

## Cover Page

**Order ID :** Q3495

**Project ID :** Maclearie Park

**Client :** Remington & Vernick Engineers

**Lab Sample Number**

Q3495-01  
Q3495-02  
Q3495-03  
Q3495-04

**Client Sample Number**

SB-1025-1  
SB-1025-2  
TW-1025-1  
TB

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: 11/10/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 7092, Phone: 908 789 8900, Fax: 908 789 8922

## **CASE NARRATIVE**

**Remington & Vernick Engineers**

**Project Name: Maclearie Park**

**Project # N/A**

**Order ID # Q3495**

**Test Name: VOC-TCLVOA-10,SVOC-PAH,SVOC-TCL BNA -  
20,EPH\_NF,PCB,Pesticide-TCL,Mercury,Metals ICP-TAL,Cyanide**

### **A. Number of Samples and Date of Receipt:**

2 Solid samples were received on 10/29/2025.

2 Water samples were received on 10/29/2025.

### **B. Parameters**

According to the Chain of Custody document, the following analyses were requested: VOC-TCLVOA-10,SVOC-PAH,SVOC-TCL BNA -20,EPH\_NF,PCB,Pesticide-TCL,Mercury,Metals ICP-TAL,Cyanide. This data package contains results for VOC-TCLVOA-10(8260-Low,8260D),SVOC-PAH(8270E),SVOC-TCL BNA -20(8270E),EPH\_NF(NJEPH),PCB(8082A),Pesticide-TCL(8081B),Mercury(7470A,7471B),Metals ICP-TAL(6010D),Cyanide(9012B,SM4500-CN C,E).

### **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 performed on instrument MSVOA\_Y were done using GC column Rxi-624SIL MS 30m, 0.25mm, 1.4 um, Cat. #13868.The analysis of VOC-TCLVOA-10 was based on method 8260-Low,8260D.

SVOC-PAH : The 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-GGA. 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-PAH was based on method 8270E and extraction was done based on method 3541.

SVOC-TCL BNA -20 : The 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-GGA. 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.



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EPH\_NF : The analysis were performed on instrument FID\_C. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18  $\mu$ m df, catalog 10224. The analysis were performed on instrument FID\_E. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18  $\mu$ m df, catalog 10224. The analysis of EPH\_NFs was based on method NJEPH and extraction was done based on method 3541.

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  $\mu$ m df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25  $\mu$ m; 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  $\mu$ m df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25  $\mu$ m; 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  $\mu$ m df,; Catalog # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25  $\mu$ m df, Catalog #: 7HMG017- 11. The analysis was performed on instrument ECD\_L. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5  $\mu$ m df,; Catalog # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25  $\mu$ m df, Catalog #: 7HMG017- 11. The analysis of Pesticide-TCLs was based on method 8081B 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 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.

Wetchem : The analysis of Cyanide was based on method 9012B, SM4500-CN C,E and extraction was done based on method 8015B.

#### **D. QA/ QC Samples:**

The Holding Times were met for all analysis.

The Surrogate recoveries were met for all analysis except following

VOC-TCLVOA-10 : TW-1025-1RE [Toluene-d8 - 77%] sample was reanalyzed to confirm the failure and reported.

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 except following

Mercury, Metals ICP-TAL : The Matrix Spike (SB-1025-1MS) analysis met criteria for all compounds except for Antimony, Chromium, Manganese, Potassium, Vanadium and



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Zinc due to Chemical Interference during Digestion Process. The Matrix Spike (TW-1025-1MS) analysis met criteria for all compounds except for Aluminum and Potassium 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 (SB-1025-1MSD) analysis met criteria for all compounds except for Antimony, Chromium, Manganese, Potassium, Vanadium and Zinc due to Chemical interference during digestion process. The Matrix Spike Duplicate (TW-1025-1MSD) analysis met criteria for all compounds except for Aluminum due to Chemical interference during digestion process.

The RPD were met for all analysis except following VOC-TCLVOA-10 : The RPD for {VX1031WBSD01} with File ID: VX048420.D met criteria except for Tetrachloroethene[16%].

The Blank Spike met requirements for all compounds except following VOC-TCLVOA-10 : The Blank Spike for {VX1031WBS01} with File ID: VX048419.D met requirements for all compounds except for 1,3-Dichlorobenzene[81%], 1,4-Dichlorobenzene[81%] is failing low as corrective action associate sample reanalyzed under passing BS.

