NPDES Compliance Sampling Inspection Report

Hopewell Campus Owners, LLC:
Princeton-West Innovative Campus @ Hopewell
(Formerly: Bristol-Myers Squibb)

311 Pennington-Rocky Hill Road
Pennington, New Jersey 08534

NPDES Permit: NJ 0000795

Inspection Date: May 02, 2023

Report Prepared by:

THUAN TRAN Digitally signed by THUAN TRAN
Date: 2023.06.15 14:29:25 -04'00'

Thuan Tran, Physical Scientist

Report Approved by:

Cocuzza, Phil Digitally signed by Cocuzza, Phil
Date: 2023.06.16 08:09:37 -04'00'

Phil Cocuzza, Chief
Monitoring Operations Section

1.0 OBJECTIVE

On May 02, 2023, at the request of the New Jersey Department of Environmental Protection, the United States Environmental Protection Agency (USEPA) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Sampling Inspection (CSI) at the Hopewell Campus Owners, LLC - Princeton-West Innovative Campus @ Hopewell in Pennington, New Jersey (NJ). The objective of the CSI was to gather information necessary to determine if the Princeton-West Innovative Campus @ Hopewell Wastewater Treatment Plant (WWTP) is in compliance with the requirements and limitations of their NPDES Permit; NJ0000795. The NPDES Permit was effective on January 01, 2020 and will expire on December 31, 2024.

2.0 KEY PARTICIPANTS

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

U.S. Environmental Protection Agency
Thuan Tran, Lead Inspector
732-321-4455, email: tran.thuan@epa.gov
Molly Hillenbrand, Environmental Scientist

Hopewell Campus Owners, LLC – Princeton-West Innovative Campus @ Hopewell
Patrick McFarland, Lincoln Equities Group
609-818-2702, email: pmcfarland@princeton-west.com
Bobbie Schwaeble, Lincoln Equities Group Compliance
Christopher Martin, US Water Project Manager
John Winterburn, US Water Licensed Operator
Alex Kidd, US Water Operator

3.0 FACILITY DESCRIPTION

3.1 General Information

Hopewell Campus Owners, LLC (formerly Bristol-Myers Squibb) manages the Princeton-West Innovative Campus @ Hopewell which is located on 311 Pennington-Rocky Hill Road, Pennington, NJ. Princeton-West Innovative Campus @ Hopewell occupies 180 acres of a 400-acre property. The campus consists of more than 30 buildings that provides biologics research and development, and biologics manufacturing, and office space serving tenants and facility owners. The campus was occupied by Bristol-Myers Squibb until 2019 when it was divested and Hopewell Campus Owners, LLC took ownership. The existing tenants and site occupants on the campus are BeiGene USA, Inc., Gennao Bio, Inc., Passage Bio, PTC Therapeutics, Rocket Pharmaceuticals, Inc., and Trustees of Princeton University.

Princeton-West Innovative Campus @ Hopewell is categorized under Standard Industrial Classification (SIC) 7389 – Business Services, Not Elsewhere Classified (NEC).

3.2 Process Information

The campus generates sanitary, pharmaceutical, and industrial waste streams that are treated by the on-site wastewater treatment plant. Sanitary, pharmaceutical, and industrial waste streams are segregated and are introduced into the treatment process at different points in the treatment plant. Industrial wastewater is stored in the industrial equalization (EQ) tanks. Pharmaceutical wastewater is collected in the biologic holding tanks.

Incoming sanitary wastewater is intercepted by the comminutor/grinder. Large matters are grounded up before continuing to the sanitary EQ tank. From the sanitary EQ tank, the wastewater is pumped to the biological EQ tank where pharmaceutical process wastewater is introduced from the biologic holding tanks. Caustic is added to the biological EQ tank for pH adjustment as well as nutrients and urea to aid the activated sludge process in the aeration tank. From the biological EQ tank, the wastewater flows to the junction box where it is mixed with the Return Activated Sludge (RAS) before entering the aeration tank. Ferric chloride is added to the Mixed Liquor Suspended Solids (MLSS) as it exits the aeration tank and settles in the biological clarifier. The effluent from the clarifier overflows the V-notch weirs and flows into the rapid mixing chamber where the industrial process wastewater is introduced. Either hydrochloric acid or sodium hydroxide and ferric chloride are added into the rapid mixing chamber. The combined wastewater is conveyed into the flocculation tank before settling in the combined clarifier. The overflow from the clarifier is pumped to the Disk Filtration System. The filtrate from the Disk Filtration System is further treated by the Granular Activated Carbon (GAC) System. The effluent is disinfected by the Ultraviolet (UV) System. Once pass the UV System, the effluent is recorded with an in-line magnetic flow meter before discharging into the unnamed tributary to Stony Brook. From the tributary, the treated effluent flows sequentially into two ponds before reaching Stony Brook.

Sludge in the biological clarifier is either wasted to the bio sludge holding tank as Waste Activated Sludge (WAS) or pumped to the aeration tank as RAS. The sludge from the combined clarifier is pumped to the combined sludge holding tank. The backwash from the Disk Filtration and the GAC Systems are pumped to the industrial process wastewater holding tank. The sludge in the bio sludge holding tank and the combined sludge holding tank is trucked to Stony Brook Regional Sewer Authority (SBRSA) for treatment.

