ROUX

September 3, 2020

Ms. Mandy Yau
Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
47-40 21st Street
Long Island City, New York 11101-5407

Re: Molasses Injection Scope of Work
Coral Island Shopping Center, Staten Island
Brownfield Cleanup Program Site #C243033

Dear Ms. Yau:

On behalf of WWP Associates, LLP, Roux Environmental Engineering and Geology, D.P.C. ("Roux") has conducted an assessment of remedial alternatives to address residual contamination at the Coral Island Shopping Center located at 1650 Richmond Avenue, Staten Island, New York (the "Site"). Specifically, the assessment and proposed Scope of Work relates to residual chlorinated volatile organic compounds ("CVOCs") observed in groundwater samples from the vicinity of monitoring well MW-101S (Figure 1).

Background

A remedial action conducted at the Site in 2007 included injection of molasses into groundwater to enhance reductive dechlorination of CVOCs. Concentrations of CVOCs in groundwater have been monitored on a semiannual basis since the remedial action, and monitoring has shown the molasses injection was successful with significant reductions of CVOCs in groundwater across the injection area. Despite generally decreasing trends, concentrations of CVOCs have exhibited periodic fluctuations over the monitoring history. Although this is consistent with long-term Site expectations, concentrations of CVOCs in groundwater from one monitoring well, MW-101S, have more recently been fluctuating over a greater range and to a higher total concentration than other wells in the monitoring program. On a January 23, 2020 telephone call, the NYSDEC requested for Roux to evaluate monitoring and/or remedial alternatives to address the residual CVOCs identified in groundwater collected from monitoring well MW-101S during a recent semiannual sampling event.

Following an assessment of different remedial options, Roux proposes an additional injection of molasses to enhance and accelerate the CVOC degradation process. This remedial action was selected over other alternatives due primarily to its historical success at the Site.

Scope of Work

As indicated above, we are proposing an additional injection of food-grade molasses to assist in the *in situ* bioremediation of CVOCs by anaerobic degradation.

- As this injection program is designed to target monitoring well MW-101S as requested by the NYSDEC, Roux will advance a total of four to six temporary injection points located inside and outside the dry cleaner space in the general area of MW-101S;

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- Injection points located inside will penetrate the slab (water intrusion through the slab into the interior space is not expected to occur);
- Each injection point will be advanced to the water table; and
- Approximately 10 gallons of molasses will be mixed with potable water and injected into each point.

The exact number and locations of the injection points, and the exact volume of water used for the mixture, will be determined based on field conditions, specifically, how easily the mixture is accepted into the subsurface.

Performance Monitoring

Groundwater monitoring is currently conducted in accordance with an April 2013 Site Management Plan ("SMP") as modified by a Request for Modification presented by Roux in the 2017 Periodic Review Report, which was approved by the NYSDEC on July 17, 2018.

- Roux proposes that following the current injection program, the Fall 2020 groundwater sampling event is modified so that a round of groundwater samples for volatile organic compounds are collected from the following monitoring wells, MW-101S, MW-101D, MW-112D, MW-113D, MW-203D, and MW-205D (Figure 1), approximately 60-90 days following the injection program.

Following receipt and review of the analytical data from the proposed Fall 2020 groundwater sampling event, Roux will discuss changes to the SMP, including the need for additional monitoring at the Site.

Schedule

Assuming there are no restrictions resulting from the COVID-19 outbreak, Roux anticipates implementing this injection program within 30 days of approval by the NYSDEC. The work is estimated to take less than one week to complete. Groundwater sampling will be conducted 60 to 90 days following the molasses injection.

Should you have any questions or comments, please do not hesitate to contact me at (631) 630-2425.

