NPDES Compliance Sampling Inspection Report

Gloucester County Utilities Authority Sewage Treatment Plant

2 Paradise Road
West Deptford Twp, NJ 08066

NPDES Permit #: NJ0024686

Inspection Dates: May 8-9, 2024

Report Prepared by:

Hillenbrand, Molly Digitally signed by Hillenbrand, Molly
Date: 2024.07.02 08:32:29 -04'00'

Molly Hillenbrand, Life Scientist

Report Approved by:

PHILIP COCUZZA Digitally signed by PHILIP COCUZZA
Date: 2024.07.02 08:18:33 -04'00'

Phil Cocuzza, Chief
Monitoring Operations Section

1.0 OBJECTIVE

On May 8 - 9, 2024, at the request of the New Jersey Department of Environmental Protection (NJDEP), the United States Environmental Protection Agency (USEPA) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Sampling Inspection (CSI) at the Gloucester County Utilities Authority Sewage Treatment Plant (GCUA STP) in West Deptford Twp, New Jersey (NJ). The objective of the CSI was to gather information necessary to determine compliance with the requirements and limitations of the New Jersey Pollution Discharge Elimination System (NJPDES) Permit No. NJ0024686. The permit became effective on January 1, 2022, and expires on December 31, 2026.

2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency
Molly Hillenbrand, Lead Inspector
Hillenbrand.molly@epa.gov, (732) 321-4452
Thuan Tran, Physical Scientist

New Jersey Department of Environmental Protection
Robert Siracusa
Environmental Specialist 2
Cell: (609) 433-3678
Office: (856) 614-3655

Gloucester County Utilities Authority STP
John J. Vinci SR; Executive Director
cell: (609) 254-4795 x102
office: (856)-423-3500

Edward Bowman; Manager of Operations
Office: (609) 254-4795 x 104
Cell: (609) 352-0374

John Dabback, Laboratory Manager

Dana Craft, Assistant Laboratory Manager

Joe Mariana, Facilities Supervisor

3.0 FACILITY DESCRIPTION

3.1 General Information

Gloucester County Utilities Authority (GSUA) Sewage Treatment Plant (STP) is located at 2 Paradise Road, West Deptford Township, NJ 08066. GCUA STP accepts and treats wastewater from industrial, commercial, and residential sources. Wastewater is received from 16 municipalities in Gloucester County (townships of Deptford, East Greenwich, Elk, Mantua, Monroe, Washington, West Deptford, Woodbury City and the boroughs of Clayton, Glassboro, National Park, Paulsboro, Pitman, Wenonah, and Westville). Additionally, GCUA STP has an approved pretreatment program serving seven categorical industrial users, five significant non categorical industrial users as well as 4 other regulated industrial users. The estimated industrial contribution is 6.68% of the current GCUA STP permitted flow of 24.1 Million Gallons per Day (MGD), and 5.97% of the potential GCUA STP permitted flow of 27.0 MGD.

GCUA STP is categorized under Standard Industrial Classification (SIC) as 4952 – Sewerage Systems and under North American Industry and Classification System (NAICS) as 221320 – Sewage Treatment Facilities. GCUA STP employs 52 employees and operates 24/7 with shift hours from 7am-3pm, 3pm-11pm, and 11pm- 7am.

3.2 Process Information

Incoming wastewater from residential, commercial, and industrial sources is pumped to the treatment plant. Due to storms in March 2024, the mechanical bar screens and cyclone grit chambers are bypassed. Preliminary treatment is provided through an aerated grit tank that allows grits to settle out followed by a manual bar screen manned 24/7 to remove rags and large materials. Following preliminary treatment, wastewater is distributed into two primary clarifiers for phase separation. From the primary clarifiers, the effluent is directed to six aeration chambers that operate primarily in plug flow mode. The Mixed Liquor Suspended Solids (MLSS), generated from the activated sludge process, flows from the aeration chambers, over a rectangular weir, and a polymer is added in the mixing zone. The MLSS is distributed to four final clarifiers for phase separation. Sludge from the final clarifiers may be returned to the aeration chambers as Returned Activated Sludge (RAS) or pumped to the mixing chambers, followed by the gravity belt and blend tanks as Waste Activated Sludge (WAS). The effluent from the clarifiers continues to a mixing station in which sodium hypochlorite is added. The effluent continues to a parshall flume equipped with a stilling well. The flow through the parshall flume is monitored by an ultrasonic flow sensor in the stilling well. Following the parshall flume, the effluent freefalls into an effluent receiving pit, then continues through a 0.5-mile discharge pipe which acts as a sodium hypochlorite

contact chamber. The effluent is discharged into the Delaware River via submerged outfall 001A.

The screenings collected from the manual bar screen are disposed of via landfill. Sludge and Grease skimming from the primary treatment is transferred to the sludge gravity thickener tanks (primary and secondary) and thickened to approximately 4% solids. The thickened sludge can then be directed to the sludge blend tanks in which the thickened primary and waste activated sludge are blended. The blended sludge is distributed to two egg-shaped anaerobic sludge digestors. The digested sludge is distributed to the belt filter presses (BFP) and dewatered to approximately 20% solids. From the BFP, the sludge cake is collected and disposed of via landfill.

3.3 Facility Self-Monitoring Information

For permit compliance, the facility maintains two automatic composite samplers at designated monitoring locations for collection of 24-hr composite samples. On-site grab samples are collected by the GCUA STP's laboratory and analyzed for pH, temperature, dissolved oxygen, chlorine produced oxidants (CPO) and fecal coliform. Fecal coliform and Chlorine produced oxidant samples are collected at the West Deptford Energy Stations intake structure prior to DSN 002A.

In coordination with Analytical Lab Services (ALS), Middletown, PA, composite samples for 5-day Carbonaceous Biochemical Oxygen Demand (CBOD5), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Oil & Grease (O&G), Ammonia (NH3), Nitrate (NO3-), Phosphorous, metals, Semi-Volatile Organic Compounds (SVOC) and grab sample for Volatile Organic Compounds (VOC) are collected. GCUA STP's analyses certified samples in-house (laboratory EPA ID: NJ00035, lab certification # 08354). For ALS samples a courier collects and transports the samples to the ALS laboratory for analyses (EPA lab ID: PA00102, Certification # PA010).

4.0 EPA SAMPLING/INSPECTION ACTIVITIES

4.1 Sampling Activities

An ISCO automatic composite sampler was setup at the effluent (Outfall 001) monitoring location. The automatic sampler was packed with ice to ensure sample preservation and programed to collect 96 liquid samples during the 24-hour sampling period. The 24-hour composite sample was collected and analyzed for Total Suspended Solids (TSS), five-day Carbonaceous Biological Oxygen Demand ($CBOD_5$), Total Dissolved Solids (TDS), Ammonia, Nitrate, Total Phosphorous, Arsinic (As), Copper (Cu), Chromium (Cr), Lead (Pb), Nickel (Ni), Selenium (Se), Lead (Pb), and Zinc (Zn). Grab samples were collected for Oil & Grease (O&G), Volatile Organic Compounds (VOCs), and Per- and Polyfluorinated Substances (PFAS). Grab composite samples were collected at time intervals for Semi-Volatile Organic Compounds

(SVOC). On-site grab samples were collected at the effluent receiving basin and analyzed for pH, Dissolved Oxygen (DO), and Temperature.

Grab samples for CPO and Fecal coliform were collected at the designated monitoring location designated at West Deptford Energy Station Intake Structure prior to WDES's DSN 002A.

In addition, an ISCO automatic composite sampler was setup at the influent monitoring location. The automatic composite sampler was packed with ice to ensure sample preservation and programed to collect 96 sample liquids during the 24-hour sampling period. The 24-hour composite sample was collected and analyzed for $CBOD_5$ and TSS.

All sample containers, preservation techniques and holding times were in accordance with US EPA requirements specified in 40 CFR Part 136. Signed and dated custody seals were placed across the lids and along the sides of the sample containers. The custody sealed sample containers were placed inside plastic sample bags and sealed. All samples were transported on ice to the USEPA Laboratory in Edison, New Jersey for analysis. A chain of custody form recorded sampling and handling activity.

The facility provided the flow data; GCUA STP instrumentation was last calibrated on February 28, 2024.

The facility representative declined the EPA offer for split samples.

4.2 Inspection Activities

A NPDES CSI was conducted at Gloucester County Utilities Authority STP in West Deptford Twp, NJ 08066 on May 8 – 9, 2024. The inspectors met with John J. Vinci SR, GCUA Executive Director; Edward Bowman, Manager of Operations; John Dabback, Lab Manager; Dana Craft, Assistant Lab Manager; Joe Mariana, Facilities Supervisor; and Robert Siracusa, Environmental Specialist 2, NJDEP. Inspector credentials were presented, and contact information was exchanged. Inspectors explained to the facility's representatives that the reason for the inspection was to determine if the facility is in compliance with their NPDES permit, NJ0024686.

A physical inspection occurred, assisted by facility staff, to observe and evaluate the wastewater treatment process, sampling and flow monitoring equipment, effluent and influent monitoring locations, and sampling procedures. Observations and concerns were communicated to facility staff throughout the inspection and reiterated during the closing conference. Inspection findings observed through the facilities physical inspection are listed in Section 6.2.

4.3 Deviations and/or Environmental Conditions

Due to flooding in March 2024 the incoming influent bypasses the mechanical bar screen and cyclone grit chambers. The flow is currently being bypassed to an aerated grit tank followed by a manual bar screen. At the time of inspection, construction was ongoing to reopen the headworks building.

5.0 ANALYTICAL RESULTS

Gloucester County Utilities Authority STP
Outfall 001 A
May 8-9, 2024

Parameter	Location	Units	Permit Limit	EPA Result
Flow	Eff.	MGD	---	20.952
$CBOD_5$	Inf.	mg/L	Monitor	195
$CBOD_5$ ***	Eff.	mg/L	25 (Monthly Average) 40 (Weekly Average)	3.18
$CBOD_5$ % removal ***	---	%	≥89.25 (Monthly Average Minimum)	98.37%
$CBOD_5$ loading ***	Eff.	Kg/day	2143 (Monthly Average) 3215 (Weekly Average)	253
TSS ***	Inf	mg/L	Monitor	224
TSS ***	Eff.	mg/L	30 (Monthly Average) 45 (Weekly Average)	U
TSS % Removal ***	---	%	≥85 (Monthly Average Minimum)	95.54%
TSS Loading ***	Eff.	Kg/day	2736 (Monthly Average) 4104 (Weekly Average)	913.39 *
Total Dissolved Solids	Eff.	mg/L	1250 daily maximum	791 mg/l
Nitrogen (Ammonia) Total (as N) ***	Eff	mg/L	35 (Monthly Average)	40.9 mg/L
Nitrogen, Nitrate Total (as N)	Eff	mg/L	Report	0.0540
Phosphorous, Total as P	Eff.	mg/L	Report	3.37
Metals: Arsenic	Eff.	ug/L Gr/Day	1394 (Daily Maximum) 127159	U
Selenium	Eff.	ug/L Gr/Day	55 (Daily Maximum) 4995	29 ug/L 2303 Gr/Day
Nickel	Eff.	ug/L Gr/Day	36 (Daily Maximum) 35119	U
Zinc	Eff.	ug/L Gr/Day	385 (Daily Maximum) 35119	24.4 ug/L 1938 Gr/Day
Lead	Eff.	ug/L	7.89 (Daily Maximum)	U

Parameter	Location	Units	Permit Limit	EPA Result
Chromium	Eff.	ug/L	Report	U
Copper	Eff.	ug/L	112 (Daily maximum)	U
NVOAs: Bis(2-ethylhexyl) Phthalate	Eff.	ug/L	12 (Daily maximum)	U
1,4-dioxane	Eff.	ug/L	State Requested	36 J
PFAS	Eff.	ng/L	State Requested	------
PFBS	Eff.	ng/L	---	190 J
PFHpA	Eff.	ng/L	---	9.86
PFHxA	Eff.	ng/L	---	41.1
PFHxS	Eff.	ng/L	---	4.77 L
PFNA	Eff.	ng/L	---	48.2
PFOA	Eff.	ng/L	---	27.8
PFOS	Eff.	ng/L	---	6.49 L
6:2 FTS	Eff.	ng/L	---	33.9 K
VOAs: Tetrachloroethylene	Eff.	ug/L	Report	U
Chloroform	Eff.	ug/L	333 (Daily maximum)	U
1,2-Dichloroethane	Eff.	ug/L Gr/Day	Report	U
Trichloroethene	Eff.	ug/L Gr/Day	Report	U
Oil and Grease	Eff.	mg/L	10 Monthly Average 15 Daily Maximum	U
Coliform, Fecal General ***	Eff.	#/100 ml	200 (Monthly Geometric Average) 400 (Weekly Geometric)	230
pH	Eff.	SU	6.0-9.0	7.5
Temperature	Eff.	°C	Report	20.5
Chlorine Produced Oxidants	Eff.	mg/L	2.0 (Daily maximum)	1.08
Dissolved Oxygen (DO)	Eff.	mg/L	4.0 Daily avg Min	1st run: 6.5 2nd run: 6.3 Average: 6.4

U- The analyte was not detected at or above the Reporting Limit.
J- The identification of the analyte is acceptable; the reported value is an estimate.
K-The identification of the analyte is acceptable; the reported value may be biased high.
L- The identification of the analyte is acceptable; the reported value may be biased low.
*The reporting limits of 10 mg/l was used to calculate the mass loading and percent removal for TSS.

*** Permit limit is an average; EPA result is for a single sample.

6.0 FINDINGS

6.1 Sampling Result Findings

The EPA analytical results obtained during this inspection show the following parameter(s) as being outside of the acceptable limits:

6.1.1 According to the NJPDES Permit the monthly average limitation for Ammonia is 35 mg/L, the EPA analytical result for a single sample was 40.9 mg/L

6.1.2 According to the NJPDES Permit the EPA analytical result for fecal coliforms was 230 per 100 ml. This exceeds the Monthly Geometric Average (200 per 100 ml but is within the Weekly Geometric Average (400 per 100 ml).

6.2 Inspection Findings

In addition to the sampling, an inspection of the facility operations was conducted as discussed in Section 4.2 above. During this inspection the following observations were noted which may contravene the requirements of the permit or the applicable regulations:

6.2.1 Air rising unevenly and dead zones were observed in the aeration chambers. In addition, the MLSS in the aeration chambers was observed to be grey in color. According to 40 CFR 122.41(e): Proper Operation and Maintenance, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit."* In addition, N.J.A.C 7:14A-6.12(a) for Operation, Maintenance, and Emergency Conditions, it states *"A permittee shall, at all times, maintain in good working order and operate the treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of the discharge permit.".*

6.2.2 Oil & Grease samples collected by the facility were collected in 250 ml glass jars. According to 40 CFR 136, approved method, EPA Method 1664, Rev B states, *"Collect approximately one liter of representative sample in a glass bottle following conventional sampling practices".* In addition, according to Part IV section A Monitoring Requirements (b) of the NJPDES permit "*The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136, unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit*".

6.2.3 Pin Floc was observed overflowing the V-notch weirs in the Final clarifiers. According to 40 CFR 122.41(e): Proper Operation and Maintenance, "*The*

permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit." In addition, N.J.A.C 7:14A-6.12(a) for Operation, Maintenance, and Emergency Conditions, it states *"A permittee shall, at all times, maintain in good working order and operate the treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of the discharge permit.".*

7.0 Attachments

Attachment 1: A list of industrial users discharging into GCUA STP.

Attachment 2: A simplified process diagram of GCUA STP.

Attachment 3: USEPA Chain of Custody for the Fecal Coliform sample was submitted to the USEPA Lab on Wednesday, May 8, 2024

Attachment 4: Samples were submitted to the USEPA Laboratory in Edison, New Jersey for analysis on Thursday, May 9, 2024

Attachment 5: USEPA Analytical Data Package was received on Wednesday, May 29, 2024

8.0 Photographs

Photograph #1. An ISCO automatic composite sampler was programmed to collect sample aliquots from the influent monitoring location.

Photograph #2. An ISCO automatic composite sampler was programmed to collect sample aliquots from Outfall 001 discharge monitoring location.

Photograph #4: Dead zones were observed in the aeration chambers.

Photograph #5: Air rising unevenly, and dead zones were observed in the aeration chambers.

Photograph #6. Pin floc was observed overflowing the V-notch weirs from final clarifiers.

