

# Rhode Island Airport Corporation

**First Quarter 2019**  
**Outfall and In-Stream Sampling**  
**T.F. Green Airport**

Prepared by:  
Rhode Island Airport Corporation

April 2019

## **Background**

The RIPDES permit identifies a total of 16 perimeter outfalls at PVD. Outfalls 001A, 002A, 003A, 004A and 013A discharge to tributaries of Warwick Pond. Outfalls, 006A, 006B, 006C, 006D, 007A, 007B, 008A and 009A discharge to tributaries of Buckeye Brook downstream of Warwick Pond. Outfalls 010A, 011A, and 012A discharge to Tuscatucket Brook. Major outfalls, 002A, 003A, 008A, and 010A, are those outfalls which receive or may receive drainage from areas where aircraft deicing fluid is applied. Sampling for these major outfalls is defined at Part I.A.1 of the permit. Minor outfalls drain taxiways, runways and other paved services. Outfall 005A was combined with Outfall 006A during construction of Runway 34 Safety Area Improvements. Sampling for these minor outfalls is defined at Part I.A.2. of the permit. Additional sampling requirements are defined at Part I.A.5. and Parts I.C. and I.D. Table 1 lists parameters sampled.

Part I.B.4.h describes water quality monitoring requirements for receiving water bodies. Stream monitoring is to be conducted at four locations: the inlet to Warwick Pond at Lake Shore Drive; the outlet to Warwick Pond at the south end of Lake Shore Drive; Buckeye Brook at West Shore Road; and Old Mill Creek at Tidewater Drive. These sample locations were identified as BB-02, BB-03, BB-04 and BB-07 (respectively) to maintain consistency with previous sampling studies in the Buckeye Brook watershed. Figure 1 identifies outfall and in-stream sampling locations.

Industrial activities at PVD with the potential to impact stormwater quality include the use of glycol-based Aircraft Deicing and Anti-icing Fluids (ADFs/AAFs) and pavement deicers. Only propylene glycol (PG)-based ADFs/AAFs are used at PVD. Pavement deicers used at PVD include solid sodium formate, and liquid potassium acetate. Between February 12 and February 14, 2019 approximately 6,150 gallons of deicing fluid was applied to 20 aircraft during the event. Approximately 445,000 gallons of fluid were diverted to storage at the Deicing Treatment Facility. Approximately 1,300 gallons of liquid pavement deicer (potassium acetate) was applied to runways and taxiways during this sampling event.

## **Summary of Storm**

First Quarter (January 1 through March 31) sampling includes the major outfalls (002A, 003A, 008A and 010A) hourly for twelve hours and in-stream sampling locations (BB-02, BB-03, BB-04 and BB-07) every four hours for forty eight hours. The sampling began upon a precipitation event of sufficient magnitude and subsequent to aircraft deicing as specified in the RIPDES permit.

Light snow began falling around 1:00 PM on February 12, 2019. Aircraft deicing commenced at approximately the same time. Sampling commenced at 2:00 PM subsequent to measurable accumulation. Outfall sampling continued until approximately 1:00 AM on February 13, 2019. In-stream sampling continued until 2:00 PM on February 14, 2019.

A total of 1.17 inches of precipitation (as water equivalent) with 3.3 inches as snow was measured at PVD during this event. Precipitation data is summarized in Table 2.

## **Summary of Flow**

Flow meters are installed at three of the major outfalls: OF-002A, OF-003A, and OF-008A. Continuous flow measurements during the 12 hours of sampling were made using these Isco 2150 area velocity meters programmed to measure level and velocity at 15 minute increments. No flow meters are installed at minor outfalls or at outfall 010A, as it is off airport property.

Maximum daily and average monthly flows for the major outfalls were calculated using measured data. Estimated runoff volumes calculated using drainage area and depth of precipitation for all outfalls are presented in Table 3.

## **Sample Collection**

For the First Quarter the major outfalls (002A, 003A, 008A, and 010A) were sampled hourly for twelve hours, beginning at 2:00 PM on February 12, 2019. Flow was not observed at 010A during the sampling event.

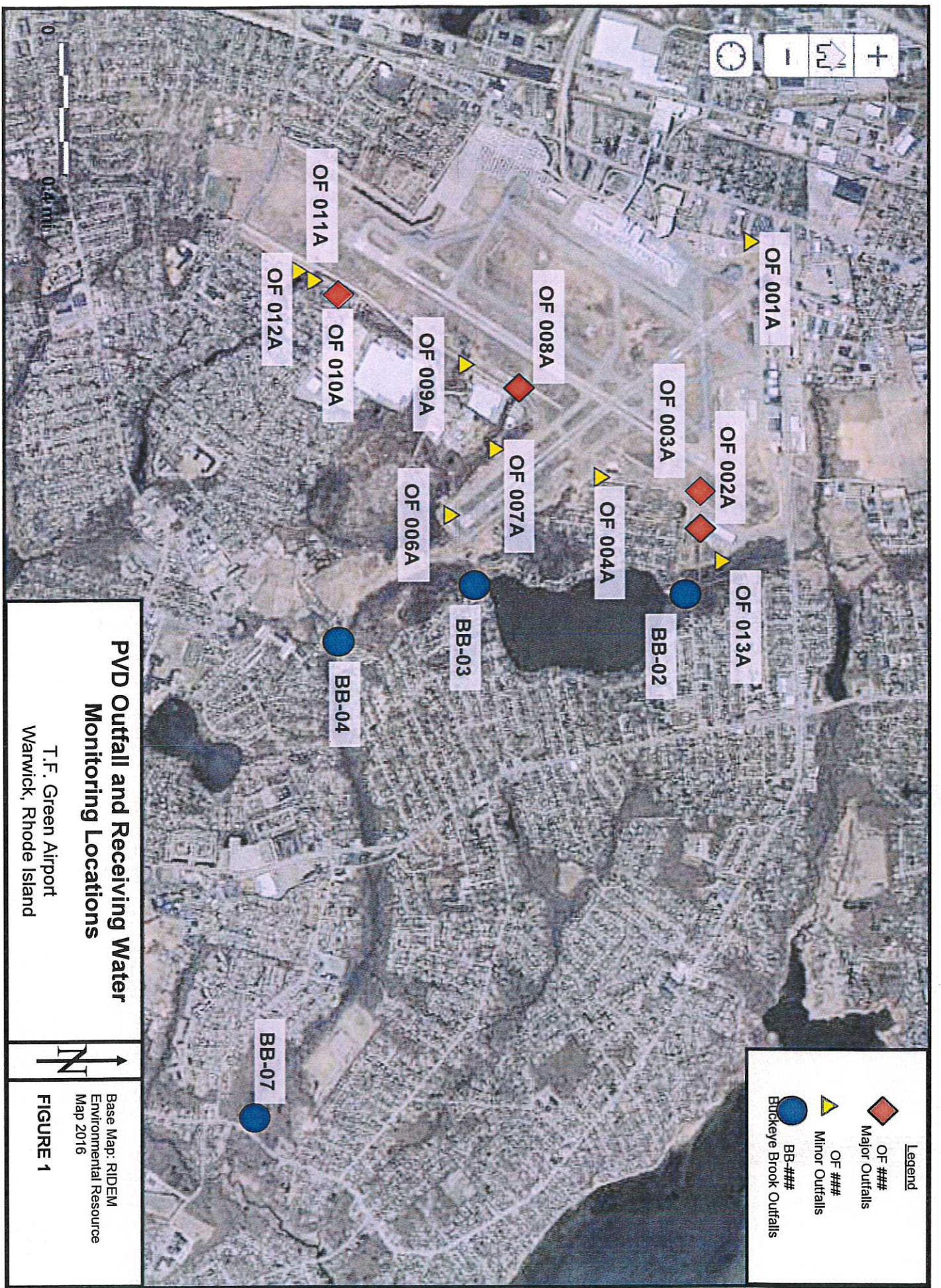
Receiving water sampling in Buckeye Brook (BB-02, BB-03, BB-047 and BB-078) commenced concurrent with the outfall sampling. Downstream samples were collected every four hours for 48 hours. During downstream sample collection, no discoloration, foaming, or unusual odors were observed by sampling personnel.

All samples were collected and decanted into sample bottles. The bottles were then placed in ice in a cooler for transport to the laboratory for analysis. Because of the short sample holding time for Fecal Coliform, all samples collected in the first three hours were transported to the laboratory immediately following the third hour of sampling.

At the major outfalls and in-stream sampling measurements for temperature, pH, dissolved oxygen (DO), and specific conductance were taken and recorded in the field. Dissolved oxygen percent saturation was also measured at in-stream locations.

## **Sampling Results**

A summary of sampling results for major outfalls are presented in Tables 4 and 5. In-stream sampling results are presented in Tables 6 and 7. Certificates of Analysis are attached to this report.