The Blank Spike Duplicate met requirements for all compounds except following VOC-TCLVOA-10 : The Blank Spike Duplicate for {VY1030SBSD01} with File ID: VY023623.D met requirements for all compounds except for 1,2-Dichloropropane[123%] is failing high but no positive hit in associate sample therefore no corrective action taken.

VOC-TCLVOA-10 : The Blank Spike Duplicate for {VX1103WBSD01} with File ID: VX048450.D met requirements for all compounds except for Benzene[114%].

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 Method 8270-BG102421.M for 2-Nitrophenol, 2-Nitroaniline, 2,6-Dinitrotoluene, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 4,6-Dinitro-2-methylphenol these, these Compounds are passing on Linear regression.

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



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The Continuous Calibration met the requirements except following  
VOC-TCLVOA-10 : The Continuous Calibration File ID VX048445.D met the requirements except for Dibromofluoromethane which is not our target compound, therefore no corrective action taken.

The Continuous Calibration File ID VY023620.D met the requirements except for Methyl Acetate and Styrene are failing high but no positive hit in associate sample therefore no corrective action taken.

SVOC-PAH : The Continuous Calibration File ID BG064654.D met the requirements except for 2,4,6-Tribromophenol and Nitrobenzene-d5. But associated samples have no positive hit for these compounds therefore no corrective action was taekn.

SVOC-TCL BNA -20 : The Continuous Calibration File ID BG064654.D met the requirements except for 2,3,4,6-Tetrachlorophenol,2,4,6-Trichlorophenol,2,4-Dinitrophenol,2,4-Dinitrotoluene,2-Nitrophenol,3-Nitroaniline,4,6-Dinitro-2-methylphenol,4-Nitroaniline,4-

Nitrophenol,Hexachlorocyclopentadiene,Nitrobenzene,2,4,6-Tribromophenol and Nitrobenzene-d5. But associated samples have no positive hit for these compounds therefore no corrective acition was taken.

Pesticide-TCL : The Continuous Calibration File ID PD090949.D met the requirements except for Heptachlor is failing in 1st column, failing high but no positive hits in associated samples therefore no corrective action was taken. AND for Decachlorobiphenyl is failing in 2nd column, failing high but no positive hits in associated samples therefor no corrective action was taken.

The Continuous Calibration File ID PD090957.D met the requirements except for Heptachlor is failing in 1st column, failing high but no positive hits in associated samples therefore no corrective action was taken.

The Tuning criteria met requirements.

The Duplicate analysis met criteria for all compoundsexcept following

Mercury,Metals ICP-TAL : The Duplicate (TW-1025-1DUP) analysis met criteria for all compounds except for Manganese due to sample matrix interference.

The Serial Dilution met criteria for all compounds except following

Mercury,Metals ICP-TAL : The Serial Dilution (SB-1025-1L) met criteria for all compounds except for Aluminum, Chromium, Iron, Manganese and Potassium due to sample matrix interference. The Serial Dilution (TW-1025-1L) met criteria for all compounds except for Aluminum and Chromium due to sample matrix interference.

#### **E. Additional Comments:**

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



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Mercury, Metals ICP-TAL : The Post Digest Spike (TW-1025-1A) analysis met criteria for all compounds except for Aluminum and Potassium 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.

In analytical sequence LB137750, The % recovery was outside of acceptance limit for all parameter of CCV08 but, no any sample associated under this CCV.

In analytical sequence LB137798, The % recovery was outside of acceptance limit for Sodium of CCV06 but, no any sample associated under this CCV.

In analytical sequence LB137798, The Result was outside of acceptance limit for Sodium and Potassium of CCB06 but, no any sample associated under this CCB.

SVOC-TCL BNA -20 : The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

VOC-TCLVOA-10 : Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

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

**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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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\_\_\_\_\_

## DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

<b>J</b>	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).
<b>U</b>	Indicates the analyte was analyzed for, but not detected.
<b>ND</b>	Indicates the analyte was analyzed for, but not detected
<b>E</b>	Indicates the reported value is estimated because of the presence of interference
<b>M</b>	Indicates Duplicate injection precision not met.
<b>N</b>	Indicates the spiked sample recovery is not within control limits.
<b>S</b>	Indicates the reported value was determined by the Method of Standard Addition (MSA).
<b>*</b>	Indicates that the duplicate analysis is not within control limits.
<b>+</b>	Indicates the correlation coefficient for the MSA is less than 0.995.
<b>D</b>	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
<b>M</b>	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
<b>OR</b>	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>Q</b>	Indicates the LCS did not meet the control limits requirements
<b>H</b>	Sample Analysis Out Of Hold Time



## 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 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



## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q3495

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 Custody

✓

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: 11/10/2025