Data Validation Services

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October 18, 2024

Rachel Miller
Roux Environmental Engineering and Geology, D. P. C.
209 Shafter St
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RE: Halletts Building 2 SPE LLC and Halletts Building 3 SPE LLC, Astoria, NY Remedial Investigation
Data Usability Summary Report (DUSR) Validation Review
Pace/Alpha SDG Nos. L2356129, L2356198, L2437638, and L2437657

Dear Ms. Miller:

Review has been completed for the data packages generated by Pace/Alpha Analytical that pertain to soil samples collected 09/22/23 and 07/02/24 at the Halletts Building 2 and Halletts Building 3 site. Twenty five samples and two field duplicates were processed for TCL and NYCRR Part 375 CP-51 (CP-51) volatiles, TCL and CP-51 semivolatiles, 1,4-dioxane, TCL Aroclor PCBs (PCBs), TCL pesticides, TCL herbicides, per- and polyfluoroalkyl substances (PFAS), TAL metals, hexavalent/trivalent chromium, and total cyanide. Twenty four samples and two field duplicates were processed for Part 375 CP-51 analyte lists for volatiles, semivolatiles, 1,4-dioxane, pesticides, PCBs, silvex, and metals, and for hexavalent/trivalent chromium and total cyanide. Field and trip blanks were also processed. The analytical methodologies are those of the USEPA SW846 and USEPA modified Method 537.

The data packages submitted by the laboratory contain full deliverables for validation, and this usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. The reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, with guidance from the USEPA national and regional validation documents, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

* Data Completeness
* Case Narrative
* Custody Documentation/Sample Receipt
* Holding Times
* Surrogate, Isotopic Dilution, and Internal Standard Recoveries
* Field/Trip/Method/Preparation/Calibration Blanks
* Matrix Spike Recoveries/Duplicate Correlations
* Blind Field Duplicate Correlations
* Laboratory Control Sample (LCS)
* Instrumental Tunes
* Initial and Continuing Calibration Standards
* Method Compliance
* Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review, as discussed in NYS DER-10 Appendix B Section 2.0 (c). Documentation of the outlying parameters cited in this report can be found in the laboratory data packages.

In summary, certain of the samples exhibit significant matrix effects and/or interferences, resulting in the inability to properly analyze phenolic semivolatile analytes in those affected samples. Results that are rejected in the project data are:

- 1,4-Dioxane derived from the volatile fraction are rejected and not usable due to poor relative instrument response; those derived from the semivolatile fraction are acceptable
- Benzoic acid and phenolic analytes in nine samples and a field duplicate due to matrix effects
- 1,1,2,2-Tetrachloroethane, d-BHC, and hexachlorocyclopentadiene in one sample, and 3,3-dichlorobenzidine in another are rejected due to matrix effects

Many of the volatile, semivolatile, and PFAS analytes are qualified as estimated, with a low bias, due to those matrix interferences. Qualifications made based on matrix spike outliers are only made to the parent samples. The end user of the data should consider these qualifications during an evaluation of samples with similar matrices.

Data completeness, representativeness, reproducibility, sensitivity, and comparability are acceptable. Accuracy, precision, and sensitivity are affected by the difficult sample matrix (some showed pHs greater than 10) as well as the dilutions required for processing.

Validation data qualifier definitions and client sample identifications are attached to this text. Also included in this report are the client EDDs with recommended qualifiers/edits applied in red.

Chain-of-Custody/Sample Receipt

Samples collected on July 2 did not include the year in the custody form entries. The year was present on other entries on those forms.

The request for total cyanide processing was not present on one of the three custody forms associated with samples reported in SDG L2356129. The samples were processed for that compound.

An interim laboratory custody transfer did not include the date in one instance and the time in another. The dates and times of those transfers were present on other form entries.

Client identifications in SDG L2356129 that were entered onto the custody form with a “9” were entered initially as “4” by the laboratory, and later revised.

Scratchouts should have been initialed and dated.

Variances between custody and container entries for the time of collection and for the identification of Field Blank-092223_P were resolved at sample receipt.