**Legend**

- ◆ OF ###  
Major Outfalls
- ▲ OF ###  
Minor Outfalls
- BB-###  
Buckeye Brook Outfalls

**PVD Outfall and Receiving Water  
Monitoring Locations**

T.F. Green Airport  
Warwick, Rhode Island

Base Map: RIDEM  
Environmental Resource  
Map 2016

**FIGURE 1**

TABLE 1  
 LABRATORY ANALYTICAL PARAMETERS  
 T.F. GREEN AIRPORT  
 WARWICK, RHODE ISLAND  
 FIRST QUARTER 2019

Sample Identification	Hours 1-3	Hours 4-12
OF-002A, OF-003A, OF-008A, OF-010A	<ul style="list-style-type: none"> <li>• Fecal coliform</li> <li>• BOD, TSS, Surfactants</li> <li>• COD, TOC</li> <li>• Oil &amp; grease -1664</li> <li>• Propylene glycol</li> <li>• Dissolved Potassium and Sodium</li> <li>• Total Metals (aluminum, chromium, copper, iron, lead, and zinc)</li> </ul>	<ul style="list-style-type: none"> <li>• BOD, surfactants</li> <li>• COD, TOC</li> <li>• Propylene glycol</li> <li>• Dissolved Potassium and Sodium</li> <li>• Total Metals (aluminum, chromium, copper, iron, lead, and zinc)</li> </ul>
Sample Identification	Hours 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, and 48	
BB-02, BB-03, BB-04, BB-07	<ul style="list-style-type: none"> <li>• BOD</li> <li>• COD</li> <li>• Propylene glycol</li> </ul>	

Note: Outfall and BB field measurements for pH, Specific Conductance, Temperature, and Dissolved Oxygen. BB includes DO % saturation  
 BOD -biological oxygen demand  
 COD -chemical oxygen demand  
 TOC -total organic carbon  
 TSS -total suspended solids

**TABLE 2  
PRECIPITATION AMOUNTS  
T.F. GREEN AIRPORT  
WARWICK, RHODE ISLAND  
FIRST QUARTER 2019**

Date	Total Precipitation (water equivalent, in inches)	Snowfall (inches)
February 9, 2019	0	0
February 10, 2019	0	0
February 11, 2019	0	0
February 12, 2019	0.92	3.3
February 13, 2019	0.25	T
February 14, 2019	0	0

Sampling commenced at 14:00 on February 12, 2019

Major outfall sampling ended at 01:00 on February 13, 2019

Buckeye Brook sampling ended at 14:00 on February 14, 2019

**TABLE 3  
PVD RUNOFF VOLUME CALCULATION  
T.F. GREEN AIRPORT  
WARWICK, RHODE ISLAND  
FIRST QUARTER 2019**

2/12/19 -2/14/19 Precip (inches):            1.17

Drainage Basin ID	PVD Storm Water Discharge	Receiving Water	Drainage Area (ac)	gal precip
1	Outfall 001A	Warwick Pond	5.9	187,433
2	Outfall 002A	Warwick Pond	93.4	2,967,160
3	Outfall 003A	Warwick Pond	119.8	3,805,843
4	Outfall 004A	Warwick Pond	30.1	956,226
6	Outfall 006A	Buckeye Brook	10.7	339,921
6B	Outfall 006B	Buckeye Brook	1.5	47,652
6C	Outfall 006C	Buckeye Brook	0.8	25,415
6D	Outfall 006D	Buckeye Brook	0.7	22,238
7	Outfall 007A	Buckeye Brook	9.6	304,976
7B	Outfall 007B	Buckeye Brook	1.2	38,122
8	Outfall 008A	Buckeye Brook	240.6	7,643,455
9	Outfall 009A	Buckeye Brook	38.4	1,219,903
10	Outfall 010A	Tuscatucket Brook	26	825,976
11	Outfall 011A	Tuscatucket Brook	14	444,756
12	Outfall 012A	Tuscatucket Brook	46.4	1,474,049
13	Outfall 013A	Warwick Pond	28	889,513
				<b>21,192,638</b>

667.1

**TABLE 4  
ANALYTICAL RESULTS  
MAJOR OUTFALLS  
T.F. GREEN AIRPORT  
WARWICK, RHODE ISLAND  
FIRST QUARTER 2019**

Parameter	Major Outfalls							
	Outfall 002A		Outfall 003A		Outfall 008A		Outfall 010A	
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
Flow (gpd) <sup>1,8</sup>	226,153	368,538	41,698	251,617	1,654,446	2,512,418	NO FLOW	
Oil & Grease (mg/l) <sup>5</sup>		0		0.9		0		
TSS (mg/l) <sup>4,5</sup>	3.8	5	13.3	16.0	1.6	3.0		
Fecal Coliform (MPN/100ml) <sup>7,5</sup>	0.0	0	0.0	0.0	0.0	0		
BOD <sub>5</sub> (mg/l) <sup>2,6</sup>	27.7	100	17.4	26	5.7	14		
Propylene Glycol (mg/l) <sup>2,6</sup>	44.8	290	11.8	18	0.0	0		
COD (mg/l) <sup>2,6</sup>	85.8	520	27.8	34	13.7	43		
Dissolved Potassium (mg/l) <sup>2,6</sup>	8.03	17.90	14.6	20.6	5.25	5.73		
Dissolved Sodium (mg/l) <sup>2,6</sup>	12.09	30.50	176.1	254	1092.65	3220.00		
Surfactants (ug/l) <sup>2,6</sup>	0	0	50.3	100	136.8	390		
Dissolved Oxygen (mg/l) <sup>2,3</sup>	8.28	9.08	8.55	9.21	7.85	8.60		
TOC (mg/l) <sup>2,6</sup>	26.9	150	8.9	11	3.0	6		
Total Aluminum (ug/l) <sup>2,6</sup>	45.5	185	119	196	425.2	1390		
Total Chromium (ug/l) <sup>2,6</sup>	0.3	1.6	0.29	1	1.53	4.8		
Total Copper (ug/l) <sup>2,6</sup>	0	0	0	0	4.48	13.6		
Total Iron (mg/l) <sup>2,6</sup>	7.3	16.0	3.27	9.42	1.88	3.40		
Total Lead (ug/l) <sup>2,6</sup>	0.47	2.2	0	0	0.88	3		
Total Zinc (ug/l) <sup>2,6</sup>	0	0	0	0	12.65	100		

<sup>1</sup> Results reported as average monthly were determined using the arithmetic average of measurement made every 15 minutes during the 12 hours of sampling. Results reported as maximum daily was the maximum flow measurements over the 12 hours of sampling. Both reported values were converted from GPM to GPD reflecting a 24 hour day

<sup>2</sup> Results reported as maximum daily were the maximum of the 12 samples collected during the 12 hours of sampling.

<sup>3</sup> Results reported as average monthly were determined using the arithmetic average of the 12 samples collected during the 12 hours of sampling.

<sup>4</sup> Results reported as average monthly were determined using the arithmetic average of the 3 samples collected (when available) during the first 3 hours of sampling.

<sup>5</sup> Results reported as maximum daily were the maximum of the 3 samples collected (when available) during the first 3 hours of sampling

<sup>6</sup> Results reported as average monthly were determined by using a flow-weighted average of the 12 samples collected during the 12 hours of sampling.

<sup>7</sup> Results reported as average monthly were determined by using a geometric mean of the 3 samples collected (when available) during the 3 hours of sampling

<sup>8</sup> Outfall 010A does not have a flow meter installed. Therefore, flow was calculated arithmetically utilizing the Outfall drainage area, storm intensity, and duration.

BOD<sub>5</sub> Biological oxygen demand 5-day test

COD Chemical oxygen demand

TOC Total organic carbon

TSS Total suspended solids

gpd gallons per day

mg/l milligrams per liter

ug/l micrograms per liter

ND - Non-Detect



TABLE 5  
 FIELD ANALYTICAL RESULTS  
 MAJOR OUTFALLS  
 T.F. GREEN AIRPORT  
 WARWICK, RHODE ISLAND  
 FIRST QUARTER 2019

Parameter	Major Outfalls							
	Outfall 002A		Outfall 003A		Outfall 008A		Outfall 010A	
	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>
pH	6.7	7.0	6.4	7.0	6.4	6.9	<b>No Flow</b>	
Temperature (°F)		52.3		51.3	7.2	48.2		

**Bold text indicates exceedance of permit standards**

Reported values are from laboratory analysis. Field pH measurements were taken but not used for this report

<sup>1</sup> results reported as minimum daily were the minimum of the samples collected during the 12 hours of sampling.

<sup>2</sup> results reported as maximum daily were the maximum of the samples collected during the 12 hours of sampling.

**TABLE 6  
ANALYTICAL RESULTS  
BUCKEYE BROOK  
T.F. GREEN AIRPORT  
WARWICK, RHODE ISLAND  
FIRST QUARTER 2019**

Parameter	BB-02		BB-03		BB-04		BB-07	
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
Conductivity (umhos/cm) <sup>1,2</sup>	732.6	1,836.0	434.4	978.7	446.4	501.8	686	1,992
BOD <sub>5</sub> (mg/l) <sup>1,2</sup>	6.2	17	6.6	18	6.6	18	2.5	7.7
COD (mg/l) <sup>1,2</sup>	10.8	30	14	41	14.2	41	10	17
Dissolved Oxygen (mg/l) <sup>1,2</sup>	8.99	10.79	10.92	12.27	7.80	8.91	9.87	10.99
Dissolved Oxygen Saturation (%) <sup>1,2</sup>	77.3	100.3	83.4	89.8	59.9	67.4	75.2	82.2
Propylene Glycol (mg/l) <sup>1,2</sup>	ND	ND	ND	ND	ND	ND	ND	ND

<sup>1</sup> Results reported as average monthly were determined using the arithmetic average of measurements made every 4 hours during the 48 hours of sampling.

<sup>2</sup> Results reported as maximum daily were the maximum samples collected every 4 hours during the 48 hours of sampling.

BOD<sub>5</sub> Biological oxygen demand 5-day test

COD Chemical oxygen demand

mg/l milligrams per liter

ND - Non-Detect

**TABLE 7**  
**FIELD ANALYTICAL RESULTS**  
**BUCKEYE BROOK**  
**T.F. GREEN AIRPORT**  
**WARWICK, RHODE ISLAND**  
**FIRST QUARTER 2019**

Parameter	BB-02		BB-03		BB-04		BB-07	
	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>	Minimum Daily <sup>1</sup>	Maximum Daily <sup>2</sup>
pH	<b>5.62</b>	6.98	<b>5.85</b>	6.75	<b>5.43</b>	6.53	<b>6.03</b>	6.88
Temperature (°F)		51.5		44.8		46.3		47.4

**Bold** text indicates exceedance of permit standards.

<sup>1</sup> Results reported as average monthly were determined using the arithmetic average of measurement made every 4 hours during the 48 hours of sampling. Results reported as maximum daily was the maximum flow measurements over the 12 hours of sampling.

