



January 13, 2023

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 2022 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 2022 (Q4) 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."

Prior to precipitation events (where deicer is likely to be applied), weather forecasts (National Weather Service, Weather Underground, and local media forecasts) 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 the minimum precipitation requirements for sampling will or are likely to be met (>0.1" for rain and freezing rain events, >0.5" for snow events). Sampling commences once the minimum depths are met and deicing activities have occurred. In addition, RIAC uses data derived from National Climatic Data Center (NCDC) Quality Controlled Local Climatological Data from the weather station at Rhode Island T. F. Green International Airport (PVD) to determine if an event met all criteria for a sampling event.

4th Quarter 2022 Precipitation and Deicing Events

During the 4th Quarter of 2022, there were 32 days of measurable precipitation. Of these, 24 days resulted in precipitation depths greater than 0.1" (water equivalent). One (1) day included measurable snowfall with snowfall depth greater than 0.5". During this Quarter, there was one (1) day that had measurable precipitation that tenants reported aircraft deicing concurrent with active precipitation.

In October 2022, there was no measurable frozen precipitation. There were no dates where aircraft deicing occurred concurrent with measurable precipitation.

In November 2022, there was no measurable frozen precipitation. There were no dates where aircraft deicing occurred concurrent with measurable precipitation.

In December 2022, there was one event (two days) with greater than 0.5" of frozen precipitation. 3.2" of snow fell on December 11, 2022, and 0.2" of snow fell on December 12, 2022 (0.15" total as water equivalent). Precipitation began at approximately 3:00 PM on December 11, 2022 and ceased at approximately 3:00 AM. Measurable precipitation (<0.1") did not occur until after 10:00 PM. On December 11, 2022, seven (7) aircraft were deiced prior to 7:00 AM. One (1) aircraft was deiced at 12:25 PM. Ten (10) aircraft were deiced between 2:30 PM and 8:20 PM. No aircraft were deiced on December 12, 2022 concurrent with active precipitation.

RIAC did not sample this event. RIAC contends that this did not constitute a qualifying event, since aircraft deicing activities ceased approximately two hours before measurable precipitation. More importantly, RIAC's analytical laboratory (RI Analytical Laboratories) could not support this event, as it did not have staff to conduct bacteria analysis within the specified hold times.

A summary of daily deicing fluid application, collection, and weather summaries for the 4th Quarter of 2022 is attached.

Summary

The weather and deicing conditions between October 1st and December 31st, 2022 did not yield a representative storm event while aircraft deicing occurred. 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,

A handwritten signature in blue ink, appearing to read "Jay Brolin", is written over a printed name and title.

Jay Brolin
Manager Environmental Program

Attachments: Deicing Fluid Application and Collection (OCT, NOV, DEC 2022)

PVD October 2022 Monthly Deicing Usage and Collection

Date	Applied					Estimated Amount Recovered			Weather					
	Type I	Pure Type I	Type IV	Type I	Type IV	Collected	Diverted Terminal	Diverted Cargo	Date	High	Low	Precip	Snow	Ground
10/1/2022							0	0	1	57	51	0.6	0	0
10/2/2022							0	0	2	58	50	0	0	0
10/3/2022							0	0	3	55	50	T	0	0
10/4/2022							0	0	4	57	52	0.48	0	0
10/5/2022							0	0	5	60	55	0.69	0	0
10/6/2022							0	0	6	76	55	0.01	0	0
10/7/2022							0	0	7	77	52	0	0	0
10/8/2022							0	0	8	61	44	0.1	0	0
10/9/2022							0	0	9	62	38	0	0	0
10/10/2022							0	0	10	66	42	0	0	0
10/11/2022							0	0	11	68	45	0	0	0
10/12/2022							0	0	12	73	50	0	0	0
10/13/2022							0	0	13	67	52	0.88	0	0
10/14/2022							0	0	14	73	50	0.75	0	0
10/15/2022							0	0	15	71	47	0	0	0
10/16/2022							0	0	16	70	46	0	0	0
10/17/2022							0	0	17	65	47	0.21	0	0
10/18/2022							0	0	18	66	43	0.14	0	0
10/19/2022	11	6	0	11.00	0	Y	0	0	19	55	38	0	0	0
10/20/2022							0	0	20	58	38	0	0	0
10/21/2022							0	0	21	65	37	0	0	0
10/22/2022							0	0	22	66	39	0	0	0
10/23/2022							0	0	23	60	47	0.07	0	0
10/24/2022							0	0	24	59	52	0.84	0	0
10/25/2022							0	0	25	70	57	0.91	0	0
10/26/2022							0	0	26	74	63	0.17	0	0
10/27/2022							0	0	27	69	47	0	0	0
10/28/2022							0	0	28	56	40	0	0	0
10/29/2022	50	25	0	22.00	0	Y	0	0	29	62	37	0	0	0
10/30/2022	165	83	0	83.80	0	Y	0	0	30	64	32	0	0	0
10/31/2022	25	13	0	11.00	0	Y	0	0	31	63	39	T	0	0

