



Date: 9/3/2020

To: Mitchell Gayer

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

Re: **(NJIT NEWARK CAMPUS WASTE WATER DISCHARGE SARS-CoV-2 SAMPLING &PCR ANALYSIS) WEEKLY DATA SUMMARY FOR 8/24-8/28/2020** {Omega Project #: 20-1177}

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Attachment(s):

- *Prestige EnviroMicrobiology Laboratory Analysis Report dated 8/28/2020 for samples collected 8/25-8/26/2020*
- *Prestige EnviroMicrobiology Laboratory Analysis Report dated 8/28/2020 for samples collected 8/26-8/27/2020*

Project Overview:

In order to pro-actively predict potential escalation of COVID-19 in occupied campus dormitory buildings, 24-hour composite wastewater (WW) discharge sampling is being performed, followed by 3<sup>rd</sup> party laboratory analysis according to the published method cited on 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)
Oak Building	8/26-8/27/20	ND	ND	ND	ND
Greek House Manhole	8/26-8/27/20	ND	ND	ND	ND
Laurel Main	8/27-8/28/20	ND	ND	ND	ND

Data Interpretation:

Considering that the dormitory and Greek House buildings sampled on the above listed dates had very low occupancy, and the NJ published COVID infection rate was <2%, this data set reflects a low occupancy baseline with no reported outbreaks.

If order-of-magnitude other variations are reported in upcoming weeks, the data set will be analyzed for relative week-to-week infection outbreak risk.

*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: 8-25-2020 & 8-26-2020

Submittal date: 8-26-2020

Sample received: 8-27-2020

Samples submitted by: David Ekstrand

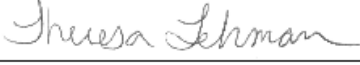
Date analysis completed: August 28, 2020

Prestige Report number: 200827-03

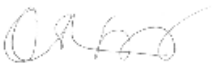
RT-PCR 2019-nCoV: Analysis of Water samples for the detection of SARS-CoV-2 Genetic Markers

Prestige # Client sample ID Location	2019-nCoV (N1 Protein)	Cycle Threshold Value <sup>3</sup> (N1 Protein)	2019-nCoV (N2 Protein)	Cycle Threshold Value <sup>3</sup> (N2 Protein)
200827-03-047 OAK-01 Oak Building	ND	ND	ND	ND
200827-03-048 Greek-01 Greek House Manhole	ND	ND	ND	ND

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.
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. 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: 8-26-2020 & 8-27-2020

Submittal date: 8-27-2020

Sample received: 8-28-2020

Samples submitted by: David Ekstrand

Date analysis completed: September 1, 2020

Prestige Report number: 200828-01

#### 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 Value <sup>3</sup> (N1 Protein)	2019-nCoV (N2 Protein)	Cycle Threshold Value <sup>3</sup> (N2 Protein)
200828-01-001 Laurel M-01 Laurel Main	ND	ND	ND	ND

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>
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5. ND = not detected, no genetic marker is detected within 40 PCR cycles. 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. #: 200827-03

### 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: 8/25-26/2020

Contact Name: David Ekstrand

Phone: 201-522-9879

Results E-mail: David@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
OAK-01	Oak Building	Water	NA	PCR for COVID19	48 hours	
Greek-01	Greek House Manhole	Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	

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

Samples Submitted by: (print) David Ekstrand

Samples Submitted by: (sign) [Signature]

Date submitted: 8/26/20

Received by: (sign & print) [Signature]

Date & time received: 8/26 11:00 A

Delivered by: [Signature] Fedex, UPS, USPS, in person

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

www.Prestige-env.com

Prestige Proj. #: 200828-01

### 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: 8/26-27/2020

Contact Name: David Ekstrand

Phone: 201-522-9879

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

Sample ID	Location or source	Sample type	Area (inch <sup>2</sup> )	Analysis request code or description	Turnaround time*	Notes or special instructions
<u>LAB RELM-01</u>	<u>LAUREL MAIN</u>	Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	
		Water	NA	PCR for COVID19	48 hours	

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

Samples Submitted by: (print) David Ekstrand

Samples Submitted by: (sign) [Signature]

Date submitted: 8/27/20

Received by: (sign & print) [Signature]

Date & time received: 8/26 11:00 A

Delivered by: Fedex UPS, USPS, in person

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Rev 05  
12-11-2019