<sup>2</sup> Results reported as maximum daily were the maximum of the 12 samples collected during the 48 hours of sampling.



## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/12/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02747

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



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Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LAI00033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** OUTFALL 002A-01  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:44	NQD
Total Suspended Solids	4.7	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	2.0	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 14:40	RBR
Total Metals						
Chromium	1.4	1.0	ug/l	EPA 200.8	2/18/2019 19:37	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:37	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:39	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:39	DDP
Iron	1900	100	ug/l	EPA 200.7	2/18/2019 17:39	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:39	DDP
Dissolved Metals						
Potassium	5420	1000	ug/l	EPA 200.7	2/19/2019 14:52	DDP
Sodium	16200	3000	ug/l	EPA 200.7	2/19/2019 14:52	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 002  
**Sample Description:** OUTFALL 003A-01  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:44	NQD
Total Suspended Solids	16	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	1.6	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 15:11	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:45	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:45	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:41	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:41	DDP
Iron	9420	100	ug/l	EPA 200.7	2/18/2019 17:41	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:41	DDP
Dissolved Metals						
Potassium	3700	1000	ug/l	EPA 200.7	2/19/2019 14:53	DDP
Sodium	5160	3000	ug/l	EPA 200.7	2/19/2019 14:53	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

Sample Number: 003  
 Sample Description: OUTFALL 008A-01  
 Sample Type : GRAB  
 Sample Date / Time : 2/12/2019 @ 14:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:46	NQD
Total Suspended Solids	2.2	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	0.93	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 15:42	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:49	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:49	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:42	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:42	DDP
Iron	1230	100	ug/l	EPA 200.7	2/18/2019 17:42	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:42	DDP
Dissolved Metals						
Potassium	5360	1000	ug/l	EPA 200.7	2/19/2019 15:12	DDP
Sodium	57200	3000	ug/l	EPA 200.7	2/19/2019 15:12	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** OUTFALL 002A-02  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:46	NQD
Total Suspended Solids	3.0	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	1.0	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 16:13	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:53	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 19:53	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:44	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:44	DDP
Iron	1220	100	ug/l	EPA 200.7	2/18/2019 17:44	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:44	DDP
Dissolved Metals						
Potassium	5280	1000	ug/l	EPA 200.7	2/19/2019 15:14	DDP
Sodium	15700	3000	ug/l	EPA 200.7	2/19/2019 15:14	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 005  
**Sample Description:** OUTFALL 003A-02  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 15:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:49	NQD
Total Suspended Solids	11	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	1.4	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 16:44	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:05	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:05	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:45	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:45	DDP
Iron	6770	100	ug/l	EPA 200.7	2/18/2019 17:45	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:45	DDP
Dissolved Metals						
Potassium	3590	1000	ug/l	EPA 200.7	2/19/2019 15:16	DDP
Sodium	4740	3000	ug/l	EPA 200.7	2/19/2019 15:16	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 006  
**Sample Description:** OUTFALL 008A-02  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 15:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:40	NQD
Total Suspended Solids	2.7	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	0.88	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 17:15	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:09	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:09	AJD
Total Metals						
Aluminum	100	100	ug/l	EPA 200.7	2/18/2019 17:47	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:47	DDP
Iron	1760	100	ug/l	EPA 200.7	2/18/2019 17:47	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:47	DDP
Dissolved Metals						
Potassium	5430	1000	ug/l	EPA 200.7	2/19/2019 15:17	DDP
Sodium	56500	3000	ug/l	EPA 200.7	2/19/2019 15:17	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** OUTFALL 003A-03  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 16:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:52	NQD
Total Suspended Solids	13	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	1.4	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	0.9	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 17:45	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:13	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:13	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:49	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:49	DDP
Iron	6690	100	ug/l	EPA 200.7	2/18/2019 17:49	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:49	DDP
Dissolved Metals						
Potassium	3680	1000	ug/l	EPA 200.7	2/19/2019 15:19	DDP
Sodium	4820	3000	ug/l	EPA 200.7	2/19/2019 15:19	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 008  
**Sample Description:** OUTFALL 002A-03  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 16:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:57	NQD
Total Suspended Solids	3.7	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	1.3	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 18:16	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:17	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:17	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/18/2019 17:50	DDP
Copper	<10	10	ug/l	EPA 200.7	2/18/2019 17:50	DDP
Iron	1370	100	ug/l	EPA 200.7	2/18/2019 17:50	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/18/2019 17:50	DDP
Dissolved Metals						
Potassium	5350	1000	ug/l	EPA 200.7	2/19/2019 15:20	DDP
Sodium	15900	3000	ug/l	EPA 200.7	2/19/2019 15:20	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 009  
**Sample Description:** OUTFALL 008A-03  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 16:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/12/2019 18:30	JWC
Fecal Coliform (MPN)	<1.8	1.8	MPN/100 ml	SM9221E2 19-21ed	2/12/2019 18:08	AOO
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 17:49	NQD
Total Suspended Solids	<2.0	2.0	mg/l	SM2540D 2011	2/16/2019 14:41	BR
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/12/2019 19:30	JWC
TOC	0.90	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
Oil & Grease Gravimetric	<0.5	0.5	mg/l	EPA 1664A	2/15/2019 12:45	RMS
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 18:47	RBR
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:20	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/18/2019 20:20	AJD
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 14:22	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 14:22	DDP
Iron	1370	100	ug/l	EPA 200.7	2/19/2019 14:22	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 14:22	DDP
Dissolved Metals						
Potassium	5420	1000	ug/l	EPA 200.7	2/19/2019 15:22	DDP
Sodium	55600	3000	ug/l	EPA 200.7	2/19/2019 15:22	DDP
ICPMS Digestion				EPA 200.8	2/16/2019 14:33	DDP
ICP Digestion				EPA 200.7	2/18/2019 13:48	DDP
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02747

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** OUTFALL 010A-01  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 14:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 14:30	*CS

\*CS - No flow per the client.

**Sample Number:** 011  
**Sample Description:** OUTFALL 010A-02  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 15:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 15:30	*CS

\*CS - No flow per the client.

**Sample Number:** 012  
**Sample Description:** OUTFALL 010A-03  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 16:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 16:30	*CS

\*CS - No flow per the client.

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	Fecal Coliform	BOD, TSS, Surfactants, pH	COD, TOC	Oil & Grease 1664	Propylene Glycol	Total Metals	Dissolved K & Na
2/12/19	1400	Outfall 002A-01	G	*	*	O							
"	1460	Outfall 003A-01	G	*	*	O							
"	1400	Outfall 008A-01	G	*	*	O							
2/12/19	1430	Outfall 010A-01 <i>NO FLOW</i>	G	*	*	O							
2/12/19	1500	Outfall 002A-02	G	*	*	O							
"	1570	Outfall 003A-02	G	*	*	O							
"	1500	Outfall 008A-02	G	*	*	O							
2/12/19	1530	Outfall 010A-02 <i>NO FLOW</i>	G	*	*	O							
2/12/19	1600	Outfall 002A-03	G	*	*	O							
"	1612	Outfall 003A-03	G	*	*	O							
"	1600	Outfall 008A-03	G	*	*	O							
2/12/19	1630	Outfall 010A-03 <i>NO FLOW</i>	G	*	*	O							

\*Fecal Coliform - 1 Sterile Non Preserved  
BOD, TSS, Surfactants, pH - 1 500mL Non Preserved  
COD, TOC - 1 250mL Sulfuric Acid Preserved  
Oil & Grease 1664 - 32 oz Amber Glass Sulfuric Preserved  
Propylene Glycol - 2 40mL Non-Preserved VOA Vial  
Metals - 250mL Nitric Preserved  
Dissolved Metals - 250ml Non Preserved

Total Metals:  
Aluminum - 200.7  
Chromium - 200.8  
Copper - 200.7  
Iron - 200.7  
Lead - 200.7  
Zinc - 200.7

Client Information				Project Information			
Company	Rhode Island Airport Corp			ProjectName:	T.F. Green RIPDES Monitoring		
Address:	2000 Post Rd			P.O. Number:		Project Number:	
City / State /	Warwick, RI 02886			Sampled by:			
Telephone:	691-2490	Fax:	691-2560	Email :address:	jbrolin@pvdairport.com		
Contact Person:	Jay Brolin			Email :address:			

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/12/19	1647	<i>W. Doe</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
<input type="checkbox"/> Rush	(business)

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O= Storm Water

*on ice 5.4°*

Lab Use Only	
	Sample Pick Up Only
<input checked="" type="checkbox"/>	RIAL sampled; attach field hours
<input checked="" type="checkbox"/>	Shipped on ice
Workorder No:	1902-02747



## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/13/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02781

