



Air Transport Association



July 2, 2009

Mr. James Laity
White House Office of Management and Budget
OIRA, Natural Resources & Environment Branch
725 17th Street, NW
Washington, DC 20503
Transmitted via email to: James_A_Laity@omb.eop.gov

Dear Mr. Laity,

Thank you again for meeting with the Air Transport Association and Airports Council International-North America to discuss the U.S. Environmental Protection Agency's draft effluent limitation guidelines under development to address airport and airline deicing activities.

The information provided in Attachment A serves as follow-up to our June 4, 2009 meeting. Please do not hesitate to contact us with additional questions about this information or any other issues related to the draft regulation.

Sincerely,

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ATTACHMENT A

This information is intended to respond to questions raised during the aviation industry's June 4, 2009 meeting with OMB, SBA, and EPA, specifically:

1. Does the aviation industry have information or examples regarding limitations on the discharge volumes imposed on airports by POTWs such that additional collection of deicing-related stormwater could lead the airport to have to seek alternative, supplemental direct discharge treatment technologies (possibly AFBR-type treatment systems)?
2. Does the aviation industry have information or examples of seasonal limits for DO, BOD, COD or related constituents that serve as evidence regarding the variable benefits or efficiency of pollutant removals relating to season or temperature?
3. Does the aviation industry have information or examples regarding the use of urea that could impact EPA's possible attempt to ban or effectively ban its use at airports through regulation?
4. Does the aviation industry have input regarding how to account for pollution prevention practices that reduce the amount of aircraft deicing fluid used relative to the fluid collection and treatment standards that EPA might impose? (The issues being that (1) equivalent credit should be provided for all means by which the industry reduces its discharge, whether by pollution prevention or collection/treatment, and (2) more limited and efficient usage of fluids associated with pollution prevention practices makes achieving a percentage collection standard more difficult. Failure to recognize these issues inhibits pollution prevention practices from being fully utilized.)
5. Does the aviation industry have information regarding the costs of flight delays and other potential impacts on operations associated with complying with EPA's possible regulatory alternatives?

1. POTW Access Issues

The aviation industry has collected information and examples regarding limitations on the discharge volumes imposed on airports by POTWs, which, in the context of a regulation requiring collection of additional deicing-related stormwater and treatment of such stormwater not sent to POTWs, could effectively require the airport to establish alternative, supplemental direct discharge treatment technologies to address this incremental volume. An informal survey of ACI-NA member airports resulted in numerous responses that illustrate a variety of mechanisms through which POTWs limit the quantity of deicing-related stormwater that the POTWs will accept, often a limitation on the total quantity of a pollutant (e.g., BOD) that a POTW would accept from the airport in a given 24-hour period or a POTW-imposed volume

restriction (in gallons). Here are some examples which, in most instances represent binding, not just theoretical, constraints:

- BGR: Limited to 25,000 gallons or 3,000lbs BOD per day. Also, Combined Sewer Overflow issues can cause the POTW to deny accepting discharges from the airport
- BUF: POTW imposed a volume limit of 75 gallons per minute, resulting in the airport having to construct separate on-site treatment.
- IAD: Maximum limit imposed on volume and concentration.
- BNA: Metropolitan Nashville Water Services does not allow the discharge of stormwater to the POTW.
- BWI: BWI Marshall has been denied a permanent increase in the BOD limit because Baltimore County, its permitting authority, does not have extra waste load allocation to the Baltimore City owned treatment plant.
- CLE: Limits; BOD =13,000 lbs/day, COD =21,000 lbs/day Ammonia =6,000 lbs/day.
- DEN: On occasion, the POTW has requested that DIA halt or curtail discharges to the POTW for volume or treatment-related issues/causes.
- DTW: Discharge is restricted based on daily BOD load. The POTW has requested that DTW shut its discharge off in the past due to operational issues at the plant and during wet-weather.
- IND: POTW allows 3,000 gpm, based on the load capacity of the local interceptor. If the interceptor is >50% of capacity but < 80%, POTW cuts IND's discharge in half (1,500 gpm). POTW prohibits IND discharges if the interceptor is >80% of capacity.
- PDX: Limited to 1200 lbs BOD/day (potential to increase to 5,000 or 10,000 BOD/day on weekends) with a flow restriction of 300 gpm.

2. Seasonal Limits

The aviation industry has collected information and examples of seasonal limits for DO, BOD, COD or related constituents that serve as evidence regarding the variable benefits or variable efficiency of pollutant removals relating to season or temperature. Our purpose is to demonstrate that seasonal limits are common, not to advocate for any particular seasonal limit. Many airports have seasonal limits, and many are working with permitting authorities to obtain seasonal limits. Examples include:

- IND: Permit limitations apply during the deicing season only. The "deicing season" is a "weather-based" definition, which begins once the first application of deicer takes

place, and lasts into the Spring, until the airport achieves a non-detect on Propylene Glycol discharges. During the “deicing season,” COD limits are tiered by temperature, as follows:

- Below 45 F - 406 ppm COD
 - 45 F to 55 F - 125 ppm COD
 - Above 55 F - 50 ppm COD.
- SEA: Seattle Tacoma International BOD seasonal limits are calendar-based:
 - November Thru March –
 - 45mg/l and 500 lbs/day Monthly Ave; 3115 lbs/day Daily Max.
 - April Thru October –
 - 25mg/l and 130 lbs/day Monthly Ave.; 1340 lbs/day Daily Max.
 - DAY: CBOD limits that apply only during September 1 through April 30 (30-day: 770 mg/l; daily 1155 mg/l)
 - BNA: CBOD5 limits that vary both by season (higher in Summer (May 1 through September 30), lower in Winter (October 1 through April 30)) and by flow rate of the receiving stream (higher limits apply during higher flows).

