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CASE NARRATIVE

Remington & Vernick Engineers
Project Name: Edison Landfill
Project # N/A
Order ID # Q3584
Test Name: VOC-TCLVOA-10,SVOC-SIMGroup1,SVOC-TCL BNA -20,EPH,PCB,Pesticide-TCL,Mercury,Metals ICP-TAL,Anions Group1,BOD5,COD,Cyanide,Hexavalent Chromium,Oil and Grease,pH,TDS,TKN

A. Number of Samples and Date of Receipt:
7 Water samples were received on 11/07/2025.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10,SVOC-SIMGroup1,SVOC-TCL BNA -20,EPH,PCB,Pesticide-TCL,Mercury,Metals ICP-TAL,Anions Group1,BOD5,COD,Cyanide,Hexavalent Chromium,Oil and Grease,pH,TDS,TKN. This data package contains results for VOC-TCLVOA-10(8260-Low),SVOC-SIMGroup1(8270-Modified),SVOC-TCL BNA -20(8270E),EPH(NJEPH),PCB(8082A),Pesticide-TCL(8081B),Mercury(7470A),Metals ICP-TAL(6010D),Anions Group1(300.0),BOD5(SM5210 B),COD(SM5220 D),Cyanide(9012B),Hexavalent Chromium(7196A),Oil and Grease(1664A),pH(9040C),TDS(SM2540 C),TKN(SM4500 N Org B or C).

C. Analytical Techniques:
VOC-TCLVOA-10 : The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI. The analysis of VOC-TCLVOA-10 was based on method 8260-Low.

SVOC-TCL BNA -20 : 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-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA. The analysis of SVOC-TCL BNA -20 was based on method 8270E and extraction was done based on method 3510.

SVOC-SIMGroup1 : The samples were analyzed on instrument BNA_N using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGA. The analysis of SVOC-SIMGroup1 was based on method 8270-Modified and extraction was done based on method 3510.

PCB : 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 analyses were performed on instrument GCECD_O. 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.

Pesticide-TCL : The analysis was performed on instrument ECD_D. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11.The analysis of Pesticide-TCLs was based on method 8081B and extraction was done based on method 3510.

EPH : The analysis were performed on instrument FID_E. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224.The analysis were performed on instrument FID_G. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302.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 EPHs was based on method NJEPH and extraction was done based on method 3510.

Mercury,Metals ICP-TAL : The analysis of Metals ICP-TAL was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of Mercury was based on method 7470A.

Wetchem : The analysis of Anions Group1,BOD5,COD,Cyanide,Hexavalent Chromium,Oil and Grease,pH,TDS,TKN was based on method 1664A,300.0,7196A,9012B,9040C,SM2540 C,SM4500 N Org B or C,SM5210 B,SM5220 D and extraction was done based on method 8015B.

D. QA/ QC Samples:

The Holding Times were met for all analysis except following Wetchem : EB-2 of pH, for FB-2 of pH, for SEEP-1 of pH, for SW-1 of pH, for SW-2 of pH and for SW-3 of pH as samples were receive out of holding time.

The Surrogate recoveries were met for all analysis except following
SVOC-SIMGroup1 : The Surrogate recoveries were met for all analysis except for,
SW-1 [Terphenyl-d14 - 133%],
EB-2 [Terphenyl-d14 - 136%],
FB-2 [Terphenyl-d14 - 135%], This compound did not meet the NJDKQP criteria but met the in-house criteria.

The Surrogate recoveries were met for all analysis except following

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PCB : EB-2 [Tetrachloro-m-xylene(1)154%], FB-2 [Tetrachloro-m-xylene(1)154%]these compounds did not meet the NJDKQP criteria but met the in-house criteria.

The Internal Standards Areas were met for all analysis except following SVOC-SIMGroup1 :
SEEP-1 and SEEP-1DL. Regular internal Standard (20ng) added to the sample, So 50 multiplier was used. For SEEP-1 , Also a multiplier 10 was used for SEEP-1 DL 5X as dilution was made from it, Therefor no further corrective action was taken.

The Retention Times were acceptable for all samples.
The MS recoveries met the requirements for all compounds except following Mercury,Metals ICP-TAL : The Matrix Spike (SW-3MS) analysis met criteria for all compounds except for Iron, Silver, Thallium and Zinc due to Chemical Interference during Digestion process.

The MSD recoveries met the requirements for all compounds except following Mercury,Metals ICP-TAL : The Matrix Spike Duplicate (SW-1MSD) analysis met criteria for all compounds except for Mercury due to Sample Matrix interference. The Matrix Spike Duplicate (SW-3MSD) analysis met criteria for all compounds except for Antimony, Arsenic, Iron, Silver and Zinc due to Chemical Interference during Digestion process.

The RPD were met for all analysis except following
VOC-TCLVOA-10 : The RPD for {VX1110WBSD01} with File ID: VX048531.D met criteria except for Dichlorodifluoromethane[24%], Acetone[27%] due to difference in results of BS and BSD.

Pesticide-TCL : The RPD for {PB170485BS} with File ID: PD091093.D met criteria except for Endrin Ketone[23%]this compound did not meet the NJDKQP criteria and in-house criteria, due to difference in results of BS-BSD.