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



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Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LAI00033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** OUTFALL 002A-04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 17:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:36	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.2	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 17:14	RBR
Dissolved Metals						
Potassium	3570	1000	ug/l	EPA 200.7	2/19/2019 17:52	DDP
Sodium	4550	3000	ug/l	EPA 200.7	2/19/2019 17:52	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:21	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:21	DDP
Iron	6730	100	ug/l	EPA 200.7	2/19/2019 16:21	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:21	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 16:48	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 16:48	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 002  
**Sample Description:** OUTFALL 003A-04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 17:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	7.0		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:36	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.98	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 17:45	RBR
Dissolved Metals						
Potassium	5120	1000	ug/l	EPA 200.7	2/19/2019 17:54	DDP
Sodium	15500	3000	ug/l	EPA 200.7	2/19/2019 17:54	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:24	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:24	DDP
Iron	1280	100	ug/l	EPA 200.7	2/19/2019 16:24	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:24	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:00	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:00	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 003  
**Sample Description:** OUTFALL 008A-04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 17:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:40	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.93	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 18:16	RBR
Dissolved Metals						
Potassium	5730	1000	ug/l	EPA 200.7	2/19/2019 18:00	DDP
Sodium	59100	3000	ug/l	EPA 200.7	2/19/2019 18:00	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:37	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:37	DDP
Iron	1500	100	ug/l	EPA 200.7	2/19/2019 16:37	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:37	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:12	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:12	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** OUTFALL 002A-05  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 18:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:40	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.3	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 18:46	RBR
Dissolved Metals						
Potassium	3580	1000	ug/l	EPA 200.7	2/19/2019 18:01	DDP
Sodium	4560	3000	ug/l	EPA 200.7	2/19/2019 18:01	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:39	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:39	DDP
Iron	6590	100	ug/l	EPA 200.7	2/19/2019 16:39	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:39	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:16	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:16	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 005  
**Sample Description:** OUTFALL 003A-05  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 18:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:44	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/15/2019 7:45	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.86	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 19:17	RBR
Dissolved Metals						
Potassium	5270	1000	ug/l	EPA 200.7	2/19/2019 18:03	DDP
Sodium	15700	3000	ug/l	EPA 200.7	2/19/2019 18:03	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:43	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:43	DDP
Iron	1590	100	ug/l	EPA 200.7	2/19/2019 16:43	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:43	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:20	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:20	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 006  
**Sample Description:** OUTFALL 008A-05  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 18:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:44	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.90	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 19:48	RBR
Dissolved Metals						
Potassium	5370	1000	ug/l	EPA 200.7	2/19/2019 18:04	DDP
Sodium	56500	3000	ug/l	EPA 200.7	2/19/2019 18:04	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:45	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:45	DDP
Iron	1180	100	ug/l	EPA 200.7	2/19/2019 16:45	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:45	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:31	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:31	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** OUTFALL 002A-06  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 19:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:46	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.2	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 20:18	RBR
Dissolved Metals						
Potassium	3670	1000	ug/l	EPA 200.7	2/19/2019 18:06	DDP
Sodium	4650	3000	ug/l	EPA 200.7	2/19/2019 18:06	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:46	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:46	DDP
Iron	6240	100	ug/l	EPA 200.7	2/19/2019 16:46	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:46	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:35	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:35	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 008  
**Sample Description:** OUTFALL 003A-06  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 19:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:46	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.98	0.50	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 20:49	RBR
Dissolved Metals						
Potassium	5190	1000	ug/l	EPA 200.7	2/19/2019 18:22	DDP
Sodium	15300	3000	ug/l	EPA 200.7	2/19/2019 18:22	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:48	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:48	DDP
Iron	1240	100	ug/l	EPA 200.7	2/19/2019 16:48	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:48	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:51	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:51	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 009  
**Sample Description:** OUTFALL 008A-06  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 19:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:48	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.6	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 21:20	RBR
Dissolved Metals						
Potassium	4860	1000	ug/l	EPA 200.7	2/19/2019 18:23	DDP
Sodium	51200	3000	ug/l	EPA 200.7	2/19/2019 18:23	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:49	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:49	DDP
Iron	824	100	ug/l	EPA 200.7	2/19/2019 16:49	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:49	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:55	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:55	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** OUTFALL 002A-07  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 20:14

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:48	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.1	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/18/2019 21:51	RBR
Dissolved Metals						
Potassium	3610	1000	ug/l	EPA 200.7	2/19/2019 18:25	DDP
Sodium	4480	3000	ug/l	EPA 200.7	2/19/2019 18:25	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 16:51	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 16:51	DDP
Iron	5370	100	ug/l	EPA 200.7	2/19/2019 16:51	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 16:51	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:59	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 17:59	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 011  
**Sample Description:** OUTFALL 003A-07  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 20:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:50	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	1.1	0.5	mg/l	SM5310C 21 ed.	2/14/2019 2:27	DDC
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 0:55	RBR
Dissolved Metals						
Potassium	5120	1000	ug/l	EPA 200.7	2/19/2019 18:26	DDP
Sodium	15300	3000	ug/l	EPA 200.7	2/19/2019 18:26	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:06	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:06	DDP
Iron	1290	100	ug/l	EPA 200.7	2/19/2019 17:06	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:06	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:03	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:03	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 012  
**Sample Description:** OUTFALL 008A-07  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 20:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	5.7	3.0	mg/l	SM5210B 21ed	2/13/2019 23:50	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	3.0	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 1:25	RBR
Dissolved Metals						
Potassium	4740	1000	ug/l	EPA 200.7	2/19/2019 18:28	DDP
Sodium	54300	3000	ug/l	EPA 200.7	2/19/2019 18:28	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:08	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:08	DDP
Iron	789	100	ug/l	EPA 200.7	2/19/2019 17:08	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:08	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:07	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:07	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 013  
**Sample Description:** OUTFALL 002A-08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:18

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.8		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:55	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.87	0.50	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 1:56	RBR
Dissolved Metals						
Potassium	3560	1000	ug/l	EPA 200.7	2/19/2019 18:29	DDP
Sodium	4350	3000	ug/l	EPA 200.7	2/19/2019 18:29	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:10	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:10	DDP
Iron	5170	100	ug/l	EPA 200.7	2/19/2019 17:10	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:10	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:10	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:10	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 014  
**Sample Description:** OUTFALL 003A-08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:08

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:55	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.91	0.50	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 2:27	RBR
Dissolved Metals						
Potassium	5160	1000	ug/l	EPA 200.7	2/19/2019 18:31	DDP
Sodium	15400	3000	ug/l	EPA 200.7	2/19/2019 18:31	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:14	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:14	DDP
Iron	1180	100	ug/l	EPA 200.7	2/19/2019 17:14	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:14	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:14	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:14	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 015  
**Sample Description:** OUTFALL 008A-08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	7.1	3.0	mg/l	SM5210B 21ed	2/13/2019 23:59	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	3.5	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 2:57	RBR
Dissolved Metals						
Potassium	4600	1000	ug/l	EPA 200.7	2/19/2019 18:32	DDP
Sodium	62100	3000	ug/l	EPA 200.7	2/19/2019 18:32	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:25	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:25	DDP
Iron	800	100	ug/l	EPA 200.7	2/19/2019 17:25	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:25	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:18	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:18	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 016  
**Sample Description:** OUTFALL 002A-09  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 22:12

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:59	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.88	0.50	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 3:28	RBR
Dissolved Metals						
Potassium	3600	1000	ug/l	EPA 200.7	2/19/2019 18:34	DDP
Sodium	4340	3000	ug/l	EPA 200.7	2/19/2019 18:34	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:26	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:26	DDP
Iron	5440	100	ug/l	EPA 200.7	2/19/2019 17:26	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:26	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:22	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:22	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 017  
**Sample Description:** OUTFALL 003A-09  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 22:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 23:31	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	0.86	0.50	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 3:59	RBR
Dissolved Metals						
Potassium	5030	1000	ug/l	EPA 200.7	2/19/2019 18:35	DDP
Sodium	16500	3000	ug/l	EPA 200.7	2/19/2019 18:35	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:28	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:28	DDP
Iron	1220	100	ug/l	EPA 200.7	2/19/2019 17:28	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:28	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:37	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:37	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 018  
**Sample Description:** OUTFALL 008A-09  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 22:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	5.7	3.0	mg/l	SM5210B 21ed	2/13/2019 23:31	AOO
COD	14	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	190	100	ug/l	SM5540C 18-21ed	2/13/2019 18:50	JWC
TOC	3.3	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 4:29	RBR
Dissolved Metals						
Potassium	5210	1000	ug/l	EPA 200.7	2/19/2019 18:47	DDP
Sodium	956000	6000	ug/l	EPA 200.7	2/20/2019 15:28	DDP
Total Metals						
Aluminum	148	100	ug/l	EPA 200.7	2/19/2019 17:29	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:29	DDP
Iron	1920	100	ug/l	EPA 200.7	2/19/2019 17:29	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:29	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:41	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:41	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 019  
**Sample Description:** OUTFALL 002A-10  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 23:23