Blind Field Duplicates

The blind field duplicate evaluations were performed for all analytes on EP-16, EP-66, EP-69 and EP-85. Correlations fall within validation guidelines, with the exception of the following, results for which have been qualified as estimated in that parent sample and its field duplicate:

- Benzo(k)fluoranthene, anthracene, phenanthrene, barium, lead, manganese, nickel, potassium, and zinc in E-66
- Zinc in EP-16
- PFOS, copper, lead, magnesium, manganese, and zinc in EP-69
- Fluoranthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, pyrene, and copper in EP-85

Non-homogenous sample matrices are suspected.

TCL and CP-51 Volatile Analyses by EPA 8260D

Matrix spike evaluations were performed on EP-15, EP-68, EP-88, and EP-67. EP-15 and EP-68 exhibited significant matrix effects.

The result for 1,1,2,2-tetrachloroethane is rejected in EP-68 due to lack of recovery in those matrix spikes. The results for thirty one analytes in that parent sample, and for all except five analytes in EP-15 have been qualified as estimated, with a low bias, due to outlying matrix spike recoveries. EP-67 and EP-88 show recoveries and correlations that are within validation guidelines, with the following exceptions, results for which are qualified as estimated in the indicated parent sample:

Parent Sample	Analyte	Outlying % Recoveries	Outlying %RPD
EP-88	1,2-dichlorobenzene	48,58	
	1,3-dichlorobenzene	53,65	
	1,4-dichlorobenzene	51,61	
	vinyl acetate	33,31	
	1,2-dibromo-3-chloropropane	42,49	
	hexachlorobutadiene	53,60	
	naphthalene	24,28	
	1,2,3-trichlorobenzene	26,30	
	1,2,4-trichlorobenzene	30,34	
	1,2,4,5-tetramethylbenzene	44,53	
EP-67	1,2-dichlorobenzene	46,39	
	1,3-dichlorobenzene	48,40	38
	1,4-dichlorobenzene	46,38	38
	o-xylene	68,60	
	n-butylbenzene	48,40	57
	sec-butylbenzene	56,46	42
	tert-butylbenzene	58,48	34
	n-propylbenzene	61,50	37
	1,3,5-trimethylbenzene	56,47	35
	1,2,4-trimethylbenzene	52,44	37

Detected analytes in EP-3, EP-17, and EP-65 are qualified as estimated, with a high bias, due to elevated surrogate standard DCA recoveries (136% to 150%).

LCS recoveries are within validation guideline with the following exceptions, results for which are qualified as estimated in the indicated associated samples:

Associated Samples	Analyte	Outlying % Recoveries
DUP_09222023_B, EP-72, EP-73, and EP-82	4-methyl-2-pentanone	66,69
	2-hexanone	67,64
	1,2-dibromo-3-chloropropane	60,63
	hexachlorocyclobutadiene	140,133

The following detected results below the reporting limit are considered external contamination and edited to non-detection due to presence in the associated blanks: 1,2-dichloroenzene and 1,4-dichlorobenzene in EP-68, EP-69, EP-70, EP-71, EP-74, EP-75, and DUP_09222023.

Results for 1,4-dioxane in the samples are rejected due to poor instrument relative response (RRF < 0.01). Other calibration standards show responses within validation guidelines, with the exceptions of the following, the results for which have been qualified as estimated in the indicated associated samples:

- Bromomethane and trans-1,4-dichloro-2-butene (26%D and 45%D) in TRIP BLANK, FB_09222023, and FB_09222023B
- Bromochloromethane and bromoform (21%D and 24%D) in EP-75, EP-76, EP-77, EP-78, EP-92, EP-91, EP-89, EP-84, EP-79, EP-80, EP-81, EP-83, EP-90, EP-86, EP-87, and EP-85
- Naphthalene (24%D) in DUP_09222023_B, EP-72, EP-73, and EP-82
- Bromoform and naphthalene (22%D and 30%D) in EP-88

TCL and CP-51 Semivolatile Analyses by EPA8270E

EP-68, EP-69, EP-70, DUP_09222023, EP-71, EP-72, EP-75, EP-76, EP-77, and EP-78 exhibited a matrix effect that prohibited recovery of acidic surrogate standards from the samples. This indicates a lack of ability to recover acidic target analytes from the samples. Although the samples were processed at fivefold dilution due to the matrix, the total lack of recovery of the acid surrogates, along with the very highly alkaline pH of the samples, indicates a loss of integrity to the reported results of the acid target compounds. Therefore, results for benzoic acid and those with "phenol" as part of the nomenclature are rejected in the forementioned samples.