MONTHLY TOTALS 251 126 0 127.80 0 127.80 0 0 0 0

5.85 0 13 0

PVD November 2022 Monthly Deicing Usage and Collection

Date	Applied					Estimated Amount Recovered			Weather						
	Type I	Pure Type I	Type IV	Type I	as PG Type IV	Total	Collected	Diverted Terminal	Diverted Cargo	Date	High	Low	Precip	Snow	Ground
11/1/2022								0	0	1	65	56	0.05	0	0
11/2/2022								0	0	2	70	43	0	0	0
11/3/2022								0	0	3	64	39	0	0	0
11/4/2022								0	0	4	72	41	T	0	0
11/5/2022								0	0	5	75	55	T	0	0
11/6/2022								0	0	6	75	64	T	0	0
11/7/2022								0	0	7	79	54	T	0	0
11/8/2022								0	0	8	56	39	0	0	0
11/9/2022	75	38	0	33.00	0	33.00	Y	0	0	9	52	34	0	0	0
11/10/2022	150	75	0	66.00	0	66.00	Y	0	0	10	67	37	0	0	0
11/11/2022								0	0	11	72	47	0.52	0	0
11/12/2022								0	0	12	74	54	0.27	0	0
11/13/2022								0	0	13	55	39	0.11	0	0
11/14/2022	150	75	0	66.00	0	66.00	Y	0	0	14	46	30	0	0	0
11/15/2022	257	129	0	113.08	0	113.08	Y	0	0	15	45	26	0.13 T	0	0
11/16/2022								0	0	16	56	36	0.98	0	0
11/17/2022	116	58	0	51.04	0	51.04	Y	0	0	17	48	32	0	0	0
11/18/2022	168	84	0	73.92	0	73.92	Y	0	0	18	45	29	0	0	0
11/19/2022	311	156	0	136.84	0	136.84	Y	0	0	19	43	27	0	0	0
11/20/2022	150	75	0	66.00	0	66.00	Y	0	0	20	39	24	0	0	0
11/21/2022	132	66	0	58.08	0	58.08	Y	0	0	21	41	21	0	0	0
11/22/2022	175	88	0	77.00	0	77.00	Y	0	0	22	49	33	0	0	0
11/23/2022	225	113	0	99.00	0	99.00	Y	0	0	23	53	31	0	0	0
11/24/2022	221	111	0	97.24	0	97.24	Y	0	0	24	47	28	0	0	0
11/25/2022	70	35	0	30.80	0	30.80	Y	0	0	25	53	33	0.02	0	0
11/26/2022								0	0	26	54	33	0	0	0
11/27/2022								0	0	27	61	41	0.52	0	0
11/28/2022	100	50	0	44.00	0	44.00		0	0	28	59	37	0	0	0
11/29/2022	310	155	0	136.40	0	136.40	Y	0	0	29	45	29	0	0	0
11/31/2022	75	38	0	33.00	0	33.00	Y	0	0	31	58	36	0.93	0	0

