Rhode Island Airport Corporation

January 15, 2020

Mr. Aaron Mello
Rhode Island Department of Environmental Management
Office of Water Resources
RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908

Subject: **4th Quarter 2019 Report in Lieu of Sampling**
T.F. Green Airport
Permit No. RI0021598

Dear Mr. Mello:

The RIPDES Permit No. RI0021598 (Permit), issued to the Rhode Island Airport Corporation (RIAC), requires that samples meeting certain criteria must be collected quarterly. RIAC submits this report in accordance with Part I.(A)(6)(i) of the Permit in lieu of 4th Quarter 2019 sampling as the result of a "lack of a representative storm event during the entire quarterly monitoring period."

RIPDES Permit - Storm Event Criteria for Sampling

In accordance with Part I.(A)(6)(g) of the Permit, samples must be collected from a discharge resulting from a representative storm event. A representative storm event is precipitation that: "(a) occurs at least seventy-two (72) hours from the previous measurable storm event", and (b), "is greater than or equal to 0.1 inches water equivalent per twenty-four (24) hours in magnitude". In addition, Parts I.A.1.(footnote 6) and I.A.2.(footnote 5) of the Permit require Q4 sampling to be conducted "while aircraft deicing is occurring". Parts I.A.1.(footnote 2) and I.A.2.(footnote 1) further define sampling event precipitation to be: "During snow events, the start of precipitation shall be assumed to occur when the total accumulation of snowfall is 0.5 inches in depth. During other freezing (i.e., sleet, freezing rain) or non-freezing (i.e., rain) precipitation events, the start of precipitation shall be assumed to occur when the total accumulation is 0.1 inches in depth." Parts I.A.1.(footnote 5) and I.A.2.(footnote 3) define the period of sample collection to be "no later than three (3) hours following the initiation of precipitation that generates runoff", but if a sample cannot be collected within three (3) hours a sample can be taken "not to exceed six (6) hours following the initiation of precipitation that generates runoff, providing the permittee submit with the monitoring report, a description of why a sample during the specified period could not be collected.".

Prior to precipitation events, weather forecasts (National Weather Service, WeatherUnderground, and local media forecasts) and information from T.F. Green Airport Operations are used to assess whether the event will present a potential sampling opportunity.

As precipitation begins, weather conditions and forecasts are continually monitored to determine if and when the minimum precipitation requirements for sampling are likely to be met (>0.1" for rain and freezing rain events, >0.5" for snow events). Sampling commences once the minimum depths have been met and deicing activities have occurred during active precipitation. In addition, RIAC uses data derived from National Climatic Data Center (NCDC) Quality Controlled Local Climatological Data from the weather station at T.F. Green Airport to determine if an event met all qualifying criteria for a sampling event and compares to the "average storm event in Rhode Island" (Part I.A.6.g. and h.).

4th Quarter 2019 Precipitation and Deicing Events

During the 4th Quarter of 2019, there were 40 days of measurable precipitation. Of these, 26 days resulted in depths greater than 0.1" (water equivalent). During this Quarter there were eight (8) events that had measurable precipitation on which tenants reported aircraft deicing. Below is a description of why these events did not qualify or were not sampled.

There were no dates in October where aircraft were deiced during active precipitation.

In November there were four (4) events where aircraft deicing occurred on days with measurable precipitation. However, none of these were qualifying events.

- November 5, 2019 aircraft were deiced more than six hours prior to commencement of precipitation.
- November 7, 2019 was preceded by 0.49" precipitation on November 5, 2019.
- November 12, 2019 precipitation was less than 0.1".
- November 20, 2019 was preceded by 0.19" precipitation on November 19, 2019.

In December there were four (4) events where aircraft were deiced during active precipitation.

- The storm event that commenced December 1, 2019 was a qualifying event, however insufficient resources were available to sample that event.
- For the event which commenced December 9, 2019 aircraft were deiced several hours before measurable precipitation. Precipitation lasted until December 11, 2019. No aircraft were deiced December 10, 2019. Aircraft were deiced on December 11, 2019, however, 2.27" "of precipitation had fallen since December 9, 2019.
- The event which commenced December 17, 2019 was preceded by 1.93" on December 14, 2019.
- For the event which commenced December 29, 2019 aircraft were deiced greater than 6 hours prior to the start of precipitation. On December 30, 2019 aircraft were deiced greater than 6 hours after the start of precipitation.

A summary of deicing fluid application and collection, and daily weather summaries for each month of the 4th Quarter of 2019 is attached.

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Summary

The weather and deicing conditions between October 1, 2019 and December 31, 2019 yielded only one representative storm event while aircraft deicing occurred. Insufficient resources were available to sample the event which commenced December 1, 2019. RIAC did not collect samples during this period, and submits this report in lieu of monitoring in accordance with Part I.(A)(6)(i) of the Permit.

If you have any questions, please do not hesitate to call me at (401) 691-2490.

Sincerely,

Jay Brolin
Manager Environmental Program

Attachments:
Daily Deicing Fluid Application and Collection October, November, December 2019