Matrix spikes were performed on EP-15, EP-67, EP-68, and EP-88. Results for the following analytes are rejected in the indicated parent samples due to lack of recovery in the matrix spikes:

- 3,3'-Dichlorobenzidine in EP-88
- Hexachlorocyclopentadiene, 2,4,6-trichlorophenol, 2-nitrophenol, 4-nitrophenol, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, pentachlorophenol, 2,4,5-trichlorophenol, and benzoic acid in EP-68

All of the results for EP-15 are qualified as estimated due to the preponderance of outlying low recoveries in the matrix spikes of that parent sample. As with the volatile fraction of this sample, a matrix effect is indicated. The following additional results are qualified as estimated, with a low bias, due to low recoveries in the associated matrix spikes:

Parent Sample	Analyte	Outlying % Recoveries
EP-88	4-nitroaniline	24,34
	hexachlorocyclopentadiene	15,0
	4-chloroaniline	39,39

Parent Sample	Analyte	Outlying % Recoveries
EP-67	fluoranthene (detected value)	0,0
	pyrene (detected value)	0,0
	pentachlorophenol	10,11

Other than the rejected target analytes noted above, no additional qualifications are made for EP-68 because that sample and its matrix spikes were processed at fivefold dilution, and additional recovery evaluations are not applicable.

The detection of phenol in EP-40 is qualified as having a tentative identification and being estimated in value, as the responses of the primary and secondary fragments do not maximize together.

Calibration standards show responses within validation guidelines, with the exceptions of the following, the results for which have been qualified as estimated in the indicated associated samples:

- n-Nitrosodi-n-propylamine (21%D) in EP-68, EP-69, EP-70, DUP_09222023, DUP_09222023_B, EP-71, EP-72, EP-73, EP-74, EP-75, EP-76, EP-77, EP-78, EP-92, EP-91, EP-89, EP-84, EP-79, and EP-80
- Pyrene (21%D) in EP-81and EP-82
- bis(2-Chloroisopropyl) ether (41%D) in EP-88, EP-83, EP-86, and EP-85
- n-Nitrosodiphenylamine/diphenylamine (26%D) in EP-90 and EP-87
- Hexachlorobenzene (27%D) in FB_09222023

Internal standard recoveries are compliant, and blanks show no contamination.

Some of the samples were processed at dilution due to matrix interferences. Reporting limits in those samples are proportionally elevated.

Pesticides, Herbicides, and Aroclor PCB Analyses by USEPA 8081B, 8082A, and 8151A

Samples that contain Aroclor mixtures produce responses in the pesticide analysis that interfere with and contribute to pesticide target analyte responses. Typically, those responses are reported as pesticides, and the validation process adjusts based on how well dual column values correlate. Those that can be tentatively identified as pesticides are at higher concentrations than the pesticide reporting limit concentrations. The Aroclors mask the ability to determine actual pesticide concentrations, and pesticide reporting limits must be adjusted upward. In some of the project samples exhibiting Aroclor detections, the sample pesticide raw data instrument output reflects analyst review, and the responses that interfere with the affected pesticides were not reported. During validation, the non-detected results of the affected analytes in those samples were qualified as estimated, with a low bias of unknown degree. The affected analytes are: dieldrin, 4,4'-DDE, 4.4'-DDT, endosulfan I, and methoxychlor.

Some of the detected pesticide results exhibit elevated dual column quantitative correlations, and are qualified to reflect the uncertainty in identification and/or quantitation. The values have been either qualified as estimated ("J"), qualified as tentative in identification and estimated in value ("NJ"), or edited to non-detection ("U"), depending on the degree of variance.

It is noted that, in some cases, the laboratory reports detections for analytes that did not show responses above the MDL on the secondary column. This has been corrected during validation review.

