



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Clean Air Act Inspection Report

Drafted: August 7, 2024

Finalized: August 20, 2024

EPA Inspector: Grace Perry, Environmental Engineer, Air Compliance Section

EPA Reviewer: John Melcher, Senior Enforcement Coordinator, Air Compliance Section

Date of Inspection: July 31, 2024

Facility Name: Bates College

ICISAir ID#: ME0000002300100010

Facility Location: 5 Andrews Road, Lewiston, ME 04240

Mailing Address: 5 Andrews Road, Lewiston, ME 04240

Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

Inspection Attendees

Name	Title	Organization
Grace Perry	Environmental Engineer	EPA Region 1
Darren Fortescue	Manager, Air Compliance Section	EPA Region 1
Tim Smith	Compliance Inspector	Maine DEP
Jim Morrison	Director of Environmental Health & Safety	Bates College
Andi Lasselle	Environmental Health & Safety Coordinator	Bates College
Timothy Pratt	Director of Facility Services & Operations	Bates College
Alan Kelley	Mechanical Services Manager	Bates College
Karen Morrison	Environmental Consultant	Morrison Environmental Engineering

Facility/Process Description

Facility

Bates College (“Bates”) is a private college located at 5 Andrews Road, Lewiston, Maine. It was founded in 1855. Bates provides academic services and laboratory facilities, athletic fields and facilities, and dormitories to provide education, athletics, and housing to students.

Generators

For the purpose of this inspection, EPA focused on the generators located at the facility.

Bates owns and operates eight licensed stationary reciprocating internal combustion engines (“RICE”). See Attachment A for engine details. Three of the engines participate in a demand response program, and five of the engines are for emergency use only. Bates also owns and operates two additional RICE that are exempt from licensing due to their small size (Not inspected).

Number of Employees and Working Hours

Bates College employs roughly 2,000 employees. The facility primarily operates from 7:45 a.m. to 4:30 p.m. on business days, but the facility is open 24 hours per day, 7 days a week.

Potentially Applicable Clean Air Act Requirements

- 40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (“Subpart 4I”)

- 40 CFR Part 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engine (“Subpart 4J”)
- 40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (“Subpart 4Z”)
- Maine DEP Air Emissions License and Renewal A-373-71-O-R/M

Previous Enforcement Actions

A “Detailed Facility Report” from EPA’s Enforcement and Compliance History Online database indicates that there have been no informal or formal Clean Air Act enforcement actions taken against Bates College in the past five years.

Entry and Opening Conference

On July 31, 2024, at 10:05 a.m., EPA Region 1 representatives Grace Perry and Darren Fortescue, and Maine Department of Environmental Protection (Maine DEP) Representative Tim Smith arrived at the facility at Dana Hall, located at 5 Andrews Road, Lewiston, Maine. EPA and Maine DEP representatives entered the facility and met with Jim Morrison, Andi Lasselle, Karen Morrison, and Timothy Pratt. Mr. Fortescue presented his credentials, and the EPA Region 1 Representatives initiated an opening conference.

Ms. Perry asked Mr. Morrison for the physical and mailing address for the facility. Mr. Morrison said that the physical address is 5 Andrews Road, Lewiston, ME 04240. Mr. Morrison said that address is also the mailing address for the Environmental Health and Safety Department, but that the physical address for the Bates College Power plant is 147 Russel Street, Lewiston, ME 04240.

Ms. Perry asked how many stationary reciprocating internal combustion engines Bates College owns and operates. Mr. Morrison said that there are eight licensed generators at Bates College. Ms. Morrison added that there are two generators, one located in the security building and one located in the Russel Building, that are exempt from licensing because that have a maximum capacity below 45 kW. Ms. Morrison showed the EPA representatives the most recent copy of the Bates College Air Emissions License and Renewal, filed January 18, 2024. Ms. Morrison provided the license number A-373-71-O-R/M.

Alan Kelley, Bates College Mechanical Services Manager, entered the room and joined the opening conference.

Ms. Perry asked what the purpose of each engine was. Mr. Morrison said that of the eight licensed engines, Generators #2, #4, and #5 participate in a demand response program, and that Generators #1, #3, #6, #7 and #8 are emergency use only. Mr. Fortescue asked the facility representatives if they could provide a description of the demand response program. Mr.

