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Cover Page

Order ID : O1232

Project ID : NYCDDC Phase II SCI Arthur Kill Road CEQR

Client : Louis Berger U.S., Inc., A WSP Company

Lab Sample Number	Client Sample Number
O1232-01	B-P17A
O1232-02	B-P17B
O1232-03	WC-17
O1232-04	B-P18A
O1232-05	B-P18B
O1232-06	B-P19A
O1232-07	B-P19B
O1232-08	B-P35A
O1232-09	B-P35B
O1232-10	DUP01

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 9/13/2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_Y were done using GC column Rxi-624Sil MS, which is 30 meters, 0.25 mm id, 1.4 um df, Restek Cat. #13868. The Trap was supplied by Supelco, VOCARB 3000, ATOMAX XYZ Concentrator.The analysis of VOC-TCLVOA-10 was based on method 8260D.

D. QA/ QC Samples:
The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for B-P35B [1,2-Dichloroethane-d4 - 193%], B-P35BRE [1 and2-Dichloroethane-d4 - 183%].
The Internal Standards Areas met the acceptable requirements except for B-P35B and B-P35BRE the failure sample in surrogate and Internal standard was reanalyzed to confirm the failure as per method and reported while,

For B-P19B VIAL A analyzed but internal standard fail as a corrective action VIAL B analyzed but did not purge therefore VIAL A reported as final analysis.

The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

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The %RSD is greater than 15% in the Initial Calibration method (82Y011623S.M) for Methylene Chloride,1,2-Dichloroethane-d4,Toluene-d8 these compounds are passing on Linear Regression.
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

E. Additional Comments:
This data Package has been revised to correct the Client ID of sample O1232-01, O1232-02, O1232-04, O1232-05, O1232-06, O1232-07, O1232-08, O1232-09 as per client request.
Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.
Trip Blank was not provided with this set of samples.
The soil samples results are based on a dry weight basis.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: Gasoline Range Organics

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for Gasoline Range Organics.

C. Analytical Techniques:
The analysis performed on instrument FID_B were done using GC column RTX502.2 which is 60 meters, 0.53mm ID, 3.0 um df, cat#10909.The analysis of Gasoline Range Organics was based on method 8015D.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

Samples WC-17 was directly run in methanol as both low level soil vials did not purge.

E. Additional Comments:
The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: SVOC-TCL BNA -20

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for SVOC-TCL BNA -20.

C. Analytical Techniques:
The samples were analyzed on instrument BNA_F using GC Column DB-UI 8270D which is 20 meters, 0.18 mm ID, 0.36 um dfThe samples were analyzed on instrument BNA_G using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe samples were analyzed on instrument BNA_P using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of SVOC-TCL BNA -20 was based on method 8270E and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 15% in the Initial Calibration (Method 8270-BF011923.M) for 2-Nitrophenol ,Benzoic acid, 2-Nitroaniline , 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Butylbenzylphthalate ,Bis(2-ethylhexyl)phthalate, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene this compounds is passing on Linear Regression. Di-n-octyl phthalate is passing on Quadratic regression.

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The % RSD is greater than 15% in the Initial Calibration (8270-BP012323.M) for Hexachlorocyclopentadiene, 2-Nitroaniline , 2,6-Dinitrotoluene , 3-Nitroaniline, 4-Nitrophenol, 2,4-Dinitrotoluene, 4-Nitroaniline, Pentachlorophenol these compounds are passing on Linear Regression and 2-Nitrophenol, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol passing on Quadratic regression.

The Continuous Calibration File ID BF132164.D met the requirements except for 2,4-Dinitrotoluene, The associate samples have no positive hit for these compounds therefore no corrective action was taken.

The Continuous Calibration File ID BP013562.D met the requirements except for 2,4-Dinitrophenol,2,4-Dinitrotoluene and 4,6-Dinitro-2-methylphenol, The associate samples have no positive hit for these compounds therefore no corrective action was taken.