7.0 Attachments

IV. INDUSTRIAL INVENTORY

Form AR-2a Industrial Inventory: Categorical Industrial Users [CIUs & NSCIUs]

INDUSTRIAL INVENTORY: CATEGORICAL INDUSTRIAL USERS [CIUs]			
FACILITY NAME	**FACILITY STREET ADDRESS**	**SIC CODE BUSINESS ACTIVITY**	**AVERAGE DAILY FLOW (gpd)**
Automatic Plating, Inc.	3410 Jessup Road Thorofare, NJ 08086	3417 Metal Plating.	Permitted 3,500
Crown Point LLP	4 Paradise Road West Deptford Township Paulsboro, NJ 08066	2911 Refining of crude oils (toppings). Bulk storage of oil products.	Permitted 144,000
Dana Trucking, Inc.	4 Crown Point Road Paulsboro, NJ 08066	4213 Truck & Tank Washing.	Permitted 32,000
Johnson Matthey, Inc. Materials Technology Division	2001 Nolte Drive West Deptford, NJ 08066	3341 Production of precious metal catalysts and chemicals. Refining of residues for recovery of metals.	Permitted 93,600
Johnson Matthey, Inc. Pharmaceutical Division	2003 Nolte Drive West Deptford, NJ 08066	2833 Production of bulk pharmaceutical products.	Permitted 10,000 Daily Max 6,000 Month Avg
Separation and Recovery Systems Operating Company LLC	2 Paradise Road West Deptford, NJ 08066	562119 Centralized Waste Treatment, Multiple Waste Streams.	Permitted 240,000.
Solvey Solexis, Inc.	Crown Point Road & Leonards Lane Thorofare, NJ 08086	2821, 2819, 2869 Production of Polyvinyl Fluoride.	Permitted 216,000
INDUSTRIAL INVENTORY: NON-SIGNIFICANT CATEGORICAL INDUSTRIAL USERS [NSCIUs]			
FACILITY NAME	**FACILITY STREET ADDRESS**	**SIC CODE BUSINESS ACTIVITY**	**AVERAGE DAILY FLOW (gpd)**
NA	NA	NA	NA

Form AR-2b Industrial Inventory: Significant/Major Non-Categorical Industrial Users

INDUSTRIAL INVENTORY: SIGNIFICANT/MAJOR NON-CATEGORICAL INDUSTRIAL USERS			
FACILITY NAME	**FACILITY STREET ADDRESS**	**SIC CODE BUSINESS ACTIVITY**	**AVERAGE DAILY FLOW (gpd)**
B&G Foods Violet Packing Division	123 Railroad Avenue Williamstown, NJ 08094	2030 Canning of fresh tomatoes and peppers	Permitted 244,000 Seasonal
Borough of Glassboro Potable Well #5	1 South Main Street Glassboro, NJ 08028-2592	N/A Discharge Reverse Osmosis Process and Vibration Shear Enhanced Process (VSEP)	Permitted 43,200
Gloucester County Improvement Authority - Solid Waste Complex [Sanitary Landfill]	503 Monroeville Road Swedesboro, NJ	N/A Sanitary Landfill Leachate	Permitted No Limit (Report Only) 41,095 long term flow
Helen Kramer Landfill Site Trust [Former CERCLA Site, Former NJDEP Site, Current PRP Site]	Boody Road Mantua, NJ 08051	N/A Site remediation of closed landfill.	Permitted 173,000
Lipari Landfill Site [CERCLA Site] overseen by US Army, Corps of Engineers	Route 322 Lot260 Block7 Glassboro Mantua Township, NJ	N/A Site remediation of closed landfill	Permitted 288,000

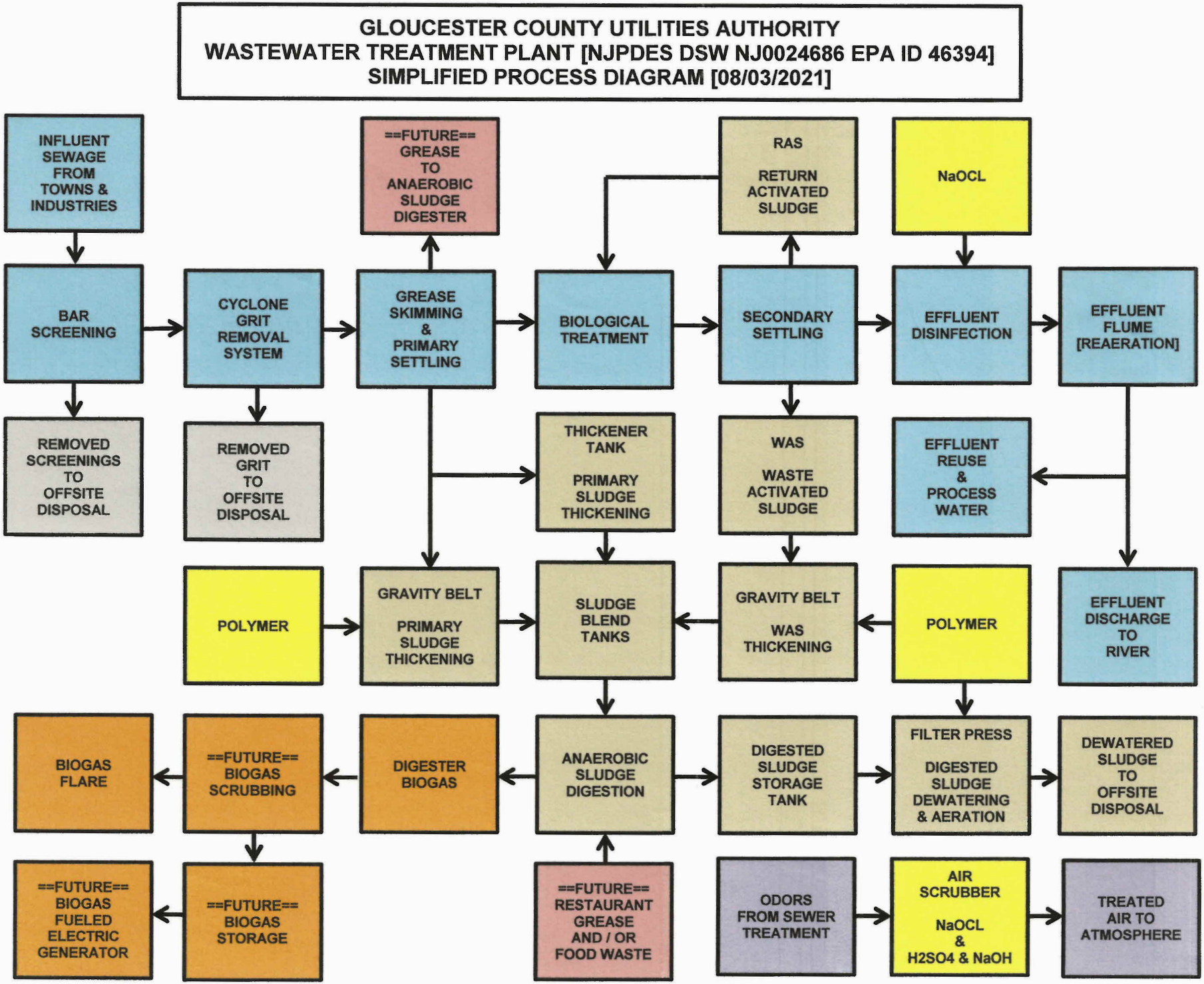
Form AR-2c Industrial Inventory: Other Regulated Industrial Users

INDUSTRIAL INVENTORY: OTHER REGULATED INDUSTRIAL USERS			
FACILITY NAME	**FACILITY STREET ADDRESS**	**SIC CODE BUSINESS ACTIVITY**	**AVERAGE DAILY FLOW (gpd)**
International Paper	33 Phoenix Drive Thorofare, NJ 08086	2653 Corrugated and Solid Fiber Boxes	Permitted 10,500 Month Avg
Kinsley Landfill, Inc. [Closed Sanitary Landfill]	Route 47 & Route 41 Deptford, NJ 08096	N/A Closed sanitary landfill.	Permitted 20,000
NJ Transit Corporation	Route 42 & Atlantic City Expressway Turnersville, NJ	4131 Bus operation and maintenance.	Permitted 14,000 Daily Max 9,000 Month Avg
West Deptford Energy, LLC	3 Paradise Road West Deptford, NJ 08066	N/A Gas fired power generation. Categorical waste permitted under NJDEP DSW permit. Only non-categorical waste to GCUA	Permitted 14 gals per minute Daily Max 20,160 Month Avg

Form AR-2d: Industrial Inventory Modifications

INDUSTRIAL INVENTORY MODIFICATIONS		
FACILITY NAME	**FACILITY STREET ADDRESS**	**REASON FOR MODIFICATION**
Deptford Plating Company, Inc. 3471 Metal Plating	Route 41 & Dein Avenue Deptford, NJ 08096	Deleted from Inventory. Facility ceased operation.
Monarch Environmental 562119 Centralized Waste Treatment, Oil Treatment & Recovery	108 East Lake Road Woodstown, NJ 08098	Deleted from Inventory. This facility was outside the GCUA service area in a non-sewer service part of Woodstown, NJ. The facility was hauling their treated wastewater to GCUA. GCUA no longer accepts hauled waste other than in-county landfill leachate.

Attachment 2: A simplified process diagram of GCUA STP.



Attachment 3: USEPA Chain of Custody for the Fecal Coliform sample was submitted to the USEPA Lab on Wednesday, May 8, 2024

US EPA REGION 2 LABORATORY

Page ____ of ___ pages

CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY ___ GCUA STP

PROJECT LEADER _____ Molly Hillenbrand

PROGRAM: SF ☐ : SITE ID _____ OPERABLE UNIT _____ PROGRAM RESULTS CODE _____

Decision		RCRA ☐	RCRA ENF ☐	NPDES ■	SDWA ☐	AM ☐	CAA ☐	TSCA ☐	OD ☐	FIFRA ☐	CRIMINAL ENF ☐
Unit Code	Y206	D210	D307	B304	C215	B224	A305	L306	B253		

Permit #: NJ0024686

LAB ID/ FIELD ID	# OF CONTERS	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS,	Res CL Checked	Preservative (circle)	Collection Time (24hr clock) Begin	Collection Time (24hr clock) End	Collection Date mm/dd/yy
Outfall 001 (Grab sample)	1	B	☐	1, 290 ml Sterile bottle, Fecal Coliform, Grab 240506/0-01 5/8/24	☐	0, 4		1350	5/8/2024
			☐		☐				
			☐		☐				
			☐		☐				
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			☐		☐				

Comments and Special Requirments

1=H2SO4 pH<2
2=HNO3 pH<2
3=HCl pH<2
4=Na2S2O3
5=NaOH pH>9
6=Ascorbic Acid
8=ZnAc
9=NaOH pH>12
10=NH4Cl

	Time	Date
Person Assuming Responsibility for Sample(s): Molly Hillenbrand	17:38	5/8/24
Relinquished By Molly Hillenbrand / Received By:	17:38	5/8/24
Relinquished By: / Received By:		
Relinquished By: / Received By:		

Matrix:

A=aqueous	F=multiphasic
B=aqueous (chlorinated)	G=solvent
C=soil	H=biota
D=sediment	I=oil
E=sludge	J=other

Survey Complete? Y ☐ N ☐

Direct from Sampling, clutch Isolated. 5/8/24

revised 10/25/2004

Attachment 4: Samples were submitted to the USEPA Laboratory in Edison, New Jersey for analysis on Thursday, May 9, 2024

US EPA REGION 2 LABORATORY

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CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY GCUA STP

PROJECT LEADER Molly Hillenbrand

PROGRAM: SF ☐ : SITE ID _____ OPERABLE UNIT _____ PROGRAM RESULTS CODE _____

Decision	RCRA ☐	RCRA ENF ☐	NPDES ☑	SDWA ☐	AM ☐	CAA ☐	TSCA ☐	OD ☐	FIFRA ☐	CRIMINAL ENF ☐
Unit Code Y206	D210	D307	B304	C215	B224	A305	L306	B253		

Permit #: NJ0024686

LAB ID/ FIELD ID	# OF CONTAINERS	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS,	Res CL Checked	Preservative (circle)		Collection Time (24hr clock) Begin	Collection Time (24hr clock) End	Collection Date mm/dd/yy
Outfall 001 (24 hour Composite)	2	B	☐	2, 1L Plastic Bottle, CBOD5 24 hour Composite	☐	240507-01	0	10:25-	10:10	5/8-9/2024
	1	B	☐	1, 500 ml Plastic Bottle, TSS 24 hour Composite	☑		0	10:25-	10:10	5/8-9/2024
	1	B	☐	1, 500 ml Plastic Bottle, TDS 24 hour Composite	☑		0	10:25-	10:10	5/8-9/2024
	1	B	☐	1, 250 ml Plastic Bottle, Metals 24 hour Composite	☑		0,2	10:25-	10:10	5/8-9/2024
	1	B	☐	1, 250 ml Plastic Bottle, Ammonia & Total Phos 24 hour Composite	☑		0,1	10:25-	10:10	5/8-9/2024
	1	B	☐	1, 125 ml Plastic Bottle, Nitrate 24 hour Composite	☑		0	10:25-	10:10	5/8-9/2024
(24 hr Grab Composite)	3	B	☐	3, 1000L Amber glasss NVOA, 24 hour Composite	☑	-02	0,4	10:45-	12:00	5/8-9/2024
(Grab Samples)	3	B	☐	3, 1000L Clear glass O&G, Grab	☑	-03	0,1		11:50	5/9/2024
	9	B	☐	9, 40 ml vial w/ teplon lined septum, VOA Grab	☑	-04	0,4		12:20	5/9/2024
	1	B	☐	1, 250 ml Polypropylene bottle w/pp caps, PFAS	☑	-05	**0		12:39	5/9/2024
Influent (24 hour composite)	1	B	☐	1, 1L Plastic Bottle, CBOD5 24 hour Composite	☐	-06	0	11:25-	11:10	5/9/2024
	1	B	☐	1, 250 ml Plastic Bottle, TSS 24 hour Composite	☑	-06	0	11:25-	11:10	5/9/2024
Blank	1	B	☐	Blank, 250 ml Polypropylene bottle w/pp caps, PFAS	☑	-07	0		12:38	5/9/2024
Trip Blank	3	B	☐	40 ml vial w/ teplon lined septum, VOA	☑	-08	0,4		12:15	5/9/2024

Comments and Special Requirments

**Metals: As, Cu, Se, Ni, Zn, Pb, Cr, Cu
NVOAs: Bis(2-ethylhexyl)phthalate, 1,4-dioxane
VOAs: Tetrachloroethylene, Chloroform, 1,2-Dichloroethane, Trichloroethene

** Trizma

5/9/24

1=H2SO4 pH<2
2=HNO3 pH<2
3=HCl pH<2
4=Na2S2O3
5=NaOH pH>9
6=Ascorbic Acid
8=ZnAc
9=NaOH pH>12
10=NH4Cl

Note: Chlorine is 1.09

	Person Assuming Responsibility for Sample(s):	Time	Date
	Molly Hillenbrand	15:33	5-09-24
Relinquished By: Molly Hillenbrand	Received By:	15:33	5/9/24
Relinquished By:	Received By:		
Relinquished By:	Received By:		

Matrix:
A=aqueous
B=aqueous (chlorinated)
C=soil
D=sediment
E=sludge
F=multiphasic
G=solvent
H=biota
I=oil
J=other

Survey Complete? Y ☐ N ☐

Direct from Sampling (Chilling for Volatiles) at 5/9/24

revised 10/25/2004

Attachment 5: USEPA Analytical Data Package was received on Wednesday, May 29, 2024

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory
2890 Woodbridge Avenue
Edison , New Jersey 08837
732-906-6886 Phone
732-906-6165 Fax

May 28, 2024

Molly Hillenbrand
Monitoring & Assessment Branch
LSASD/MAB
Edison, NJ 08837

RE: GCUA STP - 2405010

Enclosed are the results of analyses for samples received by the laboratory between 5/8/2024 and 5/9/2024. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 2405010 and contact the laboratory.

Sincerely,

John R. Bourbon
Chief, LSASD/LB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

Project Narrative:

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

For the 624.1 VOA EPA-NPDES in the LCS/LCSD there were a total of 5 analytes that failed the RPD critieria under this method. This is 2 analytes over the allotted 10% analyte failure in the method. The instrument was performing poorly and the holding time was about to expire. There are 0 positive hits for these 5 analytes in the samples, and the lab is confident in the results being reported out. Once instrument issues are resolved, the samples may be run again outside of holding time if the client requests.

