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Cover Page

Order ID : P4397

Project ID : Amtrak Sawtooth Bridges 2024

Client : Portal Partners Tri-Venture

Lab Sample Number	Client Sample Number
P4397-01	WB-301-TOP
P4397-02	WB-301-BOT
P4397-04	WB-301-SW
P4397-05	TB-10102024
P4397-06	WB-301-BOT

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: 11/6/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: VOC-TCLVOA-10

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for VOC-TCLVOA-10.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UIThe 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.
The Internal Standards Areas met the acceptable requirements.
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.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

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E. Additional Comments:

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 <20% 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 > 20% 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.

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: TCLP VOA

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for TCLP VOA.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_N were done using GC column RXI-624SIL MS 30m 0.25mm 1.4 um. Cat#13868.The analysis of TCLP VOA was based on method 8260D and TCLP extraction method was 1311.

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 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.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .
The Tuning criteria met requirements.

E. Additional Comments:
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.

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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 <20% 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 > 20% 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.

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: SVOC-TCL BNA -20

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 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 analysis of SVOC-TCL BNA -20 was based on method 8270E and extraction was done based on method 3510.

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 {P4397-02MS} with File ID: BF139977.D recoveries met the requirements for all compounds except for 3-Nitroaniline[59%], 4-Chloroaniline[25%], Benzo(g,h,i)perylene[59%], bis(2-Ethylhexyl)phthalate[136%], Di-n-octyl phthalate[141%] and Indeno(1,2,3-cd)pyrene[68%] these compounds did not meet the NJDKQP criteria but met the in-house criteria and Atrazine[132%] this compound did not meet the NJDKQP criteria and in-house criteria due to matrix interference.

The MSD {P4397-02MSD} with File ID: BF139978.D recoveries met the acceptable requirements except for 3-Nitroaniline[59%], 4-Chloroaniline[27%], Benzo(g,h,i)perylene[59%], bis(2-Ethylhexyl)phthalate[136%], Di-n-octyl phthalate[136%] these compounds did not meet the NJDKQP criteria but met the

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in-house criteria and Atrazine[132%] this compound did not meet the NJDKQP criteria and in-house criteria due to matrix interference.

The RPD met criteria .

The Blank Spike for {PB164123BS} with File ID: BF139959.D met requirements for all samples except for 3-Nitroaniline[65%], 4-Chloroaniline[51%] these compounds did not meet the NJDKQP criteria but met the in-house criteria and Hexachlorocyclopentadiene[179%] , 4,6-Dinitro-2-methylphenol[135%] these compounds did not meet the NJDKQP criteria and in-house criteria but no positive hits in associated samples therefore no corrective action taken.

The Blank Spike for {PB164154BS} with File ID: BF139960.D met requirements for all samples except for 3-Nitroaniline[62%], 4-Chloroaniline[43%] these compounds did not meet the NJDKQP criteria but met the in-house criteria and Hexachlorocyclopentadiene[180%] , 4,6-Dinitro-2-methylphenol[140%] these compounds did not meet the NJDKQP criteria and in-house criteria but no positive hits in associated sample therefore no corrective action taken.

The Blank Spike Duplicate for {PB164154BSD} with File ID: BF139961.D met requirements for all samples except for 3,3-Dichlorobenzidine[68%], 3-Nitroaniline[61%], 4-Chloroaniline[40%] these compounds did not meet the NJDKQP criteria but met the in-house criteria and Hexachlorocyclopentadiene[170%] , 4,6-Dinitro-2-methylphenol[141%] these compounds did not meet the NJDKQP criteria and in-house criteria but no positive hits in associated sample therefore no corrective action taken.

The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 20% in the Initial Calibration (8270-BF101824.M) for 2,4-Dinitrophenol, this compound is passing on Linear Regression.

The Continuous Calibration File ID BF139927.D met the requirements except for 2,4-Dinitrophenol,4,6-Dinitro-2-methylphenol and Di-n-octyl phthalate but no positive hits in associated samples therefore no corrective action taken.

The Continuous Calibration File ID BF139952.D met the requirements except for 2,4-Dinitrophenol and 4,6-Dinitro-2-methylphenol but no positive hits in associated samples therefore no corrective action taken.

The Continuous Calibration File ID BF139965.D met the requirements except for 2,4-Dinitrophenol and 4,6-Dinitro-2-methylphenol but no positive hits in associated samples therefore no corrective action taken.

The Tuning criteria met requirements.

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E. Additional Comments:
For sample # WB-301-BOT some compounds below Method detection limits, therefore it is not reported as Hit in Form-1.

The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

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

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: TCLP BNA

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for TCLP BNA.

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 analysis of TCLP BNA was based on method 8270E and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis except for WB-301-BOT, extracted out of hold, as sample active out of holding time.

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.

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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 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:
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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: TCLP Pesticide

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for TCLP Pesticide.

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 TCLP Pesticides was based on method 8081B and extraction was done based on method 3510 and TCLP extraction method was 1311.

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:

F. Manual Integration Comments:

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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

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: PCB

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 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 3510.

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 Spike Duplicate 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 .