Morrison said that the demand response program they participate in is with Independent System Operator (ISO) New England. ISO New England gives the facility a 30-minute warning when there is an event that requires reducing power loads in an emergency setting. Mr. Morrison said that in such an event the generators in the demand response program provide power to the facility and do not provide electricity back to the grid. Mr. Morrison said that there have been fewer than five demand response events over the last two years. Mr. Morrison said that ISO New England runs two tests annually to ensure proper function of the program. Mr. Morrison said that the demand response program that the facility participates in also includes demand reduction, which requires the facility to reduce electricity usage during peak periods for a financial incentive. Mr. Morrison said the facility is typically notified the day before they are expected to reduce demand, and that this type of curtailment occurs frequently, especially during periods of hot weather.

Mr. Fortescue asked if the facility has a contract with ISO New England, and if they have a broker. Mr. Morrison said that a company called C-Power is the broker between ISO New England and Bates College. The facility representatives provided the inspectors with copies of the contract with C-Power, "Maine Demand Management Program Addendum" and the Active Demand Capacity Reduction Program Standard Operating Procedure.

Ms. Perry asked what type of fuel the demand response generators utilize. Mr. Morrison said Generators #2, #4, and #5 are the only engines owned and operated by Bates that are EPA certified, and that they run on diesel fuel. Mr. Fortescue asked if the diesel fuel that is used by Bates is ultra-low sulfur, and Mr. Morrison said yes. The facility representatives provided the inspectors with a copy of a recent fuel invoice that states the sulfur content of the fuel.

Ms. Perry asked what the load of each generator was. Mr. Morrison and Ms. Morrison said they did not know because the load of each generator is tracked by the energy manager, and that they would provide the record to the EPA representatives following the inspection. Mrs. Morrison said that the Demand Response SOP says that the program expects to reduce the overall facility load by 500 kW.

Mr. Morrison said that none of the generators have had emissions or stack testing, that none of the generators have had significant modification or reconstruction, and that the facility had not submitted any initial or annual compliance reports to EPA.

Ms. Perry asked if the natural gas generators ever burn landfill gas. Mr. Morrison said that the natural gas generators do not burn landfill gas, and that the facility's natural gas is supplied by Unitil. Ms. Perry asked if the generators were equipped with non-resettable hour meters, and what the hours of operation were for each engine for the most recent calendar year. Mr. Morrison said that each generator was equipped with a non-resettable hour meter, and the facility representatives provided the inspectors with a monthly compiled hour log for each generator. Ms. Morrison said that all of the hours recorded on the log are for the purpose of preventative maintenance service unless stated otherwise.

Ms. Perry asked how much fuel the facility burned in each engine over the previous calendar year. Ms. Morrison said that the facility annual reports track percent load, and do not track the quantity of fuel burned. Mr. Fortescue asked if the facility's emission calculation is based on worst case scenario, and Ms. Morrison said yes.

Ms. Perry asked if any of the engines had Certificates of Conformity. Mr. Morrison said that Generators #4, #5, #7 and #8 had Certificates of Conformity. Generators #1, #2, and #3 were not required to have Certificates of Conformity based on their year of manufacture. Mr. Morrison said that Generators #6, #7 and #8 were certified by manufacturer for use with natural gas.

Facility representatives provided the EPA inspectors with copies of the Generator #4 Certificate of Conformity for a Perkins Engines Co. Ltd. Engine with EPA Engine Family Number 7PKLXL06.6PJ1, and copies of the Generator #5 Certificate of Conformity with EPA Engine Family Number HCEXL0661.AAH issued on November 21, 2016.

Ms. Perry asked if the facility follows the manufacture's requirements for their operations and maintenance plans. Mr. Morrison said that operations and maintenance is tracked by a facility preventative maintenance system. The generator contractor comes annually in May to perform maintenance and make replacements as needed to spark plugs, belts, coolants and oil filters. Mr. Morrison said that each generator has its oil filters are replaced annually.

Mr. Morrison said that Generators #4, #5, #6, #7, and #8 were located outside, so the facility personnel needed to retrieve the keys to the generator doors before the facility walk through could commence.

