>2.6</b>	<b>2.6</b>	<b>13.4</b>	<b>7.3</b>	<b>4.5</b>	<b>0.4</b>

\*Based on firing the highest emitting fuel for each pollutant.

## 2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 C.F.R. Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 C.M.R. ch. 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits and operating hour restrictions;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 C.F.R. Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 C.F.R. Part 98.

No additional licensing actions to address GHG emissions are required at this time.

## III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<b>Pollutant</b>	<b>Tons/Year</b>
PM <sub>10</sub>	25
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

### 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-464-71-Q-R/A, subject to 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.

### STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.  
[06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may

condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. §353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
  - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or



2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.  
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and

in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.  
[06-096 C.M.R. ch. 115]

**SPECIFIC CONDITIONS**

**(16) Boilers #1-3**

**A. Fuel**

1. Total fuel use for Boilers #1-3 combined shall not exceed 52,500 MMBtu/year of heat input for natural gas and distillate fuel combined based on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BACT]
2. Prior to July 1, 2018, the facility shall fire distillate fuel with a maximum sulfur content not to exceed 0.5% by weight in Boilers #1-3. [06-096 C.M.R. ch. 115, BACT]
3. Beginning July 1, 2018, the facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Boilers #1-3. [06-096 C.M.R. ch. 115, BACT]
4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. Fuel use records shall be converted to heat input on a monthly and 12-month rolling total basis using heating values of 0.00102 MMBtu/scf for natural gas and 0.14 MMBtu/gal for distillate fuel. [06-096 C.M.R. ch. 115, BACT]

**B. Emissions shall not exceed the following:**

<b>Unit</b>	<b>Fuel</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boilers #1-3 [each]	Natural gas	PM	0.05	06-096 C.M.R. ch. 115, BACT
Boilers #1-3 [each]	Distillate fuel	PM	0.08	06-096 C.M.R. ch. 115, BACT

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boilers #1-2 [each] Natural gas	1.03	1.03	0.01	0.65	1.70	0.11
Boilers #1-2 [each] Distillate fuel	1.65	1.65	10.41	2.95	0.74	0.03
Boiler #3 Natural gas	0.31	0.31	0.01	0.19	0.51	0.03
Boiler #3 Distillate fuel	0.50	0.50	3.12	0.89	0.22	0.02

D. Visible Emissions

1. Visible emissions from Boilers #1-3 when firing natural gas shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 and 06-096 C.M.R. ch. 115, BACT]
2. Visible emissions from Boilers #1-3 when firing distillate fuel shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 and 06-096 C.M.R. ch. 115, BACT]

E. USM-Portland shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #1-2 including, but not limited to, the following:

1. USM-Portland shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boilers and the type of fuel to be combusted. [40 C.F.R. § 60.48c(a)]
2. USM-Portland shall perform and submit to EPA and the Department an initial performance test within 30 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after the initial start-up of the facility. The performance test shall consist of fuel supplier certification of the sulfur content of the fuel fired in Boilers #1 and #2. The fuel supplier certification must contain the name of the oil supplier and a statement from the oil supplier that the oil complies with ASTM specifications for #2 fuel oil. [40 C.F.R. §§ 60.44c and 60.45c]
3. USM-Portland shall record and maintain records of the amounts of each fuel combusted during each month with fuel certifications. [40 C.F.R. § 60.48c(g)]

4. USM-Portland shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period. [40 C.F.R. § 60.48c(j)]
5. The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I  
5 Post Office Square, Suite 100 (OES04-2)  
Boston, MA 02109-3912  
Attn: Air Compliance Clerk

- F. USM-Portland shall maintain records of the yearly operating hours each boiler fires distillate fuel. If any of the boilers exceed 48 hours firing liquid fuel during a calendar year, those boilers will become subject to all applicable requirements for 40 C.F.R. Part 63, Subpart JJJJJ for new oil-fired boilers, and USM-Portland will be required to notify EPA and the Department of the change within 180 days of the effective date of the fuel switch. [40 C.F.R. § 63.11210(h) and 06-096 C.M.R. ch. 115, BPT]

(17) **Glickman Boilers #1-4 and Science Boilers #1-4**

A. Fuel

1. Total fuel use for Glickman Boilers #1-4 and Science Boilers #1-4 combined shall not exceed 15 MMscf/yr of natural gas, based on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel delivered. Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Glickman Boilers #1-4 and Science Boilers #1-2 and #4 [each]	0.05	0.05	0.01	0.10	0.08	0.01
Science Boiler #3	0.08	0.08	0.01	0.15	0.12	0.01

- C. Visible emissions from Glickman Boilers #1-4 and Science Boilers #1-4 shall each not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 C.M.R. ch. 101]

(18) **Payson Generator, Glickman Generator, Science C Generator, and Garage Generator**

- A. The Payson Generator, Glickman Generator, Science C Generator, and Garage Generator shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]
- B. USM-Portland shall keep records that include maintenance conducted on the Payson Generator, Glickman Generator, Science C Generator, and Garage Generator and the hours of operation of each unit recorded through the non-resettable hour meters. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and the hours spent for non-emergency operation. [06-096 C.M.R. ch. 115, BPT]
- C. If the Payson Generator, Glickman Generator, Science C Generator, or Garage Generator are 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, USM-Portland shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [06-096 C.M.R. ch. 115, BPT]
- D. The fuel sulfur content for the Payson Generator, Glickman Generator, Science C Generator, and Garage Generator shall be limited to 0.0015% sulfur by weight. 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 C.M.R. ch. 115, BPT]
- E. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
Glickman Generator	PM	0.12	06-096 C.M.R. ch. 103(2)(B)(1)(a)
Science C Generator	PM	0.05	06-096 C.M.R. ch. 115, BPT

F. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Payson Generator Distillate fuel	0.08	0.08	0.01	2.91	0.63	0.24
Glickman Generator Distillate fuel	0.37	0.37	0.01	13.58	2.93	1.11
Science C Generator Natural gas	0.28	0.28	0.01	12.76	19.73	0.17
Garage Generator Propane	0.04	0.04	0.01	1.95	3.02	0.03

G. Visible Emissions

1. Visible emissions from the Payson Generator and the Glickman Generator shall each not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period. [06-096 C.M.R. ch. 101]
2. Visible emissions from the Science C Generator and the Garage Generator shall each not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a three-hour period. [06-096 C.M.R. ch. 115, BPT]

H. The Payson Generator, Glickman Generator, Science C Generator, and Garage Generator are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. These 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. [06-096 C.M.R. ch. 115, BPT]

(19) **Wishcamper Generator**

A. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Wishcamper Generator Natural gas	0.04	0.04	0.01	1.84	2.84	0.02

- B. Visible emissions from the Wishcamper Generator shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period. [06-096 C.M.R. ch. 115, BPT]
- C. The Wishcamper Generator shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BACT/BPT]
- D. USM-Portland shall keep records that include maintenance conducted on the Wishcamper Generator and the hours of operation of the Wishcamper Generator recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, including what classified the operation as emergency, and the number of hours the unit operated for non-emergency purposes. [06-096 C.M.R. ch. 115, BPT]
- E. If the Wishcamper Generator 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, USM-Portland shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [06-096 C.M.R. ch. 115, BPT]
- F. The Wishcamper Generator 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 Wishcamper Generator 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. [06-096 C.M.R. ch. 115, BPT]

(20) **Science A Generator and Heat Plant Generator**

- A. Emissions shall not exceed the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>Origin and Authority</u>
Science A Generator	PM	0.12	06-096 C.M.R. ch. 103(2)(B)(1)(a)

- B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT and 06-096 C.M.R. ch. 115, BPT]:

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Science A Generator Distillate fuel	0.36	0.36	0.01	13.27	2.86	1.08
Heat Plant Generator Distillate fuel	0.16	0.16	0.01	6.00	1.29	0.49

C. Visible Emissions

1. Visible emissions from the Science A Generator shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 C.M.R. ch. 101]
2. Visible emissions from the Heat Plant Generator shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT]

- D. The Science A Generator and Heat Plant Generator shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following:

1. Manufacturer Certification

The Science A Generator and Heat Plant Generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

2. Ultra-Low Sulfur Fuel

The fuel fired in the Science A Generator and Heat Plant Generator shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

- a. As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate



income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in 40 C.F.R. § 60.4211(f)(3)(i) are met). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

- b. USM-Portland shall keep records that include maintenance conducted on the engines and the hours of operation of each 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 the hours spent for non-emergency. If the engines are 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 as specified in 40 C.F.R. § 60.4211(f)(3)(i), USM-Portland shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 C.F.R. § 60.4214(b)]

5. Operation and Maintenance

The Science A Generator and Heat Plant Generators shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by USM-Portland that are approved by the engine manufacturer. USM-Portland may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

6. Annual Reporting For Demand Response Availability Over 15 Hours Per Year (for engines greater than 100 brake hp)

If the Science A Generator or Heat Plant Generator at USM-Portland operate or are 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 40 C.F.R. § 60.4211(f)(3)(i), the facility shall submit an annual report containing the information in 40 C.F.R. § 60.4214(d)(1)(i) through (vii). Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

U.S. Environmental Protection Agency, Region I  
5 Post Office Square, Suite 100 (OES04-2)  
Boston, MA 02109-3912  
Attn: Air Compliance Clerk

[40 C.F.R. § 60.4214(d)]

(21) **Parts Washer**

The parts washer at USM-Portland is subject to *Solvent Cleaners*, 06-096 C.M.R. ch. 130 (as amended).

- A. USM-Portland shall keep records of the amount of solvent added to each parts washer. [06-096 C.M.R. ch. 115, BPT]
- B. The following are exempt from the requirements of 06-096 C.M.R. ch. 130 [06-096 C.M.R. ch. 130]:
  1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
  2. Wipe cleaning; and,
  3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to cold cleaning machines that are applicable sources under Chapter 130.
  1. USM-Portland shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 C.M.R. ch. 130]:
    - a. Waste solvent shall be collected and stored in closed containers.
    - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
    - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
    - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
    - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the parts washer.
    - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
    - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
    - h. Work area fans shall not blow across the opening of the parts washer unit.
    - i. The solvent level shall not exceed the fill line.
  2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 C.M.R. ch. 130]

(22) **General Process Sources**

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis, except for no more than one six-minute block average in a one-hour period. [06-096 C.M.R. ch. 101]

- (23) USM-Portland shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605).

DONE AND DATED IN AUGUSTA, MAINE THIS 19 DAY OF September, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Mark Allen Robert Love for*  
PAUL MERCER, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/8/2015

Date of application acceptance: 9/10/2015

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

