ATTACHMENT #3

Juneau International Airport

1873 Shell Simmons Drive, Suite 200 • Juneau, Alaska 99801 • (907) 789-7821 • FAX: (907) 789-1227

April 2, 2012

The Honorable Cass R. Sunstein
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
1650 Pennsylvania Avenue, NW
Washington, DC 20503

The Honorable Lisa P. Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC, 20460

RE: Opposition to EPA's proposed ban on the chemical urea as an airfield pavement deicer (Docket ID # EPA-HQ-OW-2004-0038)

Dear Administrators Sunstein and Jackson:

Juneau International Airport (JNU) opposes the U.S. Environmental Protection Agency (EPA's) proposed ban on the use of urea as an airfield pavement deicer and requests a reconsideration of the proposal to ban urea, a waiver and/or a compliance alternative.

While many airports in the Lower 48 states may not use urea extensively, a ban of this chemical will dispropotionately and adversely affect JNU and other airports in Alaska. Further, at JNU, the ammonia discharge from urea is only very slightly behind monitoring benchmarks but can and will be improved.

Juneau is the only state capital city in the United States without road connections and can only be reached by air and water. Accordingly, aviation and aviation safety are of paramount importance to Juneau. Alaska has long been able to successfully balance growth and safety with environmental protection. Alaska has cleaner air and water than anywhere in the world, yet it is also the place where cold weather aviation techniques were developed and became Federal Aviation Administratin (FAA) and industry standards. In particular, JNU has more than 150 years of hands-on airfield maintenance experience with snow and ice control, as well as general airfield maintenance and wildlife issues. This crew is considered not only experienced, but referred to as experts in snow and ice control and assessment. JNU personnel assisted the FAA in quantifying and validating a prototype for runway condition reports and braking action. FAA is in its final assessment of the prototype and hopes to adapt the system as the international standard within the next few years.[i]

In July 2009, JNU's comments were incorporated in a submittal by Alaska Airlines to the docket EPA-HQ-OW-2004-0038. In this letter, JNU would like to expand on those arguments.

JNU began using urea in the early 1980's (dry prill form), then mixed as hot liquid urea by the mid 1980's. The Airfield crew determines urea use (whether liquid or dry prill form) according to several environmental factors: ambient temperature, ground temperature, frost depth, current precipitation and weather forecast. Deicing is a science in and of itself, but a science that must be

balanced with cost and application. Urea is shipped as a dry prill (or pelletized) form, so JNU has the option of using it in the dry prill form, or diluting into a liquid state based on the weather conditions. EPA's Notice of Proposed Rulemaking identified potassium acetate (E36) as a widely used subsitute product for urea.[ii] E36 is distributed/shipped in liquid form only, and therefore much more expensive to barge by ship to Alaska. However, cost is not the only factor in JNU's aversion to E36.

JNU has the following concerns about substituing E36 for urea in airfield pavement deicing:

COST: Cost estimates will vary by year due to the fluctuating price of urea, the price of E36, transportation and delivery costs, and the weather influencing the amount used. In 2009, JNU spent $3,000 per application of urea and estimates a cost of $30,000 per application for E36, which is a 10 to 1 increase. In 2012, JNU spent **$135,000** on urea for airfield deicing for the year 2012. Using a similar application rate, JNU would have spent **$877,500** on E36. This means the cost ratio for E36 versus urea is 6.5 to 1 at current prices. This would be an approximate 15% increase to JNU's total budget. JNU cannot accept this increased cost burden when there are less expensive alternatives that work at JNU.

This past winter, JNU used an estimated 130,000 gallons of liquid urea; that is, urea that JNU mixed with water from its delivered dry prill state. JNU also used a nominal amount in its original dry prill form during extreme cold temperatures. At JNU, the urea is mixed in 8,000 gallon batches. An average 8,000 gallon batch requires 11 tons of pelletized (dry prill) urea. Based on the 130,000 gallons used, this equates to 178.75 tons of urea used this year; rounded to 180 tons that will be ordered (including urea used in its original dry prill form). The price of urea delivered to JNU is $750/ton, or $135,000 this year. E36 application rate is approximately equal to that of urea. JNU is a wet environment (Juneau is located in the coastal, temperate Tongass Rainforest climate), so application rates of any deicer will typically be greater than those airports in colder, drier climates. Based on equivalent application rates, 130,000 gallons of E36 at $6.75/gallon delivered to JNU is $877,500.[iii]

ENVIRONMENT: Current ammonia runoff due to the use of urea is only slightly behind the monitoring benchmark; however, JNU currently has the flexibility to dilute the urea further and/or redirect runoff into an approved containment pond. JNU complies with EPA Storm Water Pollution Prevention Plan (SWPPP) requirements.[iv] There were four areas originally identified where airport property discharges storm water into water bodies – three of the four outflows no longer require testing due to either meeting the benchmark standards or no longer discharging into waterways. The fourth area has met the benchmark standards for chemical oxygen demand (COD), biochemical oxygen demand (BOD) and pH, but is 3.32 mg/L away from meeting the ammonia benchmark (see attachment). JNU recognizes that urea is ammonia-based while E36 is not; however, urea can be diluted, and in JNU's case urea is diluted about 95-99% of the time, depending on temperature and precipitation. Further, JNU has the flexibility to reroute the outflow for this area into the Airport's float pond, if necessary. JNU's float pond is an approved containment pond for airfield runoff.

