

February 2, 2021

Mr. Bob Friddle
City of Minneapolis
350 S. 5th Street
Room 223
Minneapolis, MN 55415

RE: City of Minneapolis Hiawatha Maintenance Facility Air Permit Applicability Determination

Dear Mr. Friddle:

The Minnesota Pollution Control Agency (MPCA) received your applicability determination request on October 5, 2020 for your proposed project at your City of Minneapolis Hiawatha Maintenance Facility (facility) located at 1901 E 26th Street in Minneapolis, Minnesota.

In this request, you asked the MPCA to determine if an air permit is needed for the facility. The MPCA staff conducted a review of your analysis received October 5, 2020 and the potential to emit calculations received November 16, 2020 and January 20, 2021, with respect to Minn. R. 7007.0150 to determine whether a permit is required for the facility and the proposed expansion project.

Description of Current and Proposed Facility

The facility is located at 1901 E 26th Street in Minneapolis, Minnesota. The facility is currently a municipal maintenance building responsible for completing service vehicle and other city-related maintenance tasks, providing storage space for an inventory of supplies, storing bulk materials (salt, sand, gravel and soil) for road treatment and ground repair, and providing fuel for City of Minneapolis owned vehicles.

The facility currently consists of the Main Building, the Central Stores Building, Bulk Material Storage, and the Fuel Island.

Emission sources from the Main Building include:

- Four natural gas-fired boilers with a heat input capacity of 2 million British thermal units per hour (MMBtu/hr) each
- Routine maintenance of equipment
- Touch-up spray painting
- An electric oven within a laboratory
- Seven above ground storage tanks and a degreaser (one 120 gallon coolant tank; four 120 gallon used oil tanks; one 500 gallon oil tank; and one 30 gallon degreaser tank)
- Welding operations
- A woodshop with various saws and sanding operations vented to a dust collection system vented inside the building
- Three natural gas-fired heaters (one with a heat input capacity of 0.44 MMBtu/hr and two each with a heat input capacity of 0.38 MMBtu/hr)
- Unvented grinding, cutting, and sanding operations
- A cure-in-place process (CIPP) used to deposit a liquid resin into a lining that is installed in sewer pipes

Emission sources from the Central Stores Building include:

- One natural gas-fired boiler with a heat input capacity of 2.52 MMBtu/hr
- One natural gas-fired hot water heater with a heat input capacity of 0.156 MMBtu/hr

Emission sources from the Bulk Material Storage include:

- The transfer of the bulk materials (salt, sand, soil, and gravel)
- Sandblasting to remove material (concrete or tar) from trailers and other equipment (*refer to additional discussion below)
- One natural gas-fired heater with a heat input capacity of 0.03 MMBtu/hr
- One 7,500 gallon electric-heated liquid asphalt storage tank

Emission sources from the Fuel Island include:

- Three underground storage tanks (one 15,000 gallon gasoline (E-10) tank; one 15,000 gallon biodiesel tank, and one 10,000 gallon gasoline (E-85) tank)
- Tank storage, filling, and loadout

The City of Minneapolis has proposed an expansion to the facility. The proposed expansion will add emission sources from two existing City of Minneapolis facilities: (1) the East Side Yard Water Facility (East Side Wateryard) operations; and, (2) the Water Distribution Maintenance functions from Minneapolis Water Works – Fridley.

Operations at the East Side Wateryard include maintaining Minneapolis' 1,000 miles of water mains, 16,000 valves and street manholes, and 8,000 hydrants. The East Side Wateryard staff perform valve operations, greasing and packing of hydrants, street manhole repairs, water main repairs, and leak detection. The East Side Wateryard is primarily used for hydrant maintenance activities but also has a small office space and equipment storage warehouse. Emission sources include one natural gas-fired boiler with a heat input capacity of 2.5 MMBtu/hr and two underground storage tanks (one 2,000 gallon gasoline storage tank and one 2,000 gallon diesel storage tank).

Only the water distribution maintenance functions from the Minneapolis Water Works – Fridley location are proposed to move to the facility. This department repairs water meters for Minneapolis and consists of water meter maintenance equipment, a water meter parts warehouse, and water meter testing equipment. Emission sources include one abrasive blasting station that is vented to the atmosphere.

Determination

Based on the information provided in the applicability determination request materials dated October 5, 2020 and the calculations received November 16, 2020 and January 20, 2021, the MPCA has determined that the facility is not required to obtain an air quality permit.

The potential to emit (PTE) from the facility is less than both the federal and state emission thresholds in Minn. R. 7007.0200, subp. 2 and Minn. R. 7007.0250, subp. 4, respectively, that trigger the need for an air quality permit. Refer to Table 1 below for more information. Additionally, the facility does not meet any of the other criteria in Minn. R. 7007.0250 which would require the facility to obtain an air quality permit.

