# EXHIBIT 36





# **Analytical Report**

### **TACONIC**

Analysis of PFOA in Water Samples

Exygen Report No. L0003924

# Testing Laboratory

Exygen Research 3058 Research Drive State College, PA 16801

### Requester

Tim Kosto TACONIC 136 Coonbrook Road Petersburgh, New York, 12138 Phone: 518-658-3202

11/2004

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### 1 Introduction

Results are reported for the analysis of perfluorocctanoic acid (PFOA) in wastewater samples received at Exygen from Tim Kosto at TACONIC. The Exygen project number assigned to the samples is L0003924. Table I lists the target analytes quantitated for the samples.

Table I. Target Analytes for Quantitation

<u>Parameter</u>	<u>Acronym</u>	<u>Formula</u>
Perfluorooctanoic acid	PFOA	C <sub>7</sub> F <sub>15</sub> COOH

### 2 Sample Receipt

Four samples were received at Exygen in 500 mL clear plastic bottles. A copy of all sample login information is presented in Attachment A.

The samples were received on 11/23/04. The samples were shipped on ice via UPS. The samples were stored refrigerated from time of receipt until analysis.

## 3 Methods - Analytical and Preparatory

### 3.1 Sample Preparation

Solid phase extraction (SPE) was used to prepare the samples for LC/MS/MS analysis. A forty milliliter portion of each sample was transferred to a  $C_{18}$  SPE cartridge. The cartridge was eluted with 5 mL of 100% methanol. This treatment resulted in an eight-fold concentration of the samples prior to analysis. A portion of the extract was transferred to autosampler vials and analyzed using electrospray LC/MS/MS.

### 3.2 Sample Analysis by LC/MS/MS

In High Pressure Liquid Chromatography (HPLC), an aliquot of extract is injected and passed through a liquid-phase chromatographic column. Based on the affinity of the analyte for the stationary phase in the column relative to the liquid mobile phase, the analyte is retained for a characteristic amount of time. Following HPLC separation, mass spectrometry provides a rapid and accurate means for analyzing a wide range of organic compounds. Molecules are ionized, fragmented, and detected. The ions characteristic of the compounds are observed and quantitated against extracted standards.

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An HP1100 system interfaced to a Micromass Quattro system was used to analyze the sample extracts for quantitation. A gradient elution through a Jones Chromatography Genesis C-8  $50 \times 2.1 \text{ mm} \times 4 \mu\text{m}$  column was used for separation.

The following gradient was performed:

Mobile Phase (A): Mobile Phase (B):	2mM Amr Methanol	nonium Acetate in Water
<u>Time</u>	<u>%A</u>	<u>%B</u>
0.0	60	40
0.4	60	40
1.0	10	90
7.0	10	90
7.5	0	100
9.0	ο.	100
9.5	60	40
13.5	60	40
14.0	60	40

The following parameters were used for operation of the mass spectrometer:

Parameter	Setting
Ionization Mode	Electrospray
Polarity	Negative
Transitions Monitored	413->369 (PFOA)
Gas Temperature	350°C
Drying Gas (N2)	7.0 L/min

### 4 Analysis

### 4.1 Calibration

A 7-point calibration curve was analyzed throughout the analytical sequence for PFOA. The calibration points were prepared at 0, 25, 50, 100, 250, 500, and 1000 ng/L (ppt) for LC/MS/MS analysis. Calibration standards are prepared using the same SPE procedure used for samples. The instrument response versus the concentration was plotted for each point. Using linear regression with 1/x weighting, the slope, y-intercept and coefficient of determination ( $r^2$ ) were determined. A calibration curve is acceptable if  $r^2 \ge 0.985$ .

For the results reported here, calibration criteria were met. The calibration curves are included in the raw data in Attachment C.

### 4.2 Surrogates

Surrogates were not used in this study.

