



Date: 10/1/2020

To: Mitchell Gayer

From: David Ekstrand  
Kadeem Hill  
Veronica Kero, CIH, P.E.

Re: **(NJIT NEWARK CAMPUS WASTEWATER DISCHARGE SARS-CoV-2 SAMPLING & PCR ANALYSIS) WEEKLY DATA SUMMARY FOR 9/28-9/30/2020** {Omega Project #: 20-1177}

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Attachment(s):

- *Prestige EnviroMicrobiology Laboratory Analysis Reports for samples collected 9/28-9/30/2020*
- *Sample Trends*

Project Overview:

In order to proactively predict potential escalation of COVID-19 cases in occupied campus dormitory buildings, 24-hour composite wastewater (WW) discharge sampling is being performed, followed by 3<sup>rd</sup> party laboratory analysis in accordance with the published method cited on the attached laboratory analysis report using the approved CDC EUA Kit.

Weekly Data Summary:

WW Discharge Sampling Location	24-hr Sampling Date Range	2019-nCoV (N1 Protein)	Cycle Threshold Value <sup>3</sup> (N1 Protein)	2019-nCoV (N2 Protein)	Cycle Threshold Value <sup>3</sup> (N2 Protein)	Conc. (Copies of RNA/mL)
Oak-06 OAK	9/28- 9/29/2020	ND	ND	ND	ND	NA
Laurel E-03 Laurel Ext.	9/28- 9/29/2020	ND	ND	ND	ND	NA
Laurel M-05 Laurel Main	9/28- 9/29/2020	ND	ND	ND	ND	NA
Cypress-05 Cypress	9/28- 9/29/2020	ND	ND	ND	ND	NA
Redwood-04	9/29- 9/30/2020	ND	ND	ND	ND	NA
GRK-Honors-06	9/29- 9/30/2020	ND	ND	ND	ND	NA

### Local Trending

According to *covidactnow.org* online database for Essex County:

Infection Rate 9/28-9/30: 1.08% (increasing)

Positivity Rate 9/28-9/30: Unknown; insufficient data to assess.

Daily New Cases Per 100k: 3.9 to 4.0 (increasing)

### Summary

No additional action is recommended at this time other than reminding students of use of masks, social distancing, and personal hygiene (frequent hand washing).

Date Collected	Sample #	Results Summary
<b>Oak Bldg. Trap</b>		
8/25-26	Oak-01	ND
9/1-2	Oak-02	ND
9/8-9	Oak-03	ND
9/14-9/15	Oak-04	ND
9/21-9/22	Oak-05	ND
9/28-9/29	Oak-06	ND
<b>Greek Houses Manhole</b>		
8/25-26	Greek-01	ND
9/2-9/3	Greek-02	ND
9/9-10	Greek-03	ND
9/15-16	Greek-04	ND
9/22-23	Greek-Honors-05	ND
9/28-29	Greek-Honors 06	ND
<b>Honors Manhole</b>		
9/1-2	Honors-01	ND
9/8-9	Honors-02 VOID	Insufficient Water for Sample
9/14-9/15	Honors 3 VOID	Insufficient Water for Sample
<b>Laurel Main Bldg. Trap (M) and Laurel Extension (E)</b>		
8/26-27	Laurel M-01	ND
9/1-2	Laurel M-02	ND
9/8-9	Laurel M-03	ND
9/14-9/15	Laurel E-01	ND
9/21-22	Laurel E-02	ND
	Laurel M-04	ND
9/28-29	Laurel E-03	ND
	Laurel M-05	ND
<b>Cypress Bldg.</b>		
9/1-9/2	Cypress-01	ND
9/8-9/9	Cypress-02	ND
9/14-9/15	Cypress-03*	Positive
9/21-9/22	Cypress-04	ND
9/28-9/29	Cypress-05	ND
<b>Redwood</b>		
9/9-9/10	Redwood-01	ND
9/15-9/16	Redwood-02	ND
9/22-9/23	Redwood-03	ND
9/28-29	Redwood-04	ND

## **ATTACHMENTS**

*Prestige EnviroMicrobiology, Inc.*

Analytical Test Report

Client: Omega Environmental Services, Inc., 280 Huyler Street, South Hackensack, NJ 07606

Client Project/Name: 20-1177

Sample date: 9-28-2020 & 9-29-2020

Submittal date: 9-29-2020

Sample received: 9-30-2020

Samples submitted by: David Ekstrand/Val Rublikov


Date analysis completed: September 30, 2020

Prestige Report number: 200930-01


RT-PCR 2019-nCoV: Analysis of Water samples for the detection of SARS-CoV-2 Genetic Markers

Prestige # Client sample ID Location	2019-nCoV (N1 Protein)	Cycle Threshold (Ct) Value <sup>3</sup> (N1 Protein)	2019-nCoV (N2 Protein)	Cycle Threshold Value <sup>3</sup> (N2 Protein)	Conc. (copies of RNA/mL)
200930-01-001 Oak-06 OAK	ND	ND	ND	ND	NA
200930-01-002 Laurel E-03 Laurel Ext.	ND	ND	ND	ND	NA
200930-01-003 Laurel M-05 Laurel Main	ND	ND	ND	ND	NA
200930-01-004 Cypress-05 Cypress	ND	ND	ND	ND	NA

Report approved: \_\_\_\_\_

  
Theresa Lehman, MPH, Lab Director

Technical Manager: \_\_\_\_\_

  
Chin S Yang, Ph.D.

Analyst: Ching-Yi Tsai, Ph.D.