In case of high incoming flow to the sanitary EQ tank, the treatment plant has the capability to pump excess wastewater through a dedicated sewer line to SBRSA.

3.3 Facility Self-Monitoring Information

For permit compliance, the plant operator assembles and sets-up the automatic composite sampler at the designated monitoring location to collect 4-hour composite sample. The sampling event is coordinated with the contract laboratory, Eurofins Laboratory in Edison, NJ. The courier transports the sample containers and portable field instrumentations to the

WWTP. The 4-hour sampling composite sample is distributed between the individual sample containers. Grab samples are collected from the designated monitoring location.

Furthermore, on-site analytical tests are performed by the courier using portable field instrumentations for pH, temperature, and dissolved oxygen (DO). The collected samples are transported to Eurofins Laboratory for analysis, except for E. Coli. Eurofins Laboratory subcontracted E. Coli to Pace Analytical Services for analysis.

4.0 EPA SAMPLING/INSPECTION ACTIVITIES

4.1 Sampling Activities

Two ISCO automatic composite samplers were programmed to take 16 sample aliquots during the 4-hour sampling event at the designated effluent monitoring location. The 4-hour composite sample was collected and analyzed for 5-Day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Ammonia (NH_3), Phosphorus, Chemical Oxygen Demand (COD), Nitrate (NO_3), Total Dissolved Solids (TDS) and Metals (arsenic and copper). Direct grab samples were collected for Oil & Grease (O&G) and E. Coli.

In addition, on-site grab samples were collected and analyzed for pH, Temperature and Dissolved Oxygen (DO). Chlorine (TRC) was checked to determine the proper container for collecting E. Coli sample.

All sample containers, preservation techniques and holding times were in accordance with USEPA 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, NJ for analysis.

Flow monitoring data were provided by the plant instrumentation that was calibrated on May 24, 2022.

Split samples were collected and given to the facility representative.

4.2 Inspection Activities

An NPDES CSI at the Princeton-West Innovative Campus @ Hopewell WWTP was conducted on May 02, 2023. The inspectors met with Patrick McFarland; Lincoln Equities Group, Bobbie Schwaeble; Lincoln Equities Group Compliance, Chris Martin; U.S. Water Program Manager, John Winterburn; U.S. Water Corp. Licensed Operator, and Alex Kidd; U.S. Water Corp. Operator. Inspector's credential was presented, and business card was provided during the opening conference. It was explained to the representatives that the purpose of the inspection with supporting on-site activities was to determine if the facility is in compliance with their NPDES Permit as well as State and Federal Regulations.

The on-site supporting activities consist of collecting samples at the effluent monitoring location, observing and evaluating the monitoring locations, observing and evaluating the

wastewater treatment process, observing the flow monitoring equipment, observing and evaluating the treated effluent and discharged outfall to the unnamed tributary of Stony Brook, review and evaluate sampling and laboratory data for the month of December 2022, and interviewing the facility's representatives.

During the closing conference, the facility representatives were briefed on the inspection activities. On-site sample results and concerns discovered or observed during the inspection were communicated to the facility representatives.

5.0 ANALYTICAL RESULTS

Princeton-West Innovative Campus @ Hopewell – Outfall 001A
Inspection Date: May 02, 2023

Parameters	Units	NPDES Permit Limitations	EPA Results
Flow	MGD	Monitor	0.005 – 4-hour 0.024 – 24-hour
BOD_5*	MG/L	5.0 (Daily Maximum)	3.06
BOD_5 Mass Loading*	KG/DAY	3.3 (Daily Maximum)	0.06
TSS*	MG/L	5.0 (Daily Maximum)	U
TSS Mass Loading*	KG/DAY	3.3 (Daily Maximum)	0.19
Ammonia (NH_3)*	MG/L	5.3 (Daily Maximum)	U
Nitrate (NO_3)	MG/L	Monitor	22.6
TDS	MG/L	Monitor	850
COD	MG/L	220 (Monthly Average)	U
Phosphorus	MG/L	0.34 (Monthly Average)	U
Arsenic	UG/L	Monitor	U
Copper	UG/L	Monitor	13.1
E. Coli	#/100ML	126 (Monthly Geo. Mean Avg.)	U
Oil & Grease (O&G)	MG/L	10 – 15	U
pH	SU	6.5 – 8.5	8.07
Dissolved Oxygen	MG/L	7.0 (Minimum)	1st Run: 9.5 2nd Run: 9.4
Temperature	°C	Monitor	16

Notes: Mass Loading for BOD4 & TSS calculation is based on a 4-hour composite sample.
The reporting limit (concentration) of 10 mg/l was used to calculate the mass loading for TSS.
U- The analyte was not detected at or above the Reporting Limit.

6.0 FINDINGS

6.1 Sampling Result Findings

The EPA analytical results obtained during this inspection are within the acceptable limits.

