



Rhode Island Airport Corporation

January 13, 2021

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 2020 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 2020 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 applied, 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. 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 criteria for a sampling event.

4th Quarter 2020 Precipitation and Deicing Events

During the 4th Quarter of 2020, there were 29 days of measurable precipitation. Of these, 22 events resulted in precipitation depths greater than 0.1" (water equivalent). Four (4) days included measurable snowfall, three (3) of these had snowfall depths greater than 0.5". During this Quarter there were eight (8) days 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.

In October, there was one (1) date where aircraft deicing occurred on a day with measurable precipitation. On October 30, 2020 aircraft were deiced during active precipitation, however 1.35" of precipitation fell the 72 hours prior.

In November there were three (3) dates where aircraft deicing occurred on days with measurable precipitation. On November 1, 2020 one aircraft was deiced, however, 1.79" of precipitation fell the 72 hours prior. The event on November 15, 2020 was preceded by 0.28" precipitation. On November 30, 2020 two aircraft were deiced more than six hours prior to the commencement of precipitation.

In December there were four (4) dates where aircraft were deiced on days with measurable precipitation. On December 5, 2020 two aircraft were deiced more than six hours after commencement of measurable precipitation. On December 14 aircraft were deiced greater than 6 hours prior to measurable precipitation. The event which commenced December 16, 2020 was preceded by 0.12" on December 14, 2020 and occurred greater than 6 hours prior to measurable precipitation. For December 17, 2020, aircraft were deiced greater than 6 hours after the start of precipitation.

A summary of daily deicing fluid application and collection, and weather summaries for the 4th Quarter of 2020 is attached.

Summary

The weather and deicing conditions between October 1st and December 31st, 2020 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,



Jay Brolin
Manager Environmental Program

Attachments:

Daily Deicing Fluid Application and Collection October, November, December 2020

PVD December 2020 Monthly Deicing Usage and Collection

Date	Applied						Estimated Amount Recovered			Weather					
	Type I	Pure Type I	Type IV	as PG		Total	Collected	Diverted Terminal	Diverted Cargo	Actuals (°)		Precip Amounts			
				Type I	Type IV					High	Low	Precip	Snow	Ground	
12/1/2020								0	0	1	64	41	0.71	0	0
12/2/2020	150	75	0	66.00	0	66.00	Y	0	0	2	43	34	T	0	0
12/3/2020	265	133	0	116.60	0	116.60	Y	6000	0	3	52	29		0	0
12/4/2020								17000	0	4	59	42	0.01	0	0
12/5/2020	505	253	50	222.20	25	247.20		0	0	5	49	34	2.65	0.5	0
12/6/2020	260	130	0	114.40	0	114.40	183.00	0	0	6	39	29	T	0	0
12/7/2020	275	138	0	121.00	0	121.00	Y	0	18000	7	38	23		0	0
12/8/2020	125	63	0	55.00	0	55.00	Y	0	0	8	34	26		0	0
12/9/2020	231	116	0	101.64	0	101.64	186.00	0	0	9	38	20	T	T	0
12/10/2020	130	65	0	57.39	0	57.39	Y	0	0	10	47	30		0	0
12/11/2020	302	151	0	132.88	0	132.88	Y	0	0	11	53	26		0	0
12/12/2020								0	0	12	47	36	0.52	0	0
12/13/2020								0	0	13	63	37		0	0
12/14/2020	148	74	0	65.25	0	65.25	378.00	0	0	14	42	32	0.12	T	0
12/15/2020	216	108	0	95.22	0	95.22	Y	13000	0	15	38	25		0	0
12/16/2020	1140	570	200	501.60	100	601.60	Y	11000	0	16	29	19	0.13	1.5	0
12/17/2020	2756	1378	295	1212.46	148	1359.96		15000	35000	17	33	22	0.74	6.4	5
12/18/2020	2392	1196	0	1052.48	0	1052.48		8000	92000	18	31	20		0	0
12/19/2020	404	202	0	177.76	0	177.76	Y	12000	35000	19	32	11		0	0
12/20/2020	220	110	20	96.80	10	106.80	Y	17000	0	20	36	20	0.02	0	0
12/21/2020	370	185	0	162.80	0	162.80	1530.00	21000	0	21	37	28		0	0
12/22/2020	235	118	0	103.55	0	103.55	Y	0	0	22	45	31		0	0
12/23/2020	200	100	0	88.00	0	88.00	465.00	0	0	23	42	26		0	0
12/24/2020	162	81	0	71.09	0	71.09		0	0	24	56	26		0	0
12/25/2020								0	0	25	60	37	2.95	0	0
12/26/2020								0	0	26	37	27		0	0
12/27/2020	186	93	0	81.71	0	81.71	Y	0	0	27	39	24		0	0
12/28/2020	293	146	0	128.86	0	128.86	Y	0	0	28	52	25		0	0
12/29/2020								0	0	29	41	24		0	0
12/30/2020	73.06	36.53	0	32.1464	0	32.1464	Y	0	0	30	44	21		0	0
12/31/2020								0	0	31	48	33	0.23	0	0