3. Urea Usage Considerations

The aviation industry recognizes and has worked to reduce/eliminate the environmental impacts associated with urea and promote the availability of alternative pavement deicing products (PDPs). Hence, urea is not generally the preferred PDP for airport use.

However, usages vary. In some cases, urea is used infrequently as a backup PDP where supply constraints, such as those experienced in the past year, threaten to limit availability of other products. Such emergency uses should be exempted from any ban or costly ammonia or other limitation that would render them effectively infeasible.

While some airports have determined that alternatives to urea can be more effective, other airports reportedly make regular use of urea whether because of supply, storage and transportation considerations or because the product provides superior performance under certain conditions. Moreover, there are emerging concerns about the potential adverse impact of non-urea PDPs on concrete, runway and taxiway electrical fixtures, and carbon fiber aircraft brake systems. While recognized as potentially adverse effects, work to ascertain their extent and causal relationship to the use of non-urea PDPs is on-going. These considerations counsel that the ELG, in addition to providing for emergency uses of urea without application of an ammonia or other limitation, should also provide limitations short of an overt ban to enable airports to make general use of urea in the future subject to appropriate technology-based controls.

We suggest that EPA solicit comments on the situations in which airports may need to continue to use urea and the potential impacts of banning (or effectively banning) its use. To gain a better understanding of these issues, we suggest the following type of comment requests:

- Comments on airports' experiences regarding circumstances under which urea is more effective than other pavement deicing products (PDPs).
- Comments on the availability of PDPs and potential impacts on safety/airport operations based on shortage of PDPs.
- Comments on indirect impacts from use of PDPs, including for example, alkali silica reactivity issues with potassium acetate (leading to deterioration of concrete surfaces/runways) and conductivity affecting aircraft components.
- Comments on airports' ability to meet FAA safety obligations and operational needs if urea use is discontinued (or effectively banned).
- Comments on cost differences/impacts associated with switching to non-urea PDPs.
- Comments on special use needs of urea (Alaska, emergencies, other unique circumstances).

4. Pollution Prevention Credits

The aviation industry believes that EPA should both encourage and account for practices that result in reducing deicing fluid usage. Therefore, EPA should provide explicit direction for how such practices will be credited, considering both the mass-balance calculation that EPA is considering for its deicing fluid collection standard and the treatment standard. The rule should incorporate a conservation credit for fluid use reduced through employment of pollution prevention practices. One suggestion would be to provide credit on a gallon-for-gallon basis against the collection standard for deicing fluid usage reductions resulting from pollution prevention. In other words, a gallon of deicing fluid saved through pollution prevention should equal a full gallon of deicing fluid collected. A more comprehensive approach might involve (1) estimating the volume of fluid an airport could allowably discharge given the airport's baseline fluid usage and the proposed collection and treatment standards, and (2) allowing the airport to achieve this discharge limitation by any desired combination of prevention, collection, recycle/reuse and treatment.

5. Costs of Delays

Changes to deicing procedures and infrastructure may adversely affect flight operations at an airport. Switching from gate/apron deicing to deicing pads can result in queuing at pads, operational constraints (e.g., taxiway/runway use restrictions), and/or increased travel distance and taxi time for planes from gates to runways. Taking pavement areas out of service while drainage and collection improvements are constructed can result in inefficiencies and introduce safety concerns. Ineffective and/or slower pavement deicing such as might ensue in some instances if urea were banned reduces airport capacity, resulting potentially in flight diversions

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and delays. Even the use of GRVs adds to existing airport traffic, potentially slowing already-complex operations (particularly when deicing occurs in gate areas, where GRVs would need to be added to planes, fuel service, baggage handling, catering, maintenance, ground control, security, passengers, deicing equipment, etc.). Further, airports and airlines do not operate in isolation, but within the National Airspace System, of which the overall efficiency can be affected as delays propagate across the entire system. This is particularly true of delays in the New York and East Coast airports.

The cost of delays should be estimated both for airlines and for passengers. The FAA suggests methods for identifying delays and estimating and monetizing them in “FAA Airport Benefit-Cost Analysis Guidance” (Office of Aviation Policy and Plans, December 15, 1999, at http://www.faa.gov/airports_airtraffic/airports/aip/bc_analysis/media/faabca.pdf). FAA has also suggested specific unit values for these delays in the form of cost per aircraft hour and cost per passenger hour in “Economic Values for Evaluation of Federal Aviation Administration Investment and Regulatory Programs” (Office of Aviation Policy and Plans, June, 1998, at <http://ntl.bts.gov/lib/20000/20800/20898/PB98157530.pdf>). The Air Transport Association has updated these unit values, resulting in the following estimates applicable for 2008:

- Cost of aircraft delays: \$74.10 per block minute (covering fuel, crew, maintenance, aircraft ownership, etc.);
- Cost of passenger delays: \$35.70 per passenger hour.

See: <http://www.airlines.org/economics/cost+of+delays/>