6.2 Inspection Findings

In addition to the analytical data, an inspection of the facility operation was conducted as discussed in Section 4.2 above. During the inspection, the following observations were noted

which may contravene the requirements of the permit or the applicable regulations:

6.2.1 The bio clarifier V-notch weirs are not level. Uneven overflows were observed in some areas while no overflows at other areas. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*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 permitted to achieve compliance with the conditions of this permit."* Furthermore, Title 7 of the New Jersey Administrative Code Subchapter 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 Blow-ups and dead zones were observed in the aeration tank. Air distribution in the aeration tank should be uniform. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*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 permitted to achieve compliance with the conditions of this permit."* Furthermore, Title 7 of the New Jersey Administrative Code Subchapter 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. Facility representatives present during the opening conference.

Attachment #2. The campus is occupied by the current list of tenants and site occupants.

Attachment #3. An overview map outlines the building locations on the campus.

Attachment #4. The campus collection system conveys wastewater to the On-Site WWTP.

Attachment #5. The On-Site WWTP uses physical, chemical, & biological treatment.

Attachment #6. USEPA Chain of Custody for Samples was submitted on May 2, 2023.

Attachment #7. USEPA Analytical Data Package was received on May 23, 2023.

8.0 PHOTOGRAPHS

Photo #1. Air distribution is uneven in the aeration tank.

Photo #2. The V-notch weirs in the bio clarifier are not level resulting in uneven overflow.

Photo #3. Automatic composite samplers were set-up at the designated monitoring location.

Photo #4. The treated effluent discharges into the unnamed tributary of Stony Brook.

7.0 Attachments

Attachment #1. A list of facility representatives presents during the opening conference.

OBG

SUBJECT:	PAGE:	BY:	DATE:	JOB NUMBER:
EPA Visit 5/2/2023				

Chris Martin	U.S. Water Project Manager
Bobbie Schwaeble	Lincoln Equities Group Compliance
Patrick McFarland	Lincoln Equities Group
John Winterburn	US Water Corp Licensed Operator
Alex Kidd	US Water Corp Operator

Attachment #2. A list of current tenants and site occupants on the campus.

Princeton West Innovation Campus @ Hopewell

Tenants and Site Occupants

BeiGene USA, Inc.

Gennao Bio, Inc.

