



- GEOTECHNICAL
- CONSTRUCTION MATERIALS
- ENVIRONMENTAL
- BUILDING TECHNOLOGY
- PETROGRAPHY/CHEMISTRY

January 20, 2021

Ms. Elizabeth Lennartson
Industrial Division, Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155

Delivered via email: Elizabeth.lennartson@state.mn.us

RE: Description of Sand Blasting and Welding Operations
Air Permit Applicability Review
City of Minneapolis Hiawatha Maintenance Facility
1901 E 26th St., Minneapolis, MN 55404

Dear Ms. Lennartson:

On behalf of the City of Minneapolis, please review the following information as requested by you to complete the Air Permit Applicability review.

- Sand Blasting Operation: As requested by you via email on January 19, 2021, attached is a formal statement describing the sand blasting operation. A picture of the concrete bunker where the blasting operation takes place and where the emissions are confined is also attached. We understand no further edits to the calculations are needed.
- Welding Operation: Although not required because the welding operation is an insignificant source of air emissions, as requested, attached is a potential to emit calculation spreadsheet which demonstrates the welding operations are an insignificant source of emissions.

Please contact me know if you need additional information or have any questions.

Sincerely

American Engineering Testing, Inc.

A handwritten signature in black ink that reads 'Gail Anne Cederberg'.

Gail A. Cederberg, PhD
Vice President, Environmental Services
651-324-2140, gcederberg@amengtest.com

Attachments:

Description of Sand Blasting Operations
PTE for Welding Operations (open Xcel file included with email)

cc: Robert Friddle, City of Minneapolis
Mike Colestock, City of Minneapolis

Description of Sand Blasting Operation- Hiawatha Maintenance Facility

Sand blasting at the Hiawatha Maintenance Facility is conducted as follows:

Location:

Sand blasting operations are conducted inside a confined, concrete “bunker” which is located on the facility property. The sand blasting bunker consists of a four-sided and roofed structure, approximately 17 ft deep, 14 ft wide, and 20 ft high. Three walls are constructed of concrete, the roof is tin, and the door is a canvas tarp that is closed and rolls down when blasting is conducted (see the attached pictures).

Description of Process:

Items typically sand blasted include concrete forms, expansions joints for bridges, tar wagons, and other similar items. When a part or piece of equipment needs to be cleaned, first, any large amount of material such as dirt or tar is scraped off. This process is only used to clean equipment, as necessary, in the Hiawatha Maintenance Facility, one or two pieces at a time.

Equipment used for sandblasting (e.g., material, hopper and hoses) are stored inside another building between uses. The part/equipment to be cleaned is placed in the bunker. The hopper, hoses and other equipment such as the compressor and generator are brought out of storage and moved to the bunker and connected together. Because the door is closed and it is confined when blasting occurs, lights are also brought out to the bunker and set up. The operator is suited in PPE and connected to supplied air. Operators are certified and fit tested per OSHA requirements. Following the blasting operation, the equipment is taken apart, cleaned, grit removed, and moved back into storage to be ready for the next use. The lights and generator are also moved back into storage. The used blasting material is collected and disposed of according to solid waste requirements.

Limitations:

Operations generally run between late fall and early spring so parts and equipment are ready to be used beginning in April of each year. The certified operators are only scheduled to work during Monday-Friday for an 8-hour shift. Set up and breakdown of the sand blasting equipment and operations as described above typically takes 3½ - 4 hours each day the equipment is used and blasting is conducted. The sand blasting operation is very weather dependent; the equipment cannot be used when it is raining, snowing or there is high humidity because the hopper, hoses and nozzle will become clogged and the abrasive material will be made unusable and ruined.

Summary:

Sand blasting operations are conducted in an enclosed bunker; thereby, confining emissions to the inside of the bunker. In 2020, 20,000 lbs. of abrasive material was used which is typical; this is approximately 200 cubic ft. of material (average density of 100 lbs./cu ft).

Sand Blasting Bunker
Hiawatha Maintenance Facility
City of Minneapolis