Data Qualifier(s):

U- The analyte was not detected at or above the Reporting Limit.
J- The identification of the analyte is acceptable; the reported value is an estimate.
K- The identification of the analyte is acceptable; the reported value may be biased high.
L- The identification of the analyte is acceptable; the reported value may be biased low.
NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

Reporting Limit(s):

The Laboratory was able to achieve the standard laboratory reporting limits, where applicable, for each analyte requested except for the following analyte(s):

NVOA GCMS

The reporting level of 5.00 ug/L was raised to 10 ug/L for the following analyte(s):
Pentachlorophenol
for the following samples:
2405017-02

The reporting level of 5.00 ug/L was raised to 30 ug/L for the following analyte(s):
4,6-Dinitro-2-Methylphenol
for the following samples:
2405017-02

The reporting level of 5.00 ug/L was raised to 50 ug/L for the following analyte(s):
2,4-Dinitrophenol
for the following samples:
2405017-02

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 001(Grab Sample)	2405010-01	Aqueous	05/08/2024 13:50	05/08/2024 17:38
Outfall 001(24 Hour Composite)	2405017-01	Aqueous	05/09/2024 10:10	05/09/2024 15:33
Outfall 001(24 Hr. Grab Composite)	2405017-02	Aqueous	05/09/2024 12:00	05/09/2024 15:33
Outfall 001(Grab Samples)	2405017-03	Aqueous	05/09/2024 11:50	05/09/2024 15:33
Outfall 001(Grab Samples)	2405017-04	Aqueous	05/09/2024 12:20	05/09/2024 15:33
Outfall 001(Grab Samples)	2405017-05	Aqueous	05/09/2024 12:39	05/09/2024 15:33
Influent (24 Hour Composite)	2405017-06	Aqueous	05/09/2024 10:10	05/09/2024 15:33
Blank	2405017-07	Aqueous	05/09/2024 12:38	05/09/2024 15:33
Trip Blank	2405017-08	Aqueous	05/09/2024 12:15	05/09/2024 15:33

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

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Project Number: 2405010

SUMMARY REPORT FOR METHODS

Analysis	Method	Certification	Matrix
624.1 VOA EPA-NPDES	EPA 624.1 SOP C-89 Rev 3.7	NELAP	Aqueous
625.1 SVOA NPDES	EPA 625.1 SOP C-90 Rev 3.9	NELAP	Aqueous
Ammonia [As N]	EPA 350.1 SOP C-80 Rev 2.8	NELAP	Aqueous
Biochemical Oxygen Demand, Carb.	SM 5210B SOP C-21 Rev 2.8	NELAP	Aqueous
Coliform, Fecal	SM9221B,E / SOP B-8 Rev 2.8	NELAP	Aqueous
Metals ICP TAL NPDES/DW	EPA 200.7 SOP C-109 Rev 3.7	NELAP	Aqueous
Nitrate [As N]	EPA 353.2 SOP C-79 Rev 3.7	NELAP	Aqueous
Oil & Grease	EPA 1664A SOP C-126 Rev 1.7	NELAP	Aqueous
Perfluorinated alkyl acids (PFAAs)	EPA EPA 537.1 SOP C-135 Rev 1.4	NELAP	Aqueous
Phosphorus	EPA 365.1 SOP C-68 Rev 2.8	NELAP	Aqueous
Residue, Filterable	SM 2540C SOP C-37 Rev 2.8	NELAP	Aqueous
Residue, Non-Filterable	SM 2540D SOP C-33 Rev 3.8	NELAP	Aqueous

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001(Grab Sample)			**Sample ID: 2405010-01**			
Microbiology, MPN						
Coliform, Fecal	230		1.8	MPN/100 mL	B405033	05/09/2024 16:15
Field ID: Outfall 001(24 Hour Composite)			**Sample ID: 2405017-01**			
Metals ICP						
Arsenic	---	U	8.00	ug/L	B405055	
Chromium	---	U	5.00	ug/L	B405055	
Copper	---	U	10.0	ug/L	B405055	
Lead	---	U	8.00	ug/L	B405055	
Nickel	---	U	20.0	ug/L	B405055	
Selenium	29.0		20.0	ug/L	B405055	
Zinc	24.4		20.0	ug/L	B405055	
Sanitary						
Ammonia [As N]	40.9		1.00	mg/L	B405093	
Biochemical Oxygen Demand, Carb.	3.18		2.00	mg/L	B405042	05/14/2024 14:21
Nitrate [As N]	0.0540		0.0500	mg/L	B405041	05/09/2024 18:08
Phosphorus	3.37		0.500	mg/L	B405060	
Total Dissolved Solids	791		10.0	mg/L	B405047	
Total Suspended Solids	---	U	10.0	mg/L	B405046	
Field ID: Outfall 001(24 Hr. Grab Composite)			**Sample ID: 2405017-02**			
NVOA GCMS						
Acenaphthene	---	U J	5.10	ug/L	B405052	
Acenaphthylene	---	U J	5.10	ug/L	B405052	
Anthracene	---	U	5.10	ug/L	B405052	
Benzo(A)Anthracene	---	U	5.10	ug/L	B405052	
Benzo(A)Pyrene	---	U	5.10	ug/L	B405052	
Benzo(B)Fluoranthene	---	U	5.10	ug/L	B405052	
Benzo(G,H,I)Perylene	---	U	5.10	ug/L	B405052	
Benzo(K)Fluoranthene	---	U	5.10	ug/L	B405052	

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001(24 Hr. Grab Composite)					**Sample ID: 2405017-02**	
NVOA GCMS						
Chrysene	---	U	5.10	ug/L	B405052	
Dibenzo(A,H)Anthracene	---	U	5.10	ug/L	B405052	
Fluoranthene	---	U	5.10	ug/L	B405052	
Fluorene	---	U	5.10	ug/L	B405052	
Indeno(1,2,3-Cd)Pyrene	---	U	5.10	ug/L	B405052	
Naphthalene	---	U J	2.04	ug/L	B405052	
Phenanthrene	---	U	5.10	ug/L	B405052	
1,2,4-Trichlorobenzene	---	U J	5.10	ug/L	B405052	
2,4,6-Trichlorophenol	---	U J	5.10	ug/L	B405052	
2,4-Dichlorophenol	---	U J	5.10	ug/L	B405052	
2,4-Dimethylphenol	---	U J	5.10	ug/L	B405052	
2,4-Dinitrotoluene	---	U	5.10	ug/L	B405052	
2,6-Dinitrotoluene	---	U	5.10	ug/L	B405052	
2,4-Dinitrophenol	---	U J	51.0	ug/L	B405052	
2-Chloronaphthalene	---	U J	5.10	ug/L	B405052	
2-Chlorophenol	---	U J	5.10	ug/L	B405052	
2-Nitrophenol	---	U J	5.10	ug/L	B405052	
3,3'- Dichlorobenzidine	---	U	5.10	ug/L	B405052	
4,6-Dinitro-2-Methylphenol	---	U	30.6	ug/L	B405052	
4-Bromophenyl-Phenylether	---	U	5.10	ug/L	B405052	
4-Chloro-3-Methylphenol	---	U J	5.10	ug/L	B405052	
4-Chlorophenyl-Phenylether	---	U	5.10	ug/L	B405052	
4-Nitrophenol	---	U	5.10	ug/L	B405052	
Bis(-2-Chloroethoxy)Methane	---	U J	5.10	ug/L	B405052	
Bis(2-Chloroethyl)Ether	---	U J	5.10	ug/L	B405052	
Bis(2-Chloroisopropyl)Ether	---	U J	5.10	ug/L	B405052	
Bis(2-Ethylhexyl)Phthalate	---	U	5.10	ug/L	B405052	
Butylbenzylphthalate	---	U	5.10	ug/L	B405052	
Azobenzene	---	U	5.10	ug/L	B405052	

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Project: GCUA STP - 2405010

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Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001(24 Hr. Grab Composite)				**Sample ID: 2405017-02**		
NVOA GCMS						
Diethylphthalate	---	U	5.10	ug/L	B405052	
Dimethyl Phthalate	---	U	2.04	ug/L	B405052	
Di-N-Butyl Phthalate	---	U	5.10	ug/L	B405052	
Di-N-Octyl Phthalate	---	U	5.10	ug/L	B405052	
Hexachlorobenzene	---	U	5.10	ug/L	B405052	
Hexachlorobutadiene	---	U J	2.04	ug/L	B405052	
Hexachlorocyclopentadiene	---	U J	5.10	ug/L	B405052	
Hexachloroethane	---	U J	2.04	ug/L	B405052	
Isophorone	---	U J	5.10	ug/L	B405052	
Nitrobenzene	---	U J	5.10	ug/L	B405052	
N-Nitrosodimethylamine	---	U J	5.10	ug/L	B405052	
N-Nitroso-Di-N-Propylamine	---	U J	5.10	ug/L	B405052	
N-Nitrosodiphenylamine	---	U	5.10	ug/L	B405052	
Pentachlorophenol	---	U	10.2	ug/L	B405052	
Phenol	---	U J	2.04	ug/L	B405052	
Pyrene	---	U	5.10	ug/L	B405052	
1,4-Dioxane	36.0	J	2.04	ug/L	B405052	
Field ID: Outfall 001(Grab Samples)				**Sample ID: 2405017-03**		
GC						
Oil & Grease	---	U	5.68	mg/L	B405099	
Field ID: Outfall 001(Grab Samples)				**Sample ID: 2405017-04**		
VOA GCMS						
Chloromethane	---	U J	5.00	ug/L	B405071	
Vinyl Chloride	---	U J	5.00	ug/L	B405071	
Bromomethane	---	U	5.00	ug/L	B405071	
Chloroethane	---	U	5.00	ug/L	B405071	
Trichlorofluoromethane	---	U	5.00	ug/L	B405071	
1,1-Dichloroethene	---	U	5.00	ug/L	B405071	

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Project: GCUA STP - 2405010

Project Number: 2405010

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001(Grab Samples)				**Sample ID: 2405017-04**		
VOA GCMS						
Methylene Chloride	---	U J	5.00	ug/L	B405071	
Acrylonitrile	---	U J	5.00	ug/L	B405071	
trans-1,2-Dichloroethene	---	U	5.00	ug/L	B405071	
1,1-Dichloroethane	---	U	5.00	ug/L	B405071	
Chloroform	---	U	5.00	ug/L	B405071	
1,1,1-Trichloroethane	---	U	5.00	ug/L	B405071	
Carbon Tetrachloride	---	U	5.00	ug/L	B405071	
1,2-Dichloroethane	---	U	5.00	ug/L	B405071	
Benzene	---	U	5.00	ug/L	B405071	
Trichloroethene	---	U	5.00	ug/L	B405071	
1,2-Dichloropropane	---	U J	5.00	ug/L	B405071	
Bromodichloromethane	---	U	5.00	ug/L	B405071	
cis-1,3-Dichloropropene	---	U J	5.00	ug/L	B405071	
Toluene	---	U	5.00	ug/L	B405071	
trans-1,3-Dichloropropene	---	U	5.00	ug/L	B405071	
1,1,2-Trichloroethane	---	U	5.00	ug/L	B405071	
Tetrachloroethene	---	U	5.00	ug/L	B405071	
Dibromochloromethane	---	U	5.00	ug/L	B405071	
Chlorobenzene	---	U	5.00	ug/L	B405071	
Ethylbenzene	---	U	5.00	ug/L	B405071	
Bromoform	---	U	5.00	ug/L	B405071	
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L	B405071	
1,3-Dichlorobenzene	---	U	5.00	ug/L	B405071	
1,4-Dichlorobenzene	---	U	5.00	ug/L	B405071	
1,2-Dichlorobenzene	---	U	5.00	ug/L	B405071	
Field ID: Outfall 001(Grab Samples)				**Sample ID: 2405017-05**		
PFAAS, LCMS-MS						
11Cl-PF3OUdS	---	U L	3.58	ng/L	B405067	
9Cl-PF3ONS	---	U L	3.58	ng/L	B405067	

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Project: GCUA STP - 2405010

Project Number: 2405010

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001(Grab Samples)				**Sample ID: 2405017-05**		
PFAAS, LCMS-MS						
HFPO-DA	---	U	3.58	ng/L	B405067	
ADONA	---	U	3.58	ng/L	B405067	
NEtFOSAA	---	U	3.58	ng/L	B405067	
NMeFOSAA	---	U	3.58	ng/L	B405067	
PFBS	190	J	3.58	ng/L	B405067	
PFDA	---	U	3.58	ng/L	B405067	
PFDoA	---	U	3.58	ng/L	B405067	
PFHpA	9.86		3.58	ng/L	B405067	
PFHxA	41.1		3.58	ng/L	B405067	
PFHxS	4.77	L	3.58	ng/L	B405067	
PFNA	48.2		3.58	ng/L	B405067	
PFOA	27.8		3.58	ng/L	B405067	
PFOS	6.49	L	3.58	ng/L	B405067	
PFTeDA	---	U	3.58	ng/L	B405067	
PFTrDA	---	U	3.58	ng/L	B405067	
PFUdA	---	U	3.58	ng/L	B405067	
PFPeS	---	U	3.58	ng/L	B405067	
PFNS	---	U	3.58	ng/L	B405067	
PFHpS	---	U	3.58	ng/L	B405067	
PFDS	---	U	3.58	ng/L	B405067	
4:2 FTS	---	U	3.58	ng/L	B405067	
6:2 FTS	33.9	K	3.58	ng/L	B405067	
8:2 FTS	---	U	3.58	ng/L	B405067	
Field ID: Influent (24 Hour Composite)				**Sample ID: 2405017-06**		
Sanitary						
Biochemical Oxygen Demand, Carb.	195		2.00	mg/L	B405042	05/14/2024 14:21
Total Suspended Solids	224		10.0	mg/L	B405046	

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

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Project: GCUA STP - 2405010

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Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Blank			**Sample ID: 2405017-07**			
PFAAS, LCMS-MS						
11Cl-PF3OUdS	---	U	3.47	ng/L	B405067	
9Cl-PF3ONS	---	U	3.47	ng/L	B405067	
HFPO-DA	---	U	3.47	ng/L	B405067	
ADONA	---	U	3.47	ng/L	B405067	
NEtFOSAA	---	U	3.47	ng/L	B405067	
NMeFOSAA	---	U	3.47	ng/L	B405067	
PFBS	---	U J	3.47	ng/L	B405067	
PFDA	---	U	3.47	ng/L	B405067	
PFDoA	---	U	3.47	ng/L	B405067	
PFHpA	---	U	3.47	ng/L	B405067	
PFHxA	---	U	3.47	ng/L	B405067	
PFHxS	---	U	3.47	ng/L	B405067	
PFNA	---	U	3.47	ng/L	B405067	
PFOA	---	U	3.47	ng/L	B405067	
PFOS	---	U	3.47	ng/L	B405067	
PFTeDA	---	U	3.47	ng/L	B405067	
PFTrDA	---	U	3.47	ng/L	B405067	
PFUdA	---	U	3.47	ng/L	B405067	
PFPeS	---	U	3.47	ng/L	B405067	
PFNS	---	U	3.47	ng/L	B405067	
PFHpS	---	U	3.47	ng/L	B405067	
PFDS	---	U	3.47	ng/L	B405067	
4:2 FTS	---	U	3.47	ng/L	B405067	
6:2 FTS	---	U	3.47	ng/L	B405067	
8:2 FTS	---	U	3.47	ng/L	B405067	
Field ID: Trip Blank			**Sample ID: 2405017-08**			
VOA GCMS						
Chloromethane	---	U J	5.00	ug/L	B405071	
Vinyl Chloride	---	U J	5.00	ug/L	B405071	

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Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Trip Blank			**Sample ID: 2405017-08**			
VOA GCMS						
Bromomethane	---	U	5.00	ug/L	B405071	
Chloroethane	---	U	5.00	ug/L	B405071	
Trichlorofluoromethane	---	U	5.00	ug/L	B405071	
1,1-Dichloroethene	---	U	5.00	ug/L	B405071	
Methylene Chloride	---	U J	5.00	ug/L	B405071	
Acrylonitrile	---	U J	5.00	ug/L	B405071	
trans-1,2-Dichloroethene	---	U	5.00	ug/L	B405071	
1,1-Dichloroethane	---	U	5.00	ug/L	B405071	
Chloroform	---	U	5.00	ug/L	B405071	
1,1,1-Trichloroethane	---	U	5.00	ug/L	B405071	
Carbon Tetrachloride	---	U	5.00	ug/L	B405071	
1,2-Dichloroethane	---	U	5.00	ug/L	B405071	
Benzene	---	U	5.00	ug/L	B405071	
Trichloroethene	---	U	5.00	ug/L	B405071	
1,2-Dichloropropane	---	U J	5.00	ug/L	B405071	
Bromodichloromethane	---	U	5.00	ug/L	B405071	
cis-1,3-Dichloropropene	---	U	5.00	ug/L	B405071	
Toluene	---	U	5.00	ug/L	B405071	
trans-1,3-Dichloropropene	---	U	5.00	ug/L	B405071	
1,1,2-Trichloroethane	---	U	5.00	ug/L	B405071	
Tetrachloroethene	---	U	5.00	ug/L	B405071	
Dibromochloromethane	---	U	5.00	ug/L	B405071	
Chlorobenzene	---	U	5.00	ug/L	B405071	
Ethylbenzene	---	U	5.00	ug/L	B405071	
Bromoform	---	U	5.00	ug/L	B405071	
1,1,2,2-Tetrachloroethane	---	U	5.00	ug/L	B405071	
1,3-Dichlorobenzene	---	U	5.00	ug/L	B405071	
1,4-Dichlorobenzene	---	U	5.00	ug/L	B405071	
1,2-Dichlorobenzene	---	U	5.00	ug/L	B405071	