1. The samples in this report were received in good, acceptable conditions. Results relate only to the items tested.
2. Wastewater samples are processed following the protocol described in the article: Ahmed, W., et al. 2020. First confirmed detection of SARS-CoV-2 in untreated wastewater in Australia: A proof of concept for the wastewater surveillance of COVID-19 in the community. Science of the Total Environment 728. <https://doi.org/10.1016/j.scitotenv.2020.138764>
3. The primers and probes in 2019-nCoV CDC EUA Kit are designed for the detection of the two SARS-CoV-2 genes that encode for the N1 and N2 proteins. The kit is manufactured and supplied by Integrated DNA Technologies and approved by the U.S. Centers for Disease Control and Prevention (CDC). Three controls, two positive controls for N proteins and one internal control for the RNA extraction process, are simultaneously run with the samples.

*Prestige EnviroMicrobiology, Inc.*

4. Cycle Threshold Value refers to the number of cycles required for the fluorescent signal to cross the detectable threshold in Reverse Transcriptase Polymerase Chain Reaction (RT-PCR); a lower cycle threshold value indicates a higher viral load.
5. ND = not detected, no genetic marker is detected within 40 PCR cycles. NA = not applicable. The detection limit is 10 copies/reaction.

*Prestige EnviroMicrobiology, Inc.*

Analytical Test Report

Client: Omega Environmental Services, Inc., 280 Huyler Street, South Hackensack, NJ 07606

Client Project/Name: 20-1177

Sample date: 9-29-2020 & 9-30-2020

Submittal date: 9-30-2020

Sample received: 10-1-2020

Samples submitted by: David Ekstrand/Val Rublikov


Date analysis completed: October 1, 2020

Prestige Report number: 201001-01


RT-PCR 2019-nCoV: Analysis of Water samples for the detection of SARS-CoV-2 Genetic Markers

Prestige # Client sample ID Location	2019-nCoV (N1 Protein)	Cycle Threshold (Ct) Value <sup>3</sup> (N1 Protein)	2019-nCoV (N2 Protein)	Cycle Threshold Value <sup>3</sup> (N2 Protein)	Conc. (copies of RNA/mL)
201001-01-001 Redwood-04	ND	ND	ND	ND	NA
201001-01-002 GRK-Honors-06	ND	ND	ND	ND	NA

Report approved: \_\_\_\_\_

  
Theresa Lehman, MPH, Lab Director

Technical Manager: \_\_\_\_\_

  
Chin S Yang, Ph.D.

Analyst: Ching-Yi Tsai, Ph.D.

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4. Cycle Threshold Value refers to the number of cycles required for the fluorescent signal to cross the detectable threshold in Reverse Transcriptase Polymerase Chain Reaction (RT-PCR); a lower cycle threshold value indicates a higher viral load.
5. ND = not detected, no genetic marker is detected within 40 PCR cycles. NA = not applicable. The detection limit is 10 copies/reaction.

**Prestige EnviroMicrobiology, Inc.** Tel: 856-767-8300  
242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

www.Prestige-em.com

Prestige Proj. #: 200930-01

### Chain-of-Custody and Analysis Request Form

Company Name: Omega Environmental Client Proj. #: 20-1177  
Company Address: 280 Huyler St., S. Hackensack, NJ PO#: \_\_\_\_\_  
Date Sampled: 9/28-29  
Contact Name: David Ekstrand Phone: 201-522-9879 Report E-mail: Davide@omega-env.com/lab@omega-env.com

Sample ID	Location or source	Sample type	Area (inch <sup>2</sup> )	Analysis requests code or description	Turnaround time*	Notes or special instructions
<u>OAK-06</u>	<u>OAK</u>	Water	NA	PCR for COVID19	Same Day	
<u>LAUREL E-03</u>	<u>LAUREL EXT.</u>	Water	NA	PCR for COVID19	Same Day	
<u>LAUREL M-05</u>	<u>LAUREL MAIN</u>	Water	NA	PCR for COVID19	Same Day	
<u>CYPRESS-05</u>	<u>CYPRESS</u>	Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	

\*Indicate your request, either standard (3 business days), next day, same day or Saturday.

Samples Submitted by: (print) Val Rublikov Samples Submitted by: (sign) [Signature] Date submitted: 09/29/2020  
Received by: (sign & print) Julie Yang Date & time received: 9/30/20 11:15A Delivered by: [Signature] Fedex, UPS, USPO, in person

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Rev 05  
12-11-2019



Prestige EnviroMicrobiology, Inc. Tel: 856-767-8300 www.Prestige-em.com  
242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Prestige Proj.#: 201001-01

### Chain-of-Custody and Analysis Request Form

Company Name: Omega Environmental

Client Proj. #: 20-1177

Company Address: 280 Huyler St., S. Hackensack, NJ

PO#: \_\_\_\_\_

Date Sampled: 09/29/2020 - 09/30/2020

Contact Name: David Ekstrand

Phone: 201-522-9879

Report E-mail: Davide@omega-env.com/lab@omega-env.com

Sample ID	Location or source	Sample type	Area (inch <sup>2</sup> )	Analysis requests code or description	Turnaround time*	Notes or special instructions
<u>REDWOOD-04</u>		Water	NA	PCR for COVID19	Same Day	
<u>GRK-HONORS-06</u>		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	
		Water	NA	PCR for COVID19	Same Day	

\*Indicate your request, either standard (3 business days), next day, same day or Saturday.

Samples Submitted by: (print) Val Rublikov

Samples Submitted by: (sign) [Signature]

Date submitted: 09/30/2020

Received by: (sign & print) [Signature] Julie Yang

Date & time received: 10/1/20 11:15A

Delivered by: Fedex, UPS, USPO, in person

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12-11-2019