Matrix spikes were performed for pesticides, herbicides, and Aroclors 1016/1260 on EP-15, EP-67, EP-68, and EP-88, and for Aroclors 1016/1260 on EP-16. Recoveries and correlations are within validation guidelines, with the following exceptions:

- d-BHC did not recover from the matrix spikes of EP-68, and the result for that analyte is therefore rejected in that parent sample
- Although the matrix spikes were processed at fivefold dilution, the result for Aroclor 1260 in EP-88 is qualified as estimated due to outlying duplicate correlation (91%RPD).

Surrogate and internal standard recoveries are within validation guidelines. LCS recoveries are within required ranges. Calibration standards show responses within validation guidelines. Blanks show no contamination.

The following results have been qualified due to poor congener patterns (i.e. match to standards):

- Aroclor 1254 in EP-90
- Aroclors 1268 in EP-69, EP-70, EP-72, EP-73, EP-87, and DUP-09222023

PFAS by Modified EPA Method 537

Numerous low IDS recoveries were observed in the field samples collected 09/19/22. Twenty three samples and a field duplicate exhibited multiple low outlying recoveries, with as many as thirteen of the seventeen IDSs showing low responses. Results for the analytes associated with the affected IDSs have been qualified as estimated in the affected IDSs. Matrix effects are indicated.

The detections of NEtFOSAA in samples collected in EP-14-P and EP-66-P are considered external contamination and edited to non-detection due to presence in the associated method blank.

Matrix spike evaluations of EP-15-P, EP-67-P, EP-68_P and EP-88_P show recoveries and correlations within validation guidelines, with the following exceptions, the results for which are qualified as estimated in the indicated parent samples:

Parent Sample	Analyte	Outlying % Recoveries	Outlying %RPD
EP-68_P	NEtFOSAA	162	43
EP-88_P	PFNA	130,133	

A total of eighteen detected analytes in nine samples show ion ratios outside the acceptance range. These detections have been flagged as being Estimated Maximum Potential Concentration (EMPC).

Internal standard recoveries are within validation guidelines. Calibration standard responses are compliant.

Although noted in the project QAPP of June 2, 2017, equipment blanks and trip blanks were not processed for PFAS, and therefore, the potential for external contamination has not been entirely evaluated.

TAL and CP-51 Metals by EPA 6010D, 6020B, 7470A, and 7471B

The detection of antimony in samples collected in September 2023 are considered external contamination and edited to non-detection due to presence in the associated calibration blanks.

Matrix spikes were performed on EP-15, EP-66, EP-67, EP-68, and EP-88, and show recoveries and correlations within validation guidelines, with the following exceptions, results for which are qualified as estimated in the indicated parent sample:

Parent Sample	Element	Outlying % Recoveries	Outlying % RPD's
EP-68	Lead	59,48	
	Magnesium		43
	Zinc	0,59	
EP-88	Chromium	64,26	
	Magnesium		62
	Nickel	42,30	
	Potassium	22,15	
EP-66	Zinc	295	54
EP-67	Zinc	42,72	
EP-15	Chromium	37,60	
	Potassium	47,62	

The ICP serial dilutions performed on EP-15, EP-66, EP-67, EP-68, and EP-88 show correlations within validation guidelines.

Calibration and low level standard responses are compliant.

Total Cyanide and Hexavalent/Trivalent Chromium Analyses by EPA 7196 and 9012

Review was conducted for method compliance, holding times, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable for the validated sample, unless noted specifically within this text.

Matrix spike recovery and/or duplicate correlation evaluations were performed as follows:

- Total cyanide on DUP-09222023_B, EP-15, EP-16, EP-17, EP-67, EP-68, EP-86, and EP-88
- Hexavalent chromium on FB-09222023B, EP-13, EP-15, EP-67, EP-68, EP-79, and EP-88

Recoveries and correlations are within validation guidelines.

LCS recoveries are within validation guidelines, with the exception of the recovery for hexavalent chromium in the LCS associated with ten samples reported in SDG L2356129. The results for that compound in those associated samples are qualified as estimated, with a low bias. The affected samples are: EP-68, EP-69, EP-70, EP-71, EP-72, EP-73, EP-74, EP-75, DUP_09222023, and DUP-09222023_B.

Blanks show no contamination.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Attachments: Validation Data Qualifier Definitions
Sample Identifications
Qualified Laboratory EQuIS EDDs

VALIDATION DATA QUALIFIER DEFINITIONS

U	The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
J-	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
J+	The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
UJ	The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NJ	The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
EMPC	The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.