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Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
Blank (B405071-BLK1)									
Chloromethane	--- U	5.00	ug/L						
Vinyl Chloride	--- U	5.00	ug/L						
Bromomethane	--- U	5.00	ug/L						
Chloroethane	--- U	5.00	ug/L						
Trichlorofluoromethane	--- U	5.00	ug/L						
1,1-Dichloroethene	--- U	5.00	ug/L						
Methylene Chloride	--- U	5.00	ug/L						
Acrylonitrile	--- U	5.00	ug/L						
trans-1,2-Dichloroethene	--- U	5.00	ug/L						
1,1-Dichloroethane	--- U	5.00	ug/L						
Chloroform	--- U	5.00	ug/L						
1,1,1-Trichloroethane	--- U	5.00	ug/L						
Carbon Tetrachloride	--- U	5.00	ug/L						
1,2-Dichloroethane	--- U	5.00	ug/L						
Benzene	--- U	5.00	ug/L						
Trichloroethene	--- U	5.00	ug/L						
1,2-Dichloropropane	--- U	5.00	ug/L						
Bromodichloromethane	--- U	5.00	ug/L						
cis-1,3-Dichloropropene	--- U	5.00	ug/L						
Toluene	--- U	5.00	ug/L						
trans-1,3-Dichloropropene	--- U	5.00	ug/L						
1,1,2-Trichloroethane	--- U	5.00	ug/L						
Tetrachloroethene	--- U	5.00	ug/L						
Dibromochloromethane	--- U	5.00	ug/L						
Chlorobenzene	--- U	5.00	ug/L						
Ethylbenzene	--- U	5.00	ug/L						
Bromoform	--- U	5.00	ug/L						
1,1,2,2-Tetrachloroethane	--- U	5.00	ug/L						
1,3-Dichlorobenzene	--- U	5.00	ug/L						
1,4-Dichlorobenzene	--- U	5.00	ug/L						
1,2-Dichlorobenzene	--- U	5.00	ug/L						
Surrogate: 1,4-Difluorobenzene	*100*		ug/L	*100.0*		*100*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*91.8*		ug/L	*100.0*		*91.8*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*106*		ug/L	*100.0*		*106*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
LCS (B405071-BS1)									
Chloromethane	50.3	5.00	ug/L	50.00		101	19-205		
Vinyl Chloride	48.6	5.00	ug/L	50.00		97.2	5-195		
Bromomethane	56.5	5.00	ug/L	50.00		113	15-185		
Chloroethane	48.8	5.00	ug/L	50.00		97.6	40-160		
Trichlorofluoromethane	53.2	5.00	ug/L	50.00		106	50-150		
1,1-Dichloroethene	41.0	5.00	ug/L	50.00		81.9	50-150		
Methylene Chloride	37.2	5.00	ug/L	50.00		74.3	60-140		
Acrylonitrile	37.7	5.00	ug/L	50.00		75.5	60-140		
trans-1,2-Dichloroethene	45.3	5.00	ug/L	50.00		90.6	70-130		
1,1-Dichloroethane	45.3	5.00	ug/L	50.00		90.6	70-130		
Chloroform	52.4	5.00	ug/L	50.00		105	70-135		
1,1,1-Trichloroethane	50.9	5.00	ug/L	50.00		102	70-130		
Carbon Tetrachloride	50.0	5.00	ug/L	50.00		100	70-130		
1,2-Dichloroethane	52.9	5.00	ug/L	50.00		106	70-130		
Benzene	56.3	5.00	ug/L	50.00		113	65-135		
Trichloroethene	51.6	5.00	ug/L	50.00		103	65-135		
1,2-Dichloropropane	57.4	5.00	ug/L	50.00		115	35-165		
Bromodichloromethane	52.1	5.00	ug/L	50.00		104	65-135		
cis-1,3-Dichloropropene	59.6	5.00	ug/L	50.00		119	25-175		
Toluene	55.8	5.00	ug/L	50.00		112	70-130		
trans-1,3-Dichloropropene	59.1	5.00	ug/L	50.00		118	50-150		
1,1,2-Trichloroethane	56.5	5.00	ug/L	50.00		113	70-130		
Tetrachloroethene	52.3	5.00	ug/L	50.00		105	70-130		
Dibromochloromethane	53.8	5.00	ug/L	50.00		108	70-135		
Chlorobenzene	53.9	5.00	ug/L	50.00		108	65-135		
Ethylbenzene	55.2	5.00	ug/L	50.00		110	60-140		
Bromoform	50.7	5.00	ug/L	50.00		101	70-130		
1,1,2,2-Tetrachloroethane	62.7	5.00	ug/L	50.00		125	60-140		
1,3-Dichlorobenzene	51.8	5.00	ug/L	50.00		104	70-130		
1,4-Dichlorobenzene	52.1	5.00	ug/L	50.00		104	65-135		
1,2-Dichlorobenzene	52.8	5.00	ug/L	50.00		106	65-135		
Surrogate: 1,4-Difluorobenzene	*98.4*		ug/L	*100.0*		*98.4*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*108*		ug/L	*100.0*		*108*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*108*		ug/L	*100.0*		*108*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
LCS Dup (B405071-BSD1)									
Chloromethane	66.8	5.00	ug/L	50.00		134	19-205	28.2	20
Vinyl Chloride	64.0	5.00	ug/L	50.00		128	5-195	27.3	20
Bromomethane	60.4	5.00	ug/L	50.00		121	15-185	6.64	20
Chloroethane	52.0	5.00	ug/L	50.00		104	40-160	6.29	20
Trichlorofluoromethane	54.0	5.00	ug/L	50.00		108	50-150	1.62	20
1,1-Dichloroethene	45.3	5.00	ug/L	50.00		90.6	50-150	10.0	20
Methylene Chloride	49.8	5.00	ug/L	50.00		99.6	60-140	29.1	20
Acrylonitrile	48.8	5.00	ug/L	50.00		97.7	60-140	25.7	20
trans-1,2-Dichloroethene	44.7	5.00	ug/L	50.00		89.4	70-130	1.36	20
1,1-Dichloroethane	42.9	5.00	ug/L	50.00		85.9	70-130	5.37	20
Chloroform	53.4	5.00	ug/L	50.00		107	70-135	1.95	20
1,1,1-Trichloroethane	49.8	5.00	ug/L	50.00		99.7	70-130	2.06	20
Carbon Tetrachloride	49.3	5.00	ug/L	50.00		98.6	70-130	1.39	20
1,2-Dichloroethane	50.7	5.00	ug/L	50.00		101	70-130	4.28	20
Benzene	50.2	5.00	ug/L	50.00		100	65-135	11.4	20
Trichloroethene	47.0	5.00	ug/L	50.00		94.1	65-135	9.27	20
1,2-Dichloropropane	46.9	5.00	ug/L	50.00		93.8	35-165	20.2	20
Bromodichloromethane	48.8	5.00	ug/L	50.00		97.7	65-135	6.36	20
cis-1,3-Dichloropropene	53.6	5.00	ug/L	50.00		107	25-175	10.5	20
Toluene	51.0	5.00	ug/L	50.00		102	70-130	9.04	20
trans-1,3-Dichloropropene	54.1	5.00	ug/L	50.00		108	50-150	8.78	20
1,1,2-Trichloroethane	52.6	5.00	ug/L	50.00		105	70-130	7.02	20
Tetrachloroethene	51.9	5.00	ug/L	50.00		104	70-130	0.786	20
Dibromochloromethane	52.3	5.00	ug/L	50.00		105	70-135	2.79	20
Chlorobenzene	52.1	5.00	ug/L	50.00		104	65-135	3.45	20
Ethylbenzene	51.9	5.00	ug/L	50.00		104	60-140	6.33	20
Bromoform	55.3	5.00	ug/L	50.00		111	70-130	8.77	20
1,1,2,2-Tetrachloroethane	67.1	5.00	ug/L	50.00		134	60-140	6.70	20
1,3-Dichlorobenzene	51.7	5.00	ug/L	50.00		103	70-130	0.0193	20
1,4-Dichlorobenzene	51.5	5.00	ug/L	50.00		103	65-135	1.20	20
1,2-Dichlorobenzene	54.0	5.00	ug/L	50.00		108	65-135	2.19	20
Surrogate: 1,4-Difluorobenzene	*98.3*		ug/L	*100.0*		*98.3*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*94.8*		ug/L	*100.0*		*94.8*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*117*		ug/L	*100.0*		*117*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
Matrix Spike (B405071-MS1)		**Source: 2405017-04**							
Chloromethane	49.4	5.00	ug/L	50.00	ND	98.9	19-273		
Vinyl Chloride	49.1	5.00	ug/L	50.00	ND	98.2	49-251		
Bromomethane	44.5	5.00	ug/L	50.00	ND	89.0	21-242		
Chloroethane	55.0	5.00	ug/L	50.00	ND	110	14-230		
Trichlorofluoromethane	56.0	5.00	ug/L	50.00	ND	112	17-181		
1,1-Dichloroethene	59.7	5.00	ug/L	50.00	ND	119	52-234		
Methylene Chloride	60.4	5.00	ug/L	50.00	ND	121	69-221		
Acrylonitrile	59.0	5.00	ug/L	50.00	ND	118	40-160		
trans-1,2-Dichloroethene	55.8	5.00	ug/L	50.00	ND	112	54-156		
1,1-Dichloroethane	52.2	5.00	ug/L	50.00	ND	104	59-155		
Chloroform	54.0	5.00	ug/L	50.00	ND	108	51-138		
1,1,1-Trichloroethane	54.7	5.00	ug/L	50.00	ND	109	52-162		
Carbon Tetrachloride	54.3	5.00	ug/L	50.00	ND	109	70-140		
1,2-Dichloroethane	54.8	5.00	ug/L	50.00	ND	110	49-155		
Benzene	53.0	5.00	ug/L	50.00	ND	106	37-151		
Trichloroethene	60.6	5.00	ug/L	50.00	ND	121	70-157		
1,2-Dichloropropane	70.5	5.00	ug/L	50.00	ND	141	74-210		
Bromodichloromethane	64.8	5.00	ug/L	50.00	ND	130	35-155		
cis-1,3-Dichloropropene	60.4	5.00	ug/L	50.00	ND	121	80-227		
Toluene	66.7	5.00	ug/L	50.00	ND	133	47-150		
trans-1,3-Dichloropropene	64.0	5.00	ug/L	50.00	ND	128	17-183		
1,1,2-Trichloroethane	56.1	5.00	ug/L	50.00	ND	112	52-150		
Tetrachloroethene	52.3	5.00	ug/L	50.00	ND	105	64-148		
Dibromochloromethane	53.1	5.00	ug/L	50.00	ND	106	53-149		
Chlorobenzene	53.6	5.00	ug/L	50.00	ND	107	37-160		
Ethylbenzene	54.9	5.00	ug/L	50.00	ND	110	37-162		
Bromoform	55.6	5.00	ug/L	50.00	ND	111	45-169		
1,1,2,2-Tetrachloroethane	67.5	5.00	ug/L	50.00	ND	135	46-157		
1,3-Dichlorobenzene	53.4	5.00	ug/L	50.00	ND	107	59-156		
1,4-Dichlorobenzene	53.9	5.00	ug/L	50.00	ND	108	18-190		
1,2-Dichlorobenzene	53.3	5.00	ug/L	50.00	ND	107	18-190		
Surrogate: 1,4-Difluorobenzene	*104*		ug/L	*100.0*		*104*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*135*		ug/L	*100.0*		*135*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*113*		ug/L	*100.0*		*113*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
Matrix Spike (B405071-MS2)		**Source: 2405007-06**							
Chloromethane	61.0	5.00	ug/L	50.00		122	19-273		
Vinyl Chloride	59.7	5.00	ug/L	50.00		119	49-251		
Bromomethane	49.1	5.00	ug/L	50.00		98.2	21-242		
Chloroethane	50.6	5.00	ug/L	50.00		101	14-230		
Trichlorofluoromethane	48.4	5.00	ug/L	50.00		96.7	17-181		
1,1-Dichloroethene	51.9	5.00	ug/L	50.00		104	52-234		
Methylene Chloride	53.3	5.00	ug/L	50.00		107	69-221		
Acrylonitrile	52.9	5.00	ug/L	50.00		106	40-160		
trans-1,2-Dichloroethene	48.1	5.00	ug/L	50.00		96.2	54-156		
1,1-Dichloroethane	47.2	5.00	ug/L	50.00		94.5	59-155		
Chloroform	50.9	5.00	ug/L	50.00		102	51-138		
1,1,1-Trichloroethane	53.1	5.00	ug/L	50.00		106	52-162		
Carbon Tetrachloride	49.2	5.00	ug/L	50.00		98.4	70-140		
1,2-Dichloroethane	52.2	5.00	ug/L	50.00		104	49-155		
Benzene	52.4	5.00	ug/L	50.00		105	37-151		
Trichloroethene	45.3	5.00	ug/L	50.00		90.6	70-157		
1,2-Dichloropropane	51.2	5.00	ug/L	50.00		102	74-210		
Bromodichloromethane	49.8	5.00	ug/L	50.00		99.7	35-155		
cis-1,3-Dichloropropene	47.3	5.00	ug/L	50.00		94.6	80-227		
Toluene	45.6	5.00	ug/L	50.00		91.3	47-150		
trans-1,3-Dichloropropene	46.4	5.00	ug/L	50.00		92.7	17-183		
1,1,2-Trichloroethane	52.0	5.00	ug/L	50.00		104	52-150		
Tetrachloroethene	52.2	5.00	ug/L	50.00		104	64-148		
Dibromochloromethane	51.7	5.00	ug/L	50.00		103	53-149		
Chlorobenzene	52.3	5.00	ug/L	50.00		105	37-160		
Ethylbenzene	52.1	5.00	ug/L	50.00		104	37-162		
Bromoform	56.2	5.00	ug/L	50.00		112	45-169		
1,1,2,2-Tetrachloroethane	58.6	5.00	ug/L	50.00		117	46-157		
1,3-Dichlorobenzene	54.0	5.00	ug/L	50.00		108	59-156		
1,4-Dichlorobenzene	53.5	5.00	ug/L	50.00		107	18-190		
1,2-Dichlorobenzene	54.9	5.00	ug/L	50.00		110	18-190		
Surrogate: 1,4-Difluorobenzene	*98.4*		ug/L	*100.0*		*98.4*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*85.1*		ug/L	*100.0*		*85.1*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*95.5*		ug/L	*100.0*		*95.5*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

VOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405071									
Matrix Spike Dup (B405071-MSD1)	**Source: 2405017-04**								
Chloromethane	60.5	5.00	ug/L	50.00	ND	121	19-273	20.2	28
Vinyl Chloride	57.3	5.00	ug/L	50.00	ND	115	49-251	15.5	28
Bromomethane	33.7	5.00	ug/L	50.00	ND	67.3	21-242	27.8	28
Chloroethane	47.3	5.00	ug/L	50.00	ND	94.6	14-230	15.1	28
Trichlorofluoromethane	47.2	5.00	ug/L	50.00	ND	94.4	17-181	17.1	28
1,1-Dichloroethene	49.9	5.00	ug/L	50.00	ND	99.7	52-234	17.9	28
Methylene Chloride	50.4	5.00	ug/L	50.00	ND	101	69-221	18.2	28
Acrylonitrile	49.6	5.00	ug/L	50.00	ND	99.1	40-160	17.4	28
trans-1,2-Dichloroethene	46.6	5.00	ug/L	50.00	ND	93.2	54-156	18.0	28
1,1-Dichloroethane	46.7	5.00	ug/L	50.00	ND	93.4	59-155	11.2	28
Chloroform	50.6	5.00	ug/L	50.00	ND	101	51-138	6.59	28
1,1,1-Trichloroethane	50.3	5.00	ug/L	50.00	ND	101	52-162	8.40	28
Carbon Tetrachloride	48.1	5.00	ug/L	50.00	ND	96.2	70-140	12.0	28
1,2-Dichloroethane	53.1	5.00	ug/L	50.00	ND	106	49-155	3.08	28
Benzene	52.3	5.00	ug/L	50.00	ND	105	37-151	1.31	28
Trichloroethene	46.9	5.00	ug/L	50.00	ND	93.9	70-157	25.4	28
1,2-Dichloropropane	51.9	5.00	ug/L	50.00	ND	104	74-210	30.3	28
Bromodichloromethane	50.4	5.00	ug/L	50.00	ND	101	35-155	24.9	28
cis-1,3-Dichloropropene	41.0	5.00	ug/L	50.00	ND	82.0	80-227	38.3	28
Toluene	51.7	5.00	ug/L	50.00	ND	103	47-150	25.4	28
trans-1,3-Dichloropropene	48.8	5.00	ug/L	50.00	ND	97.6	17-183	26.9	28
1,1,2-Trichloroethane	53.4	5.00	ug/L	50.00	ND	107	52-150	4.90	28
Tetrachloroethene	50.8	5.00	ug/L	50.00	ND	102	64-148	3.03	28
Dibromochloromethane	50.6	5.00	ug/L	50.00	ND	101	53-149	4.75	28
Chlorobenzene	51.3	5.00	ug/L	50.00	ND	103	37-160	4.39	28
Ethylbenzene	51.9	5.00	ug/L	50.00	ND	104	37-162	5.54	28
Bromoform	54.4	5.00	ug/L	50.00	ND	109	45-169	2.00	28
1,1,2,2-Tetrachloroethane	61.7	5.00	ug/L	50.00	ND	123	46-157	9.01	28
1,3-Dichlorobenzene	52.0	5.00	ug/L	50.00	ND	104	59-156	2.56	28
1,4-Dichlorobenzene	52.3	5.00	ug/L	50.00	ND	105	18-190	3.14	28
1,2-Dichlorobenzene	52.2	5.00	ug/L	50.00	ND	104	18-190	1.97	28
Surrogate: 1,4-Difluorobenzene	*98.6*		ug/L	*100.0*		*98.6*	*60-140*		
Surrogate: 2-Bromo-1-Chloropropane	*104*		ug/L	*100.0*		*104*	*60-140*		
Surrogate: 1,4-Dichlorobutane	*105*		ug/L	*100.0*		*105*	*60-140*		

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Blank (B405052-BLK1)									
Acenaphthene	--- U	5.00	ug/L						
Acenaphthylene	--- U	5.00	ug/L						
Anthracene	--- U	5.00	ug/L						
Benzo(A)Anthracene	--- U	5.00	ug/L						
Benzo(A)Pyrene	--- U	5.00	ug/L						
Benzo(B)Fluoranthene	--- U	5.00	ug/L						
Benzo(G,H,I)Perylene	--- U	5.00	ug/L						
Benzo(K)Fluoranthene	--- U	5.00	ug/L						
Chrysene	--- U	5.00	ug/L						
Dibenzo(A,H)Anthracene	--- U	5.00	ug/L						
Fluoranthene	--- U	5.00	ug/L						
Fluorene	--- U	5.00	ug/L						
Indeno(1,2,3-Cd)Pyrene	--- U	5.00	ug/L						
Naphthalene	--- U	2.00	ug/L						
Phenanthrene	--- U	5.00	ug/L						
1,2,4-Trichlorobenzene	--- U	5.00	ug/L						
2,4,6-Trichlorophenol	--- U	5.00	ug/L						
2,4-Dichlorophenol	--- U	5.00	ug/L						
2,4-Dimethylphenol	--- U	5.00	ug/L						
2,4-Dinitrotoluene	--- U	5.00	ug/L						
2,6-Dinitrotoluene	--- U	5.00	ug/L						
2,4-Dinitrophenol	--- U	5.00	ug/L						
2-Chloronaphthalene	--- U	5.00	ug/L						
2-Chlorophenol	--- U	5.00	ug/L						
2-Nitrophenol	--- U	5.00	ug/L						
3,3'- Dichlorobenzidine	--- U	5.00	ug/L						
4,6-Dinitro-2-Methylphenol	--- U	5.00	ug/L						
4-Bromophenyl-Phenylether	--- U	5.00	ug/L						
4-Chloro-3-Methylphenol	--- U	5.00	ug/L						
4-Chlorophenyl-Phenylether	--- U	5.00	ug/L						
4-Nitrophenol	--- U	5.00	ug/L						
Bis(-2-Chloroethoxy)Methane	--- U	5.00	ug/L						
Bis(2-Chloroethyl)Ether	--- U	5.00	ug/L						
Bis(2-Chloroisopropyl)Ether	--- U	5.00	ug/L						
Bis(2-Ethylhexyl)Phthalate	--- U	5.00	ug/L						

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Blank (B405052-BLK1)									
Butylbenzylphthalate	--- U	5.00	ug/L						
Azobenzene	--- U	5.00	ug/L						
Diethylphthalate	--- U	5.00	ug/L						
Dimethyl Phthalate	--- U	2.00	ug/L						
Di-N-Butyl Phthalate	--- U	5.00	ug/L						
Di-N-Octyl Phthalate	--- U	5.00	ug/L						
Hexachlorobenzene	--- U	5.00	ug/L						
Hexachlorobutadiene	--- U	2.00	ug/L						
Hexachlorocyclopentadiene	--- U	5.00	ug/L						
Hexachloroethane	--- U	2.00	ug/L						
Isophorone	--- U	5.00	ug/L						
Nitrobenzene	--- U	5.00	ug/L						
N-Nitrosodimethylamine	--- U	5.00	ug/L						
N-Nitroso-Di-N-Propylamine	--- U	5.00	ug/L						
N-Nitrosodiphenylamine	--- U	5.00	ug/L						
Pentachlorophenol	--- U	5.00	ug/L						
Phenol	--- U	2.00	ug/L						
Pyrene	--- U	5.00	ug/L						
1,4-Dioxane	--- U	2.00	ug/L						
Surrogate: 2-Fluoroaniline	*44.3*		ug/L	*50.00*		*88.7*	*60-140*		
Surrogate: Phenol-D6	*ND*		ug/L	*50.00*		*38.6*	*60-140*		
Surrogate: Naphthalene-D8	*44.2*		ug/L	*50.00*		*88.5*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*44.2*		ug/L	*50.00*		*88.3*	*60-140*		
Surrogate: 2,4-Dibromophenol	*39.2*		ug/L	*50.00*		*78.5*	*60-140*		
Surrogate: Anthracene-D10	*52.2*		ug/L	*50.00*		*104*	*60-140*		
Surrogate: Chrysene-D12	*45.9*		ug/L	*50.00*		*91.8*	*60-140*		
LCS (B405052-BS1)									
Acenaphthene	40.5	5.00	ug/L	50.00		81.0	47-145		
Acenaphthylene	38.8	5.00	ug/L	50.00		77.7	33-145		
Anthracene	43.4	5.00	ug/L	50.00		86.9	27-133		
Benzo(A)Anthracene	47.3	5.00	ug/L	50.00		94.7	33-143		
Benzo(A)Pyrene	49.9	5.00	ug/L	50.00		99.8	17-163		
Benzo(B)Fluoranthene	50.0	5.00	ug/L	50.00		99.9	24-159		
Benzo(G,H,I)Perylene	51.0	5.00	ug/L	50.00		102	35-219		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
LCS (B405052-BS1)									
Benzo(K)Fluoranthene	49.1	5.00	ug/L	50.00		98.3	11-162		
Chrysene	47.0	5.00	ug/L	50.00		94.0	17-168		
Dibenzo(A,H)Anthracene	51.7	5.00	ug/L	50.00		103	33-227		
Fluoranthene	44.2	5.00	ug/L	50.00		88.5	26-137		
Fluorene	42.8	5.00	ug/L	50.00		85.5	59-121		
Indeno(1,2,3-Cd)Pyrene	52.5	5.00	ug/L	50.00		105	39-171		
Naphthalene	38.6	2.00	ug/L	50.00		77.3	21-133		
Phenanthrene	44.6	5.00	ug/L	50.00		89.3	54-120		
1,2,4-Trichlorobenzene	36.2	5.00	ug/L	50.00		72.5	44-142		
2,4,6-Trichlorophenol	41.6	5.00	ug/L	50.00		83.2	37-144		
2,4-Dichlorophenol	40.7	5.00	ug/L	50.00		81.3	39-135		
2,4-Dimethylphenol	26.6	5.00	ug/L	50.00		53.3	32-120		
2,4-Dinitrotoluene	49.6	5.00	ug/L	50.00		99.3	39-139		
2,6-Dinitrotoluene	45.5	5.00	ug/L	50.00		91.0	50-158		
2,4-Dinitrophenol	22.7	5.00	ug/L	50.00		45.3	21-191		
2-Chloronaphthalene	38.8	5.00	ug/L	50.00		77.7	60-120		
2-Chlorophenol	38.3	5.00	ug/L	50.00		76.6	23-134		
2-Nitrophenol	44.8	5.00	ug/L	50.00		89.5	29-182		
3,3'- Dichlorobenzidine	47.0	5.00	ug/L	50.00		94.1	38-262		
4,6-Dinitro-2-Methylphenol	46.1	5.00	ug/L	50.00		92.1	17-181		
4-Bromophenyl-Phenylether	45.2	5.00	ug/L	50.00		90.4	53-127		
4-Chloro-3-Methylphenol	39.8	5.00	ug/L	50.00		79.6	22-147		
4-Chlorophenyl-Phenylether	43.3	5.00	ug/L	50.00		86.6	25-158		
4-Nitrophenol	21.2	5.00	ug/L	50.00		42.4	9-132		
Bis(-2-Chloroethoxy)Methane	39.4	5.00	ug/L	50.00		78.8	33-184		
Bis(2-Chloroethyl)Ether	40.1	5.00	ug/L	50.00		80.2	12-158		
Bis(2-Chloroisopropyl)Ether	38.7	5.00	ug/L	50.00		77.3	36-166		
Bis(2-Ethylhexyl)Phthalate	54.2	5.00	ug/L	50.00		108	8-158		
Butylbenzylphthalate	48.6	5.00	ug/L	50.00		97.1	38-152		
Azobenzene	43.0	5.00	ug/L	50.00		85.9	60-115		
Diethylphthalate	44.6	5.00	ug/L	50.00		89.3	31-114		
Dimethyl Phthalate	39.1	2.00	ug/L	50.00		78.2	28-120		
Di-N-Butyl Phthalate	47.1	5.00	ug/L	50.00		94.2	1-120		
Di-N-Octyl Phthalate	54.0	5.00	ug/L	50.00		108	4-146		
Hexachlorobenzene	44.7	5.00	ug/L	50.00		89.5	35-152		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
LCS (B405052-BS1)									
Hexachlorobutadiene	36.5	2.00	ug/L	50.00		72.9	24-120		
Hexachlorocyclopentadiene	46.4	5.00	ug/L	50.00		92.8	15-76		
Hexachloroethane	36.2	2.00	ug/L	50.00		72.4	40-120		
Isophorone	44.1	5.00	ug/L	50.00		88.2	21-196		
Nitrobenzene	41.2	5.00	ug/L	50.00		82.5	35-180		
N-Nitrosodimethylamine	27.2	5.00	ug/L	50.00		54.5	17-127		
N-Nitroso-Di-N-Propylamine	39.8	5.00	ug/L	50.00		79.5	43-230		
N-Nitrosodiphenylamine	54.9	5.00	ug/L	50.00		110	79-139		
Pentachlorophenol	43.8	5.00	ug/L	50.00		87.7	14-176		
Phenol	17.8	2.00	ug/L	50.00		35.5	5-120		
Pyrene	45.5	5.00	ug/L	50.00		91.1	52-120		
1,4-Dioxane	22.5	2.00	ug/L	50.00		45.1	7-106		
Surrogate: 2-Fluoroaniline	*40.2*		ug/L	*50.00*		*80.4*	*60-140*		
Surrogate: Phenol-D6	*16.8*		ug/L	*50.00*		*33.6*	*60-140*		
Surrogate: Naphthalene-D8	*39.5*		ug/L	*50.00*		*79.0*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*39.3*		ug/L	*50.00*		*78.5*	*60-140*		
Surrogate: 2,4-Dibromophenol	*39.4*		ug/L	*50.00*		*78.8*	*60-140*		
Surrogate: Anthracene-D10	*46.3*		ug/L	*50.00*		*92.6*	*60-140*		
Surrogate: Chrysene-D12	*44.2*		ug/L	*50.00*		*88.5*	*60-140*		
LCS Dup (B405052-BSD1)									
Acenaphthene	42.2	5.00	ug/L	50.00		84.4	47-145	4.09	30
Acenaphthylene	40.3	5.00	ug/L	50.00		80.7	33-145	3.79	30
Anthracene	42.6	5.00	ug/L	50.00		85.2	27-133	1.95	30
Benzo(A)Anthracene	45.4	5.00	ug/L	50.00		90.9	33-143	4.10	30
Benzo(A)Pyrene	48.8	5.00	ug/L	50.00		97.6	17-163	2.21	30
Benzo(B)Fluoranthene	49.2	5.00	ug/L	50.00		98.4	24-159	1.55	30
Benzo(G,H,I)Perylene	48.7	5.00	ug/L	50.00		97.3	35-219	4.64	30
Benzo(K)Fluoranthene	48.1	5.00	ug/L	50.00		96.2	11-162	2.12	30
Chrysene	45.6	5.00	ug/L	50.00		91.1	17-168	3.13	30
Dibenzo(A,H)Anthracene	50.1	5.00	ug/L	50.00		100	33-227	3.14	30
Fluoranthene	44.3	5.00	ug/L	50.00		88.5	26-137	0.0678	30
Fluorene	41.7	5.00	ug/L	50.00		83.4	59-121	2.49	30
Indeno(1,2,3-Cd)Pyrene	52.3	5.00	ug/L	50.00		105	39-171	0.401	30
Naphthalene	39.0	2.00	ug/L	50.00		78.1	21-133	1.08	30

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
LCS Dup (B405052-BSD1)									
Phenanthrene	43.9	5.00	ug/L	50.00		87.7	54-120	1.72	30
1,2,4-Trichlorobenzene	36.2	5.00	ug/L	50.00		72.4	44-142	0.0552	30
2,4,6-Trichlorophenol	43.0	5.00	ug/L	50.00		85.9	37-144	3.22	30
2,4-Dichlorophenol	40.8	5.00	ug/L	50.00		81.6	39-135	0.270	30
2,4-Dimethylphenol	20.0	5.00	ug/L	50.00		40.1	32-120	28.2	30
2,4-Dinitrotoluene	48.8	5.00	ug/L	50.00		97.6	39-139	1.75	30
2,6-Dinitrotoluene	47.4	5.00	ug/L	50.00		94.8	50-158	4.07	30
2,4-Dinitrophenol	31.1	5.00	ug/L	50.00		62.2	21-191	31.3	30
2-Chloronaphthalene	39.8	5.00	ug/L	50.00		79.5	60-120	2.39	30
2-Chlorophenol	39.0	5.00	ug/L	50.00		77.9	23-134	1.63	30
2-Nitrophenol	45.6	5.00	ug/L	50.00		91.3	29-182	1.95	30
3,3'- Dichlorobenzidine	44.1	5.00	ug/L	50.00		88.2	38-262	6.47	30
4,6-Dinitro-2-Methylphenol	50.0	5.00	ug/L	50.00		100	17-181	8.30	30
4-Bromophenyl-Phenylether	43.8	5.00	ug/L	50.00		87.6	53-127	3.19	30
4-Chloro-3-Methylphenol	40.5	5.00	ug/L	50.00		81.0	22-147	1.84	30
4-Chlorophenyl-Phenylether	42.4	5.00	ug/L	50.00		84.8	25-158	2.08	30
4-Nitrophenol	23.0	5.00	ug/L	50.00		46.0	9-132	8.23	30
Bis(-2-Chloroethoxy)Methane	40.3	5.00	ug/L	50.00		80.6	33-184	2.23	30
Bis(2-Chloroethyl)Ether	40.9	5.00	ug/L	50.00		81.8	12-158	1.95	30
Bis(2-Chloroisopropyl)Ether	39.4	5.00	ug/L	50.00		78.9	36-166	1.97	30
Bis(2-Ethylhexyl)Phthalate	51.8	5.00	ug/L	50.00		104	8-158	4.57	30
Butylbenzylphthalate	48.7	5.00	ug/L	50.00		97.5	38-152	0.391	30
Azobenzene	42.2	5.00	ug/L	50.00		84.4	60-115	1.76	30
Diethylphthalate	42.9	5.00	ug/L	50.00		85.7	31-114	4.02	30
Dimethyl Phthalate	39.1	2.00	ug/L	50.00		78.2	28-120	0.102	30
Di-N-Butyl Phthalate	45.8	5.00	ug/L	50.00		91.5	1-120	2.93	30
Di-N-Octyl Phthalate	52.8	5.00	ug/L	50.00		106	4-146	2.42	30
Hexachlorobenzene	43.7	5.00	ug/L	50.00		87.3	35-152	2.42	30
Hexachlorobutadiene	35.4	2.00	ug/L	50.00		70.8	24-120	2.98	30
Hexachlorocyclopentadiene	44.9	5.00	ug/L	50.00		89.8	15-76	3.22	30
Hexachloroethane	36.0	2.00	ug/L	50.00		72.0	40-120	0.526	30
Isophorone	45.3	5.00	ug/L	50.00		90.7	21-196	2.77	30
Nitrobenzene	42.4	5.00	ug/L	50.00		84.8	35-180	2.77	30
N-Nitrosodimethylamine	28.2	5.00	ug/L	50.00		56.3	17-127	3.32	30
N-Nitroso-Di-N-Propylamine	40.5	5.00	ug/L	50.00		80.9	43-230	1.77	30

