



June 15, 2016

Mr. Michael Wood
Town Manager
Town of Burrillville
100 Main Street
Harrisville, RI 02830

Re: Clear River Energy Center Ammonia Storage Review

Dear Mr. Wood:

At your request, CDR Maguire and Sovereign Consulting Inc. (Sovereign) has provided a review of the issues related to storage of ammonia at the proposed Clear River Energy Facility.

SUMMARY

The EFSB application states that the facility will include storage for approximately 40,000 gallons of aqueous ammonia at concentrations below 20%. The ammonia will be used in the plant emission controls.

3.2.6 40 CFR 68 - Chemical Accident Prevention Provisions

40 CFR 68 sets forth the list of regulated substances and thresholds, and the requirements for owners and operators of stationary sources concerning the prevention of accidental releases. It applies to a stationary source that has more than a threshold quantity of a regulated substance.

The only regulated substance which will be stored at the Facility is ammonia. The threshold quantity for ammonia listed on Table 1 of 40 CFR 68 is 10,000 pounds at a concentration of 20% or greater. The ammonia to be stored at the Facility will be at a 19% concentration. Therefore, 40 CFR 68 and its associated requirements do not apply to the Facility because it will not store a regulated substance at more than its threshold quantity.

The General Duty Clause

Under the Clean Air Act Section 112(r)(1), the General Duty Clause states: "The owners and operators of stationary sources producing, processing, handling or storing such substances [i.e., a chemical in 40 CFR part 68 or any other extremely hazardous substance] have a general duty [in the same manner and to the same extent as the general duty clause in the Occupational Safety and Health Act (OSHA)] to identify hazards which may result from (such) releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur."

In the Clean Air Act Amendments of 1990, Congress enacted Section 112(r)(1), also known as the General Duty Clause (GDC), which makes the owners and operators of facilities that have regulated and other extremely hazardous substances responsible for ensuring that their chemicals are managed safely. Facilities have been required to comply with GDC since November 1990.

The General Duty Clause applies to **any** stationary source producing, processing, handling, or storing regulated substances or other extremely hazardous substances. "Other extremely hazardous substances" are any chemicals listed in 40 CFR part 68, or any other chemicals, which may be considered extremely hazardous. Facilities subject to the General Duty Clause are, among other things, responsible for the following:

- Knowing the hazards posed by the chemicals and assessing the impacts of possible releases,
- Designing and maintaining a safe facility to prevent accidental releases, and
- Minimizing the consequences of accidental releases that do occur.

SUMMARY OF RECOMMENDATIONS

Since the cutoff for ammonia under 40 CFR 68 is 20%, it would be advisable for the CREC project team to evaluate the potential risk of a chemical accident under the Risk Management Plan requirements. At a minimum, the provisions for the prevention of chemical accidents should be addressed under the provisions of the General Duty Clause. Please be advised that even though the CREC facility is slightly below the RMP requirements, the use of regulated substances or any other extremely hazardous substance in any amount is subject to the General Duty Clause under EPA.

The CREC facility should consider conducting an impact zone analysis for the proposed storage of 40,000 gallons of 19% aqueous ammonia.

The CREC facility should consider a less hazardous chemical than 19% aqueous ammonia for use in the proposed plant emission control system.

The Pascoag Fire Department should be consulted concerning the equipment and training to respond to chemical accidents at CREC.

The Burrillville Hazard Mitigation Plan 2015 should be updated to include the CREC prior to the storage of ammonia on site.

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Page 3 of 3

We appreciate the opportunity to assist the Town of Burrillville with these issues. If you have questions please contact me at your convenience

Very truly yours,

CDR MAGUIRE INC.

A handwritten signature in blue ink, appearing to read "James A. Jackson". The signature is fluid and cursive, with a prominent initial "J" and a long, sweeping tail.

James A Jackson, P.E.
Project Manager