Sincerely,

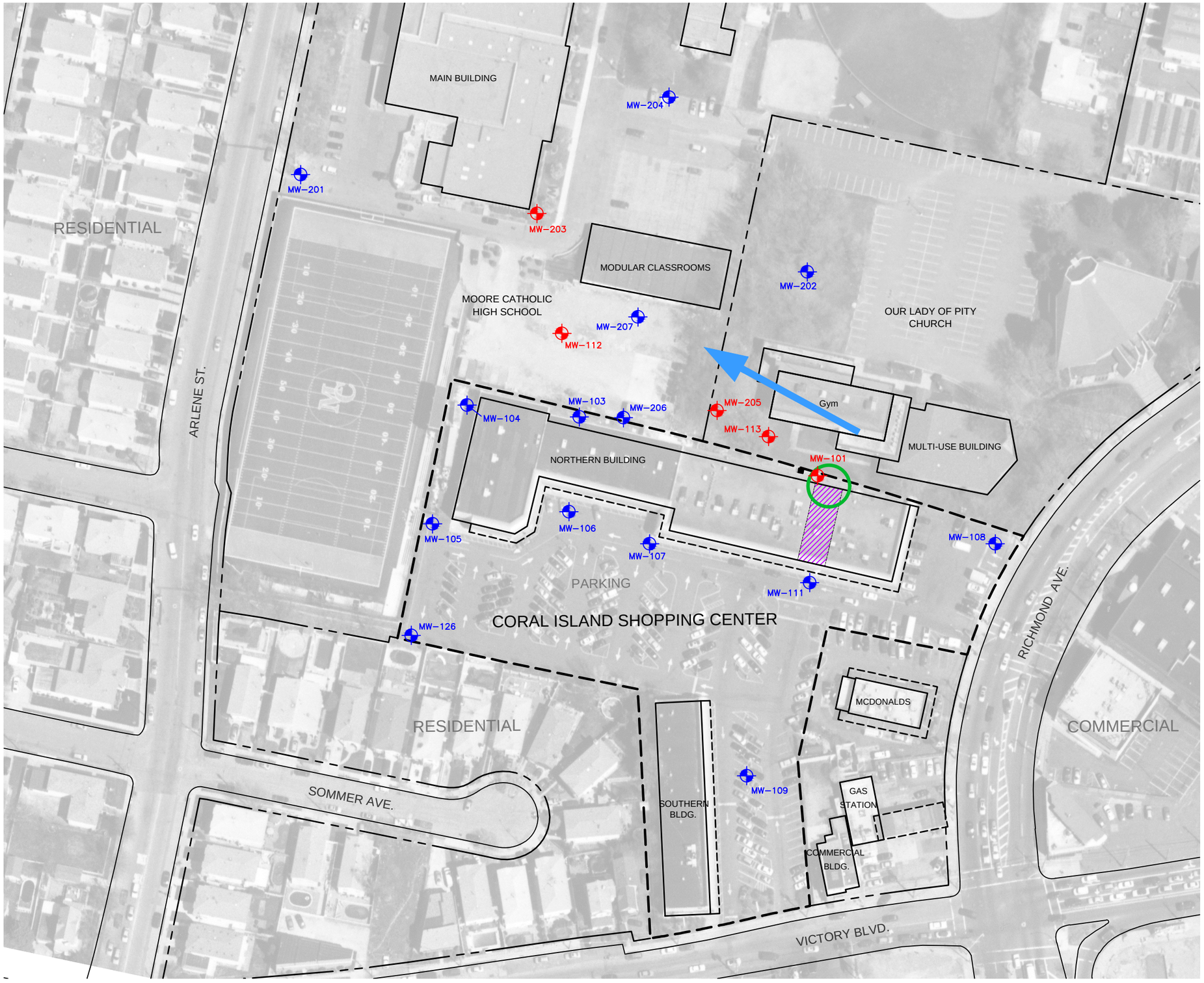
ROUX ENVIRONMENTAL ENGINEERING AND GEOLOGY, D.P.C.

Michael Roux, P.G.
Principal Hydrogeologist

Brian Morrissey, P.E.
Principal Engineer

Attachment

cc: Jane O'Connell, NYSDEC
Wendy Marsh, Hancock Estabrook
Christian Hoelzli, Roux



LEGEND

- MW-201 — LOCATION AND DESIGNATION OF MONITORING WELL
- MW-101 — LOCATION AND DESIGNATION OF MONITORING WELL FOR FALL 2020 SAMPLING
- GENERAL AREA OF MOLASSES INJECTION
- INFERRED DIRECTION OF GROUNDWATER FLOW
- SITE BOUNDARY
- APPROXIMATE LOCATION OF INTERIOR SPACE
- DRY CLEANER

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100' 0 100'

Title:

SITE PLAN

CORAL ISLAND SHOPPING CENTER
STATEN ISLAND, NEW YORK

Prepared for:

WWP ASSOCIATES

ROUX

Compiled by: M.R.	Date: 10JUL20	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	1
Project Mgr: M.R.	Project: 1258.0001Y004	
File: 1258.0001Y192.01.DWG		

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