



RTI Laboratories
33080 Industrial Rd.
Livonia, MI 48150
TEL: (734) 422-8000
Website: www.rtilab.com

Friday, August 11, 2023

Grayson Anderson
Sprinturf
146 Fairchild Street, Suite 150
Daniel Island, SC 29492
TEL: (843) 936-6023
FAX:

RE: Sprinturf sample
Work Order #: 2307540
Dear Grayson Anderson:

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

This report may only be reproduced in its entirety. Individual pages, reproduced without supporting documentation, do not contain related information and may be misinterpreted by other data reviewers.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Lloyd Kaufman", written in a cursive style.

Lloyd Kaufman
Vice President, Director of Materials Sciences

RTI Laboratories, Inc. - Analytical Report

WO#: 2307540

Date Reported: 8/11/2023

Original

Client:	Sprinturf	Collection Date:	7/19/2023 12:00:00 AM
Project:	Sprinturf sample		
Lab ID:	2307540-001	Matrix:	Solid
Client Sample ID:	Black Solid		

Analysis	Result	RL	Qual	Units	DF	Date Analyzed
Perfluorinated Compounds Solid Matrix LC/MS/MS		Method: DOD QSM5.3 B15			Analyst: DKS	
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonate (11Cl-PF3OYUdS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
1H,1H,2H,2H-Perfluorodecanesulfonate (8:2 FTS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
1H,1H,2H,2H-Perfluorohexanesulfonate (4:2 FTS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
1H,1H,2H,2H-Perfluorooctanesulfonate (6:2 FTS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF3ONS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Dodecafluoro-3H-4,8-dioxanonoate (ADONA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
HFPO-DA (GEN X)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
N-ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
N-methyl perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorobutanesulfonic acid (PFBS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorobutanoic acid (PFBA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorodecanesulfonate (PFDS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorodecanoic acid (PFDA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorododecanoic acid (PFDoA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluoroheptanesulfonate (PFHpS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluoroheptanoic acid (PFHpA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorohexanesulfonic acid (PFHxS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorohexanoic acid (PFHxA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorononanesulfonate (PFNS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorononanoic acid (PFNA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorooctanesulfonic acid (PFOS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorooctanoic acid (PFOA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorooctansulfonamide (FOSA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluoropentanesulfonate (PFPeS)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluoropentanoic acid (PFPeA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorotetradecanoic acid (PFTeDA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluorotridecanoic acid (PFTrDA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Perfluoroundecanoic acid (PFUdA)	ND	35000		ng/Kg	1	8/11/2023 11:20 AM
Surr: MFPBA	196	50-150	S	%Rec	1	8/11/2023 11:20 AM
Surr: M5PFPeA	150	50-150	S	%Rec	1	8/11/2023 11:20 AM
Surr: M3PFBS	127	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M2-4:2FTS	68.4	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M5PFHxA	76.1	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M3 GEN X	53.6	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M5PFHpA	72.3	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M3PFHxS	89.7	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M2-6:2FTS	97.8	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M8PFOA	88.3	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M9PFNA	96.1	50-150		%Rec	1	8/11/2023 11:20 AM

RTI Laboratories, Inc. - Analytical Report

WO#: 2307540

Date Reported: 8/11/2023
Original

Client:	Sprinturf	Collection Date:	7/19/2023 12:00:00 AM
Project:	Sprinturf sample		
Lab ID:	2307540-001	Matrix:	Solid
Client Sample ID:	Black Solid		

Analysis	Result	RL	Qual	Units	DF	Date Analyzed
Surr: M8PFOS	94.0	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M2-8:2FTS	173	50-150	S	%Rec	1	8/11/2023 11:20 AM
Surr: M6PFDA	144	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: D3-N-MeFOSAA	58.2	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: D5-N-EtFOSAA	124	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M7PFUdA	69.8	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M8FOSA	54.1	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: MPFDoA	104	50-150		%Rec	1	8/11/2023 11:20 AM
Surr: M2PFTeDA	62.4	50-150		%Rec	1	8/11/2023 11:20 AM

DEFINITIONS:

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known amount of target analytes to a specified amount of clean matrix and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: A duplicate LCS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

L+: LCS Failed High

L-: LCS Failed Low

MBLK: Method Blank; a sample of similar matrix that does not contain target analytes or interference that may impact the analytical results and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, used to assess and verify that the analytical process is free of contamination.

