February 18, 2020

Mr. David Locey
New York State Department of Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203

WITTMAN
GeoSciences, PLLC

Re: **Proposed Work Plan**
ROCO, Ltd.
Index No: 9-20150506-35
1746 Dale Road
Cheektowaga, New York
WGS Project No: 18110

Dear Mr. Locey:

Wittman GeoSciences, PLLC (WGS) was retained by Dale Anderson LLC to complete environmental consulting services in order to address the Notice of Violation issued on January 31, 2020. The following activities will be completed in order to address the Remedial Work Plan Report dated September 2015.

Task 1 – Soil Vacuum Extraction System (SVES)operation and sampling – the SVES was installed in 2015, with limited sampling completed. Planned monitoring was to include monitoring vacuum levels on a weekly basis at select soil vapor sampling locations. Additionally, SVES influent (extracted vapor) and effluent was to be sampled monthly for VOCs.

WGS reviewed the work plan for the SVES and has provided the following recommended changes or alterations:

- The SVES appears to be constructed similar to a sub-slab depressurization system, with its purpose to withdraw air from below the slab and emit to the exterior. The SVES is set within a room, that includes a trench around the perimeter of the room, as well as a sump. The trench appears to extend through the concrete and into the subbase gravel. It is likely that the vacuum is being lost from the proximity of the trench, and therefore the SVES may be ineffective and not provide a radius of influence to cover the required area. In order to assure effectiveness of the system, the trench and sump will be filled with concrete. After the concrete floor is sealed, further SVES testing will be completed.

- Based on WGS review of the existing system, WGS estimates that the current SVES fan, which is a Radonaway GS501 fan, capable of a maximum vacuum of 4.2 inches of water column and 95 cubic feet per minute open flow, may be undersized for the system design, which includes a 55-gallon drum carbon filter system. To evaluate the SVES, WGS will completed the following tasks:

- In-line sampling will be completed from each of the two existing vapor extraction points. The appropriate summa canister will be used to collect a grab sample from the sampling port, prior to carbon filtration system. An in-line grab sample will be collected for analysis.

- The two vapor extraction point samples will be analyzed for volatile organic compounds (VOC) via TO-15. WGS assumes that QA/QC sampling and data validation will not be required.

- Communication testing/pilot testing will be completed on one of the two existing vapor extraction points. The testing will include collecting and documenting vacuum measurements of the sub slab floor in various locations. Communication testing will be done using the existing fan with, and possibly without, the carbon filtration system. However, if the fan is not successful due to limited vacuum influence, WGS's subcontractor will be prepared to upgrade the fan to a higher vacuum blower. As part of the SVES evaluation, WGS obtain access to the entire building, specifically the area south of the SVES location, to assess the potential radius of influence.

- One the radius of influence is understood, weekly vacuum monitoring will no longer be required.

- Based on in-line sample results from the two vapor extraction points, a determination will be made to whether monthly sampling is still required, as well as need for carbon filtration. Please note that an effluent (post carbon) sample is not planned.

Task 2 – Monitoring Well Assessment and Sampling – NYSDEC requested that the six on-site monitoring wells be resampled, including GW1 to GW5, and GW7.

- WGS will locate the five on-site and off-site monitoring wells required for sampling. Each well will be accessed for usability, and sounded for bottom depth and groundwater depth measured. The monitoring wells will be purged using dedicated disposable polyethylene bailers via purge methodology. Field parameters, including pH, temperature, turbidity, and specific conductance will be measured periodically until they become relatively stable (approximately 10% fluctuation or less). A minimum of three well volumes will be removed from each monitoring well, unless dry well conditions are encountered. Based on previous sampling information, the wells have slow recharge, and therefore, after the wells are purged dry, sampling will commence. Development water will be containerized in 55-gallon drums and sampled for future off-site disposal.

- Following well purging, groundwater samples will be collected using low flow sampling techniques. If insufficient groundwater, new dedicated disposable bailers may be used to collect the groundwater samples.

- The six groundwater samples will be analyzed for VOCs via EPA Method 8260

(target compound list). WGS assumes that QA/QC sampling and data validation will not be required.

Task 3 – Summary Report - WGS will complete a Summary and Recommendation Report, summarizing the findings of the SVES communication/pilot testing, vapor extraction point analytical testing results, and monitoring well testing results. Additionally, the report will include recommendations for system upgrade, if needed.

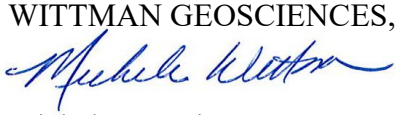
SCHEDULE

The following schedule is proposed:

- Week of March 23, 2020 – fill trenches and sump with concrete. This task is weather dependent and needs warmer weather for concrete to properly set;
- Week of March 30, 2020 – complete in-line air sampling, communication/pilot testing. Will be completed one week after trenches are complete.
- Week of April 6, 2020 – locate and sample 6 monitoring wells. This task is weather dependent, as the wells will need to be located after the snow has melted. Additionally, four of the wells are on adjoining property, in which we'll have to gain access to those properties.
- Summary Report will be completed within 2 weeks of receipt of laboratory data.

Please confirm that this scope of work is acceptable and will meet NYSDEC requirements. If you have questions concerning the proposed services, please contact the undersigned directly.

Very truly yours,
WITTMAN GEOSCIENCES, PLLC



Michele M. Wittman, P.G.
Principal