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
LCS Dup (B405052-BSD1)									
N-Nitrosodiphenylamine	53.0	5.00	ug/L	50.00		106	79-139	3.47	30
Pentachlorophenol	46.0	5.00	ug/L	50.00		92.0	14-176	4.76	30
Phenol	17.6	2.00	ug/L	50.00		35.3	5-120	0.678	30
Pyrene	45.0	5.00	ug/L	50.00		90.1	52-120	1.10	30
1,4-Dioxane	23.5	2.00	ug/L	50.00		47.0	7-106	4.17	30
Surrogate: 2-Fluoroaniline	*39.9*		ug/L	*50.00*		*79.7*	*60-140*		
Surrogate: Phenol-D6	*16.5*		ug/L	*50.00*		*33.1*	*60-140*		
Surrogate: Naphthalene-D8	*39.8*		ug/L	*50.00*		*79.7*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*39.6*		ug/L	*50.00*		*79.2*	*60-140*		
Surrogate: 2,4-Dibromophenol	*40.3*		ug/L	*50.00*		*80.6*	*60-140*		
Surrogate: Anthracene-D10	*44.7*		ug/L	*50.00*		*89.3*	*60-140*		
Surrogate: Chrysene-D12	*41.9*		ug/L	*50.00*		*83.8*	*60-140*		
Matrix Spike (B405052-MS1)	**Source: 2405011-03**								
Acenaphthene	33.2	5.26	ug/L	52.63	ND	63.1	47-145		
Acenaphthylene	33.5	5.26	ug/L	52.63	ND	63.7	33-145		
Anthracene	36.5	5.26	ug/L	52.63	ND	69.3	27-133		
Benzo(A)Anthracene	38.7	5.26	ug/L	52.63	ND	73.6	33-143		
Benzo(A)Pyrene	41.1	5.26	ug/L	52.63	ND	78.1	17-163		
Benzo(B)Fluoranthene	40.9	5.26	ug/L	52.63	ND	77.7	24-159		
Benzo(G,H,I)Perylene	44.1	5.26	ug/L	52.63	ND	83.8	35-219		
Benzo(K)Fluoranthene	39.4	5.26	ug/L	52.63	ND	74.8	11-162		
Chrysene	39.4	5.26	ug/L	52.63	ND	74.8	17-168		
Dibenzo(A,H)Anthracene	45.4	5.26	ug/L	52.63	ND	86.3	33-227		
Fluoranthene	38.1	5.26	ug/L	52.63	ND	72.5	26-137		
Fluorene	36.3	5.26	ug/L	52.63	ND	69.0	59-121		
Indeno(1,2,3-Cd)Pyrene	44.3	5.26	ug/L	52.63	ND	84.1	39-171		
Naphthalene	30.4	2.11	ug/L	52.63	ND	57.8	21-133		
Phenanthrene	37.4	5.26	ug/L	52.63	ND	71.0	54-120		
1,2,4-Trichlorobenzene	29.9	5.26	ug/L	52.63	ND	56.7	44-142		
2,4,6-Trichlorophenol	31.4	5.26	ug/L	52.63	ND	59.6	37-144		
2,4-Dichlorophenol	30.0	5.26	ug/L	52.63	ND	57.1	39-135		
2,4-Dimethylphenol	31.6	5.26	ug/L	52.63	ND	60.0	32-120		
2,4-Dinitrotoluene	40.5	5.26	ug/L	52.63	ND	77.0	39-139		
2,6-Dinitrotoluene	37.0	5.26	ug/L	52.63	ND	70.2	50-158		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike (B405052-MS1)	**Source: 2405011-03**								
2,4-Dinitrophenol	28.6	5.26	ug/L	52.63	ND	54.4	21-191		
2-Chloronaphthalene	32.2	5.26	ug/L	52.63	ND	61.2	60-120		
2-Chlorophenol	25.9	5.26	ug/L	52.63	ND	49.2	23-134		
2-Nitrophenol	31.5	5.26	ug/L	52.63	ND	59.9	29-182		
3,3'- Dichlorobenzidine	21.9	5.26	ug/L	52.63	ND	41.6	38-262		
4,6-Dinitro-2-Methylphenol	37.6	5.26	ug/L	52.63	ND	71.4	17-181		
4-Bromophenyl-Phenylether	37.2	5.26	ug/L	52.63	ND	70.6	53-127		
4-Chloro-3-Methylphenol	31.3	5.26	ug/L	52.63	ND	59.4	22-147		
4-Chlorophenyl-Phenylether	36.5	5.26	ug/L	52.63	ND	69.3	25-158		
4-Nitrophenol	15.8	5.26	ug/L	52.63	ND	30.0	9-132		
Bis(-2-Chloroethoxy)Methane	31.6	5.26	ug/L	52.63	ND	60.0	33-184		
Bis(2-Chloroethyl)Ether	29.0	5.26	ug/L	52.63	ND	55.1	12-158		
Bis(2-Chloroisopropyl)Ether	28.9	5.26	ug/L	52.63	ND	54.9	36-166		
Bis(2-Ethylhexyl)Phthalate	47.9	5.26	ug/L	52.63	ND	91.0	8-158		
Butylbenzylphthalate	42.5	5.26	ug/L	52.63	ND	80.8	38-152		
Azobenzene	36.5	5.26	ug/L	52.63	ND	69.3	61-106		
Diethylphthalate	37.9	5.26	ug/L	52.63	ND	72.0	31-114		
Dimethyl Phthalate	34.6	2.11	ug/L	52.63	ND	65.7	28-120		
Di-N-Butyl Phthalate	41.0	5.26	ug/L	52.63	ND	77.9	1-120		
Di-N-Octyl Phthalate	46.1	5.26	ug/L	52.63	ND	87.6	4-146		
Hexachlorobenzene	36.7	5.26	ug/L	52.63	ND	69.7	35-152		
Hexachlorobutadiene	29.1	2.11	ug/L	52.63	ND	55.3	24-120		
Hexachlorocyclopentadiene	35.0	5.26	ug/L	52.63	ND	66.5	15-76		
Hexachloroethane	27.5	2.11	ug/L	52.63	ND	52.3	40-120		
Isophorone	31.7	5.26	ug/L	52.63	ND	60.3	21-196		
Nitrobenzene	31.3	5.26	ug/L	52.63	ND	59.5	35-180		
N-Nitrosodimethylamine	17.6	5.26	ug/L	52.63	ND	33.4	17-127		
N-Nitroso-Di-N-Propylamine	31.9	5.26	ug/L	52.63	ND	60.7	43-230		
N-Nitrosodiphenylamine	36.9	5.26	ug/L	52.63	ND	70.1	79-139		
Pentachlorophenol	40.3	5.26	ug/L	52.63	ND	76.6	14-176		
Phenol	13.0	2.11	ug/L	52.63	ND	24.8	5-120		
Pyrene	38.2	5.26	ug/L	52.63	ND	72.5	52-120		
1,4-Dioxane	13.9	2.11	ug/L	52.63	ND	26.4	7-106		
Surrogate: 2-Fluoroaniline	*29.9*		ug/L	*52.63*		*56.8*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike (B405052-MS1)	**Source: 2405011-03**								
Surrogate: Phenol-D6	*13.6*		ug/L	*52.63*		*25.9*	*60-140*		
Surrogate: Naphthalene-D8	*34.6*		ug/L	*52.63*		*65.7*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*34.6*		ug/L	*52.63*		*65.8*	*60-140*		
Surrogate: 2,4-Dibromophenol	*33.7*		ug/L	*52.63*		*64.0*	*60-140*		
Surrogate: Anthracene-D10	*42.9*		ug/L	*52.63*		*81.5*	*60-140*		
Surrogate: Chrysene-D12	*40.4*		ug/L	*52.63*		*76.8*	*60-140*		
Matrix Spike (B405052-MS2)	**Source: 2405017-02**								
Acenaphthene	29.2	5.10	ug/L	51.02	ND	57.2	47-145		
Acenaphthylene	28.5	5.10	ug/L	51.02	ND	55.9	33-145		
Anthracene	39.1	5.10	ug/L	51.02	ND	76.7	27-133		
Benzo(A)Anthracene	38.0	5.10	ug/L	51.02	ND	74.5	33-143		
Benzo(A)Pyrene	42.9	5.10	ug/L	51.02	ND	84.0	17-163		
Benzo(B)Fluoranthene	41.9	5.10	ug/L	51.02	ND	82.2	24-159		
Benzo(G,H,I)Perylene	47.3	5.10	ug/L	51.02	ND	92.7	35-219		
Benzo(K)Fluoranthene	39.9	5.10	ug/L	51.02	ND	78.1	11-162		
Chrysene	38.5	5.10	ug/L	51.02	ND	75.5	17-168		
Dibenzo(A,H)Anthracene	48.4	5.10	ug/L	51.02	ND	94.9	33-227		
Fluoranthene	39.7	5.10	ug/L	51.02	ND	77.7	26-137		
Fluorene	36.5	5.10	ug/L	51.02	ND	71.5	59-121		
Indeno(1,2,3-Cd)Pyrene	51.3	5.10	ug/L	51.02	ND	101	39-171		
Naphthalene	22.0	2.04	ug/L	51.02	ND	43.1	21-133		
Phenanthrene	39.8	5.10	ug/L	51.02	ND	78.0	54-120		
1,2,4-Trichlorobenzene	20.8	5.10	ug/L	51.02	ND	40.8	44-142		
2,4,6-Trichlorophenol	29.3	5.10	ug/L	51.02	ND	57.5	37-144		
2,4-Dichlorophenol	25.0	5.10	ug/L	51.02	ND	49.0	39-135		
2,4-Dimethylphenol	25.0	5.10	ug/L	51.02	ND	48.9	32-120		
2,4-Dinitrotoluene	44.3	5.10	ug/L	51.02	ND	86.9	39-139		
2,6-Dinitrotoluene	35.2	5.10	ug/L	51.02	ND	68.9	50-158		
2,4-Dinitrophenol	23.4	5.10	ug/L	51.02	ND	45.8	21-191		
2-Chloronaphthalene	25.6	5.10	ug/L	51.02	ND	50.2	60-120		
2-Chlorophenol	19.1	5.10	ug/L	51.02	ND	37.3	23-134		
2-Nitrophenol	22.2	5.10	ug/L	51.02	ND	43.4	29-182		
3,3'- Dichlorobenzidine	25.7	5.10	ug/L	51.02	ND	50.3	38-262		
4,6-Dinitro-2-Methylphenol	39.9	5.10	ug/L	51.02	ND	78.3	17-181		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike (B405052-MS2)	**Source: 2405017-02**								
4-Bromophenyl-Phenylether	39.0	5.10	ug/L	51.02	ND	76.4	53-127		
4-Chloro-3-Methylphenol	30.5	5.10	ug/L	51.02	ND	59.7	22-147		
4-Chlorophenyl-Phenylether	36.7	5.10	ug/L	51.02	ND	71.9	25-158		
4-Nitrophenol	18.2	5.10	ug/L	51.02	ND	35.7	9-132		
Bis(-2-Chloroethoxy)Methane	21.8	5.10	ug/L	51.02	ND	42.8	33-184		
Bis(2-Chloroethyl)Ether	21.9	5.10	ug/L	51.02	ND	43.0	12-158		
Bis(2-Chloroisopropyl)Ether	20.8	5.10	ug/L	51.02	ND	40.8	36-166		
Bis(2-Ethylhexyl)Phthalate	46.4	5.10	ug/L	51.02	ND	90.9	8-158		
Butylbenzylphthalate	42.6	5.10	ug/L	51.02	ND	83.5	38-152		
Azobenzene	37.3	5.10	ug/L	51.02	ND	73.1	61-106		
Diethylphthalate	40.7	5.10	ug/L	51.02	ND	79.8	31-114		
Dimethyl Phthalate	33.0	2.04	ug/L	51.02	ND	64.7	28-120		
Di-N-Butyl Phthalate	43.1	5.10	ug/L	51.02	ND	84.5	1-120		
Di-N-Octyl Phthalate	45.3	5.10	ug/L	51.02	ND	88.8	4-146		
Hexachlorobenzene	38.6	5.10	ug/L	51.02	ND	75.6	35-152		
Hexachlorobutadiene	20.8	2.04	ug/L	51.02	ND	40.7	24-120		
Hexachlorocyclopentadiene	22.7	5.10	ug/L	51.02	ND	44.6	15-76		
Hexachloroethane	20.8	2.04	ug/L	51.02	ND	40.8	40-120		
Isophorone	24.8	5.10	ug/L	51.02	ND	48.7	21-196		
Nitrobenzene	22.0	5.10	ug/L	51.02	ND	43.1	35-180		
N-Nitrosodimethylamine	13.6	5.10	ug/L	51.02	ND	26.6	17-127		
N-Nitroso-Di-N-Propylamine	21.9	5.10	ug/L	51.02	ND	43.0	43-230		
N-Nitrosodiphenylamine	49.5	5.10	ug/L	51.02	ND	97.1	79-139		
Pentachlorophenol	37.2	5.10	ug/L	51.02	ND	72.9	14-176		
Phenol	10.8	2.04	ug/L	51.02	ND	21.2	5-120		
Pyrene	40.2	5.10	ug/L	51.02	ND	78.8	52-120		
1,4-Dioxane	33.6	2.04	ug/L	51.02	36.0	NR	7-106		
Surrogate: 2-Fluoroaniline	*20.7*		ug/L	*51.02*		*40.6*	*60-140*		
Surrogate: Phenol-D6	*10.4*		ug/L	*51.02*		*20.4*	*60-140*		
Surrogate: Naphthalene-D8	*22.9*		ug/L	*51.02*		*44.8*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*23.2*		ug/L	*51.02*		*45.4*	*60-140*		
Surrogate: 2,4-Dibromophenol	*30.5*		ug/L	*51.02*		*59.7*	*60-140*		
Surrogate: Anthracene-D10	*46.7*		ug/L	*51.02*		*91.4*	*60-140*		
Surrogate: Chrysene-D12	*41.5*		ug/L	*51.02*		*81.4*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike Dup (B405052-MSD1)	**Source: 2405011-03**								
Acenaphthene	37.0	5.00	ug/L	50.00	ND	73.9	47-145	10.6	24
Acenaphthylene	37.8	5.00	ug/L	50.00	ND	75.5	33-145	11.9	24
Anthracene	39.9	5.00	ug/L	50.00	ND	79.8	27-133	9.00	24
Benzo(A)Anthracene	42.9	5.00	ug/L	50.00	ND	85.8	33-143	10.2	24
Benzo(A)Pyrene	46.6	5.00	ug/L	50.00	ND	93.2	17-163	12.5	24
Benzo(B)Fluoranthene	45.8	5.00	ug/L	50.00	ND	91.6	24-159	11.3	24
Benzo(G,H,I)Perylene	49.6	5.00	ug/L	50.00	ND	99.2	35-219	11.7	24
Benzo(K)Fluoranthene	45.4	5.00	ug/L	50.00	ND	90.8	11-162	14.1	24
Chrysene	44.0	5.00	ug/L	50.00	ND	88.0	17-168	11.1	24
Dibenzo(A,H)Anthracene	51.2	5.00	ug/L	50.00	ND	102	33-227	12.0	24
Fluoranthene	42.3	5.00	ug/L	50.00	ND	84.5	26-137	10.3	24
Fluorene	40.1	5.00	ug/L	50.00	ND	80.2	59-121	9.90	24
Indeno(1,2,3-Cd)Pyrene	53.1	5.00	ug/L	50.00	ND	106	39-171	18.1	24
Naphthalene	31.0	2.00	ug/L	50.00	ND	62.1	21-133	1.98	24
Phenanthrene	41.5	5.00	ug/L	50.00	ND	83.0	54-120	10.5	24
1,2,4-Trichlorobenzene	30.2	5.00	ug/L	50.00	ND	60.5	44-142	1.29	24
2,4,6-Trichlorophenol	38.8	5.00	ug/L	50.00	ND	77.7	37-144	21.3	24
2,4-Dichlorophenol	37.3	5.00	ug/L	50.00	ND	74.6	39-135	21.6	24
2,4-Dimethylphenol	35.1	5.00	ug/L	50.00	ND	70.2	32-120	10.6	24
2,4-Dinitrotoluene	46.3	5.00	ug/L	50.00	ND	92.6	39-139	13.3	24
2,6-Dinitrotoluene	41.7	5.00	ug/L	50.00	ND	83.5	50-158	12.1	24
2,4-Dinitrophenol	21.3	5.00	ug/L	50.00	ND	42.6	21-191	29.5	24
2-Chloronaphthalene	35.5	5.00	ug/L	50.00	ND	71.1	60-120	9.86	24
2-Chlorophenol	29.6	5.00	ug/L	50.00	ND	59.3	23-134	13.5	24
2-Nitrophenol	35.2	5.00	ug/L	50.00	ND	70.4	29-182	10.9	24
3,3'- Dichlorobenzidine	29.2	5.00	ug/L	50.00	ND	58.5	38-262	28.8	24
4,6-Dinitro-2-Methylphenol	40.4	5.00	ug/L	50.00	ND	80.8	17-181	7.23	24
4-Bromophenyl-Phenylether	41.5	5.00	ug/L	50.00	ND	83.0	53-127	11.1	24
4-Chloro-3-Methylphenol	38.3	5.00	ug/L	50.00	ND	76.6	22-147	20.1	24
4-Chlorophenyl-Phenylether	40.7	5.00	ug/L	50.00	ND	81.4	25-158	10.9	24
4-Nitrophenol	19.1	5.00	ug/L	50.00	ND	38.3	9-132	19.2	24
Bis(-2-Chloroethoxy)Methane	33.0	5.00	ug/L	50.00	ND	65.9	33-184	4.35	24
Bis(2-Chloroethyl)Ether	28.9	5.00	ug/L	50.00	ND	57.8	12-158	0.313	24
Bis(2-Chloroisopropyl)Ether	28.6	5.00	ug/L	50.00	ND	57.2	36-166	0.987	24
Bis(2-Ethylhexyl)Phthalate	53.2	5.00	ug/L	50.00	ND	106	8-158	10.5	24