MDL: Method Detection Limit; The lowest concentration of analyte that can be detected by the method in the applicable matrix.

Mg/Kg or mg/L: Units of part per million (PPM) – milligram per Kilogram (W/W) or milligram per Liter (W/V).

MS: Matrix Spike; prepared by adding a known amount of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: A duplicate MS sample, used to calculate both Accuracy (%REC) and Precision (%RPD)

% REC: Percent Recovery of a known spike (SPK); a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration (SPK) added to the sample. This is compared to the Low Limit and High Limit.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration. This is compared to the RPD Limit.

PL: Permit limit; Not included on all reports. Used primarily for wastewater discharge permits.

PQL: Practical Quantitation Limit; The lowest verified limit to which data is quantified without qualifications. Analyte concentrations below PQL are reported either as ND or as a number with a "J" qualifier.

Qual: Qualifier that applies to the analyte reported

RL: Reporting Limit: See PQL

SPK: Spike; used in the QC section for both SPK Value and SPK Ref Val

Ug/Kg or ug/L: Units of part per billion (PPB) – microgram per Kilogram (W/W) or microgram per Liter (W/V).

QUALIFIERS:

*X: Reported value exceeds the maximum allowed concentration by regulation or permit

B/v: Analyte detected in the associated Method Blank at a concentration > RL.

E: Analyte concentration reported that exceeds the upper calibration standard. Greater uncertainty is associated with this result and data should be considered estimated.

H/@: Holding time for preparation or analysis has been exceeded

J/n: Analyte concentration is reported, and is less than the PQL and greater than or equal to the established MDL. Greater uncertainty is associated with this result and data reported is estimated. These analytes are not routinely reviewed nor narrated as to their potential for being laboratory artifacts.

m/M: Manual Integration used to determine area response

ND/t: Analyte concentration is less than the Reporting Limit.

P: Second column RPD exceeds 40%

R: % RPD exceeds control limits

S/Q: % REC exceeds control limits

T: MBLK result is greater than 1/2 of the LOQ

U: The analyte concentration is less than the DL.

\: Laboratory Control Sample (LCS) recovery outside of acceptable range

/: Matrix Spike (MS) recovery outside of acceptable range

Y: CCV % REC exceeds control limits

Z: ICV % REC exceeds control limits



CHAIN OF CUSTODY

PAGE	OF
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RTI LABORATORIES

Environmental Sciences Division

31628 Grandale Street
Lynch Mt, 48150

Materials Testing Division

3000 Industrial Road
Lynch Mt, 48150

PHONE: (734) 422-8000
FAX: (734) 422-5342
www.rtiab.com

RTI WORK ORDER NO:

2307540

Please Include Email Address of Report Recipient !!!

SUBMITTING COMPANY			REPORT TO (Name): Seth Fiano			BILL TO:		
PROJECT NAME: X ST JRSUCA ACADEMY			COMPANY: Top Choice Turf			COMPANY:		
PROJECT #			ADDRESS: 3610 W. Crawford Ave.			ADDRESS:		
SAMPLING LOCATION (STATE OF COUNTRY)			CITY, STATE, ZIP: Dunbar, PA 15431			CITY, STATE, ZIP:		
SPECIAL INSTRUCTIONS / COMMENTS			PHONE: 724-803-0377			P.O. NUMBER:		
			EMAIL (IF AVAILABLE): s.fiano@topchoiceturf.com					
SAMPLER'S PRINTED NAME:			SAMPLER'S SIGNATURE:					

ITEM NUMBER	SAMPLE ID	DATE SAMPLED	LAB. ANALYSIS (See back of form)	MATRIX CODE (See back of form)	NBR OF BOTTLES	NBR OF CONTAINERS AND PRESERVATIVES							TESTS REQUESTED	pH Accompanied? Y/N (Lab only)	COMMENTS Method of Preservation HGT Sample Notation Additional Sample Description As Volume, etc.	
						None	HCL	HNO ₃	H ₂ SO ₄	NaOH	Methanol	Ice				
1	Black Solid	7-19-23		SD	1											
2																
3																
4																
5																
6																
7																
8																
9																
10																