OTHER CONCERNS: Even more troubling, JNU is concerned that E36 is not compatible with galvanized metals and electrical conduit.[v] JNU runway and taxiway light bases are composed of galvanized metal and the possibility for degradation of the airfield lighting system and

navigational aids (NAVAIDs) is alarming. JNU questions the safety and cost-effectiveness of the long term use of E36 around runway/taxiway lighting and the NAVAID conduits that run throughout the airfield runway/safety areas that are not encased in pavement. This has the potential for not only costly repairs to the lighting system/NAVAIDs, but a loss of the system presents a safety concern for an airport that operates 24/7 and is a diversion port for commercial and military aircraft.

JNU believes that the proposed ban on urea would not only be cost prohibitive to JNU, but the cost would certainly exceed any presumed environmental benefits for this area. JNU is also concerned about the use of E36 around lighting systems and NAVAIDs. Safety is #1 at this Airport. We believe urea is part of that equation.

REQUESTED ACTION

We request reconsideration on the proposed ban on urea or a waiver to the ban on Alaska airports such as JNU. At a minimum, JNU requests that the final rule maintain the option in the NPRM to allow airports to continue using urea if they agree to a compliance alternative to monitor all runway outfalls to demonstrate compliance with a future proposed ammonia limit.

We appreciate your consideration on this matter. Please feel free to contact this office if you have further questions.

Sincerely,

Jeannie Johnson
Airport Manager
Jeannie_Johnson@ci.juneau.ak.us ; (907) 789-7821

Attachment

CC: U.S. Senator Lisa Murkowski; U.S. Senator Mark Begich; U.S. Congressman Don Young

---

[i] FAA Takeoff/Landing Performance Assessment Aviation Rulemaking Committee (TALPA ARC) Runway Matrix Testing (2010-11 and 2011-12).

[ii] The Seattle-based distributor for E36 stated that there is a new generation of Cryotech NAAC (sodium acetate) sold in a dry pelletized form; however the cost of NAAC is only slightly less than E36.

[iii] Prices for Urea and E36 have been updated within the past month for the most current price comparisons. Please note that the above cost of E36 does not include the cost of shipping the empty containers back to the distributor on the barge. This would be an additional cost to consider.

[iv] JNU's SWPPP was developed in 2009 by Contract Engineer (Carson-Dorn) with continued requirements to monitor the outflow points into waterways. The attached ***JNU SWPPP Sampling Summary Information*** (provided by Carson-Dorn) highlights the test areas and the four analysis parameters: Biochemical Oxygen Demand (BODs), Chemical Oxygen Demand (CODs), Ammonia and acidity/basicity (pH).

[v] According to Cryotech, *"E36 is an ionized solution and is more conductive than water. Users are advised to take precautions to prevent solutions containing E36 from entering subsurface conduits and electrical components. E36 is compatible with most materials, but exceptions occur such as with galvanized metals. Do not use E36 with galvanized materials."*

ATTACHMENT #3

March 28, 2012

JNU SWPPP Sampling Summary Information

In 2009, JNU initiated an operational Storm Water Pollution Prevention Plan (SWPPP) program intended to monitor outfalls from airport property discharging storm water to streams, rivers, or water bodies. The initial program included monitoring at the following outfalls:

- Lower Duck Creek (Outfall 1)
- Jordan Creek Culvert (Outfall 7)
- Intersection G culvert (Outfall 10)
- Float Plane Pond (Outfall 11)

For each outfall, monitoring including sampling and analysis for the following parameters (benchmark concentrations shown in parentheses):

- BOD_5 (30 mg/L)
- COD (120 mg/L
- Ammonia (2.14 mg/L)
- pH (6.5 to 8.5 s.u.)

For any monitoring site, if, after collection of 4 sequential samples, the average of the 4 monitoring values for any parameter does not exceed the benchmark concentration listed above, monitoring requirements for that parameter will have been fulfilled for the permit term.

During 2010, JNU eliminated Lower Duck Creek (Outfall 1) because the Runway Safety Area (RSA) project moved Duck Creek and routed discharge from that particular outfall to the Float Plane Pond.

Also during 2010, we eliminated the Float Plane Pond outfall (Outfall 11) because it discharged into the float plane pond, not to surrounding streams, rivers, or waterways.

By the end of 2010, the Jordan Creek Outfall (Outfall 7) no longer needed to be monitored because all parameters met benchmark concentration standards.

Thus, by the end of 2010, only Intersection G (Outfall 10) was still being monitored. The only parameter for that site that had not met benchmark concentration standards was Ammonia. The benchmark concentration for Ammonia is 2.14 mg/L. For Outfall 10, the rolling average for the 2012 monitoring season is currently 6 mg/L. The averages for test years 2010 and 2011 ranged from 30.5 mg/L to 5.46 mg/L.