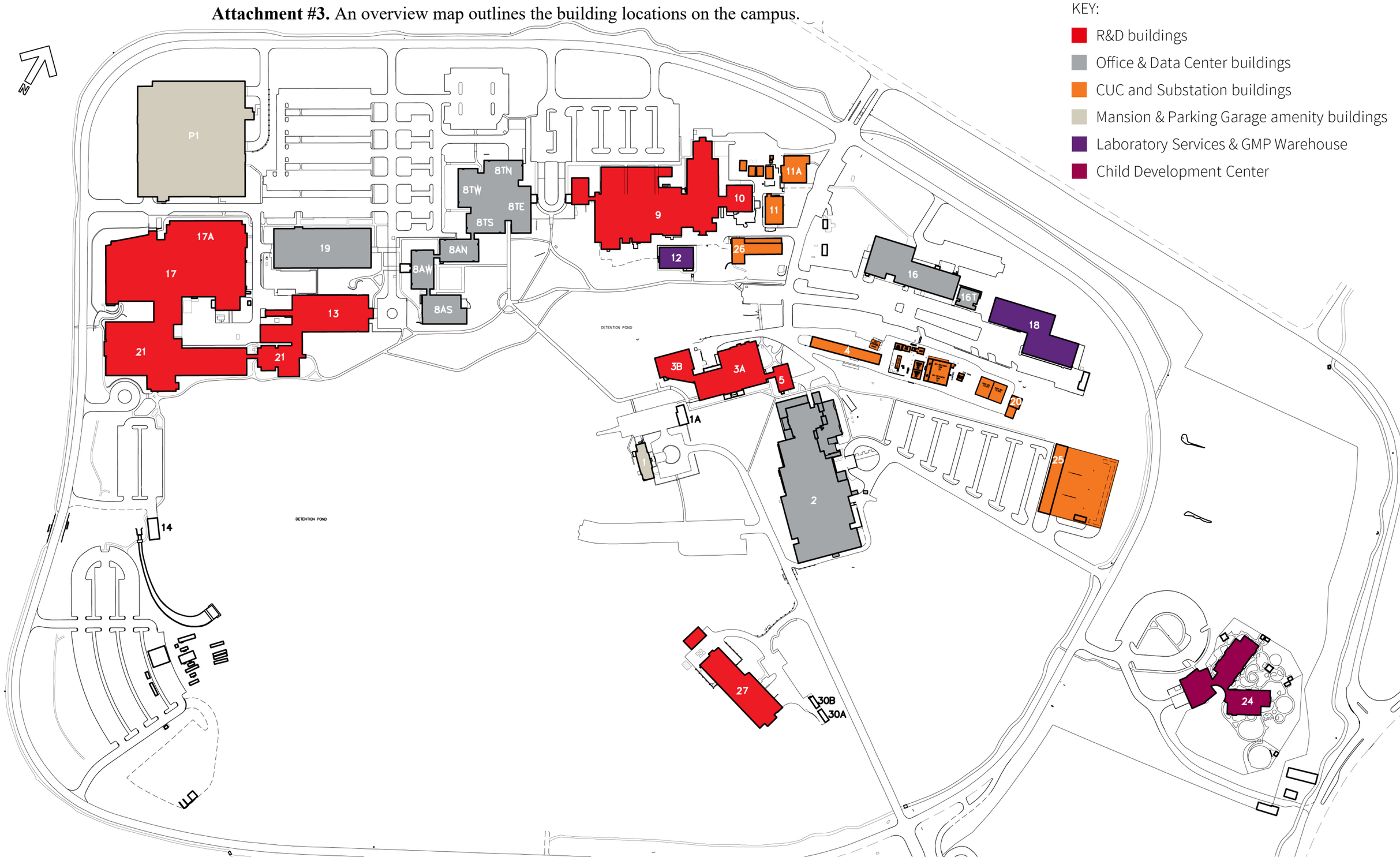
Passage Bio

PTC Therapeutics

Rocket Pharmaceuticals, Inc.

Trustees of Princeton University

Attachment #3. An overview map outlines the building locations on the campus.



Attachment #4. The color coded waste streams are conveyed to the On-Site WWTP.

BUILDING NO.	DESCRIPTION
1	MANOR HOUSE
1A	HOUSE & GARAGE
2 & 2A	EDP CENTER
3	OFFICE &LAB
4	MECHANICAL
5	OFFICE
8	TOWERS OFFICE
8A	ANNEX OFFICE
9	OFFICE & LAB
10	MECHANICAL (DI WATER)
11	POWER HOUSE
11A	CENTRAL UTILITIES
12	LABORATORY SERVICES
13	LABORATORY
14	UTILITY BUILDING
15	GATEHOUSE
16	GENERAL SERVICES
17 & 17A	OFFICE & LAB
18	WAREHOUSE
19	OFFICE
20	GARAGE
21	METABOLIC LAB
26	COOLING TOWER
27	LABORATORY
BIOLOGICS	WWTP BIOLOGICS EQUALIZATION TANK
SANITARY	WWTP SANITARY EQUALIZATION TANK
HAVC/LAB	WWTP HVAC/LAB EQUALIZATION TANK

