STATE OF MICHIGAN
GRETCHEN WHITMER, Governor

EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY
LIESL EICHLER CLARK, **Director**

AIR QUALITY DIVISION
CONSTITUTION HALL, PO BOX 30260, LANSING MI 48909-7760
INTERNET: http://www.michigan.gov/air

GENERAL PERMIT TO INSTALL FOR ANHYDROUS AMMONIA STORAGE AND HANDLING

BACKGROUND

On February 23, 1998, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), issued a general permit to install for anhydrous ammonia storage and handling. This general permit, issued pursuant to R 336.1201a promulgated pursuant to Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Rule 201a), provides a streamlined permitting alternative for affected facilities which meet the specified applicability criteria and allows facilities more operational flexibility. Prior to approval, EGLE held a 30-day public comment period to receive comments on the proposed general permit. A public hearing was not requested and no written comments were received during the comment period.

EMISSIONS

Anhydrous ammonia has a variety of industrial uses including metallurgical processes, wastewater treatment and flue gas conditioning at electric power plants. In addition, numerous bulk storage tanks currently exist for agricultural applications and fertilizer sales.

Emissions from anhydrous ammonia storage and handling processes are released to the atmosphere from line disconnects after transfer of ammonia from rail tank car to storage or from storage to trucks. Each rail tank car or truck has two or three lines to disconnect containing ammonia vapor. These line disconnects will result in emissions of about three grams of ammonia per line. Fugitive emissions from pressure relief valves, flanges, and compressor seals are estimated to be less than five pounds per day using emission factors from the Synthetic Organic Chemicals Manufacturing Industry (SOCMI). However, these fugitive emissions are very difficult to quantify and limit. The estimated emissions are based on normal operations and the special conditions of the general permit are designed to minimize all possible spills. No pollutants other than ammonia are expected to be emitted from these processes.

AMBIENT AIR IMPACTS

Operation of an anhydrous ammonia storage process under the terms and conditions of the general permit will impact the ambient air as summarized in the following table. This impact was calculated using a combined emission rate from fugitive emissions and the hose disconnects, and a worst case dilution factor.

Pollutant	Averaging Time	Acceptable Impact	Basis	Predicted Maximum Impact
Anhydrous Ammonia	24 hours	100 µg/m^3	Rule 225 - ITSL	0.04 µg/m^3 (trace)

µg/m^3 = micrograms per cubic meter

ITSL = Initial Threshold Screening Level as defined in R 336.1109(e)

REVISIONS

The AQD may revise or update a general permit to install for various reasons, including administrative changes (i.e., addresses, contacts, formatting), clarifying instructions or permit language, or correcting an underlying applicable requirement. These types of minor changes are made without a comment period because they do not affect the applicability criteria or the special conditions of the general permit.

The general permit for anhydrous ammonia storage and handling has been revised and/or updated as follows:

- October 28, 1999 - made minor corrections and identified additional state requirements that are addressed in the General Conditions.
- March 20, 2000 - addressed applicability for a source, process or process equipment that may be identified in a consent order or consent judgment.
- September 29, 2000 - revised General Information form (EQP5727) and General Condition language.
- January 2002 – updated General Conditions and made minor administrative changes.
- January 28, 2003 – removed requirement for local zoning permits and revised Process Information form (EQP5731).
- March 3, 2005 – changed format of Special Conditions, clarified instructions for modifications, and incorporated revised General Information form (EQP5727).
- December 2010 – updated General Information and Process Information forms (EQP5727 and EQP5731).
- June 2017 – made minor administrative changes to Background document.

If a change or revision will affect the applicability criteria or special conditions of the general permit, EGLE will hold a public comment period to receive comments on the proposed changes. If the applicability criteria or special conditions become less stringent as a result of the change (e.g., a setback requirement relaxed from 1000 feet to 500 feet; a reporting requirement reduced from daily to monthly), sources operating under an existing general permit will be notified of the change and allowed to operate under the revised criteria, which can be downloaded from the internet. A source operating under an existing general permit to install will not be required to meet the new requirements if the applicability criteria or special conditions become more stringent as a result of the change.

The most recent version of the general permit is available on the AQD General Permits to Install web site. All changes to the general permit are summarized in the Background document.