MONTHLY TOTALS

11038 5519 565 4856.84 263

5139.34

2742

120000

180000

8.08 **8.4**

PVD November 2020 Monthly Deicing Usage and Collection

Date	Applied				Estimated Amount Recovered			Weather					
	Type I	Pure Type I	Type IV	as PG Type IV	Collected	Diverted Terminal	Diverted Cargo	Actuals (°)		Precip Amounts			
								High	Low	Precip	Snow	Ground	
11/1/2020	50	25	0	22.00	334			1	51	34	0.73	0	0
11/2/2020								2	44	32	0	0	0
11/3/2020								3	47	29	T	0	0
11/4/2020								4	57	31	0	0	0
11/5/2020								5	69	43	0	0	0
11/6/2020								6	72	51	0	0	0
11/7/2020								7	76	45	0	0	0
11/8/2020								8	75	41	0	0	0
11/9/2020								9	75	41	0	0	0
11/10/2020								10	74	42	0	0	0
11/11/2020								11	74	56	0.03	0	0
11/12/2020								12	66	49	0.06	0	0
11/13/2020								13	51	40	0.22	0	0
11/14/2020								14	52	33	0	0	0
11/15/2020	235	118	0	103.40	120			15	62	28	0.42	0	0
11/16/2020								16	55	39	0.01	0	0
11/17/2020								17	51	32	0	0	0
11/18/2020								18	37	24	0	0	0
11/19/2020					Y			19	49	20	0	0	0
11/20/2020								20	63	48	0	0	0
11/21/2020								21	65	45	0	0	0
11/22/2020								22	50	37	T	0	0
11/23/2020								23	60	37	1.37	0	0
11/24/2020	181	91	0	79.79	Y			24	46	29	0	0	0
11/25/2020	25	13	0	11.00	Y			25	57	29	T	0	0
11/26/2020								26	61	48	0.4	0	0
11/27/2020								27	59	41	0	0	0
11/28/2020								28	55	38	0	0	0
11/29/2020	241	121	0	106.14	Y			29	55	30	0	0	0
11/30/2020	50	25	0	22.00	Y			30	63	34	2.74	0	0

MONTHLY TOTALS

783 391

0 344.33

0 344.33

454

0

0

5.98 0

PVD October 2020 Monthly Deicing Usage and Collection

Date	Applied				Estimated Amount Recovered			Weather					
	Type I	Pure Type I	Type IV	as PG Type IV	Collected	Diverfied Terminal	Diverfied Cargo	Actuals (°)		Precip Amounts			
								Type I	Type IV	High	Low	Precip	Show
10/1/2020								1	77	56	0	0	0
10/2/2020								2	68	49	T	0	0
10/3/2020								3	71	42	0	0	0
10/4/2020								4	68	43	T	0	0
10/5/2020								5	66	50	0.27	0	0
10/6/2020								6	68	46	0	0	0
10/7/2020								7	75	53	0.07	0	0
10/8/2020								8	65	45	0	0	0
10/9/2020								9	64	42	0	0	0
10/10/2020								10	75	54	0	0	0
10/11/2020								11	66	49	0	0	0
10/12/2020								12	56	49	0.05	0	0
10/13/2020								13	61	53	1.11	0	0
10/14/2020								14	70	49	0	0	0
10/15/2020								15	73	45	0	0	0
10/16/2020								16	71	50	0.69	0	0
10/17/2020	50	25	0	22.00	0	22.00	22.00	17	60	39	1.23	0	0
10/18/2020					103			18	62	35	0	0	0
10/19/2020								19	65	40	0	0	0
10/20/2020								20	65	46	0.26	0	0
10/21/2020								21	71	60	0	0	0
10/22/2020								22	76	61	0	0	0
10/23/2020								23	68	54	0	0	0
10/24/2020								24	67	48	0	0	0
10/25/2020								25	54	42	T	0	0
10/26/2020								26	56	47	T	0	0
10/27/2020								27	60	50	0	0	0
10/28/2020						27000		28	52	45	0.2	0	0
10/29/2020	4941	2471	1307	2174.04	654	2827.54	20000	29	49	45	1.33	0	0
10/30/2020	880	440	0	387.20	0	387.20	6000	30	46	26	0.46	1.6	0
10/31/2020					537	86000	12000	31	47	24	0	0	0

MONTHLY TOTALS

5871 2936

1307 2583.24

654

3236.74

640

455000

38000

5.67

1.6