Table 1. Total Facility PTE Thresholds (tons/year)

	NOx	SO ₂	VOC	PM	PM ₁₀	PM _{2.5}	CO	Pb	CO _{2e}	Single HAP	Total HAP
Federal	100	100	100	100	100	100	100	N/A	100,000	10	25
State	N/A	50	100	N/A	25	N/A	N/A	0.5	N/A	N/A	N/A
Hiawatha Post-Project	6.19	0.04	6.12	5.01	2.69	0.75	5.65	0	7,373	0.20	0.35

PM = Particulate Matter

PM_{2.5} = PM, 2.5 microns and smaller

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

PM₁₀ = PM, 10 microns and smaller

SO₂ = Sulfur Dioxide

VOCs = Volatile Organic Compounds

CO_{2e} = Carbon Dioxide Equivalents as defined in Minn. R. 7007.0100

HAP = Hazardous Air Pollutant

Several activities qualify as insignificant based on descriptions in the October 5, 2020 submittal. Under Minn. R. 7007.0150, subp. 4(A)(2) and Minn. R. 7007.0500, subp. 2(C)(2), evaluation of the PTE for activities that qualify under Minn. R. 7007.1300, subp. 3 is required if accounting for these emissions units affects the applicability of permitting rules. Laboratory activities at the facility qualify under Minn. R. 7007.1300, subp. 3(D) and welding for maintenance purposed qualifies under Minn. R. 7007.1300, subp. 3(E). Based on information provided and since the overall PTE of the facility (see Table 1) is well below permitting thresholds, emissions from these activities do not appear to affect applicability of Minnesota permitting rules and do not need to be quantified for this determination.

Although the emissions from these activities do not need to be quantified, the emissions from the welding operations are included in the values in Table 1. The reason for this is to address community concern because it was brought to the MPCA's attention that the community has concerns about the possible emissions from welding operations. To address these concerns, we decided to include the welding emissions to assure that the facility is still well below permitting thresholds, even with these emissions included.

For operating permits, as described under Minn. R. 7007.0150, subp. 4(A)(1), emissions from activities that qualify as insignificant under Minn. R. 7007.1300, subp. 2 are not considered in the calculation of potential emissions as part of determining applicability of Minnesota permitting rules. At the facility, painting with rollers, wood repair equipment, and sandblasting to remove concrete buildup from tools, trailers, scaffolding, and other equipment qualify under Minn. R. 7007.1300, subp. 2(B)(1) because these activities are conducted as part of routine housekeeping and plant-upkeep not associated with the primary production processes of the facility. Painting with spray cans for routine housekeeping purposes qualifies under Minn. R. 7007.1300, subp. 2(B)(7). Sawing, sanding, and grinding activities, which are vented inside and do not have emissions controls qualify under Minn. R. 7007.1300, subp. 2(D)(5). Tanks storing lubricating oil qualify under Minn. R. 7007.1300, subp. 2(E)(2).

A note regarding sandblasting calculations: According to the Permittee, there is no known maximum throughput for the nozzle. Additionally, there are several different models of sandblaster being used and throughput volume depends on the application, the user, and the model itself. A more formal and descriptive write up is attached to the applicability determination letter. Given this information, the hypothetical worst-case would be the sand blasting activities causing the total facility PTE to cross an emissions threshold and therefore require an air permit. The lowest total facility PTE threshold is 25 tpy of PM10 for a state permit. The total facility PTE for PM10 excluding sandblasting is 2.17 tpy. The amount of PM10 emissions from sandblasting that would cause the total facility PTE to cross this

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threshold is 22.83 tpy PM10 (25 tpy threshold - 2.17 tpy from other activities). This 22.83 tpy PM10 converts to a total usage of 1,756 ton abrasive throughput/year. Given the current operation of sandblasting activities and average annual usage of 10 ton abrasive throughput/year, it is highly unlikely that the Permittee would violate the 1,756 ton abrasive throughput/year.

Under Minn. R. 7007.0150, subp. 2, part 70 and state permits may alternatively be obtained in the form of a general, registration, or capped permit if the stationary source qualifies under those parts. In the case of the facility, it is not required to obtain a part 70 or state permit, and therefore does not need to determine their qualification for a general, registration, or capped permit either.

This determination is based on the assumption that the information provided in the October 5, 2020, November 16, 2020 and January 21, 2021 submittals accurately reflects the facility operations, and that the PTE calculations are correct. Although the facility is not required to obtain an air permit at this time, you continue to be responsible for complying with applicable requirements under Minnesota and Federal rules.

If you have any questions, please feel free to contact Elizabeth Lennartson at elizabeth.lennartson@state.mn.us or 651-757-2243.

Sincerely,

Jared LaFave

This document has been electronically signed.

Jared LaFave, P.E.
Supervisor, Air Quality Permits Unit 4
Air Quality Permits Section
Industrial Division

JL/EL:lao

Attachment 1: Description of Sandblasting Operations