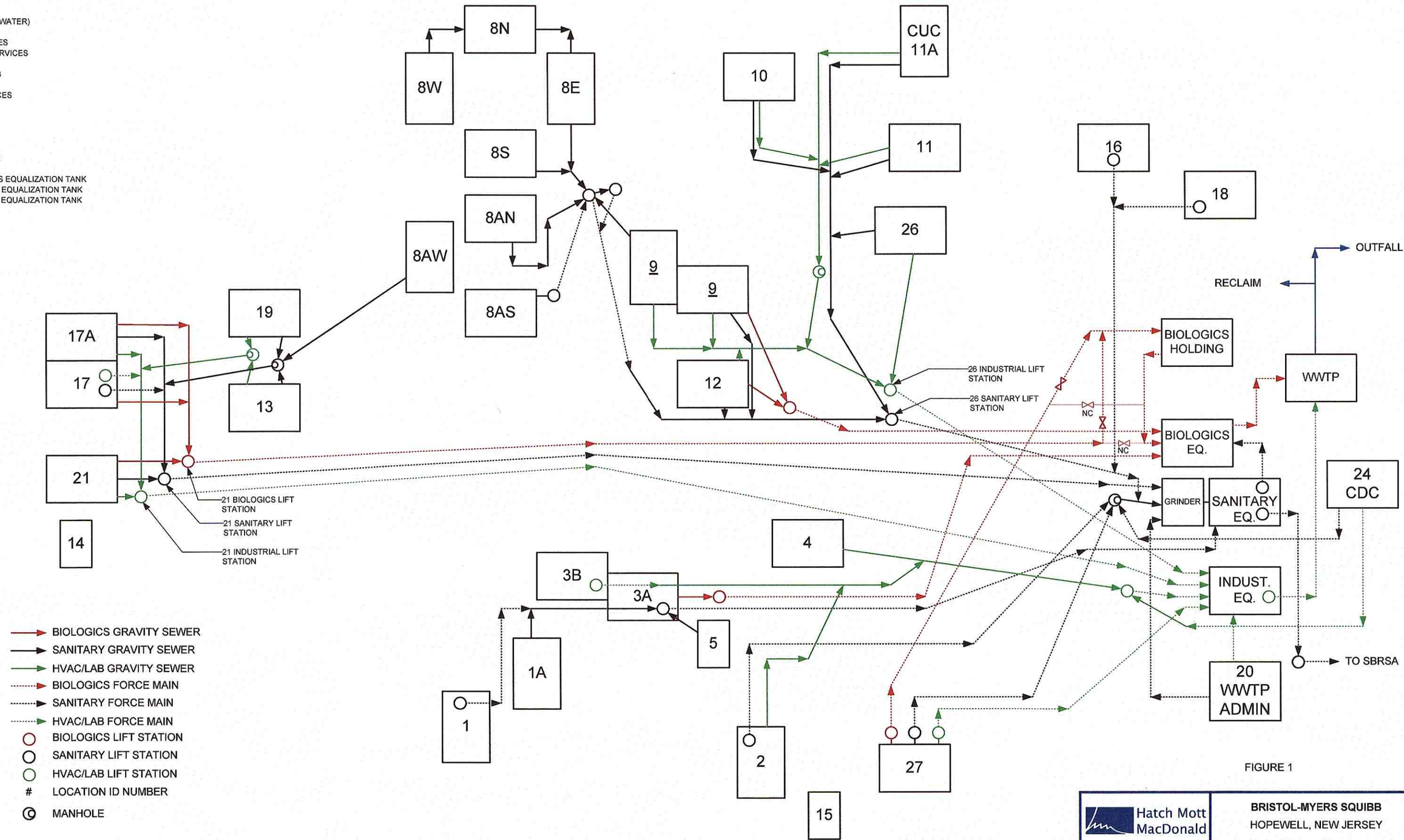


FIGURE 1

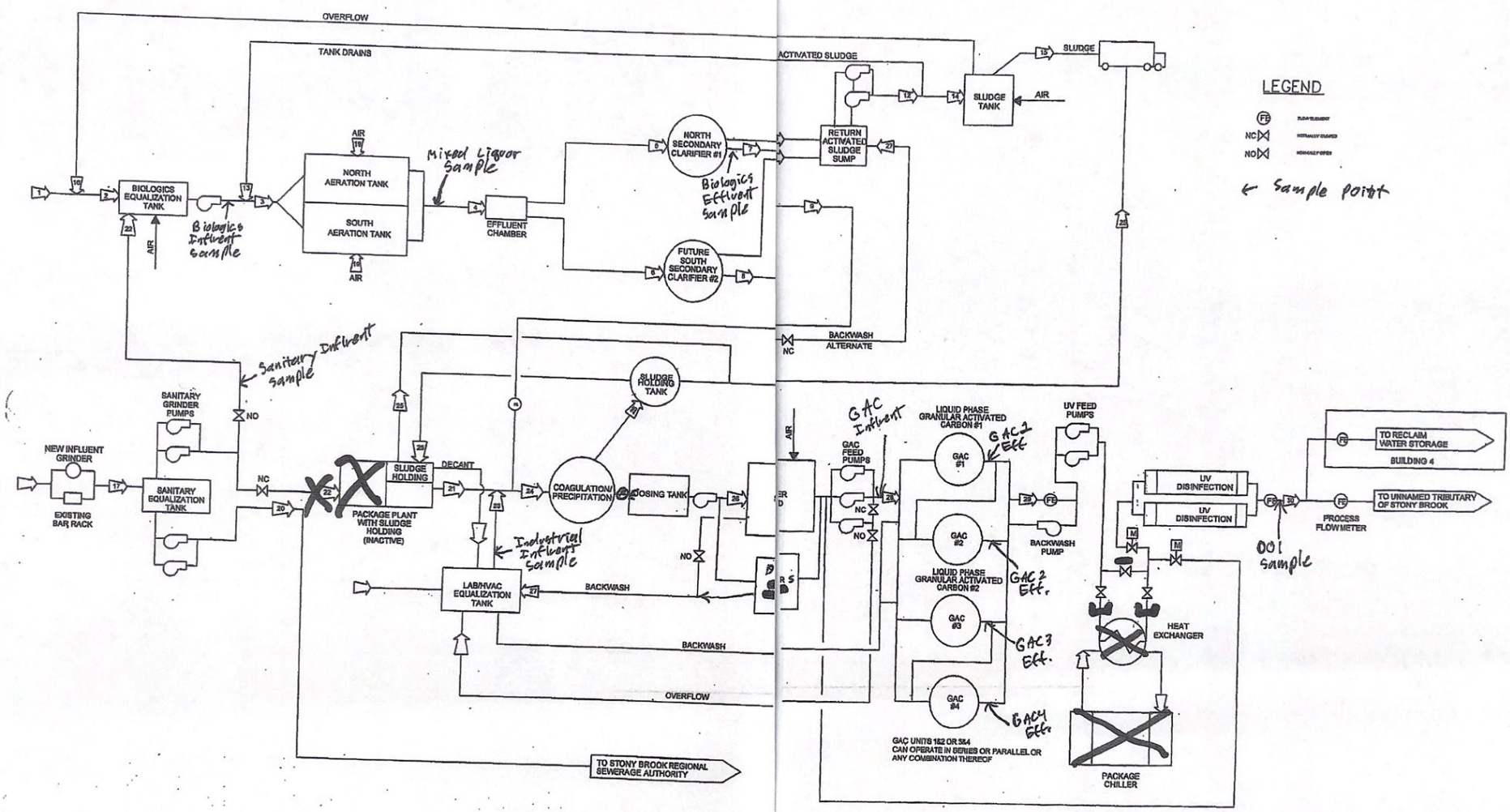
Hatch Mott MacDonald
27 Bleeker Street
Millburn, New Jersey

BRISTOL-MYERS SQUIBB
HOPEWELL, NEW JERSEY
SITE SEWER SCHEMATIC

Designed	Drawn	Checked	Approved	Date
JSS	JSS			5/9/2

p:\257676\eng\i drawings\visio\figure 1 site schematic.vsd

Attachment #5. The On-Site WWTP treats sanitary, pharmaceutical, and industrial wastewater .



