LiRo Engineers, Inc.
A LiRo Group Company
690 Delaware Avenue, Buffalo, NY 14209 Telephone 716.882.5476 Facsimile 716.882.9640 www.liro.com

Mr. Benjamin McPherson, P.E.
Assistant Engineer (Environmental), Division of Environmental Remediation
New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, NY 14203
August 21, 2018

Re: Letter – Soil Vapor Investigation Work Plan
Call Out # 134781 - 664 - 690 Northland Avenue – NYSDEC Site #915329
New York State Department of Conservation (NYSDEC)
Standby Investigation and Remediation Services Contract (C100061)

Dear Mr. McPherson,

LiRo Engineers, Inc. (LiRo) has prepared this *Soil Vapor Investigation Work Plan* in support of New York State Department of Environmental Conservation (NYSDEC) remedial investigation at the 664 - 690 Northland Avenue (Site) (see Figure 1) in response to Call Out #134781.

For the soil vapor investigation, LiRo proposes completing the following tasks:

1) Obtain and deploy six Summa Canisters for sub-slab sampling at the Site as per the Sample Location Plan (see Figure 2).

    a. Each sampling location will be constructed as a temporary sampling point and will be backfilled after sampling with asphalt patch.

    b. Each sampling location will have an approximate 1-inch diameter sample hole drilled up to 24-inches below ground surface through surface concrete/asphalt, sub-base, overburden and, to the extent possible, into bedrock.

    c. Stainless steel tubing will be placed in each hole and sealed using aluminum foil and beeswax at ground surface.

    d. Shortly after the installation of tubing, one to three implant volumes (i.e., the volume of the sample tube) will be purged prior to collecting the samples using a hand-held photo-ionization detector (PID) acting as a low volume pump to minimize outdoor air infiltration during sampling. PID readings will be recorded for each location. A temporary cap will be affixed to the top end of the sampling tube after purging.

    e. Sampling canisters will be deployed and connected to sample tubing and canister valves will be set to collect soil vapor and left in-place for 4-hours. Time of deployment, canister pounds per square inch (PSI) reading prior to sampling and start of sample collection will be noted for each location.

    f. After 4-hours of sample collection, canister valves will be closed and samples will be submitted to the analytical laboratory for analysis of volatile organic compounds (VOCs) using USEPA Method TO-15. Time of valve closure, PSI reading at time of closure and canister status will be noted for each location.

2) Obtain and deploy one Summa Canister as an Outdoor Air/Ambient Background sample location. The sample location shown on Figure 2 is for illustration only. The actual sample location will be determined in the field.

    a. The up-gradient (i.e. based on local wind patterns at the time of sampling) ambient background air sample will be set to collect air for 4-hours simultaneous with the sub-slab vapor samples.

    b. After 4-hours the canister valve will be closed and samples will be submitted to the analytical laboratory for analysis of VOCs using USEPA Method TO-15.

    c. Time of deployment, start of sample collection, PSI readings before and after sampling, time of valve closure and status of the canister will be noted for the background air sample.

3) All areas disturbed by sampling will be restored to pre-sampling conditions.

4) Latitude and longitude coordinates of each sampling location will be determined using a hand-held global positioning system (GPS) unit.

5) All sampling will be conducted in accordance with New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, October 2006.

6) Within 60-days after receipt of the laboratory analytical reports, LiRo will submit a draft letter report summarizing the sampling results, field recorded data and will include sample location data in a NYSDEC approved coordinate system, weather conditions immediately prior to and during sample collection, soil vapor probe construction logs and before-and-after photo documentation for each sampling location. After receipt of comments from the NYSDEC, LiRo will submit a final letter report.

7) After submittal of final report, LiRo will process lab supplied electronic data deliverables (EDDs) for upload into the NYSDEC EQuIS database.