Facility Walk-Through

At 11:07 am, Mr. Morrison, Ms. Lasselle, Mr. Pratt, Mr. Kelley, and Ms. Morrison led Ms. Perry, Mr. Fortescue and Mr. Smith on a tour of the facility. During the tour Mr. Fortescue took photographs of each generator, available nameplate, and available emissions label. All photo documentation is included in the inspection file.

The group toured the facility to inspect the generators in the following order:

- Generator #4: Gillespie Hall
- Generator #8: Bonney Science Complex
- Generator #6: Carnegie Hall
- Generator #7: Kalperis Hall
- Generator #5: Dining Commons
- Generator #1: Cutten
- Generator #2: Mays
- Generator #3: Pettengill

Documented generator information can be found in Attachment 1. The EPA representatives did not inspect the two generators that are exempt from the Bates College Air Emissions License, located in the security building and the Russel building.

Closing Conference

The group returned to the original meeting place in Dana Hall at 1:02 p.m. Ms. Perry confirmed with facility representatives that post inspection they would provide the EPA representatives with copies of the generator operations and maintenance logs, and the Certificate of Conformity for Generator #6.

Mr. Fortescue told the facility that EPA inspectors do not make compliance determination in the field, however the only potential area of concern identified was that they were unable to review the Certificate of Conformity for Generator #6. Mr. Fortescue said that due to the voluntary nature of certification by manufacturer of natural gas fired stationary Spark Ignition Internal Combustion Engine under Subpart 4J, it is an important document for EPA representatives to examine in order to make an appropriate compliance determination.

Ms. Perry told the facility representatives that she would send them a draft of the inspection report within 70 days of the inspection, and the EPA representatives thanked everyone for their time. The EPA and Maine DEP representatives departed the facility at 1:10 p.m.

Post Inspection

Following the inspection, on August 6, 2024, Jim Morrison sent EPA representatives copies of the Preventative Maintenance Report for each generator via email.

Attachment A: Generator Information

Generator No.	#1	#2	#3	#4	#5	#6	#7	#8
Building Name	Cutten	Mays	Pettengill Hall	Gillespe	Dining Commons	Carnegie Hall	Kalparus Hall	Bonney Science Complex
Manufacturer	Caterpillar	Cummins	Kohler	Caterpillar	Cummins	Olympian/Caterpillar	Caterpillar	Cummins
Model #	3306	6BTS.9-G2	Not available	C6.6	QSM11-G4 NR3	G100F3 ¹	G250LG4 ¹	GTA38E
Serial #	2TM00161	44778545	Not available	E6M00551	Not available	OLY00000LNGD01152 ¹	GXJ03914 ¹	99800531
Manufacture Date	1995	8/11/1992	Not available	2007	6/19/2007	3/20/2008	11/12/2015	Feb. 2020
Installation Date	1995	1993	1999	Sept. 2007	Feb. 2008	2012	2015	2020
Capacity	335 bhp	166 hp	415 bhp	217 bhp	470 bhp	163 bhp	453 bhp	850 hp
Hour Meter (hrs)	769	414.9	957.6	594.9	no reading available	260.2	166.5	90.3
Fuel Type	Diesel	Diesel	Diesel	Diesel	Diesel	Natural Gas	Natural Gas	Natural Gas
Purpose	Emergency	Demand Response	Emergency	Demand Response	Demand Response	Emergency	Emergency	Emergency
Emergency Use	Y	N	Y	N	N	Y	Y	Y
Demand-Response	N	Y	N	Y	Y	N	N	N
Maintenance	Oil filter replaced 5/2023	Radiator, hoses, and ELC replaced 8/17 Belt replaced 8/12	ELC and alt. belts replaced 3/09 Oil filters replaced 05/24	Fuel oil filters replaced 5/14/2024	Oil filters replaced 05/24	Fuel oil filters replaced 5/14/2024		
EPA Engine Family Number	N/A	N/A	N/A	6PXL06.6PJ1	7CEXL0661AAH	not available	G6NXB14.22C1	LCEXB38.0AAA

Notes:

1. Model Number and Serial Number sourced from the Generator Set Label instead of from the engine emissions label.