WASTEWATER SCHEMATIC FLOW DIAGRAM

Attachment #6. Samples were submitted to the USEPA Laboratory in Edison, NJ on May 2, 2023.

US EPA REGION 2 LABORATORY

Page ____ of ___ pages

CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY ___ Hopewell Campus Owners, LLC (formerly Bristol-Meyers Squibb)

PROJECT LEADER _____ Thuan Tran

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

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

Permit #: NJ0000795 LAB ID/ FIELD ID	# OF CONTERS	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS, SPECIAL TEST REQUIREMENTS & ALIQUOTING	Res CL Checked	Preservative (circle)	Collection Time (24hr clock) Begin	Collection Time (24hr clock) End	Collection Date mm/dd/yy
Outfall 001A - Comp	9	B	X	2, 1-liter plastic bottles: BOD5 - 4-Hr Comp	☐	230514-01 0	10:18A	2:05P	5/2/2023
		B	X	1, 500-ml plastic bottle: TSS - 4-Hr Comp	☐	0	10:18A	2:05P	5/2/2023
		B	X	1, 125-ml plastic bottle: NH3 - 4-Hr Comp	☐	01	10:18A	2:05P	5/2/2023
		B	X	1, 125-ml plastic bottle: Phosphorus - 4-Hr Comp	☐	01	10:18A	2:05P	5/2/2023
		B	X	1, 125-ml plastic bottle: COD - 4-Hr Comp	☐	01	10:18A	2:05P	5/2/2023
		B	X	1, 125-ml plastic bottle: Nitrate (NO3) - 4-Hr Comp	☐	0	10:18A	2:05P	5/2/2023
		B	X	1, 500-ml plastic bottle: TDS - 4-Hr Comp	☐	0	10:18A	2:05P	5/2/2023
		B	X	1, 250-ml plastic bottle: Metals (As & Cu) - 4-Hr Comp	☐	02	10:18A	2:05P	5/2/2023
Outfall 001A - Grab	4	B	X	3, 1-L clear WM glasses: O&G - Direct Grab	☐	-02 03		2:02PM	5/2/2023
		B	☐	1, 290-ml sterilized plastic: E. Coli - Direct Grab	☐	04		2:02PM	5/2/2023

COMMENTS & SPECIAL REQUIREMENTS:

Note: Micro bottel QA/QC ID: L3A2613

TRC: 0.04 mg/L

5/2/23

Preservative Added & Checked

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

	Time	Date
Person Assuming Responsibility for Sample(s): Thuan Tran	4:51PM	05/02/2023
Relinquished By: Thuan Tran / Received By: Zubair Fakhir Ali	4:51PM	05/02/2023
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 Sampler, Chilled & Preserved at 5/2/23

revised 10/25/2004

Attachment #7. USEPA Analytical Data Package was received on May 23, 2023.

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

May 23, 2023

Philip Cocuzza
Monitoring & Assessment Branch
LSASD/MAB
Edison, NJ 08837

RE: Hopewell Campus Owner LLC - 2305014

Enclosed are the results of analyses for samples received by the laboratory on 05/02/2023. 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 2305014 and contact the laboratory.

Sincerely,

John R. Bourbon
Chief, LSASD/LB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

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.

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.

Final Report

Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Reporting Limit(s):

The Laboratory was able to achieve the appropriate limit for each analyte requested.

SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 001A - Comp	2305014-01	Aqueous	05/02/2023 14:05	05/02/2023 16:51
Outfall 001A - Grab	2305014-02	Aqueous	05/02/2023 14:02	05/02/2023 16:51

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

SUMMARY REPORT FOR METHODS

Analysis	Method	Certification	Matrix
Ammonia [As N]	EPA 350.1 SOP C-80 Rev 2.8	NELAP	Aqueous
Biochemical Oxygen Demand	SM 5210B SOP C-21 Rev 2.8	NELAP	Aqueous
Chemical Oxygen Demand	EPA 410.4 SOP C-53 Rev 2.8	NELAP	Aqueous
E. coli	SM 9221B,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
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: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001A - Comp			**Sample ID: 2305014-01**			
Metals ICP						
Arsenic	---	U	8.00	ug/L	B305029	
Copper	13.1		10.0	ug/L	B305029	
Sanitary						
Ammonia [As N]	---	U	0.100	mg/L	B305043	
Biochemical Oxygen Demand	3.06		2.00	mg/L	B305013	05/09/2023 08:00
Chemical Oxygen Demand	---	U	20.0	mg/L	B305062	
Nitrate [As N]	22.6		1.00	mg/L	B305016	05/03/2023 08:04
Phosphorus	---	U	0.0500	mg/L	B305035	
Total Dissolved Solids	850		10.0	mg/L	B305020	
Total Suspended Solids	---	U	10.0	mg/L	B305021	
Field ID: Outfall 001A - Grab			**Sample ID: 2305014-02**			
GC - Sanitary						
Oil & Grease	---	U	6.00	mg/L	B305083	
Microbiology, MPN						
E. coli	---	U	1.8	MPN/100 mL	B305012	05/05/2023 14:10