The Continuous Calibration File ID BP013571.D met the requirements except for 2,4-Dinitrophenol,2,4-Dinitrotoluene,2-Nitrophenol and 4,6-Dinitro-2-methylphenol , The associate samples have no positive hit for these compounds therefore no corrective action was taken.
The Tuning criteria met requirements.

E. Additional Comments:
This data Package has been revised to correct the Client ID of sample O1232-01, O1232-02, O1232-04, O1232-05, O1232-06, O1232-07, O1232-08, O1232-09 as per client request.
The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: SVOC-PAH

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for SVOC-PAH.

C. Analytical Techniques:
The samples were analyzed on instrument BNA_F using GC Column DB-UI 8270D which is 20 meters, 0.18 mm ID, 0.36 um df The samples were analyzed on instrument BNA_P using GC Column ZB-Semi Volatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of SVOC-PAH was based on method 8270E and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

E. Additional Comments:
The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial

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Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: Pesticide-TCL

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for Pesticide-TCL.

C. Analytical Techniques:
The analysis was performed on instrument ECD_L. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11 The rear column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 7HM-G016-17. .The analysis of Pesticide-TCLs was based on method 8081B and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:
This data Package has been revised to correct the Client ID of sample O1232-01, O1232-02, O1232-04, O1232-05, O1232-06, O1232-07, O1232-08, O1232-09 as per client request.

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: PCB

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for PCB.

C. Analytical Techniques:
The analyses were performed on instrument GCECD_P. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 µm; Catalogue # 7HM-G017-11.The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:
This data Package has been revised to correct the Client ID of sample O1232-01, O1232-02, O1232-04, O1232-05, O1232-06, O1232-07, O1232-08, O1232-09 as per client request.
The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: Diesel Range Organics

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for Diesel Range Organics.

C. Analytical Techniques:
The analysis were performed on instrument FID_F. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302.The analysis of Diesel Range Organics was based on method 8015D and extraction was done based on method 3541.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds .
The MSD recoveries met the acceptable requirements .
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:
The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: Mercury,Metals ICP-TAL

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for Mercury,Metals ICP-TAL.

C. Analytical Techniques:
The analysis of Metals ICP-TAL was based on method 6010D, digestion based on method 3050 (soils). The analysis and digestion of Mercury was based on method 7471B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (B-P17AMS) analysis met criteria for all samples except for Antimony, Beryllium, and Copper due to chemical interference during digestion process.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
This data Package has been revised to correct the Client ID of sample O1232-01, O1232-02, O1232-04, O1232-05, O1232-06, O1232-07, O1232-08, O1232-09 as per client request.

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: TCLP ICP Metals,TCLP Mercury

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for TCLP ICP Metals,TCLP Mercury.

C. Analytical Techniques:
The analysis of TCLP ICP Metals was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Matrix Spike Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

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CASE NARRATIVE

Louis Berger U.S., Inc., A WSP Company
Project Name: NYCDDC Phase II SCI Arthur Kill Road CEQR
Project # N/A
Chemtech Project # O1232
Test Name: Corrosivity,Ignitability,Paint Filter,Reactive Cyanide,Reactive Sulfide

A. Number of Samples and Date of Receipt:
10 Solid samples were received on 01/19/2023.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-PAH, SVOC-TCL BNA -20, TCLP Extraction, TCLP ICP Metals, TCLP Mercury, TCLP METALS and VOC-TCLVOA-10. This data package contains results for Corrosivity,Ignitability,Paint Filter,Reactive Cyanide,Reactive Sulfide.

C. Analytical Techniques:
The analysis of Ignitability was based on method 1030, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034, The analysis of Corrosivity was based on method 9045D and The analysis of Paint Filter was based on method 9095B.

D. QA/ QC Samples:
The Holding Times were met for all samples except for WC-17 of Corrosivity as sample receive out of hold.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

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DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

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DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value**.** This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **O1232**

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

1st Level QA Review Signature: **SOHIL JODHANI** **Date:** **09/13/2023**

2nd Level QA Review Signature: _____ **Date:** _____