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike Dup (B405052-MSD1)	**Source: 2405011-03**								
Butylbenzylphthalate	47.9	5.00	ug/L	50.00	ND	95.8	38-152	12.0	24
Azobenzene	40.6	5.00	ug/L	50.00	ND	81.2	61-106	10.8	24
Diethylphthalate	42.1	5.00	ug/L	50.00	ND	84.2	31-114	10.5	24
Dimethyl Phthalate	38.2	2.00	ug/L	50.00	ND	76.3	28-120	9.81	24
Di-N-Butyl Phthalate	45.4	5.00	ug/L	50.00	ND	90.8	1-120	10.1	24
Di-N-Octyl Phthalate	53.3	5.00	ug/L	50.00	ND	107	4-146	14.5	24
Hexachlorobenzene	41.7	5.00	ug/L	50.00	ND	83.4	35-152	12.8	24
Hexachlorobutadiene	28.7	2.00	ug/L	50.00	ND	57.5	24-120	1.30	24
Hexachlorocyclopentadiene	36.6	5.00	ug/L	50.00	ND	73.2	15-76	4.35	24
Hexachloroethane	28.5	2.00	ug/L	50.00	ND	57.1	40-120	3.62	24
Isophorone	34.2	5.00	ug/L	50.00	ND	68.4	21-196	7.47	24
Nitrobenzene	31.6	5.00	ug/L	50.00	ND	63.2	35-180	1.03	24
N-Nitrosodimethylamine	18.6	5.00	ug/L	50.00	ND	37.2	17-127	5.58	24
N-Nitroso-Di-N-Propylamine	32.9	5.00	ug/L	50.00	ND	65.8	43-230	2.94	24
N-Nitrosodiphenylamine	41.4	5.00	ug/L	50.00	ND	82.9	79-139	11.5	24
Pentachlorophenol	41.8	5.00	ug/L	50.00	ND	83.6	14-176	3.71	24
Phenol	15.8	2.00	ug/L	50.00	ND	31.6	5-120	19.3	24
Pyrene	42.5	5.00	ug/L	50.00	ND	85.1	52-120	10.8	24
1,4-Dioxane	14.9	2.00	ug/L	50.00	ND	29.7	7-106	6.64	24
Surrogate: 2-Fluoroaniline	*29.3*		ug/L	*50.00*		*58.6*	*60-140*		
Surrogate: Phenol-D6	*15.8*		ug/L	*50.00*		*31.6*	*60-140*		
Surrogate: Naphthalene-D8	*33.3*		ug/L	*50.00*		*66.7*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*33.5*		ug/L	*50.00*		*66.9*	*60-140*		
Surrogate: 2,4-Dibromophenol	*39.6*		ug/L	*50.00*		*79.3*	*60-140*		
Surrogate: Anthracene-D10	*45.1*		ug/L	*50.00*		*90.2*	*60-140*		
Surrogate: Chrysene-D12	*42.5*		ug/L	*50.00*		*84.9*	*60-140*		
Matrix Spike Dup (B405052-MSD2)	**Source: 2405017-02**								
Acenaphthene	39.7	5.15	ug/L	51.55	ND	77.0	47-145	30.6	24
Acenaphthylene	39.2	5.15	ug/L	51.55	ND	76.1	33-145	31.6	24
Anthracene	44.9	5.15	ug/L	51.55	ND	87.1	27-133	13.8	24
Benzo(A)Anthracene	42.4	5.15	ug/L	51.55	ND	82.2	33-143	10.8	24
Benzo(A)Pyrene	49.6	5.15	ug/L	51.55	ND	96.3	17-163	14.7	24
Benzo(B)Fluoranthene	47.7	5.15	ug/L	51.55	ND	92.5	24-159	12.8	24
Benzo(G,H,I)Perylene	55.0	5.15	ug/L	51.55	ND	107	35-219	15.1	24

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike Dup (B405052-MSD2)	**Source: 2405017-02**								
Benzo(K)Fluoranthene	45.6	5.15	ug/L	51.55	ND	88.5	11-162	13.5	24
Chrysene	42.8	5.15	ug/L	51.55	ND	83.1	17-168	10.7	24
Dibenzo(A,H)Anthracene	56.6	5.15	ug/L	51.55	ND	110	33-227	15.6	24
Fluoranthene	44.6	5.15	ug/L	51.55	ND	86.5	26-137	11.7	24
Fluorene	45.3	5.15	ug/L	51.55	ND	87.9	59-121	21.7	24
Indeno(1,2,3-Cd)Pyrene	60.5	5.15	ug/L	51.55	ND	117	39-171	16.4	24
Naphthalene	34.6	2.06	ug/L	51.55	ND	67.2	21-133	44.7	24
Phenanthrene	46.0	5.15	ug/L	51.55	ND	89.3	54-120	14.6	24
1,2,4-Trichlorobenzene	32.8	5.15	ug/L	51.55	ND	63.7	44-142	44.7	24
2,4,6-Trichlorophenol	39.6	5.15	ug/L	51.55	ND	76.9	37-144	29.9	24
2,4-Dichlorophenol	38.7	5.15	ug/L	51.55	ND	75.1	39-135	43.0	24
2,4-Dimethylphenol	37.9	5.15	ug/L	51.55	ND	73.6	32-120	41.2	24
2,4-Dinitrotoluene	51.7	5.15	ug/L	51.55	ND	100	39-139	15.4	24
2,6-Dinitrotoluene	43.6	5.15	ug/L	51.55	ND	84.5	50-158	21.4	24
2,4-Dinitrophenol	18.8	5.15	ug/L	51.55	ND	36.4	21-191	21.8	24
2-Chloronaphthalene	38.0	5.15	ug/L	51.55	ND	73.8	60-120	39.0	24
2-Chlorophenol	31.8	5.15	ug/L	51.55	ND	61.8	23-134	50.2	24
2-Nitrophenol	39.0	5.15	ug/L	51.55	ND	75.7	29-182	55.1	24
3,3'- Dichlorobenzidine	32.0	5.15	ug/L	51.55	ND	62.1	38-262	22.0	24
4,6-Dinitro-2-Methylphenol	45.2	5.15	ug/L	51.55	ND	87.6	17-181	12.3	24
4-Bromophenyl-Phenylether	47.1	5.15	ug/L	51.55	ND	91.3	53-127	18.8	24
4-Chloro-3-Methylphenol	39.5	5.15	ug/L	51.55	ND	76.6	22-147	25.8	24
4-Chlorophenyl-Phenylether	45.9	5.15	ug/L	51.55	ND	89.1	25-158	22.4	24
4-Nitrophenol	17.7	5.15	ug/L	51.55	ND	34.3	9-132	2.75	24
Bis(-2-Chloroethoxy)Methane	36.3	5.15	ug/L	51.55	ND	70.4	33-184	49.8	24
Bis(2-Chloroethyl)Ether	32.8	5.15	ug/L	51.55	ND	63.6	12-158	39.8	24
Bis(2-Chloroisopropyl)Ether	31.3	5.15	ug/L	51.55	ND	60.8	36-166	40.4	24
Bis(2-Ethylhexyl)Phthalate	50.4	5.15	ug/L	51.55	ND	97.8	8-158	8.32	24
Butylbenzylphthalate	47.8	5.15	ug/L	51.55	ND	92.7	38-152	11.5	24
Azobenzene	45.6	5.15	ug/L	51.55	ND	88.4	61-106	20.0	24
Diethylphthalate	46.9	5.15	ug/L	51.55	ND	91.1	31-114	14.3	24
Dimethyl Phthalate	39.5	2.06	ug/L	51.55	ND	76.6	28-120	17.9	24
Di-N-Butyl Phthalate	48.1	5.15	ug/L	51.55	ND	93.3	1-120	11.0	24
Di-N-Octyl Phthalate	50.0	5.15	ug/L	51.55	ND	97.1	4-146	9.96	24
Hexachlorobenzene	46.0	5.15	ug/L	51.55	ND	89.2	35-152	17.5	24

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

NVOA GCMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405052									
Matrix Spike Dup (B405052-MSD2)	**Source: 2405017-02**								
Hexachlorobutadiene	31.8	2.06	ug/L	51.55	ND	61.7	24-120	42.0	24
Hexachlorocyclopentadiene	38.5	5.15	ug/L	51.55	ND	74.6	15-76	51.4	24
Hexachloroethane	29.1	2.06	ug/L	51.55	ND	56.4	40-120	33.0	24
Isophorone	39.7	5.15	ug/L	51.55	ND	77.1	21-196	46.1	24
Nitrobenzene	35.4	5.15	ug/L	51.55	ND	68.6	35-180	46.7	24
N-Nitrosodimethylamine	19.8	5.15	ug/L	51.55	ND	38.4	17-127	37.2	24
N-Nitroso-Di-N-Propylamine	36.6	5.15	ug/L	51.55	ND	71.0	43-230	50.1	24
N-Nitrosodiphenylamine	57.0	5.15	ug/L	51.55	ND	111	79-139	14.1	24
Pentachlorophenol	41.6	5.15	ug/L	51.55	ND	80.6	14-176	11.1	24
Phenol	16.6	2.06	ug/L	51.55	ND	32.3	5-120	42.4	24
Pyrene	45.3	5.15	ug/L	51.55	ND	87.9	52-120	12.0	24
1,4-Dioxane	49.2	2.06	ug/L	51.55	36.0	25.6	7-106	37.7	24
Surrogate: 2-Fluoroaniline	*32.4*		ug/L	*51.55*		*62.9*	*60-140*		
Surrogate: Phenol-D6	*15.6*		ug/L	*51.55*		*30.2*	*60-140*		
Surrogate: Naphthalene-D8	*35.1*		ug/L	*51.55*		*68.1*	*60-140*		
Surrogate: 1-Fluoronaphthalene	*35.0*		ug/L	*51.55*		*67.9*	*60-140*		
Surrogate: 2,4-Dibromophenol	*39.1*		ug/L	*51.55*		*75.8*	*60-140*		
Surrogate: Anthracene-D10	*49.9*		ug/L	*51.55*		*96.8*	*60-140*		
Surrogate: Chrysene-D12	*40.6*		ug/L	*51.55*		*78.8*	*60-140*		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405099									
Blank (B405099-BLK1)									
Oil & Grease	--- U	5.00	mg/L						
LCS (B405099-BS1)									
Oil & Grease	37.4	5.00	mg/L	40.00		93.5	78-114		
LCS (B405099-BS2)									
Oil & Grease	36.2	5.00	mg/L	40.00		90.5	78-114		
LCS (B405099-BS3)									
Oil & Grease	37.4	5.00	mg/L	40.00		93.5	78-114		
LCS (B405099-BS4)									
Oil & Grease	37.9	5.00	mg/L	40.00		94.8	78-114		
Matrix Spike (B405099-MS1)	**Source: 2405011-03**								
Oil & Grease	32.5	6.17	mg/L	49.38	ND	65.8	78-114		
Matrix Spike (B405099-MS2)	**Source: 2405017-03**								
Oil & Grease	42.4	5.62	mg/L	44.94	ND	94.3	78-114		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

Metals ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405055									
Blank (B405055-BLK1)									
Arsenic	--- U	8.00	ug/L						
Chromium	--- U	5.00	ug/L						
Copper	--- U	10.0	ug/L						
Lead	--- U	8.00	ug/L						
Nickel	--- U	20.0	ug/L						
Selenium	--- U	20.0	ug/L						
Zinc	--- U	20.0	ug/L						
LCS (B405055-BS1)									
Arsenic	200	8.00	ug/L	200.0		100	85-115		
Chromium	202	5.00	ug/L	200.0		101	85-115		
Copper	197	10.0	ug/L	200.0		98.5	85-115		
Lead	203	8.00	ug/L	200.0		102	85-115		
Nickel	202	20.0	ug/L	200.0		101	85-115		
Selenium	198	20.0	ug/L	200.0		99.0	85-115		
Zinc	201	20.0	ug/L	200.0		100	85-115		
LCS Dup (B405055-BSD1)									
Arsenic	201	8.00	ug/L	200.0		100	85-115	0.225	20
Chromium	203	5.00	ug/L	200.0		101	85-115	0.277	20
Copper	197	10.0	ug/L	200.0		98.6	85-115	0.127	20
Lead	203	8.00	ug/L	200.0		102	85-115	0.0344	20
Nickel	202	20.0	ug/L	200.0		101	85-115	0.0198	20
Selenium	198	20.0	ug/L	200.0		99.2	85-115	0.146	20
Zinc	202	20.0	ug/L	200.0		101	85-115	0.645	20
Matrix Spike (B405055-MS1)	**Source: 2405017-01**								
Arsenic	208	8.00	ug/L	200.0	ND	104	80-120		
Chromium	199	5.00	ug/L	200.0	ND	99.3	80-120		
Copper	215	10.0	ug/L	200.0	5.28	105	80-120		
Lead	196	8.00	ug/L	200.0	ND	98.2	80-120		
Nickel	201	20.0	ug/L	200.0	6.55	97.3	80-120		
Selenium	221	20.0	ug/L	200.0	29.0	95.9	80-120		
Zinc	224	20.0	ug/L	200.0	24.4	99.6	80-120		

Final Report

Project: GCUA STP - 2405010

Project Number: 2405010

Metals ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405055									
Matrix Spike Dup (B405055-MSD1)	**Source: 2405017-01**								
Arsenic	208	40.0	ug/L	200.0	ND	104	80-120	0.149	10
Chromium	200	25.0	ug/L	200.0	ND	99.8	80-120	0.462	10
Copper	209	50.0	ug/L	200.0	ND	105	80-120	2.73	10
Lead	197	40.0	ug/L	200.0	ND	98.6	80-120	0.356	10
Nickel	206	100	ug/L	200.0	ND	103	80-120	2.17	10
Selenium	235	100	ug/L	200.0	ND	118	80-120	6.34	10
Zinc	228	100	ug/L	200.0	24.4	102	80-120	1.75	10