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	15	8.0	mg/l	SM5210B 21ed	2/13/2019 23:34	AOO
COD	16	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	8.0	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 5:00	RBR
Dissolved Metals						
Potassium	8700	1000	ug/l	EPA 200.7	2/19/2019 18:48	DDP
Sodium	8440	3000	ug/l	EPA 200.7	2/19/2019 18:48	DDP
Total Metals						
Aluminum	<100	100	ug/l	EPA 200.7	2/19/2019 17:31	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:31	DDP
Iron	9960	100	ug/l	EPA 200.7	2/19/2019 17:31	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:31	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:45	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:45	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 020  
**Sample Description:** OUTFALL 003A-10  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 23:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/13/2019 14:45	JWC
BOD 5	10	3.0	mg/l	SM5210B 21ed	2/13/2019 23:34	AOO
COD	17	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	6.1	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 5:31	RBR
Dissolved Metals						
Potassium	6640	1000	ug/l	EPA 200.7	2/19/2019 18:50	DDP
Sodium	18500	3000	ug/l	EPA 200.7	2/19/2019 18:50	DDP
Total Metals						
Aluminum	196	100	ug/l	EPA 200.7	2/19/2019 17:32	DDP
Copper	<10	10	ug/l	EPA 200.7	2/19/2019 17:32	DDP
Iron	6670	100	ug/l	EPA 200.7	2/19/2019 17:32	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/19/2019 17:32	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:49	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/20/2019 18:49	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/19/2019 17:35	DDP
ICP Digestion				EPA 200.7	2/18/2019 20:52	MEM
ICPMS Digestion				EPA 200.8	2/20/2019 15:14	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 021  
**Sample Description:** OUTFALL 008A-10  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 23:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.5		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	8.8	3.0	mg/l	SM5210B 21ed	2/14/2019 0:03	AOO
COD	31	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	390	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	4.2	0.5	mg/l	SM5310C 21 ed.	2/16/2019 11:08	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 14:54	RBR
Dissolved Metals						
Potassium	5020	1000	ug/l	EPA 200.7	2/19/2019 15:37	DDP
Sodium	2920000	15000	ug/l	EPA 200.7	2/19/2019 17:00	DDP
Total Metals						
Aluminum	1050	100	ug/l	EPA 200.7	2/20/2019 16:15	DDP
Copper	12.9	10	ug/l	EPA 200.7	2/20/2019 16:15	DDP
Iron	3160	100	ug/l	EPA 200.7	2/20/2019 16:15	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:15	DDP
Total Metals						
Chromium	3.5	1.0	ug/l	EPA 200.8	2/21/2019 14:23	AJD
Lead	2.4	1.0	ug/l	EPA 200.8	2/21/2019 14:23	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 022  
**Sample Description:** OUTFALL 002A-11  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 00:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.9		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	98	30	mg/l	SM5210B 21ed	2/14/2019 0:03	AOO
COD	130	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	45	0.5	mg/l	SM5310C 21 ed.	2/16/2019 11:08	KLE
GC/FID						
Propylene Glycol	57	10	mg/l	GC-FID	2/19/2019 15:25	RBR
Dissolved Metals						
Potassium	17900	1000	ug/l	EPA 200.7	2/19/2019 15:39	DDP
Sodium	15700	3000	ug/l	EPA 200.7	2/19/2019 15:39	DDP
Total Metals						
Aluminum	161	100	ug/l	EPA 200.7	2/20/2019 16:17	DDP
Copper	<10	10	ug/l	EPA 200.7	2/20/2019 16:17	DDP
Iron	16000	100	ug/l	EPA 200.7	2/20/2019 16:17	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:17	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/21/2019 14:38	AJD
Lead	1.4	1.0	ug/l	EPA 200.8	2/21/2019 14:38	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 023  
**Sample Description:** OUTFALL 003A-11  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.6		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	18	8.0	mg/l	SM5210B 21ed	2/14/2019 0:06	AOO
COD	34	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	10	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	13	10	mg/l	GC-FID	2/19/2019 15:56	RBR
Dissolved Metals						
Potassium	14900	1000	ug/l	EPA 200.7	2/19/2019 15:40	DDP
Sodium	198000	3000	ug/l	EPA 200.7	2/19/2019 15:40	DDP
Total Metals						
Aluminum	116	100	ug/l	EPA 200.7	2/20/2019 16:19	DDP
Copper	<10	10	ug/l	EPA 200.7	2/20/2019 16:19	DDP
Iron	2880	100	ug/l	EPA 200.7	2/20/2019 16:19	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:19	DDP
Total Metals						
Chromium	<1.0	1.0	ug/l	EPA 200.8	2/21/2019 14:42	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/21/2019 14:42	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

BOD 5 - Greater than 30% difference in dilution results, highest sample volume reported.



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 024  
**Sample Description:** OUTFALL 008A-11  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.4		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	13	3.0	mg/l	SM5210B 21ed	2/13/2019 23:06	AOO
COD	43	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	330	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	5.3	0.5	mg/l	SM5310C 21 ed.	2/16/2019 11:08	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 16:26	RBR
Dissolved Metals						
Potassium	5580	1000	ug/l	EPA 200.7	2/19/2019 15:42	DDP
Sodium	3220000	15000	ug/l	EPA 200.7	2/19/2019 17:02	DDP
Total Metals						
Aluminum	1390	100	ug/l	EPA 200.7	2/20/2019 16:20	DDP
Copper	13.6	10	ug/l	EPA 200.7	2/20/2019 16:20	DDP
Iron	3400	100	ug/l	EPA 200.7	2/20/2019 16:20	DDP
Zinc	100	100	ug/l	EPA 200.7	2/20/2019 16:20	DDP
Total Metals						
Chromium	4.5	1.0	ug/l	EPA 200.8	2/21/2019 14:46	AJD
Lead	3.0	1.0	ug/l	EPA 200.8	2/21/2019 14:46	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

BOD 5 - Greater than 30% difference in dilution results, highest sample volume reported.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 025  
**Sample Description:** OUTFALL 002A-12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 01:13

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.7		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	100	30	mg/l	SM5210B 21ed	2/13/2019 23:06	AOO
COD	520	150	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	150	5.0	mg/l	SM5310C 21 ed.	2/16/2019 11:08	KLE
GC/FID						
Propylene Glycol	290	10	mg/l	GC-FID	2/19/2019 16:57	RBR
Dissolved Metals						
Potassium	16100	1000	ug/l	EPA 200.7	2/19/2019 15:43	DDP
Sodium	30500	3000	ug/l	EPA 200.7	2/19/2019 15:43	DDP
Total Metals						
Aluminum	185	100	ug/l	EPA 200.7	2/20/2019 16:22	DDP
Copper	<10	10	ug/l	EPA 200.7	2/20/2019 16:22	DDP
Iron	10000	100	ug/l	EPA 200.7	2/20/2019 16:22	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:22	DDP
Total Metals						
Chromium	1.6	1.0	ug/l	EPA 200.8	2/21/2019 14:50	AJD
Lead	2.2	1.0	ug/l	EPA 200.8	2/21/2019 14:50	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 026  
**Sample Description:** OUTFALL 003A-12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 01:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.4		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	26	8.0	mg/l	SM5210B 21ed	2/13/2019 23:10	AOO
COD	32	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	<100	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	11	0.5	mg/l	SM5310C 21 ed.	2/15/2019 8:29	KLE
GC/FID						
Propylene Glycol	18	10	mg/l	GC-FID	2/19/2019 17:27	RBR
Dissolved Metals						
Potassium	20600	1000	ug/l	EPA 200.7	2/19/2019 15:45	DDP
Sodium	254000	3000	ug/l	EPA 200.7	2/19/2019 15:45	DDP
Total Metals						
Aluminum	152	100	ug/l	EPA 200.7	2/20/2019 16:27	DDP
Copper	<10	10	ug/l	EPA 200.7	2/20/2019 16:27	DDP
Iron	2660	100	ug/l	EPA 200.7	2/20/2019 16:27	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:27	DDP
Total Metals						
Chromium	1.0	1.0	ug/l	EPA 200.8	2/21/2019 14:54	AJD
Lead	<1.0	1.0	ug/l	EPA 200.8	2/21/2019 14:54	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 027  
**Sample Description:** OUTFALL 008A-12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 01:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
pH	6.4		SU	SM4500H+B	2/13/2019 15:00	JWC
BOD 5	14	8.0	mg/l	SM5210B 21ed	2/14/2019 0:06	AOO
COD	30	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
Surfactants (MBAS)	300	100	ug/l	SM5540C 18-21ed	2/13/2019 22:00	JWC
TOC	5.8	0.5	mg/l	SM5310C 21 ed.	2/16/2019 11:08	KLE
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 17:58	RBR
Dissolved Metals						
Potassium	5370	1000	ug/l	EPA 200.7	2/19/2019 15:47	DDP
Sodium	2110000	15000	ug/l	EPA 200.7	2/19/2019 17:03	DDP
Total Metals						
Aluminum	957	100	ug/l	EPA 200.7	2/20/2019 16:28	DDP
Copper	11.3	10	ug/l	EPA 200.7	2/20/2019 16:28	DDP
Iron	2350	100	ug/l	EPA 200.7	2/20/2019 16:28	DDP
Zinc	<100	100	ug/l	EPA 200.7	2/20/2019 16:28	DDP
Total Metals						
Chromium	4.8	1.0	ug/l	EPA 200.8	2/21/2019 14:57	AJD
Lead	2.0	1.0	ug/l	EPA 200.8	2/21/2019 14:57	AJD
ICP Digestion (Dissolved)				EPA 200.7	2/18/2019 16:43	DDP
ICP Digestion				EPA 200.7	2/20/2019 15:44	DDP
ICPMS Digestion				EPA 200.8	2/20/2019 20:18	DDP

The pH analysis ideally should be performed in the field. The pH analysis was performed by the laboratory as soon as possible after receipt.

Surfactants (MBAS) - Calculated as LAS, mol wt. 342.

**Sample Number:** 028  
**Sample Description:** OUTFALL 010A-04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 029  
**Sample Description:** OUTFALL 010A-05  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 030  
**Sample Description:** OUTFALL 010A-06  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 031  
**Sample Description:** OUTFALL 010A-07  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 032  
**Sample Description:** OUTFALL 010A-08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02781

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 033  
**Sample Description:** OUTFALL 010A-09  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 034  
**Sample Description:** OUTFALL 010A-10  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 035  
**Sample Description:** OUTFALL 010A-11  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

**Sample Number:** 036  
**Sample Description:** OUTFALL 010A-12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
Dry - no sample	NO FLOW				2/12/2019 0:00	*CS

\*CS - No flow per client.

