



The Fertilizer Institute

Nourish, Replenish, Grow

EPA Rulemaking Entitled “Effluent Limitation Guidelines and Standards for Airport Deicing Operations”

RIN: 2040-AE69

Meeting with the Office of Management and Budget

July 29, 2011

I. TFI Interest

- TFI represents the fertilizer industry. Its membership includes urea producers. According to EPA, urea is the second most prominent deicer, by weight, at 12 percent.
- On February 24, 2010, TFI submitted comments on the proposed rule raising legal and technical concerns.
- Notably, and likely in response to TFI’s comments, an EPA contractor prepared a comparison of ecological effects of urea to other pavement deicer chemicals (Memorandum from Kristi Bubb, ERG, to Bill Swietlik, EPA (Feb. 17, 2011)). Unfortunately, EPA is finalizing the rule without providing the public with the opportunity to comment on this critical document. The ability to review and comment on EPA toxicological assessments relevant to this rulemaking is critical and necessary to comport with administrative law requirements if the proposed final rule, like the proposed rule, bans urea as a deicer.

II. TFI Issues with the Deicing Rule

- A. Of All the Deicers Examined by EPA in the Proposed Rule – acetate salts, formate salts, propylene glycol, ethylene glycol and urea – Only Urea has a Final OECD Screening Information Data Set, and is Also Approved by EPA in the High Production Volume Data Challenge.**
- The SIDS dossier states that urea is of low concern for both human-health and ecological endpoints.
 - The overall toxicity measures used by EPA and other international regulatory bodies would rate urea as lower toxicity than many of the chemicals not proposed to be effectively prohibited as a deicer based on the proposal’s “Best Available Technology Economically Achievable” (BAT).
 - The only toxicity data provided by EPA show that urea is equally, if not less, toxic than ethylene glycol, potassium acetate, calcium magnesium acetate, or sodium formate.
 - EPA cannot identify, and indeed solicits additional information on, the identity of deicer ingredients and the quantities in which they are used in

current formulations, as well requests information about potential environmental impacts associated with ingredients in deicer formulations. It is critical that EPA reopen the rulemaking to comment on these data.

- In February 2011, EPA placed in the docket a contractor report purporting to support the conclusion that “urea pavement deicers are worse than the alternatives EPA will allow to be used under the final regulation.” This report was not provided to the public for review and comment and is in response to TFI’s concerns with EPA’s failure to evaluate toxicities with other deicers.

B. EPA Improperly Focuses on Ammonia Toxicity as a Proxy for Urea Toxicity.

- Urea is highly soluble in water, and biodegrades fairly rapidly to ammonia and bicarbonate. Most of the ammonia will be in the form of ammonium, from which nitrogen is oxidized as the result of bacterial action, forming nitrite and finally nitrate, typically within 24 hours.
- No justification is provided for selecting ammonia over nitrate/nitrite or Total Kjeldahl Nitrogen as the appropriate pollutant monitoring parameter for urea.
- As a result, EPA assumptions regarding the fate and transport of urea, such as 100% runoff into surface waters and ammonia-only dissolution of urea, further bias the selection of BAT.
- Further, even assuming ammonia is a proper pollutant monitoring parameter for urea, EPA’s Technical Development Document shows relatively low concentrations of ammonia levels (ND – 0.79 mg/l with one outlier of 59.6 mg/l).

C. EPA’s Selected BAT Gives Preference to Ammonia from Anaerobic Fluidized Bed (AFB) Treatment and is Unnecessarily Rigid and Based.

- EPA selected AFB as the BAT for reduction of chemical oxygen demand (COD) and selected ammonia as a by-product of an AFB wastewater treatment system.
- This biased standard requires that AFB BAT for airplane deicing fluid needs only meet a COD limit while discharging ammonia, while the pavement deicing BAT must either eliminate urea as an ammonia source or meet an ammonia discharge limit that is, by EPA’s own admission, prohibitive and burdensome.
- Relative to urea use, the BAT would require certification that the airport does not use urea-based deicers or, in the alternative, require airports to install treatment systems to eliminate urea-based ammonia discharges and verify the effectiveness of the treatment through outfall monitoring.
- This amounts to an effective prohibition on urea use without adequate scientific justification, even though airports operating under the federal and state Stormwater Discharges Associated with Industrial Activities (the MSGP)

are already required to evaluate whether the particular airport can cost-effectively use an alternative deicer to urea.

D. EPA Fails to Recognize the Dangers to Aircraft from Using Deicers Other Than Urea.

- Potassium acetate is the most common liquid deicing agent used in North America.
- According to a July –August 2010 article at <http://www.airportimprovement.com> entitled “Bio-Based Deicers Avoid Corrosion Linked to Potassium Acetate & Formate,” potassium formate and potassium acetate deicers have recently been linked to a number of significant safety issues: (1) carbon brake oxidation; (2) cadmium corrosion; and (3) damage to runway lights, ground support equipment and runway pavement.
- Annual airline costs due to this corrosion is estimated to cost \$5 million to \$75 million per year.
- Before EPA embarks on a rule prohibiting urea as a deicer, it must also evaluate, in coordination with the Federal Aviation Administration, these serious safety issues.

III. TFI Request

- OMB should require that EPA evaluate, in coordination with FAA, the safety issues associated with its ban of urea as a deicer, and repropose the rule to allow meaningful comment on its February 17, 2011 memorandum inappropriately placed in the docket as well as any other documents added to the docket and bearing on the toxicity of the various deicers in response to TFI’s comments that are central to EPA’s treatment of urea as a deicer.