Sample Identification Summary

Project Name: HLP 2/3
Project Number: 1338.0001Y008

Lab Number: L2356129
Report Date: 11/03/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2356129-01	EP-68	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 09:45	09/22/23
L2356129-02	EP-69	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 09:55	09/22/23
L2356129-03	EP-70	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:10	09/22/23
L2356129-04	DUP_09222023	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:00	09/22/23
L2356129-05	DUP_09222023_B	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:02	09/22/23
L2356129-06	EP-71	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:20	09/22/23
L2356129-07	EP-72	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:45	09/22/23
L2356129-08	EP-73	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:55	09/22/23
L2356129-09	EP-74	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:15	09/22/23
L2356129-10	EP-75	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:30	09/22/23
L2356129-11	EP-76	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:45	09/22/23
L2356129-12	EP-77	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:55	09/22/23
L2356129-13	EP-78	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:05	09/22/23
L2356129-14	EP-92	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:45	09/22/23
L2356129-15	EP-91	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:55	09/22/23
L2356129-16	EP-89	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:05	09/22/23
L2356129-17	EP-84	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:15	09/22/23
L2356129-18	EP-79	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:35	09/22/23
L2356129-19	EP-80	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:45	09/22/23
L2356129-20	EP-81	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:00	09/22/23
L2356129-21	TRIP BLANK	WATER	27-50 1ST AVE, QUEENS,NY	09/22/23 00:00	09/22/23
L2356129-22	FB_09222023	WATER	27-50 1ST AVE, QUEENS,NY	09/22/23 16:00	09/22/23
L2356129-23	FB_09222023B	WATER	27-50 1ST AVE, QUEENS,NY	09/22/23 16:30	09/22/23
L2356129-24	EP-88	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 15:35	09/22/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2356129-25	EP-82	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:10	09/22/23
L2356129-26	EP-83	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:20	09/22/23
L2356129-27	EP-90	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:30	09/22/23
L2356129-28	EP-86	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:45	09/22/23
L2356129-29	EP-87	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:55	09/22/23
L2356129-30	EP-85	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 15:15	09/22/23

Project Name: HLP 2/3
Project Number: 1338.0001Y008

Lab Number: L2356198
Report Date: 10/06/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2356198-01	FIELD BLANK-092223_P	WATER	27-50 1ST AVE, QUEENS,NY	09/22/23 08:40	09/22/23
L2356198-02	EP-68_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 09:46	09/22/23
L2356198-03	DUP-09222023_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:01	09/22/23
L2356198-04	DUP-09222023B_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:03	09/22/23
L2356198-05	EP-69_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 09:56	09/22/23
L2356198-06	EP-70_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:11	09/22/23
L2356198-07	EP-71_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:21	09/22/23
L2356198-08	EP-72_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:46	09/22/23
L2356198-09	EP-73_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 10:56	09/22/23
L2356198-10	EP-74_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:16	09/22/23
L2356198-11	EP-75_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:31	09/22/23
L2356198-12	EP-76_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:46	09/22/23
L2356198-13	EP-77_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 11:56	09/22/23
L2356198-14	EP-78_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:06	09/22/23
L2356198-15	EP-92_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:46	09/22/23
L2356198-16	EP-91_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 12:56	09/22/23
L2356198-17	EP-89_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:00	09/22/23
L2356198-18	EP-84_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:16	09/22/23
L2356198-19	EP-79_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:36	09/22/23
L2356198-20	EP-80_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 13:40	09/22/23
L2356198-21	EP-81_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:01	09/22/23
L2356198-22	EP-82_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:11	09/22/23
L2356198-23	EP-83_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:21	09/22/23
L2356198-24	EP-90_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:31	09/22/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2356198-25	EP-86_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:46	09/22/23
L2356198-26	EP-87_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 14:50	09/22/23
L2356198-27	EP-85_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 15:16	09/22/23
L2356198-28	EP-88_P	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 15:36	09/22/23
L2356198-29	FB-09222023B_P	WATER	27-50 1ST AVE, QUEENS,NY	09/22/23 16:45	09/22/23
L2356198-30	DUP VOID	SOIL	27-50 1ST AVE, QUEENS,NY	09/22/23 16:45	09/22/23