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: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

GC - Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305083									
Blank (B305083-BLK1)									
Oil & Grease	--- U	5.00	mg/L						
LCS (B305083-BS1)									
Oil & Grease	35.5	5.00	mg/L	40.00		89	78-114		
LCS Dup (B305083-BSD1)									
Oil & Grease	37.2	5.00	mg/L	40.00		93	78-114	5	20
Matrix Spike (B305083-MS1)	**Source: 2305014-02**								
Oil & Grease	41.1	5.00	mg/L	40.00	ND	103	78-114		

Final Report

Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Metals ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305029									
Blank (B305029-BLK1)									
Arsenic	--- U	8.00	ug/L						
Copper	--- U	10.0	ug/L						
LCS (B305029-BS1)									
Arsenic	198	8.00	ug/L	200.0		99.1	85-115		
Copper	201	10.0	ug/L	200.0		100	85-115		
LCS Dup (B305029-BSD1)									
Arsenic	190	8.00	ug/L	200.0		95.1	85-115	4.12	20
Copper	195	10.0	ug/L	200.0		97.5	85-115	2.94	20
Matrix Spike (B305029-MS1)	**Source: 2305014-01**								
Arsenic	206	8.00	ug/L	200.0	4.03	101	80-120		
Copper	229	10.0	ug/L	200.0	13.1	108	80-120		
Matrix Spike Dup (B305029-MSD1)	**Source: 2305014-01**								
Arsenic	211	40.0	ug/L	200.0	ND	106	80-120	2.43	10
Copper	222	50.0	ug/L	200.0	13.1	104	80-120	2.97	10

Final Report

Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305013									
Blank (B305013-BLK1)									
Biochemical Oxygen Demand	--- U	2.00	mg/L						
LCS (B305013-BS1)									
Biochemical Oxygen Demand	162		mg/L	198.0		81.8	84.6-115.4		
LCS (B305013-BS2)									
Biochemical Oxygen Demand	214		mg/L	198.0		108	84.6-115.4		
LCS (B305013-BS3)									
Biochemical Oxygen Demand	227		mg/L	198.0		115	84.6-115.4		
Duplicate (B305013-DUP1)		**Source: 2305005-08**							
Biochemical Oxygen Demand	3.40	2.00	mg/L		ND				25
Matrix Spike (B305013-MS1)		**Source: 2305005-08**							
Biochemical Oxygen Demand	75.4	2.00	mg/L	79.20	ND	95.3	75-125		
Matrix Spike Dup (B305013-MSD1)		**Source: 2305005-08**							
Biochemical Oxygen Demand	55.6	2.00	mg/L	59.40	ND	93.6	75-125	30.3	200
Batch B305016									
LCS (B305016-BS1)									
Nitrate [As N]	17.1	0.500	mg/L	16.50		104	90-110		
LCS Dup (B305016-BSD1)									
Nitrate [As N]	17.5	0.500	mg/L	16.50		106	90-110	2	20

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Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305016									
Matrix Spike (B305016-MS1)		**Source: 2305014-01**							
Nitrate [As N]	22.2	1.00	mg/L	0.2000	22.6	NR	90-110		
Batch B305020									
Blank (B305020-BLK1)									
Residue, Filterable	--- U	10.0	mg/L						
Blank (B305020-BLK2)									
Residue, Filterable	--- U	10.0	mg/L						
LCS (B305020-BS1)									
Residue, Filterable	429	10.0	mg/L	452.0		94.9	85-115		
LCS (B305020-BS2)									
Residue, Filterable	438	10.0	mg/L	452.0		96.9	85-115		
LCS Dup (B305020-BSD1)									
Residue, Filterable	437	10.0	mg/L	452.0		96.7	85-115	1.85	20
LCS Dup (B305020-BSD2)									
Residue, Filterable	444	10.0	mg/L	452.0		98.3	85-115	1.46	20
Duplicate (B305020-DUP1)		**Source: 2305014-01**							
Residue, Filterable	859	10.0	mg/L		850			1.05	20
Batch B305021									
Blank (B305021-BLK1)									
Residue, Non-Filterable	--- U	10.0	mg/L						

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Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305021									
Blank (B305021-BLK2)									
Residue, Non-Filterable	--- U	10.0	mg/L						
LCS (B305021-BS1)									
Residue, Non-Filterable	48.0	10.0	mg/L	54.30		88.4	85-115		
LCS (B305021-BS2)									
Residue, Non-Filterable	52.0	10.0	mg/L	54.30		95.8	85-115		
LCS Dup (B305021-BSD1)									
Residue, Non-Filterable	52.0	10.0	mg/L	54.30		95.8	85-115	8.00	20
LCS Dup (B305021-BSD2)									
Residue, Non-Filterable	52.0	10.0	mg/L	54.30		95.8	85-115	0.00	20
Duplicate (B305021-DUP1)		**Source: 2305014-01**							
Residue, Non-Filterable	--- U	10.0	mg/L		ND				20
Batch B305035									
Blank (B305035-BLK1)									
Phosphorus	--- U	0.0500	mg/L						
Blank (B305035-BLK2)									
Phosphorus	--- U	0.0500	mg/L						
LCS (B305035-BS1)									
Phosphorus	8.60	0.250	mg/L	8.450		102	90-110		