The Blank Spike met requirements for all compounds except following
SVOC-TCL BNA -20 : The Blank Spike for {PB170473BS} with File ID: BF144245.D met requirements for all compounds except for 3,3-Dichlorobenzidine[45%], 3-Nitroaniline[52%] and 4-Chloroaniline[33%]. This compound did not meet the NJDKQP criteria but met the in-house criteria.

The Blank Spike Duplicate met requirements for all compounds except following
SVOC-TCL BNA -20 : The Blank Spike Duplicate for {PB170473BSD} with File ID: BF144246.D met requirements for all compounds except for 3,3-Dichlorobenzidine[45%], 3-Nitroaniline[50%] and 4-Chloroaniline[33%]. This compound did not meet the NJDKQP criteria but met the in-house criteria.

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The Blank Spike met requirements for all compounds except following
EPH : The Blank Spike for {PB170496BS} with File ID: FE056803.D met requirements for all samples except for aliphatic [Naphthalene (C11.7)- 0%, 2-methylnaphthalene (C12.89)-0%], these analytes compounds are only being monitoring in aliphatic fraction.

The Blank Spike Duplicate met requirements for all compounds except following
EPH : The Blank Spike Duplicate for {PB170496BSD} with File ID: FE056804.D met requirements for all samples except for aliphatic [Naphthalene (C11.7)- 0%, 2-methylnaphthalene (C12.89)- 0%], these analytes compounds are only being monitoring in aliphatic fraction.

The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements except following
SVOC-TCL BNA -20 : The %RSD is greater than 20% in the Initial Calibration (Method 8270-BF110525.M) for Hexachlorocyclopentadiene is passing on Quadratic regression.

The %RSD is greater than 20% in the Initial Calibration (Method 8270-BP102925.M) for 26) 2-Nitrophenol, 2-Nitroaniline, 2,6-Dinitrotoluene, 3-Nitroaniline,2,4-Dinitrotoluene,Butylbenzylphthalate,Bis(2-ethylhexyl)phthalate, These Compounds are passing on Linear regression and 2,4-Dinitrophenol,4,6-Dinitro-2-methylphthalate are passing on Quadratic regression.

The Continuous Calibration met the requirements except following
SVOC-TCL BNA -20 : The Continuous Calibration File ID BF144198.D met the requirements except for Benzaldehyde. Associated samples does not have hit for these compounds, therefor no further corrective was taken.

The Continuous Calibration File ID BF144243.D met the requirements except for 2,4-Dinitrophenol,Benzaldehyde and Hexachlorocyclopentadiene. Associated samples does not have hit for these compounds, therefor no further corrective was taken.

The Continuous Calibration File ID BP026090.D met the requirements except for 2,3,4,6-Tetrachlorophenol,2,4-Dinitrophenol,2,4-Dinitrotoluene,2-Nitrophenol,4,6-Dinitro-2-methylphenol,Butylbenzylphthalate,Di-n-octyl phthalate,Hexachlorocyclopentadiene and 2,4,6-Tribromophenol. Associated sample does not have hit for these compounds, Therefor no further corrective action was taken.

The Tuning criteria met requirements.

VOC-TCLVOA-10 : Sample SEEP-1 was diluted due to sample containing sediment and wood pieces, not allowing straight run analysis.

SVOC-SIMGroup1 : Sample SEEP-1 was diluted due to high concentration.

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Mercury,Metals ICP-TAL : Sample SW-2 was diluted due to high concentrations for Sodium & Sample SW-3 was diluted due to high concentrations for Sodium & Sample SEEP-1 was diluted due to high concentrations for Mercury.

Wetchem : Sample SEEP-1 was diluted due to high concentrations for TKN.

The Duplicate analysis met criteria for all samples.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:

SEMI-VOA : The Form 6 is not included in the data package because the Initial Calibration was performed using 7 points.

Anions Group1,BOD5,COD,Cyanide,Hexavalent Chromium,Oil and Grease,pH,TDS,TKN : Sample Q3584-07 was analyzed straight Dilution for COD parameter because the original samples were reading over range, only 50X has been reported.
As per method, aqueous sample for Hexavalent Chromium analysis should be filtered within 15 minutes of collection time.
However, samples were not filtered as per requirement therefore Lab has filtered the samples in-house.

Mercury,Metals ICP-TAL : The Post Digest Spike (SW-3A) analysis met criteria for all compounds except for Iron, Thallium and Zinc due to unknown chemical interference of matrix with the addition of spike amount after digestion and before analysis; matrix has suppression effect during addition of spike.

Sample Q3584-07 was analysed Stright 10X dilution for Metals ICP-TAL parameter because of matrix is very oily and muddy type, straight sample without dilution can damage the sample introduction.

PCB : samples# 04 and 05 were received with limited volume for PCB.

Pesticide-TCL : samples#04 and 05 were received with limited volume for Pesticide.

sample#EB-2 was reported with J flag on form 1 for compound# Endrin based on reporting criteria of high concentration from both column. Now for other column compound detection is below MDL therefore it is not detecting on form 10

SVOC-SIMGroup1 : Samples BP-VPB-184-EB-20251016 has the concentration of target compound below method detection limits; therefore it is not reported as Hit in Form1.

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.

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_____