Project Name: HALLETTS POINT BUILDINGS 2 & 3
Project Number: 1338.0010Y008

Lab Number: L2437638
Report Date: 07/22/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2437638-01	EP-66-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 09:45	07/02/24
L2437638-02	EP-65-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:05	07/02/24
L2437638-03	EP-64-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:10	07/02/24
L2437638-04	EP-17-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:20	07/02/24
L2437638-05	EP-67-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 09:15	07/02/24
L2437638-06	EP-2-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:30	07/02/24
L2437638-07	EP-1-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:45	07/02/24
L2437638-08	EP-3-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 10:55	07/02/24
L2437638-09	EP-4-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:05	07/02/24
L2437638-10	EP-5-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:15	07/02/24
L2437638-11	EP-14-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:50	07/02/24
L2437638-12	EP-6-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:25	07/02/24
L2437638-13	EP-7-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:35	07/02/24
L2437638-14	EP-8-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:50	07/02/24
L2437638-15	EP-39-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 11:55	07/02/24
L2437638-16	EP-9-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 12:50	07/02/24
L2437638-17	EP-10-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:00	07/02/24
L2437638-18	EP-11-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:15	07/02/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2437638-19	EP-12-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:25	07/02/24
L2437638-20	EP-13-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:45	07/02/24
L2437638-21	EP-40-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:35	07/02/24
L2437638-22	EP-15-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 13:55	07/02/24
L2437638-23	EP-16-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 14:35	07/02/24
L2437638-24	EP-41-P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 14:45	07/02/24
L2437638-25	DUP_07022024_1_P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 12:00	07/02/24
L2437638-26	DUP_07022024_2_P	SOIL	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 12:02	07/02/24
L2437638-27	FB_07022024_1_P	WATER	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 15:25	07/02/24
L2437638-28	FB_07022024_2_P	WATER	27-50 1ST AVE, QUEENS, NEW YORK 11102	07/02/24 15:30	07/02/24

Project Name: HLP 2/3
Project Number: 1338.0010Y008

Lab Number: L2437657
Report Date: 07/11/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2437657-01	EP-66	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 09:45	07/02/24
L2437657-02	EP-65	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:05	07/02/24
L2437657-03	EP-64	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:10	07/02/24
L2437657-04	EP-17	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:20	07/02/24
L2437657-05	EP-67	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 09:15	07/02/24
L2437657-06	EP-2	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:30	07/02/24
L2437657-07	EP-1	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:45	07/02/24
L2437657-08	EP-3	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 10:55	07/02/24
L2437657-09	EP-4	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:05	07/02/24
L2437657-10	EP-5	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:15	07/02/24
L2437657-11	EP-14	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:50	07/02/24
L2437657-12	EP-6	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:25	07/02/24
L2437657-13	EP-7	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:35	07/02/24
L2437657-14	EP-8	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:50	07/02/24
L2437657-15	EP-39	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 11:55	07/02/24
L2437657-16	EP-9	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 12:50	07/02/24
L2437657-17	EP-10	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:00	07/02/24
L2437657-18	EP-11	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:15	07/02/24
L2437657-19	EP-12	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:25	07/02/24
L2437657-20	EP-13	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:45	07/02/24
L2437657-21	EP-40	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:35	07/02/24
L2437657-22	EP-15	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 13:55	07/02/24
L2437657-23	EP-16	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 14:35	07/02/24
L2437657-24	EP-41	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 14:45	07/02/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2437657-25	DUP_07022024_1	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 12:00	07/02/24
L2437657-26	DUP_07022024_2	SOIL	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 12:05	07/02/24
L2437657-27	FB_07022024_1	FIELD BLANK	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 15:40	07/02/24
L2437657-28	FB_07022024_2	FIELD BLANK	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 15:50	07/02/24
L2437657-29	TRIP BLANK 1	TRIP BLANK (AQUEOUS)	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 00:00	07/02/24
L2437657-30	TRIP BLANK 2	TRIP BLANK (AQUEOUS)	27-50 1ST AVE., QUEENS, NEW YORK	07/02/24 00:00	07/02/24