CHAIN OF CUSTODY RECORD			Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD, Surfactants, pH	COD, TOC	Propylene Glycol	Metals**	Dissolved K & Na							
Date Collected	Time Collected	Field Sample Identification																
<b>R.I. Analytical Laboratories, Inc.</b> 41 Illinois Avenue Warwick, RI 02888 Tel: 800-937-2580 Fax: 401-738-1970			131 Coolidge St, Bldg. 2 Hudson, MA 01749 Tel: 888-228-3334 Fax: 978-568-0078															
2/12/19	1720	Outfall 002A-04	G	*	*	O												
4	1700	Outfall 003A-04	G	*	*	O												
11	1700	Outfall 008A-04	G	*	*	O												
<del>Outfall 010A-04 — NO FLOW —</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												
2/12/19	1812	Outfall 002A-05	G	*	*	O												
11	1800	Outfall 003A-05	G	*	*	O												
11	1800	Outfall 008A-05	G	*	*	O												
<del>Outfall 010A-05 — NO FLOW —</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												
2/12/19	1913	Outfall 002A-06	G	*	*	O												
11	1900	Outfall 003A-06	G	*	*	O												
11	1900	Outfall 008A-06	G	*	*	O												
<del>Outfall 010A-06 — NO FLOW —</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												
2/12/19	2014	Outfall 002A-07	G	*	*	O												
11	2000	Outfall 003A-07	G	*	*	O												
11	2000	Outfall 008A-07	G	*	*	O												
<del>Outfall 010A-07 — NO FLOW —</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												

*BOD, Surfactants, pH - 1 1000mL Non Preserved COD, TOC - 1 250mL Sulfuric Acid Preserved Propylene Glycol - 2 40mL Non-Preserved VOA Vial Metals - 250mL Nitric Preserved Dissolved Metals - 250ml Non Preserved	Total Metals: Aluminum - 200.7 Chromium - 200.8 Copper - 200.7 Iron - 200.7 Lead - 200.7 Zinc - 200.7
---	---

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	
Telephone:	691-2490 Fax: 691-2560	Email :address:	<a href="mailto:jbrolin@pvdairport.com">jbrolin@pvdairport.com</a>
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/13/19	0400	<i>J. Brolin</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
Rush _____ (business)	

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O= Storm Water

Lab Use Only	
<input type="checkbox"/>	Sample Pick Up Only
<input type="checkbox"/>	RIAL sampled; attach field hours
<input checked="" type="checkbox"/>	Shipped on ice
Workorder No: 1902-02781	

2.0°C

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD, Surfactants, pH	COD, TOC	Propylene Glycol	Metals**	Dissolved K & Na
2/12/19	2118	Outfall 002A-08	G	*	*	O					
"	2108	Outfall 003A-08	G	*	*	O					
"	2100	Outfall 008A-08	G	*	*	O					
<del>Outfall 010A-08 — NO FLOW</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>					
2/12/19	2212	Outfall 002A-09	G	*	*	O					
"	2200	Outfall 003A-09	G	*	*	O					
"	2200	Outfall 008A-09	G	*	*	O					
<del>Outfall 010A-09 — NO FLOW</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>					
2/12/19	2323	Outfall 002A-10	G	*	*	O					
"	2310	Outfall 003A-10	G	*	*	O					
"	2300	Outfall 008A-10	G	*	*	O					
<del>Outfall 010A-10 — NO FLOW</del>			<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>					

\*BOD, Surfactants, pH – 1 1000mL Non Preserved  
COD, TOC – 1 250mL Sulfuric Acid Preserved  
Propylene Glycol – 2 40mL Non-Preserved VOA Vial  
Metals – 250mL Nitric Preserved  
Dissolved Metals – 250ml Non Preserved

Total Metals:  
Aluminum – 200.7  
Chromium – 200.8  
Copper – 200.7  
Iron – 200.7  
Lead – 200.7  
Zinc – 200.7

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	
Telephone:	691-2490 Fax: 691-2560	Email :address:	jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/13/19	0400	<i>L. J. ...</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
<input type="checkbox"/> Rush	____ (business)

**Matrix Codes:** GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O= Storm Water

Lab Use Only
Sample Pick Up Only
RIAL sampled; attach field hours
Shipped on ice
Workorder No: 1902-02781

2.0°C ✓



# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>r</sup>	Preservation Code <sup>p</sup>	Matrix Code <sup>m</sup>	BOD, Surfactants, pH	COD, TOC	Propylene Glycol	Metals**	Dissolved K & Na							
2/13/19	0013	Outfall 002A-11	G	*	*	O												
11	0000	Outfall 003A-11	G	*	*	O												
11	0000	Outfall 008A-11	G	*	*	O												
		Outfall 010A-11 <del>NO FLOW</del>	<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												
2/13/19	0113	Outfall 002A-12	G	*	*	O												
11	0100	Outfall 003A-12	G	*	*	O												
11	0100	Outfall 008A-12	G	*	*	O												
		Outfall 010A-12 <del>NO FLOW</del>	<del>G</del>	<del>*</del>	<del>*</del>	<del>O</del>												

\*BOD, Surfactants, pH - 1 1000mL Non Preserved  
COD, TOC - 1 250mL Sulfuric Acid Preserved  
Propylene Glycol - 2 40mL Non-Preserved VOA Vial  
Metals - 250mL Nitric Preserved  
Dissolved Metals - 250ml Non Preserved

Total Metals:  
Aluminum - 200.7  
Chromium - 200.8  
Copper - 200.7  
Iron - 200.7  
Lead - 200.7  
Zinc - 200.7

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	
Telephone:	691-2490 Fax: 691-2560	Email :address:	jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
	2/13/19	0400	

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
<input type="checkbox"/> Rush	(business)

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, Sl=Sludge, A=Air, B=Bulk/Solid, O=\_\_ Storm Water\_\_

Lab Use Only	
	Sample Pick Up Only
	RIAL sampled; attach field hours
2.00 ✓	Shipped on ice
Workorder No: 1907-07781	



## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/13/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02774

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



---

Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LA100033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02774

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** BB-02 04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 17:05

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	6.3	3.0	mg/l	SM5210B 21ed	2/13/2019 17:52	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 19:30	RBR

**Sample Number:** 002  
**Sample Description:** BB-03 04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 17:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	4.8	3.0	mg/l	SM5210B 21ed	2/13/2019 17:57	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 20:02	RBR

**Sample Number:** 003  
**Sample Description:** BB-04 04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 18:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:00	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/16/2019 19:18	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02774

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** BB-07 04  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 18:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	3.8	3.0	mg/l	SM5210B 21ed	2/13/2019 18:00	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 21:04	RBR

**Sample Number:** 005  
**Sample Description:** BB-02 08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:02	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 21:35	RBR

**Sample Number:** 006  
**Sample Description:** BB-03 08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:02	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 22:05	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02774

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** BB-04 08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:05	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 22:36	RBR

**Sample Number:** 008  
**Sample Description:** BB-07 08  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/12/2019 @ 21:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:05	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 23:07	RBR

**Sample Number:** 009  
**Sample Description:** BB-02 12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 02:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	14	8.0	mg/l	SM5210B 21ed	2/13/2019 18:08	NQD
COD	29	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/14/2019 23:38	RBR

BOD 5 - Greater than 30% difference in dilution results, highest sample volume reported.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02774

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** BB-03 12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 02:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:08	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/15/2019 0:08	RBR

**Sample Number:** 011  
**Sample Description:** BB-04 12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 02:40

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:12	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 18:29	RBR

**Sample Number:** 012  
**Sample Description:** BB-07 12  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 02:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/13/2019 18:12	NQD
COD	<10	10	mg/l	SM5220D 18-21ed	2/18/2019 8:15	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 19:00	RBR

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
2/12/19	1705	BB-02 04	G	*	*	O	X	X	X
"	1725	BB-03 04 *							
"	1800	BB-04 04							
"	1820	BB-07 04							
"	2100	BB-02 08							
"	2110	BB-03 08							
"	2125	BB-04 08							
2/12/19	2145	BB-07 08							
2/13/19	0200	BB-02 12							
"	0225	BB-03 12							
"	0240	BB-04 12							
2/13/19	0255	BB-07 12							
		BB-02 16							
		BB-03 16							
		BB-04 16							
		BB-07 16							
		BB-02 20							
		BB-03 20							

BOD - 1-1000ml NP Poly  
COD - 1-120ml Sulfuric Preserved Poly  
Glycol - 2 NP Vials

\* cap on 1 vial was cracked

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	RIAL
Telephone:	737-4000 Fax: 732-8204	Email :address:	jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/13/19	0400	<i>L. Dore</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
Rush _____ (business)	

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O=\_\_ Storm Water\_\_

on ice 2.0°

Lab Use Only
Sample Pick Up Only
RIAL sampled; attach field hours
Shipped on ice
Workorder No: 1902-2774



## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/14/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02875

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



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Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LA100033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** BB-02 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	39	30	mg/l	SM5210B 21ed	2/14/2019 22:39	AOO
COD	54	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	22	10	mg/l	GC-FID	2/19/2019 19:30	RBR

**Sample Number:** 002  
**Sample Description:** BB-03 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:22

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:39	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 22:34	RBR

**Sample Number:** 003  
**Sample Description:** BB-04 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:43

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:46	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 23:05	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** BB-07 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 06:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:46	AOO
COD	10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 23:35	RBR

**Sample Number:** 005  
**Sample Description:** BB-02 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	29 J	30	mg/l	SM5210B 21ed	2/14/2019 22:50	AOO
COD	46	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	20	10	mg/l	GC-FID	2/20/2019 0:06	RBR

BOD 5 - J - The reported value is less than the sample detection limit but above the method detection limit.