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### 4.3 Laboratory Control Spikes

Laboratory control spikes in the analytical set were prepared by adding a known concentration of the analyte to laboratory water. Laboratory control spikes are used to assess method accuracy. The laboratory control spikes must show recoveries between 70-130% or the data is, rejected. For the results reported here, the laboratory control spikes were within the acceptable range.

### 4.4 Matrix Spikes

A matrix spike was prepared for each sample in the analytical set by adding a known concentration of the target analyte to a separate sample. Matrix spikes are used to assess method accuracy in the matrix. The matrix spikes should show recoveries between 70-130%. For the results reported here the matrix spike for 04-10-03A,B was within the acceptable range. For the other three samples, 04-10-01A,B, 04-10-02A,B and 04-10-04, the amount of PFOA found in the sample greatly exceeded the spiking level and an accurate recovery could not be calculated.

### 4.5 Sample Related Comments

Each sample was extracted in duplicate and analyzed. Duplicate sample results are reported along with the sample results in Attachment B.

### 5 Data Summary

Please see Attachment B for a detailed listing of the analytical results. Results are reported in parts per billion (ng/mL) for the analyte, PFOA, on an as-received basis.

# 6 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen. Hardcopy data is stored for a minimum of five years. The client will be notified 30 days prior to the disposal of hardcopy data.

# 7 Attachments

- 7.1 Attachment A: Chain of Custody
- 7.2 Attachment B: Analytical Results
- 7.3 Attachment C: Raw Analytical Data

8	Signatures	
	Darenfisha	12/21/04
	Karen Risha, Principal Investigator	Date .
	O.L.M. Flahely Vice President	13/21/09
	John M. Flaherty, Vice President	Date

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3058 Research Drive State College, PA 16801 Phone: 814-272-1039 Fax: 814-231-1580

True

True

True

True.

Conform COC Sample:

Conform COC:

Conform Sample:

Conform Request:

Login

Login Group: L0003924

Login #: Project: 4034 P0001069

Company Name: TACONIC

Submitted By: Login Type: Tim Kosto

Login Type: Started:

Due Date:

Immediate Receipt of Samples

Started: Date Start: True 11/23/2004 12/07/2004

Received Date: Received By: 11/23/2004 Ammerman, Mark

Spread Sample:

Label:

Exygen SD/PI:

Risha, Karen

Project Title/Type: Analysis of APFO in Water Samples by LCMSMS / ROUTINE

Login Notes: Conform Notes:

Packages / Containers

. Package	Carton	Mail Date / Condition	Shipper /_ID	Temp. Control/Temp.	Direction / Handled By
PK0004742		11/23/2004 2:08:55PM & Contents Uncompromised	UPS 1Z1207900145335324	Wet Ice 1.2	, RECEIVED Ammerman, Mark
Container#	Gross Weight	pH Container Type	Preservative	MfgLot	Mfg. ID
C0051125	590.40 g	500 ml Clear Plastic Narrow	NONE		•
C0051126	576.90 g	500 ml Clear Plastic Narrow	NONE ·		•
C0051127	533.80 g	500 ml Clear Plastic Narrow	NONE		
C0051128	573.30 g	500 ml Clear Plastic Narrow	NOŅE		•
C0051129	560.80 g	500 ml Clear Plastic Narrow	NONE.		
C0051130	551.30 g	500 ml Clear Plastic Narrow	NONE.		
C0051131	599.80 g	500 ml Clear Plastic	. NONE	•	

11/23/2004 Login.rpt Report Version: Nov 8 2004 1:17PM

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Instance:

101322031

# Login

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Sample ID L0003924-0001		<u>Matrix</u> <u>Frac</u> IQUID Wa				Date Sampled I 11/22/2004	Date Received * 11/23/2004	Date Due 12/07/2004
**	C0051125 C0051126							
L0003924-0002		IQUID Wa	ter 04-10-02	2		11/22/2004	11/23/2004	12/07/2004
	C0051127 . C0051128,							
L0003924-0003		IQUID Wat	ter 04-10-03	•		11/22/2004	11/23/2004	12/07/2004
	C0051129 C0051130		<b>.</b>		. '42'	e. S		
L0003924-0004	C0051131	IQUID Wa	er 04-10-04		· :	11/22/2004	11/23/2004	12/07/2004