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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

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: TCLP Herbicide

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for TCLP Herbicide.

C. Analytical Techniques:
The analysis was performed on instrument ECD_S. The front column is RTX-CLPesticides which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 11139. The rear column is RTX-CLPesticides2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 11324The analysis of TCLP Herbicides was based on method 8151A and extraction was done based on method 3510 and TCLP extraction method was 1311.

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

The Surrogate recoveries met the acceptable criteria except for WB-301-BOT [2,4-DCAA(1) - 27%, 2,4-DCAA(2) - 22%], WB-301-BOTMS [2,4-DCAA(1) - 28%, 2,4-DCAA(2) - 23%], WB-301-BOTMSD [2,4-DCAA(1) - 28%, 2 and4-DCAA(2) - 22%], these compounds did not meet the NJDKQP criteria and in-house criteria and surrogate failure confirms with MS-MSD while,

PB164261TB[2,4-DCAA(2) - 57%],this compound did not meet the NJDKQP criteria but met the in-house criteria.

The Retention Times were acceptable for all samples.

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The MS {P4397-06MS} with File ID: PS028042.D recoveries met the requirements for all compounds except for 2,4,5-TP(Silvex)[212%]this compound did not meet the NJDKQP criteria and in-house criteria due to matrix interference.

The MSD {P4397-06MSD} with File ID: PS028043.D recoveries met the acceptable requirements except for 2,4,5-TP(Silvex)[226%]this compound did not meet the NJDKQP criteria and in-house criteria due to matrix interference.

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:

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

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: EPH

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for EPH.

C. Analytical Techniques:
The analysis were performed on instrument FID_C. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224.The analyses were performed on instrument FID_D. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224.The analysis of EPHs was based on method NJEPH 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 Spike Duplicate 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 .

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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.

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: Metals ICP-TAL,Mercury

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for Metals ICP-TAL,Mercury.

C. Analytical Techniques:
The analysis of Metals ICP-TAL was based on method 6010D, digestion based on method 3050 (soils) and 3010 (waters).The analysis and digestion of Mercury was based on method 7470A. The analysis and digestion of Mercury was based on method 7471B.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
Sample WB-301-TOP was diluted due to high concentrations for Chromium,Mercury & Sample WB-301-SW was diluted due to high concentrations for Sodium.
The Blank Spike met requirements for all samples.
The Duplicate (NB-08-101424DUP) analysis met criteria for all samples except for Beryllium due to matrix interference..
The Duplicate (WB-301-SWMSD) analysis met criteria for all samples except for Copper, Potassium, Zinc due to matrix interference.
The Matrix Spike (NB-08-101424MS) analysis met criteria for all samples except for Beryllium, Chromium, Copper, Potassium, Selenium, Silver, Sodium, Vanadium due to matrix interference.
The Matrix Spike (WB-301-SWMS) analysis met criteria for all samples except for Antimony, Iron, Silver, Zinc due to matrix interference.
The Matrix Spike Duplicate (NB-08-101424MSD) analysis met criteria for all samples except for Beryllium and Selenium due to matrix interference.

The Matrix Spike Duplicate (WB-301-SWMSD) analysis met criteria for all samples except for Copper, Iron, Silver, Zinc due to matrix interference.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution (NB-08-101424L) met criteria for all samples except for Aluminum, Calcium, Chromium, Copper, Iron, Magnesium, Manganese, Sodium, Zinc due to unknown interference.

E. Additional Comments:

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: TCLP Mercury,TCLP ICP Metals

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for TCLP Mercury,TCLP ICP Metals.

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:

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

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CASE NARRATIVE

Portal Partners Tri-Venture
Project Name: Amtrak Sawtooth Bridges 2024
Project # N/A
Chemtech Project # P4397
Test Name: Hexavalent Chromium,Corrosivity,Trivalent Chromium,Ignitability,Reactive Cyanide,Reactive Sulfide

A. Number of Samples and Date of Receipt:
3 Solid samples were received on 10/11/2024.
2 Water samples were received on 10/11/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, EPH, Hexavalent Chromium, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TPH GC, Trivalent Chromium, VOC-TCLVOA-10 and VOC-TCLVOA-10. This data package contains results for Hexavalent Chromium,Corrosivity,Trivalent Chromium,Ignitability,Reactive Cyanide,Reactive Sulfide.

C. Analytical Techniques:
The analysis of Ignitability was based on method 1030, The analysis of Trivalent Chromium was based on method 6010D, The analysis of Hexavalent Chromium was based on method 7196A, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034 and The analysis of Corrosivity was based on method 9045D.

D. QA/ QC Samples:

The Holding Times were met for all samples except for WB-301-BOT of Corrosivity as sample was receive out of holding time.
The Blank Spike met requirements for all samples.
The Duplicate (WB-301-BOTDUP) analysis met criteria for all samples except for Reactive Cyanide due to the Results are Below Reporting Limit..
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.

E. Additional Comments:

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. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

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 #: **P4397**

	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	✓

QA Review Signature: **PRADIP PRAJAPATI** **Date:** **11/06/2024**