**Sample Number:** 006  
**Sample Description:** BB-03 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:11

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:50	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 0:36	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** BB-04 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	68	30	mg/l	SM5210B 21ed	2/14/2019 22:55	AOO
COD	110	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	62	10	mg/l	GC-FID	2/20/2019 1:07	RBR

**Sample Number:** 008  
**Sample Description:** BB-07 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:55	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 1:38	RBR

**Sample Number:** 009  
**Sample Description:** BB-02 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 22:57	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	21	10	mg/l	GC-FID	2/20/2019 2:08	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** BB-03 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:11

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:57	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 2:39	RBR

**Sample Number:** 011  
**Sample Description:** BB-04 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	53	30	mg/l	SM5210B 21ed	2/14/2019 23:00	AOO
COD	82	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	44	10	mg/l	GC-FID	2/20/2019 3:10	RBR

**Sample Number:** 012  
**Sample Description:** BB-07 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:41

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:00	AOO
COD	11	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 13:25	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 013  
**Sample Description:** BB-02 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	9.2	3.0	mg/l	SM5210B 21ed	2/14/2019 23:02	AOO
COD	20	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 13:56	RBR

**Sample Number:** 014  
**Sample Description:** BB-03 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:02	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 14:27	RBR

**Sample Number:** 015  
**Sample Description:** BB-04 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:54

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	47	30	mg/l	SM5210B 21ed	2/14/2019 23:04	AOO
COD	71	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	37	10	mg/l	GC-FID	2/20/2019 14:58	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 016  
**Sample Description:** BB-07 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 18:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	38	30	mg/l	SM5210B 21ed	2/14/2019 23:04	AOO
COD	66	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	34	10	mg/l	GC-FID	2/20/2019 15:28	RBR

**Sample Number:** 017  
**Sample Description:** BB-02 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.9	3.0	mg/l	SM5210B 21ed	2/14/2019 23:06	AOO
COD	16	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 15:59	RBR

**Sample Number:** 018  
**Sample Description:** BB-03 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:06	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 16:30	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 019  
**Sample Description:** BB-04 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	31	8.0	mg/l	SM5210B 21ed	2/14/2019 23:07	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	22	10	mg/l	GC-FID	2/20/2019 17:01	RBR

**Sample Number:** 020  
**Sample Description:** BB-07 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 22:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 23:07	AOO
COD	57	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	28	10	mg/l	GC-FID	2/20/2019 17:32	RBR

**Sample Number:** 021  
**Sample Description:** BB-02 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	4.4	3.0	mg/l	SM5210B 21ed	2/14/2019 23:13	AOO
COD	22	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 20:36	RBR



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 022  
**Sample Description:** BB-03 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:13	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 21:07	RBR

**Sample Number:** 023  
**Sample Description:** BB-04 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	15	8.0	mg/l	SM5210B 21ed	2/14/2019 23:15	AOO
COD	26	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 21:38	RBR

**Sample Number:** 024  
**Sample Description:** BB-07 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 23:15	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	26	10	mg/l	GC-FID	2/20/2019 22:09	RBR

# CHAIN OF CUSTODY RECORD

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Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
		BB-02 04	G	*	*	O	X	X	X
		BB-03 04							
		BB-04 04							
		BB-07 04							
		BB-02 08							
		BB-03 08							
		BB-04 08							
		BB-07 08							
		BB-02 12							
		BB-03 12							
		BB-04 12							
		BB-07 12							
2/13/19	0500	BB-02 16							
"	0522	BB-03 16					✓	✓	✓
"	0543	BB-04 16					✓	✓	✓
"	0604	BB-07 16					✓	✓	✓
"	0900	BB-02 20					✓	✓	✓
2/13/19	0911	BB-03 20					✓	✓	✓

BOD - 1-1000ml NP Poly  
COD - 1-120ml Sulfuric Preserved Poly  
Glycol - 2 NP Vials

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	RIAL
Telephone:	737-4000 Fax: 732-8204	Email :address:	jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/14/19	0650	<i>L. Dore</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
<input type="checkbox"/> Rush	_____ (business)

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O=\_\_ Storm Water\_\_

Lab Use Only
Sample Pick Up Only
RIAL sampled; attach field hours
<input checked="" type="checkbox"/> Shipped on ice 20
Workorder No: 1902-02875

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
2/13/15	0928	BB-04-20	G	*	*	O	X	X	X
"	0945	BB-07-20					✓	✓	✓
"	1300	BB-02-24					✓	✓	✓
"	1311	BB-03-24					✓	✓	✓
"	1325	BB-04-24					✓	✓	✓
"	1341	BB-07-24					✓	✓	✓
"	1700	BB-02-28					✓	✓	✓
"	1720	BB-03-28					✓	✓	✓
"	1754	BB-04-28					✓	✓	✓
"	1810	BB-07-28					✓	✓	✓
"	2100	BB-02-32					✓	✓	✓
"	2130	BB-03-32					✓	✓	✓
"	2150	BB-04-32					✓	✓	✓
2/13/15	2200	BB-07-32					✓	✓	✓
2/14/15	0100	BB-02-36					✓	✓	✓
"	0115	BB-03-36					✓	✓	✓
"	0145	BB-04-36					✓	✓	✓
2/14/15	0150	BB-07-36					✓	✓	✓

BOD 1-1000ml Non Preserved Poly  
COD 1-120ml Sulfuric Preserved Poly  
Glycol 2Non Preserved Vials

Client Information		Project Information		
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring	
Address:	2000 Post Rd	P.O. Number:	Project Number:	
City / State /	Warwick, RI 02886	Sampled by:	RIAL	
Telephone:	737-4000	Fax:	732-8204	Email :address:
Contact Person:	Jay Brolin	Email :address:	jbrolin@pvdairport.com	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/14/15	0650	<i>LGAC</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
Rush _____ (business)	

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O= Storm Water

Lab Use Only
Sample Pick Up Only
RIAL sampled; attach field hours
Shipped on ice <i>20</i>
Workorder No: <i>1902-02875</i>



## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/14/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02875

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



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Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LAI00033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** BB-02 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	39	30	mg/l	SM5210B 21ed	2/14/2019 22:39	AOO
COD	54	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	22	10	mg/l	GC-FID	2/19/2019 19:30	RBR

**Sample Number:** 002  
**Sample Description:** BB-03 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:22

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:39	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 22:34	RBR

**Sample Number:** 003  
**Sample Description:** BB-04 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 05:43

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:46	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/19/2019 8:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 23:05	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** BB-07 16  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 06:04

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:46	AOO
COD	10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/19/2019 23:35	RBR

**Sample Number:** 005  
**Sample Description:** BB-02 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	29 J	30	mg/l	SM5210B 21ed	2/14/2019 22:50	AOO
COD	46	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	20	10	mg/l	GC-FID	2/20/2019 0:06	RBR

BOD 5 - J - The reported value is less than the sample detection limit but above the method detection limit.

**Sample Number:** 006  
**Sample Description:** BB-03 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:11

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:50	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 0:36	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** BB-04 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:28

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	68	30	mg/l	SM5210B 21ed	2/14/2019 22:55	AOO
COD	110	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	62	10	mg/l	GC-FID	2/20/2019 1:07	RBR

**Sample Number:** 008  
**Sample Description:** BB-07 20  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:55	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 1:38	RBR

**Sample Number:** 009  
**Sample Description:** BB-02 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 22:57	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	21	10	mg/l	GC-FID	2/20/2019 2:08	RBR



## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** BB-03 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:11

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 22:57	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 2:39	RBR

**Sample Number:** 011  
**Sample Description:** BB-04 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	53	30	mg/l	SM5210B 21ed	2/14/2019 23:00	AOO
COD	82	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	44	10	mg/l	GC-FID	2/20/2019 3:10	RBR

**Sample Number:** 012  
**Sample Description:** BB-07 24  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 13:41

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:00	AOO
COD	11	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 13:25	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 013  
**Sample Description:** BB-02 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	9.2	3.0	mg/l	SM5210B 21ed	2/14/2019 23:02	AOO
COD	20	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 13:56	RBR

**Sample Number:** 014  
**Sample Description:** BB-03 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:02	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 14:27	RBR

**Sample Number:** 015  
**Sample Description:** BB-04 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 17:54

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	47	30	mg/l	SM5210B 21ed	2/14/2019 23:04	AOO
COD	71	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	37	10	mg/l	GC-FID	2/20/2019 14:58	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 016  
**Sample Description:** BB-07 28  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 18:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	38	30	mg/l	SM5210B 21ed	2/14/2019 23:04	AOO
COD	66	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	34	10	mg/l	GC-FID	2/20/2019 15:28	RBR

**Sample Number:** 017  
**Sample Description:** BB-02 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.9	3.0	mg/l	SM5210B 21ed	2/14/2019 23:06	AOO
COD	16	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 15:59	RBR

**Sample Number:** 018  
**Sample Description:** BB-03 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:30

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:06	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 16:30	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 019  
**Sample Description:** BB-04 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 21:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	31	8.0	mg/l	SM5210B 21ed	2/14/2019 23:07	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	22	10	mg/l	GC-FID	2/20/2019 17:01	RBR

**Sample Number:** 020  
**Sample Description:** BB-07 32  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/13/2019 @ 22:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 23:07	AOO
COD	57	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	28	10	mg/l	GC-FID	2/20/2019 17:32	RBR

**Sample Number:** 021  
**Sample Description:** BB-02 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	4.4	3.0	mg/l	SM5210B 21ed	2/14/2019 23:13	AOO
COD	22	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 20:36	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02875

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 022  
**Sample Description:** BB-03 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:15

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	<3.0	3.0	mg/l	SM5210B 21ed	2/14/2019 23:13	AOO
COD	<10	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 21:07	RBR

**Sample Number:** 023  
**Sample Description:** BB-04 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	15	8.0	mg/l	SM5210B 21ed	2/14/2019 23:15	AOO
COD	26	10	mg/l	SM5220D 18-21ed	2/20/2019 7:45	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 21:38	RBR

**Sample Number:** 024  
**Sample Description:** BB-07 36  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 01:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	36	30	mg/l	SM5210B 21ed	2/14/2019 23:15	AOO
COD	52	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	26	10	mg/l	GC-FID	2/20/2019 22:09	RBR

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
		BB-02 04	G	*	*	O	X	X	X
		BB-03 04							
		BB-04 04							
		BB-07 04							
		BB-02 08							
		BB-03 08							
		BB-04 08							
		BB-07 08							
		BB-02 12							
		BB-03 12							
		BB-04 12							
		BB-07 12							
2/13/19	0500	BB-02 16							
"	0522	BB-03 16					✓	✓	✓
"	0543	BB-04 16					✓	✓	✓
"	0604	BB-07 16					✓	✓	✓
"	0900	BB-02 20					✓	✓	✓
2/13/19	0911	BB-03 20					✓	✓	✓