MONTHLY TOTALS 2685 1343 0 1181.40 0 1181.40 0 0 0 0

3.53 0

9 0

PVD December 2022 Monthly Deicing Usage and Collection

Date	Applied						Estimated Amount Recovered			Weather						
	Type I	Pure Type I	Type IV	Type I	as PG Type IV	Total	Collected	Diverted Terminal	Diverted Cargo	Date	Actuals (°)		Precip Amounts			
											High	Low	Precip	Snow	Ground	
12/1/2022	75	38	0	33.00	0	33.00	Y	0	0	0	1	44	32	0	0	0
12/2/2022	281	141	0	123.64	0	123.64	910	0	0	0	2	44	27	0	0	0
12/3/2022	105	53	0	46.20	0	46.20	Y	0	0	0	3	59	34	0.51	0	0
12/4/2022	100	50	0	44.00	0	44.00	Y	0	0	0	4	43	26	0	0	0
12/5/2022	360	180	0	158.40	0	158.40	Y	0	0	0	5	49	24	0	0	0
12/6/2022	158	79	0	69.52	0	69.52	Y	0	0	0	6	55	33	0.08	0	0
12/7/2022								0	0	0	7	57	51	1.37	0	0
12/8/2022								0	0	0	8	56	36	0	0	0
12/9/2022	282	141	0	124.08	0	124.08	Y	0	0	0	9	47	32	0	0	0
12/10/2022	150	75	0	66.00	0	66.00	Y	0	0	0	10	36	31	T	0	0
12/11/2022	1186	593	597	521.84	299	820.34	Y	45000	0	0	11	34	26	0.13	3.2	0
12/12/2022	3251	1626	55	1430.44	28	1457.94		147000	17000	0	12	33	25	0.02	0.2	3
12/13/2022	238	119	0	104.72	0	104.72	525	12000	9000	0	13	41	20	0	0	1
12/14/2022	150	75	0	66.00	0	66.00	150	0	5000	0	14	38	24	T	0	0
12/15/2022	381	191	0	167.64	0	167.64	Y	65000	29000	0	15	41	31	T	0	0
12/16/2022	100	50	0	44.00	0	44.00		0	0	0	16	44	39	1.46	0	0
12/17/2022	750	375	0	330.00	0	330.00		0	0	0	17	45	34	0.02	0	0
12/18/2022	100	50	0	44.00	0	44.00		0	0	0	18	42	30	0	0	0
12/19/2022	65	33	0	28.60	0	28.60	Y	0	0	0	19	42	30	0	0	0
12/20/2022							Y	0	0	0	20	42	28	0	0	0
12/21/2022	235	118	0	103.40	0	103.40	Y	0	0	0	21	40	25	0	0	0
12/22/2022	386	193	0	169.84	0	169.84	Y	0	13000	0	22	46	23	0.79	0	0
12/23/2022								0	0	0	23	55	15	1.17	T	0
12/24/2022	40	20	0	17.60	0	17.60	Y	0	0	0	24	17	8	0	0	0
12/25/2022							Y	0	0	0	25	27	12	0	0	0
12/26/2022	135	68	0	59.40	0	59.40	Y	0	0	0	26	33	17	0	0	0
12/27/2022	75	38	0	33.00	0	33.00	Y	0	0	0	27	36	22	0	0	0
12/28/2022	212	106	0	93.28	0	93.28	421	0	0	0	28	44	20	0	0	0
12/29/2022	190	95	0	83.60	0	83.60	Y	0	0	0	29	53	28	0	0	0
12/30/2022	75	38	0	33.00	0	33.00	200	0	0	0	30	62	31	0	0	0
12/31/2022							Y	0	0	0	31	51	38	0.45	0	0

MONTHLY TOTALS

9080

4540

652

3995.20

326

4321.20

2206

269000

73000

6

3.4

10

2