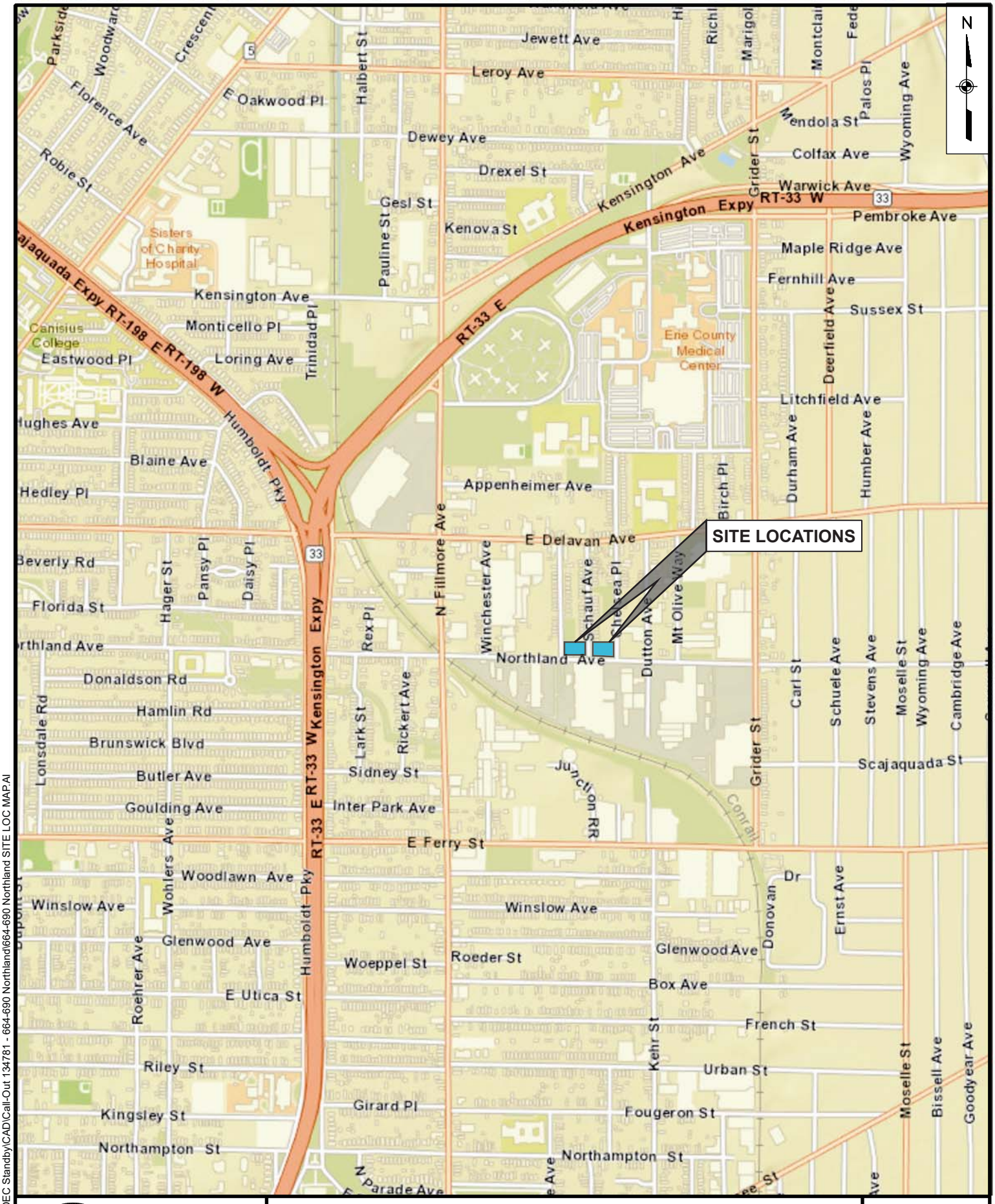
8) LiRo understands that a Data Usability Summary Report (DUSR) will not be required for this project.

Should you have any questions regarding this matter please contact me anytime at 716-882-5476 ext. 417.

Sincerely,

LiRo Engineers, Inc.

Craig Taylor
Project Manager



LiRo-Engineers, Inc.
690 Delaware Ave.
Buffalo, New York

664-690 NORTHLAND AVENUE
SITE LOCATION MAP

FIGURE NO.

1

J:\17-013-0289 NYSDEC Standby\CAD\Call-Out 134781 - 664-690 Northland\664-690 Northland SITE LOC MAP.AI

NO.	DATE	DESCRIPTION
		REVISIONS

LiRo Engineers, Inc.
690 Delaware Avenue
Buffalo, New York

PROJ. ENG.:	M.J.W.
DESIGNED BY:	M.P.B.
CHECKED BY:	M.J.W
DRAWN BY:	A.M.K.
CLIENT:	NEW YORK STATE OF OPPORTUNITY Department of Environmental Conservation
DATE:	AUGUST 2018
SCALE:	AS SHOWN
JOB TITLE AND LOCATION:	664-690 NORTHLAND AVENUE BUFFALO, NEW YORK NYSDEC SITE NUMBER 915329
DRAWING TITLE:	PROPOSED SAMPLE LOCATIONS
LIRO JOB NO.:	17–013–0289
SHEET OF	2 2
FIGURE NO:	2

J:\17-013-0289 NYSDEC Standby\CAD\Coll-Out 134781 - 664-690 Northland\664-690 Northland SAMPLE PLAN.dwg 8/21/2018 11:41 AM