BOD - 1-1000ml NP Poly  
COD - 1-120ml Sulfuric Preserved Poly  
Glycol - 2 NP Vials

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	RIAL
Telephone:	737-4000 Fax: 732-8204	Email :address:	jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/14/19	0650	<i>L. Dore</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
Rush _____ (business)	

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O= Storm Water

Lab Use Only	
Sample Pick Up Only	
RIAL sampled; attach field hours	
Shipped on ice	20
Workorder No: 1902-02875	

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

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131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
2/13/15	0928	BB-04-20	G	*	*	O	X	X	X
"	0945	BB-07-20					✓	✓	✓
"	1300	BB-02-24					✓	✓	✓
"	1311	BB-03-24					✓	✓	✓
"	1325	BB-04-24					✓	✓	✓
"	1341	BB-07-24					✓	✓	✓
"	1700	BB-02-28					✓	✓	✓
"	1720	BB-03-28					✓	✓	✓
"	1754	BB-04-28					✓	✓	✓
"	1810	BB-07-28					✓	✓	✓
"	2100	BB-02-32					✓	✓	✓
"	2130	BB-03-32					✓	✓	✓
"	2150	BB-04-32					✓	✓	✓
2/13/15	2200	BB-07-32					✓	✓	✓
2/14/15	0100	BB-02-36					✓	✓	✓
"	0115	BB-03-36					✓	✓	✓
"	0145	BB-04-36					✓	✓	✓
2/14/15	0150	BB-07-36					✓	✓	✓

BOD 1-1000ml Non Preserved Poly  
COD 1-120ml Sulfuric Preserved Poly  
Glycol 2 Non Preserved Vials

Client Information		Project Information		
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring	
Address:	2000 Post Rd	P.O. Number:	Project Number:	
City / State /	Warwick, RI 02886	Sampled by:	RIAL	
Telephone:	737-4000	Fax:	732-8204	Email :address: jbrolin@pvdairport.com
Contact Person:	Jay Brolin	Email :address:		

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/14/15	0650	<i>LGAC</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
Rush _____ (business	

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O= \_\_ Storm Water \_\_

Lab Use Only
Sample Pick Up Only
RIAL sampled; attach field hours
<input checked="" type="checkbox"/> Shipped on ice 20
Workorder No: 1902-02875





## LABORATORY REPORT

Rhode Island Airport Corp.  
Attn: Mr. Jay Brolin  
2000 Post Road  
Warwick, RI 02886

**Date Received:** 2/14/2019  
**Date Reported:** 2/25/2019  
**P.O. Number** 27599

**Work Order #:** 1902-02925

**Project Name:** T.F. GREEN RIPDES MONITORING

Enclosed are the analytical results and Chain of Custody for your project referenced above. The sample(s) were analyzed by our Warwick, RI laboratory unless noted otherwise. When applicable, indication of sample analysis at our Hudson, MA laboratory and/or subcontracted results are noted and subcontracted reports are enclosed in their entirety.

All samples were analyzed within the established guidelines of US EPA approved methods with all requirements met, unless otherwise noted at the end of a given sample's analytical results or in a case narrative.

The Detection Limit is defined as the lowest level that can be reliably achieved during routine laboratory conditions.

These results only pertain to the samples submitted for this Work Order # and this report shall not be reproduced except in its entirety.

We certify that the following results are true and accurate to the best of our knowledge. If you have questions or need further assistance, please contact our Customer Service Department.

Approved by:



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Dawne E. Smart  
Data Reporting Manager

Laboratory Certification Numbers (as applicable to sample's origin state):

Warwick RI \* RI LAI00033, MA M-RI015, CT PH-0508 Hudson MA \* M-MA1117, RI LAO00319

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02925

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 001  
**Sample Description:** BB-02 40  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 05:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	4.7	3.0	mg/l	SM5210B 21ed	2/15/2019 15:22	SRF
COD	<10	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 22:40	RBR

**Sample Number:** 002  
**Sample Description:** BB-03 40  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 05:35

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	3.3	3.0	mg/l	SM5210B 21ed	2/15/2019 15:22	SRF
COD	<10	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 23:10	RBR

**Sample Number:** 003  
**Sample Description:** BB-04 40  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 05:55

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	7.7	3.0	mg/l	SM5210B 21ed	2/15/2019 15:26	SRF
COD	15	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/20/2019 23:41	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02925

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 004  
**Sample Description:** BB-07 40  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 06:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	22	8.0	mg/l	SM5210B 21ed	2/15/2019 15:26	SRF
COD	36	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	14	10	mg/l	GC-FID	2/21/2019 0:11	RBR

BOD 5 - Greater than 30% difference in dilution results, highest sample volume reported.

**Sample Number:** 005  
**Sample Description:** BB-02 44  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 09:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	6.2	3.0	mg/l	SM5210B 21ed	2/15/2019 15:32	SRF
COD	11	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 0:42	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

**Sample Number:** 006  
**Sample Description:** BB-03 44  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 09:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	6.1	3.0	mg/l	SM5210B 21ed	2/15/2019 15:32	SRF
COD	<10	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 1:13	RBR

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02925

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 007  
**Sample Description:** BB-04 44  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 09:45

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	9.2	3.0	mg/l	SM5210B 21ed	2/15/2019 15:35	SRF
COD	11	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 4:17	RBR

**Sample Number:** 008  
**Sample Description:** BB-07 44  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 10:00

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	13	3.0	mg/l	SM5210B 21ed	2/15/2019 15:35	SRF
COD	24	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 4:47	RBR

BOD 5 - Greater than 30% difference in dilution results, highest sample volume reported.

Glycol by FID: Surrogate above QC limits. No target compounds detected.

**Sample Number:** 009  
**Sample Description:** BB-02 48  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 13:20

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.6	3.0	mg/l	SM5210B 21ed	2/15/2019 15:38	SRF
COD	<10	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 5:18	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

## R.I. Analytical Laboratories, Inc.

## Laboratory Report

Rhode Island Airport Corp.

Work Order #: 1902-02925

Project Name: T.F. GREEN RIPDES MONITORING

**Sample Number:** 010  
**Sample Description:** BB-03 48  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 13:25

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	5.0	3.0	mg/l	SM5210B 21ed	2/15/2019 15:38	SRF
COD	11	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 5:49	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

**Sample Number:** 011  
**Sample Description:** BB-04 48  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 13:50

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	6.6	3.0	mg/l	SM5210B 21ed	2/15/2019 15:40	SRF
COD	<10	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 6:20	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

**Sample Number:** 012  
**Sample Description:** BB-07 48  
**Sample Type :** GRAB  
**Sample Date / Time :** 2/14/2019 @ 14:10

PARAMETER	SAMPLE RESULTS	DET. LIMIT	UNITS	METHOD	DATE/TIME ANALYZED	ANALYST
BOD 5	8.1	3.0	mg/l	SM5210B 21ed	2/15/2019 15:40	SRF
COD	13	10	mg/l	SM5220D 18-21ed	2/21/2019 7:30	SNI
GC/FID						
Propylene Glycol	<10	10	mg/l	GC-FID	2/21/2019 6:51	RBR

Glycol by FID: Surrogate above QC limits. No target compounds detected.

# CHAIN OF CUSTODY RECORD

R.I. Analytical Laboratories, Inc.

41 Illinois Avenue  
Warwick, RI 02888  
Tel: 800-937-2580  
Fax: 401-738-1970

131 Coolidge St, Bldg. 2  
Hudson, MA 01749  
Tel: 888-228-3334  
Fax: 978-568-0078

Date Collected	Time Collected	Field Sample Identification	Grab or Composite	# of Containers & Type <sup>T</sup>	Preservation Code <sup>P</sup>	Matrix Code <sup>M</sup>	BOD	COD	Propylene Glycol
2/14/19	0520	BB-02 40	G	*	*	O	X	X	X
"	0535	BB-03 40					✓	✓	✓
"	0555	BB-04 40					✓	✓	✓
"	0610	BB-07 40					✓	✓	✓
"	0910	BB-02 44					✓	✓	✓
"	0925	BB-03 44					✓	✓	✓
"	0945	BB-04 44					✓	✓	✓
"	1000	BB-07 44					✓	✓	✓
"	1320	BB-02 48					✓	✓	✓
"	1325	BB-03 48					✓	✓	✓
"	1350	BB-04 48					✓	✓	✓
2/14/19	1410	BB-07 48					✓	✓	✓

BOD 1-1000ml Non Preserved Poly  
COD 1-120ml Sulfuric Preserved Poly  
Glycol 2Non Preserved Vials

Client Information		Project Information	
Company	Rhode Island Airport Corp	ProjectName:	T.F. Green RIPDES Monitoring
Address:	2000 Post Rd	P.O. Number:	Project Number:
City / State /	Warwick, RI 02886	Sampled by:	RIAL
Telephone:	737-4000	Fax:	732-8204
Contact Person:	Jay Brolin	Email :address:	jbrolin@pvdairport.com
		Email :address:	

Relinquished By	Date	Time	Received By
<i>Jay Brolin</i>	2/14/19	1435	<i>[Signature]</i>

Turn Around Time	
<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> EMAIL Report
5 Business days. Possible	
<input type="checkbox"/> Rush	(business)

Matrix Codes: GW=Groundwater, SW=Surface Water, WW=Wastewater, DW=Drinking Water, S=Soil, SI=Sludge, A=Air, B=Bulk/Solid, O=\_\_ Storm Water\_\_

Lab Use Only	
	Sample Pick Up Only
	RIAL sampled; attach field hours
<i>y</i>	Shipped on ice <i>34</i>
	Workorder No: <i>1902-02925</i>