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: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305035									
LCS Dup (B305035-BSD1)									
Phosphorus	8.70	0.250	mg/L	8.450		103	90-110	1	20
Matrix Spike (B305035-MS1)	**Source: 2305014-01**								
Phosphorus	0.989	0.0500	mg/L	1.000	ND	99	90-110		
Batch B305043									
Blank (B305043-BLK1)									
Ammonia [As N]	--- U	0.100	mg/L						
Blank (B305043-BLK2)									
Ammonia [As N]	--- U	0.100	mg/L						
LCS (B305043-BS1)									
Ammonia [As N]	7.82	1.00	mg/L	8.340		94	90-110		
LCS Dup (B305043-BSD1)									
Ammonia [As N]	7.90	1.00	mg/L	8.340		95	90-110	1	20
Matrix Spike (B305043-MS1)	**Source: 2305014-01**								
Ammonia [As N]	5.13	0.100	mg/L	5.000	0.0538	102	90-110		
Batch B305062									
LCS (B305062-BS1)									
Chemical Oxygen Demand	214	20.0	mg/L	194.0		110	90-110		

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Project: Hopewell Campus Owner LLC - 2305014

Project Number: 2305014

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B305062									
LCS Dup (B305062-BSD1)									
Chemical Oxygen Demand	209	20.0	mg/L	194.0		108	90-110	2	20
Matrix Spike (B305062-MS1)	**Source: 2305014-01**								
Chemical Oxygen Demand	53.9	20.0	mg/L	50.00	ND	108	90-110		

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

Reported: 5/23/2023

8.0 Photographs

Photo #1. Uneven air distribution in the aeration tank was observed.

Photo #2. Uneven overflow from the V-Notch weir in the Bio Clarifier was observed.

Photo #3. Samples were collected from the designated monitoring location.

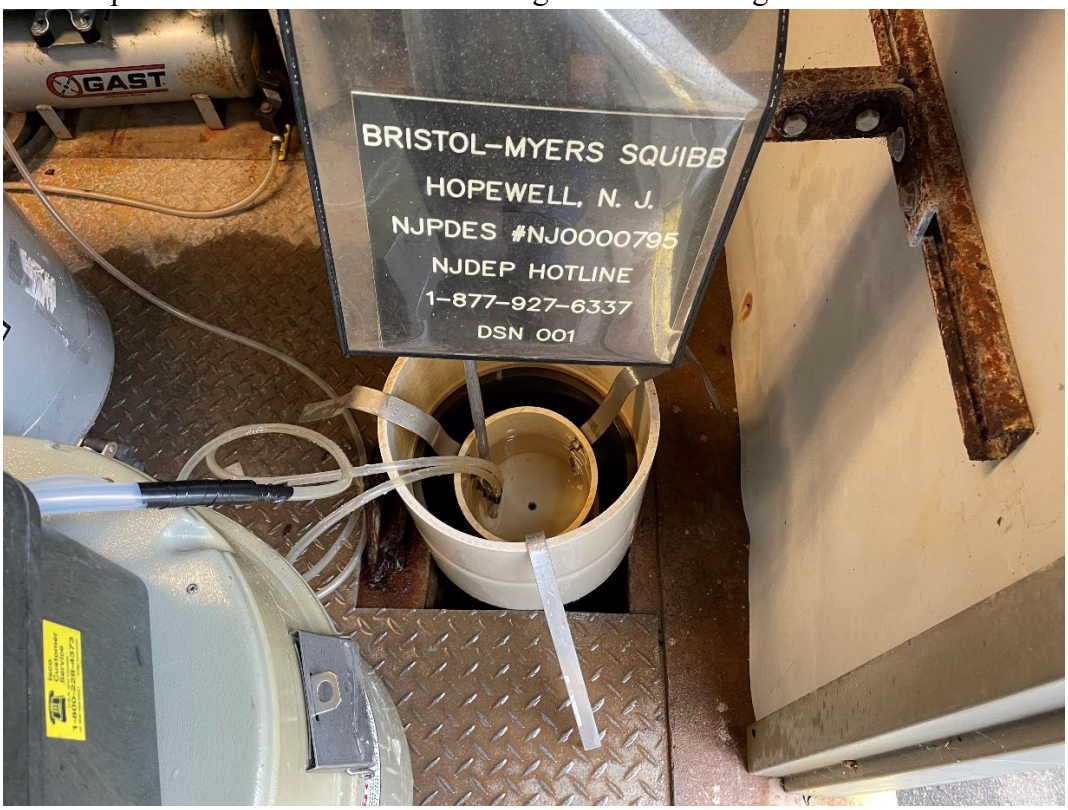

Photo #4. Treated effluent discharges into the unnamed tributary to Stony Brook.