11/23/2004 Login.rpt

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Instance:

R0132203



# CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

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Page of

PROJECT	PROJECT INFORMATION									ANALYSES REQUESTED
Client (ni	ess			ı	Proje	ct M	anager (Na	me & E-ma	Project Manager (Name & E-mail Address):	
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Fax: 518 - 65	8-32		3		P.O. #:	P.O. #:		CARD		
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ExyLIMS#	Client Sample Identification	ication	Collection Date	Collection Collection Date Time	Grab		Specify Matrix	ix Comments	nts	
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AB USE ONLY						1				
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Relinquished by	be by	Date	Time		Rec	Received by	by		Date , Time	
TIM Kg	Koro	11/22/11	4:45 RM	H.					m/52/11	Laboratory Report Options:  Sample results only
	VALUE OF THE PARTY									Add case narrative
		,			LABU	LAB USE ONLY				Add calibration summary
OTHER IN	OTHER INFORMATION					TTTT OF THE TOTAL				Add raw data Other

2FV. 6-04 000651 22 November 2004

Mark Ammerman Exygen Research 3048 Research Drive State College, PA 16801

Dear Mark,

Please find enclosed seven sample bottles containing material for 4 PFOA analyses each in duplicate. The three samples which include duplicates, labeled A and B were each taken consecutively from the sampling location. You may take a sample from each bottle for the duplicate analysis or if you prefer, take both samples from one bottle and discard the other sample bottle.

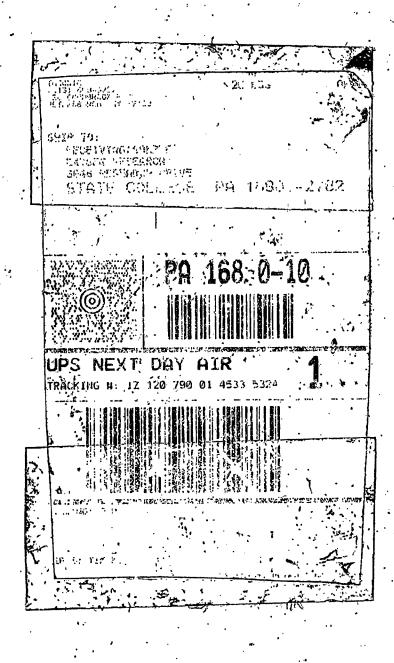
The duplicate samples are:

04-10-01A and 04-10-01B 04-10-02A and 04-10-02B 04-10-03A and 04-10-03B

Sample 04-10-04 does not have a duplicate. Thank you for your assistance.

Yours,

Timothy J. Kosto II



В





# **Summary of PFOA in Water Samples**

Sample ID	Analyte Found ppb (ng/mL) PFOA	
04-10-01A,B	117 BIRG#4 dispersion  116 BIRG#4 (AFA, WELL #2)	
04-10-01A,B*	116 Swell Chin	
04-10-02A,B	1527 and well (aff well 4)	
04-10-02A,B*	148. Sing # -	j,
04-10-03A,B	2.30 } Bidg # 6 well (A.KA. well#3	
04-10-03A,B*	2.07	
04-10-04	13700	
04-10-04*	14100	•

\*Laboratory Duplicate

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# **Recovery Summary for PFOA in Water Samples**

D	F	n	Δ
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<u> </u>			FFUA	
Sample Description	Amount Spiked (ng/mL)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)
04-10-01A,B 5 ng/mL Spike	5	117	120	۸
04-10-02A,B 5 ng/mL Spike	5	152	154	^
04-10-03A.B 5 ng/mL Spike	5 .	2.30	<b>7.75</b> .	109
04-10-04 5 ng/mL Spike	5	13700	· -14100	^

<sup>^</sup>Sample residue exceeded the spiking level significantly; therefore, an accurate recovery cannot be calculated.

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