



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

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**Savage Services Corporation  
Androscoggin County  
Auburn, Maine  
A-702-71-H-A**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

**FINDINGS OF FACT**

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

**I. REGISTRATION**

**A. Introduction**

Savage Services Corporation (Savage) was issued Air Emission License A-702-71-G-R/A on March 7, 2013 permitting the operation of emission sources associated with their bulk material handling facility.

Savage has requested an amendment to their license in order to address the following changes:

1. Add a process which involves transloading hydrochloric acid (HCl) from rail cars to trucks.
2. Remove the Soda Ash Transfer process from their license and replace it with a similar process for transferring cement.

The equipment addressed in this license is located at 123 Rodman Road, Auburn, Maine.

**B. Insignificant Activities**

Savage has several processes that are considered insignificant activities that they would like noted in their license for completeness purposes. These processes include the following:

**1. MMA Transfer**

Savage transfers Methyl Methacrylate (MMA), which is both a VOC and HAP, from railcar to tank trailer using a closed loop vapor balancing transfer

system. The vapors move from one vehicle to the other as the product is transferred. There are no open vents or emissions to atmosphere. Therefore, this process is considered an insignificant activity per 06-096 CMR 115, Appendix B, Section B.1.

2. Sulfuric Acid Transfer

Savage transfers sulfuric acid from railcars to tank trailer using a portable gantry without a scrubber system. Sulfuric Acid is not a VOC nor a HAP. Therefore, this process is an insignificant activity per 06-096 CMR 115, Appendix B, Section B.1.

3. Sodium Hypochlorite Transfer and Mixing

Savage receives 17% sodium hypochlorite by railcar which is loaded into trailers and diluted down to 12.5%. Sodium Hypochlorite is not a VOC nor a HAP. Therefore, this process is an insignificant activity per 06-096 CMR 115, Appendix B, Section B.1.

4. Mineral Oil Storage Tank

Savage uses/dispenses approximately 2,000 gallons per month of mineral oil from a 12,000 gallon storage tank. Mineral oil has a vapor pressure less than 80 mm HG at 21°C. Therefore, this process is an insignificant activity per 06-096 CMR 115, Appendix B, Section B.7.

C. 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 regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions.

This modification will not result in the change of any licensed emissions with the exception of adding a limit of 0.1 ton per year (tpy) of HCl. Therefore, this amendment is determined to be a minor modification and has been processed as such.

## 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 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Transloading of Hydrochloric Acid

Savage has proposed the addition of a process to transload solutions of Hydrochloric Acid (HCl) from railcars to tank trailers. HCl is not considered a volatile organic compound (VOC) but is considered a hazardous air pollutant (HAP) and is therefore a regulated pollutant.

Railcars arrive with 35% HCl which is pumped into tank trailers using a portable gantry. The displaced air in the tank trailer runs through a vapor scrubbing system which sprays the vapor with water to capture any HCl mist. The scrubber is rated at greater than 99% control efficiency and has estimated post-control emissions of 0.0001 lb/hr of HCl.

The pH of the scrubber water is checked at least once per day. When the pH of the scrubber water drops to below 1.0, the water is pumped into an HCl railcar and returned to the customer.

1. BACT Findings

The BACT emission limits for the HCl scrubber system were based on data provided by the scrubber manufacturer. The BACT emission limit for emissions of HCl from the scrubber is determined to be 0.0001 lb/hr.

Visible emissions from the HCl scrubber shall not exceed 10% opacity on a 6 minute block average.

2. Periodic Monitoring

Periodic monitoring for the HCl scrubber shall include recordkeeping to document the dates of transloading of HCl and the number of railcars transferred, the pH of the scrubber water at least once per day for each day transloading takes place, and the dates the scrubber water was replaced.

C. Soda Ash and Cement Transfer Processes

Savage is currently licensed to transfer soda ash from rail cars to tank trailers using an enclosed conveyor and telescoping chute. Savage no longer wishes to

continue this operation and has asked that this process be removed from the license.

However, Savage would like to add another very similar process that involves transloading dry cement from railcars to tank trailers using the same equipment. The cement drops from the bottom of the rail car through a funnel onto a conveyor. The enclosed conveyor brings the cement up to the top of the tank trailer where it drops down a chute into the trailer.

Similar to the soda ash transfer process, Savage expects to transfer less than 10 railcars per month. Due to the low number of loads transferred and the minimal amount of fugitive dust created, installation of a baghouse for this process is not economically justifiable. However, this determination may be revisited should the scope of the process change.

To meet the requirements of BACT for control of particulate matter (PM), Savage shall use an enclosed conveyor and telescoping chute whenever cement is transferred as described above. All components of the cement transfer equipment shall be maintained so as to prevent PM leaks. Visible emissions from cement transfer operations shall not exceed 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. A log documenting the number of loads of cement transferred per month shall be kept.

**D. Annual Emissions**

**1. Total Annual Emissions**

Savage shall be restricted to the following annual emissions, based on a 12 month rolling total. The tons per year limits were calculated based on the following:

- Each boiler operating for 8760 hours per year;
- Operation of the HCl scrubber for 8760 hours per year; and
- The assumption that PM emissions from the remaining process equipment is unquantifiable.

**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>	<b>HCl</b>
Boiler #1	0.4	0.4	–	0.8	0.7	0.1	–
Boiler #2	1.4	1.4	0.1	2.7	2.2	0.2	–
Boiler #3	0.3	0.3	–	0.5	0.4	0.1	–
Boiler #4	1.8	1.8	0.1	3.6	3.0	0.2	–
HCl Scrubber	–	–	–	–	–	–	0.1
<b>Total TPY</b>	<b>3.9</b>	<b>3.9</b>	<b>0.2</b>	<b>7.6</b>	<b>6.3</b>	<b>0.6</b>	<b>0.1</b>

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 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 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).

Based on the facility’s fuel use limit, the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Savage is below the major source threshold of 100,000 tons of CO<sub>2</sub>e per year. Therefore, no additional licensing requirements are needed to address GHG emissions 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 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total 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 facility licensed emissions 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-702-71-H-A subject to the conditions found in Air Emission License A-702-71-G-R/M and in 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.

**Conditions (17)(E), (F), and (G) of air emission license A-702-71-G-R/M are deleted.**

**The following are New Conditions:**

**(21) HCl Transloading Process**

- A. Savage shall operate the HCl scrubber during all HCl transloading.  
[06-096 CMR 115, BACT]
- B. The scrubber water shall be replaced if the pH drops below 1.0.  
[06-096 CMR 115, BACT]

- C. Visible emissions from the HCl scrubber shall not exceed 10% opacity on a 6 minute block average. [06-096 CMR 115, BACT]
- D. Savage shall maintain records of the following for the HCl Transloading Process [06-096 CMR 115, BACT]:
  - 1. The dates transloading of HCl took place and the number and volume of the railcars transferred.
  - 2. The pH of the scrubber water recorded at least once per day on the days HCl transloading takes place.
  - 3. The dates the scrubber water was replaced.

(22) **Cement Transfer Process**

- A. Savage shall use an enclosed conveyor and telescoping chute whenever a load of cement is transferred. All components of the cement transfer equipment shall be maintained so as to prevent PM leaks. [06-096 CMR 115, BACT]
- B. Visible emissions from cement transfer operations shall not exceed 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]
- C. A log documenting the number of loads of cement transferred per month shall be kept. [06-096 CMR 115, BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 1 DAY OF April, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Patricia W. Aho  
PATRICIA W. AHO, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-702-71-G-R/M.**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/11/14

Date of application acceptance: 3/11/14

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Poland, Bureau of Air Quality.