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Project: GCUA STP - 2405010

Project Number: 2405010

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405041									
Blank (B405041-BLK1)									
Nitrate [As N]	--- U	0.0500	mg/L						
Blank (B405041-BLK2)									
Nitrate [As N]	--- U	0.0500	mg/L						
LCS (B405041-BS1)									
Nitrate [As N]	22.1	1.00	mg/L	22.50		98	90-110		
LCS Dup (B405041-BSD1)									
Nitrate [As N]	22.5	1.00	mg/L	22.50		100	90-110	2	20
Matrix Spike (B405041-MS1)	**Source: 2405017-01**								
Nitrate [As N]	0.262	0.0500	mg/L	0.2000	0.0540	104	90-110		
Batch B405042									
Blank (B405042-BLK1)									
Biochemical Oxygen Demand, Carb.	--- U	2.00	mg/L						
LCS (B405042-BS1)									
Biochemical Oxygen Demand, Carb.	176		mg/L	198.0		88.9	84.6-115.4		
LCS (B405042-BS2)									
Biochemical Oxygen Demand, Carb.	181		mg/L	198.0		91.4	84.6-115.4		
LCS (B405042-BS3)									
Biochemical Oxygen Demand, Carb.	176		mg/L	198.0		89.1	84.6-115.4		

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Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405042									
Duplicate (B405042-DUP1)		**Source: 2405017-06**							
Biochemical Oxygen Demand, Carb.	229	2.00	mg/L		195			16.1	25
Matrix Spike (B405042-MS1)		**Source: 2405017-06**							
Biochemical Oxygen Demand, Carb.	517	2.00	mg/L	396.0	195	81.5	75-125		
Matrix Spike Dup (B405042-MSD1)		**Source: 2405017-06**							
Biochemical Oxygen Demand, Carb.	575	2.00	mg/L	396.0	195	96.1	75-125	10.6	200
Batch B405046									
Blank (B405046-BLK1)									
Residue, Non-Filterable	--- U	10.0	mg/L						
LCS (B405046-BS1)									
Residue, Non-Filterable	43.0	10.0	mg/L	46.40		92.7	85-115		
LCS Dup (B405046-BSD1)									
Residue, Non-Filterable	46.0	10.0	mg/L	46.40		99.1	85-115	6.74	20
Duplicate (B405046-DUP1)		**Source: 2405017-01**							
Residue, Non-Filterable	8.00	10.0	mg/L		8.00			0.00	20
Batch B405047									
Blank (B405047-BLK1)									
Residue, Filterable	--- U	10.0	mg/L						

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

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Project Number: 2405010

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405047									
LCS (B405047-BS1)									
Residue, Filterable	379	10.0	mg/L	378.0		100	85-115		
LCS Dup (B405047-BSD1)									
Residue, Filterable	378	10.0	mg/L	378.0		100	85-115	0.264	20
Duplicate (B405047-DUP1)		**Source: 2405001-01**							
Residue, Filterable	185	10.0	mg/L		189			2.14	20
Batch B405060									
Blank (B405060-BLK1)									
Phosphorus	--- U	0.0500	mg/L						
Blank (B405060-BLK2)									
Phosphorus	--- U	0.0500	mg/L						
LCS (B405060-BS1)									
Phosphorus	8.96	0.250	mg/L	8.450		106	90-110		
LCS Dup (B405060-BSD1)									
Phosphorus	8.98	0.250	mg/L	8.450		106	90-110	0.2	20
Matrix Spike (B405060-MS1)		**Source: 2405011-01**							
Phosphorus	3.54	0.500	mg/L	1.000	2.81	74	90-110		
Matrix Spike (B405060-MS2)		**Source: 2405017-01**							
Phosphorus	4.00	0.500	mg/L	1.000	3.37	63	90-110		

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Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405093									
Blank (B405093-BLK1)									
Ammonia [As N]	--- U	0.100	mg/L						
LCS (B405093-BS1)									
Ammonia [As N]	2.12	0.100	mg/L	2.060		103	90-110		
LCS Dup (B405093-BSD1)									
Ammonia [As N]	2.04	0.100	mg/L	2.060		99	90-110	4	20
Matrix Spike (B405093-MS1)	**Source: 2405011-01**								
Ammonia [As N]	33.8	1.00	mg/L	5.000	30.8	60	90-110		
Matrix Spike (B405093-MS2)	**Source: 2405017-01**								
Ammonia [As N]	44.4	1.00	mg/L	5.000	40.9	70	90-110		

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Project: GCUA STP - 2405010

Project Number: 2405010

PFAAS, LCMS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405067									
Blank (B405067-BLK1)									
11Cl-PF3OUdS	--- U	3.95	ng/L						
9Cl-PF3ONS	--- U	3.95	ng/L						
HFPO-DA	--- U	3.95	ng/L						
ADONA	--- U	3.95	ng/L						
NEtFOSAA	--- U	3.95	ng/L						
NMeFOSAA	--- U	3.95	ng/L						
PFBS	--- U	3.95	ng/L						
PFDA	--- U	3.95	ng/L						
PFDoA	--- U	3.95	ng/L						
PFHpA	--- U	3.95	ng/L						
PFHxA	--- U	3.95	ng/L						
PFHxS	--- U	3.95	ng/L						
PFNA	--- U	3.95	ng/L						
PFOA	--- U	3.95	ng/L						
PFOS	--- U	3.95	ng/L						
PFTeDA	--- U	3.95	ng/L						
PFTrDA	--- U	3.95	ng/L						
PFUdA	--- U	3.95	ng/L						
PFPeS	--- U	3.95	ng/L						
PFNS	--- U	3.95	ng/L						
PFHpS	--- U	3.95	ng/L						
PFDS	--- U	3.95	ng/L						
4:2 FTS	--- U	3.95	ng/L						
6:2 FTS	--- U	3.95	ng/L						
8:2 FTS	--- U	3.95	ng/L						
Surrogate: 13C2-PFDA(SURR)	*44.6*		ng/L	*40.00*		*111*	*70-130*		
Surrogate: 13C2-PFHxA(SURR)	*39.4*		ng/L	*40.00*		*98*	*70-130*		
Surrogate: 13C3-HFPO-DA (SURR)	*37.3*		ng/L	*40.00*		*93*	*70-130*		
Surrogate: d5-NEtFOSAA-M (SURR)	*176*		ng/L	*160.0*		*110*	*70-130*		
Surrogate: 13C8-PFOS (SURR)	*36.1*		ng/L	*40.04*		*90*	*70-130*		
Surrogate: 13C2-6:2 FTS (SURR)	*32.6*		ng/L	*39.98*		*82*	*70-130*		

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Project: GCUA STP - 2405010

Project Number: 2405010

PFAAS, LCMS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405067									
LCS (B405067-BS1)									
11Cl-PF3OUdS	328	3.98	ng/L	301.2		109	50-150		
9Cl-PF3ONS	335	3.98	ng/L	298.0		112	50-150		
HFPO-DA	271	3.98	ng/L	318.7		85	50-150		
ADONA	335	3.98	ng/L	301.2		111	50-150		
NEtFOSAA	323	3.98	ng/L	318.7		101	50-150		
NMeFOSAA	376	3.98	ng/L	318.7		118	50-150		
PFBS	174	3.98	ng/L	282.1		62	50-150		
PFDA	333	3.98	ng/L	318.7		104	50-150		
PFDoA	321	3.98	ng/L	318.7		101	50-150		
PFHpA	342	3.98	ng/L	318.7		107	50-150		
PFHxA	267	3.98	ng/L	318.7		84	50-150		
PFHxS	331	3.98	ng/L	290.8		114	50-150		
PFNA	334	3.98	ng/L	318.7		105	50-150		
PFOA	339	3.98	ng/L	318.7		106	50-150		
PFOS	342	3.98	ng/L	295.1		116	50-150		
PFTeDA	312	3.98	ng/L	318.7		98	50-150		
PFTrDA	326	3.98	ng/L	318.7		102	50-150		
PFUdA	327	3.98	ng/L	318.7		102	50-150		
PFPeS	264	3.98	ng/L	318.4		83	50-150		
PFNS	261	3.98	ng/L	318.9		82	50-150		
PFHpS	284	3.98	ng/L	318.6		89	50-150		
PFDS	278	3.98	ng/L	318.7		87	50-150		
4:2 FTS	276	3.98	ng/L	319.2		87	50-150		
6:2 FTS	282	3.98	ng/L	318.6		89	50-150		
8:2 FTS	263	3.98	ng/L	319.0		82	50-150		
Surrogate: 13C2-PFDA(SURR)	*47.2*		ng/L	*40.00*		*118*	*70-130*		
Surrogate: 13C2-PFHxA(SURR)	*36.9*		ng/L	*40.00*		*92*	*70-130*		
Surrogate: 13C3-HFPO-DA (SURR)	*36.5*		ng/L	*40.00*		*91*	*70-130*		
Surrogate: d5-NEtFOSAA-M (SURR)	*177*		ng/L	*160.0*		*110*	*70-130*		
Surrogate: 13C8-PFOS (SURR)	*36.1*		ng/L	*40.04*		*90*	*70-130*		
Surrogate: 13C2-6:2 FTS (SURR)	*35.6*		ng/L	*39.98*		*89*	*70-130*		

Final Report

Project: GCUA STP - 2405010

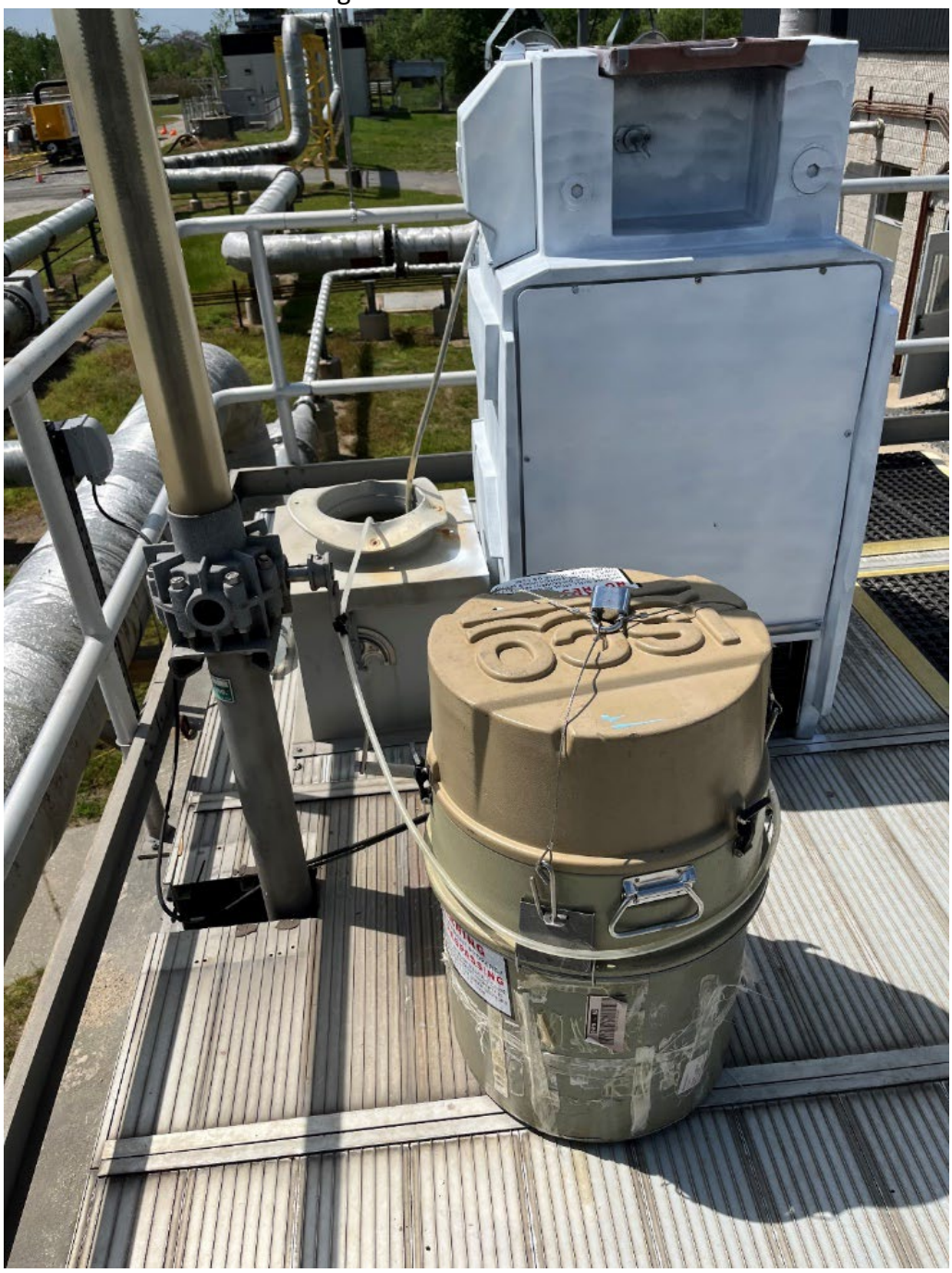
Project Number: 2405010

PFAAS, LCMS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B405067									
LCS Dup (B405067-BSD1)									
11Cl-PF3OUdS	351	3.97	ng/L	300.0		117	50-150	7	30
9Cl-PF3ONS	359	3.97	ng/L	296.8		121	50-150	7	30
HFPO-DA	309	3.97	ng/L	317.5		97	50-150	13	30
ADONA	346	3.97	ng/L	300.0		115	50-150	3	30
NEtFOSAA	341	3.97	ng/L	317.5		108	50-150	5	30
NMeFOSAA	409	3.97	ng/L	317.5		129	50-150	8	30
PFBS	253	3.97	ng/L	281.0		90	50-150	37	30
PFDA	350	3.97	ng/L	317.5		110	50-150	5	30
PFDoA	337	3.97	ng/L	317.5		106	50-150	5	30
PFHpA	362	3.97	ng/L	317.5		114	50-150	6	30
PFHxA	318	3.97	ng/L	317.5		100	50-150	18	30
PFHxS	357	3.97	ng/L	289.7		123	50-150	8	30
PFNA	345	3.97	ng/L	317.5		109	50-150	3	30
PFOA	354	3.97	ng/L	317.5		111	50-150	4	30
PFOS	360	3.97	ng/L	294.0		123	50-150	5	30
PFTeDA	323	3.97	ng/L	317.5		102	50-150	4	30
PFTrDA	339	3.97	ng/L	317.5		107	50-150	4	30
PFUdA	350	3.97	ng/L	317.5		110	50-150	7	30
PFPeS	298	3.97	ng/L	317.1		94	50-150	12	30
PFNS	273	3.97	ng/L	317.6		86	50-150	4	30
PFHpS	301	3.97	ng/L	317.3		95	50-150	6	30
PFDS	304	3.97	ng/L	317.5		96	50-150	9	30
4:2 FTS	286	3.97	ng/L	317.9		90	50-150	3	30
6:2 FTS	271	3.97	ng/L	317.3		85	50-150	4	30
8:2 FTS	245	3.97	ng/L	317.8		77	50-150	7	30
Surrogate: 13C2-PFDA(SURR)	*48.2*		ng/L	*40.00*		*121*	*70-130*		
Surrogate: 13C2-PFHxA(SURR)	*40.9*		ng/L	*40.00*		*102*	*70-130*		
Surrogate: 13C3-HFPO-DA (SURR)	*41.5*		ng/L	*40.00*		*104*	*70-130*		
Surrogate: d5-NEtFOSAA-M (SURR)	*181*		ng/L	*160.0*		*113*	*70-130*		
Surrogate: 13C8-PFOS (SURR)	*39.6*		ng/L	*40.04*		*99*	*70-130*		
Surrogate: 13C2-6:2 FTS (SURR)	*34.4*		ng/L	*39.98*		*86*	*70-130*		

8.0 Photographs

Photograph #1. An ISCO automatic composite sampler was programmed to collect sample aliquots from the influent monitoring location.



Photograph #2. An ISCO automatic composite sampler was programmed to collect sample aliquots from Outfall 001 discharge monitoring location.

Photograph # 4: Dead zones were observed in the aeration chambers.

Photograph #5: Air rising unevenly, and dead zones were observed in the aeration chambers.

Photograph #6. Pin floc was observed overflowing the V-notch weirs from final clarifiers.