Requisitioned By: SETH FIANO	Date: 7/20/23	Time: 11:20A	Received By: <i>[Signature]</i>	Date: 7-20-23	Time: 10:15
Requisitioned By:	Date:	Time:	Received By:	Date:	Time:
Requisitioned By:	Date:	Time:	Received By:	Date:	Time:

REPORT TRANSMITTAL DESIRED:			
<input type="checkbox"/> HARDCOPY (extra cost)	<input type="checkbox"/> FAX	<input type="checkbox"/> EMAIL	<input type="checkbox"/> ONLINE
ALL REPORTING IS VIA THE RTI FLASHPOINT ONLINE SYSTEM UNLESS OTHERWISE SPECIFIED			
FOR LAB USE ONLY			
Number of samples		On Wet lot?	
Comments			

TURNAROUND DESIRED:	Standard <input type="checkbox"/>	RUSH: Next BD <input type="checkbox"/> 2nd BF <input type="checkbox"/> 3rd BF <input type="checkbox"/>
Note: RUSH requests will incur surcharges!		

Distribution: White - Lab - Pink - Field		See reverse side for Laboratory Terms and Conditions of Service	
MATRIX CODES:	A = AIR SD = SOLID	GW = GROUNDWATER SV = SOLVENT WASTE	LIQ = LIQUID W = WATER WV = WASTE WATER SW = SURFACE WATER S = SOIL

From:

ORIGIN ID:TD2A (724) 802-0977
SETH JAMES FIANO

3610 W CRAWFORD AVE

DUNBAR, PA 15431
UNITED STATES US

SHIP DATE: 19JUL23
ACTWGT: 6.40 LB
CAD: 6992711/SSF02422
DIMS: 11x8x7 IN

BILL CREDIT CARD

TO **ARMANDO FLORES**
RTI LABORATORIES, INC
31628 GLENDALE ST

LIVONIA MI 48150

(734) 422-8000 X 202

REF:

DEPT:



TRK# 7813 7131 7269
0201

THU - 20 JUL 10:30A
PRIORITY OVERNIGHT

66 CFAA

48150
MI - US DTW





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TopChoice Turf LLC

2640 West Crawford Avenue, Dunbar, Pennsylvania 15424

PHONE 724 802 0977

EMAIL sfiano@topchoiceturf.com

[GET A QUOTE](#)

Subject: Re: Complete the COC

From: Seth Fiano <sfiano@topchoiceturf.com>

Date: 07/27/2023, 2:24 PM

To: Armando Flores <aflores@rtiia.com>

Please Note. Company name is Sprinturf. If you need anything else please let me know. Thank you

Get Outlook for Android

From: Armando Flores <aflores@rtiia.com>

Sent: Monday, July 24, 2023 1:05:55 PM

To: Seth Fiano <sfiano@topchoiceturf.com>

Subject: Complete the COC

Hello,

Attached is a Chain of Custody (COC) I created with the available info I had. Please complete the COC with sampling date/time, project name and signature. Return the COC to me so we can begin the analysis.

Thank you.

Armando Flores
Sample Custodian

RTI Laboratories, Inc.

31628 Glendale Street

Livonia, MI 48150

aflores@rtiia.com

(O) (734) 422-8000 ext. 202

(F) (734) 422-5432



RTI LABORATORIES

Scientific Solutions for Your Success!

Attachments:

TopChoice Turf COC.pdf

751 KB

Subject: RE: Complete the COC

From: Grayson Anderson <ganderson@sprinturf.com>

Date: 07/27/2023, 2:43 PM

To: Armando Flores <aflores@rtlab.com>

See attached additional information filed out

Regards,

Senior Project Manager

Grayson Anderson

(843) 648-0411

146 Fairchild St, Suite 150

Daniel Island, SC 29492

ganderson@sprinturf.com

Handwritten signature of Grayson Anderson

aflores@rtlab.com

From: Armando Flores <aflores@rtlab.com>

Sent: Thursday, July 27, 2023 2:34 PM

To: Grayson Anderson <ganderson@sprinturf.com>

Subject: Complete the COC

WARNING: This email originated from the Internet. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

Attached is a Chain of Custody (COC) I created with the available info I had. Please complete the COC with sampling date/time, project name and signature. Return the COC to me so we can begin the analysis.

Thank you.

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