

purposes only. The remainder of the RI data is considered usable. Therefore the unvalidated data for 1,4-dioxane should not have an impact on the goals of the RI.

- H2M collected one, discrete, surface soil sample from the area where a maximum volume of 25 gallons of liquid investigation derived waste (IDW) was released onto the ground surrounding a 55-gallon drum on November 18, 2014. As noted in the previous Monthly Progress Report (November 10, 2014), the liquid IDW sample analytical data for metals (total), mercury, metals via toxicity characteristic leaching procedure (TCLP), target compound list (TCL) volatile organic compounds (VOC), TCL semivolatile organic compounds (SVOC), pH, and flashpoint were compared to the available NYSDEC TOGS Groundwater Effluent Limitations (GEL). Based on the analytical data, the following metals were detected at a concentration greater than the corresponding NYSDEC TOGS GELs: aluminum, arsenic, chromium, iron, manganese, and nickel. The soil sample collected on November 18, 2014 was submitted to Chemtech of Mountainside, New Jersey (Chemtech) for arsenic, chromium and nickel analysis via EPA Method 6010.

H2M received laboratory analytical results for the discrete, surface soil sample collected on November 18, 2014. A copy of the laboratory analytical report is provided as Attachment 2. The soil sample analytical results were compared to the NYSDEC Restricted Residential Use and/or the Protection of Groundwater (whichever is more stringent) Soil Cleanup Objectives (SCO) for arsenic, chromium and nickel, as listed in 6 Codes, Rules and Regulations of the State of New York (NYCRR) Part 375-6.8(b). Based on the analytical results, arsenic, chromium and nickel were not detected at concentrations greater than their respective NYSDEC Part 375 Restricted Residential Use and/or the Protection of Groundwater SCOs.

As such, it is determined that the soil in the area where a maximum volume of 25 gallons of liquid IDW was released from a 55-gallon drum was not impacted to an extent greater than applicable NYSDEC objectives.

Tasks to be Initiated or Completed during the Next Reporting Period

As of October 27, 2014 field related activities associated with the Remedial Investigation (RI) have been completed. Tasks expected to be initiated or completed during the next reporting period include the following:

- Compiling and tabulating the analytical data.
- Preparation of an RI Report (RIR).

Schedule

Schedule milestones related to the next reporting period are as follows:

- No milestones are expected to be reached in the next reporting period.

Mr. Steven M. Scharf
Brownfield Cleanup Program – Bethpage Community Park Ice Rink Area – NYSDEC Site No.: C130212
Progress Report
December 10, 2014
Page 3

If you should you have any questions or concerns, please contact me at (631) 756-8000 extension 1623.

Very truly yours,

H2M architects + engineers



Philip J. Schade, P.E.
Vice President

Attachment 1 – DUSR

Attachment 2 – Soil Sample Analytical Data Report

cc: Richard Betz, Commissioner of Public Works/Town of Oyster Bay
Matt Russo, Town of Oyster Bay
John Ellsworth, Cashin Spinelli & Ferretti
Steve Karpinski, NYSDOH
Rosalie Rusinko, Esq., NYSDEC
Terry Clark, Superintendent of Schools, Bethpage School District
Smita Day, P.E., H2M

ATTACHMENT 1

Data Validation Services

120 Cobble Creek Road P.O. Box 208

North Creek, NY 12853

Phone 518-251-4429

harry@frontiernet.net

November 13, 2014

Smita Day
H2M architects + engineers
538 Broad Hollow Rd.
Melville, NY 11747

RE: Validation of the Bethpage Community Park Analytical Data Packages
Chemtech SDG No. F4133

Dear Ms. Day:

Review has been completed for the data package generated by Chemtech Laboratories that pertains to aqueous samples collected 09/30/14 and 10/01/14 at the Bethpage Community Center Site. Eight aqueous samples and two aqueous field duplicates were analyzed for volatile analytes (including Freon 12 and Freon 22) by method EPA 8260B. Tentatively Identified Compound (TIC) evaluation was also performed.

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

The following items were reviewed:

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

The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data packages.

In summary, results for target analytes are usable either as reported or with minor qualification, with the exception that the results for 1,4-dioxane are not usable due to poor instrument response.

Copies of the client sample identifications are attached to this text, and should be reviewed in conjunction with this report. Also attached are client EDD files, with recommended qualifiers applied in red.

Blind Field Duplicate

The blind field duplicate evaluations of samples RI-MW-02-093014 and MW-202-1-2014 show acceptable correlations, indicating good precision.

Volatile Analyses by EPA8260B

The detection of cis-1,2-dichloroethene in MW-202-1-100114 is qualified as tentative in identification and estimated in value due to interferences in the mass spectrum.

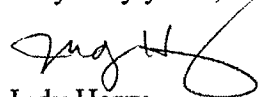
Holding time requirements were met. Instrument tunes meet fragmentation requirements, and blanks show no contamination. Surrogate and internal standard recoveries are acceptable.

The matrix spikes of RI-MW-01-093014 and MW-203-1-100114, and the LCSs show acceptable recoveries.

The results for 1,4-dioxane are rejected due to low instrument responses in the associated calibration standards, inherent with the methodology. Other initial and continuing calibration standard (ICV and CCV) responses are within protocol and validation guidelines.

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

Very truly yours,



Judy Harry

VALIDATION DATA QUALIFIER DEFINITIONS

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

**CLIENT and LABORATORY SAMPLE IDs
and LABORATORY CASE NARRATIVE**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FORM S-I

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sample ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
RI-MW-01-093014	F4133-01	8260-Low					
RI-MW-02-093014	F4133-04	8260-Low					
RI-MW-03-093014	F4133-05	8260-Low					
BCPMW6-1-093014	F4133-06	8260-Low					
DUP-093014	F4133-07	8260-Low					
MW-203-1-100114	F4133-08	8260-Low					
MW-202-1-100114	F4133-11	8260-Low					
MW-201-1-100114	F4133-12	8260-Low					
MW-200-1-100114	F4133-13	8260-Low					
DUP-100114	F4133-14	8260-Low					
TRIPBLANK	F4133-15	8260-Low					

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Bethpage Community Park BCP****Project # N/A****Chemtech Project # F4133****Test Name: VOCMS Group1****A. Number of Samples and Date of Receipt:**

15 Water samples were received on 10/02/2014.

B. Parameters

According to the Chain of Custody document, the following analysis were requested: VOCMS Group1. This data package contains results for VOCMS Group1.

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 VOCMS Group1 was based on method 8260-Low.

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 recoveries 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 %RSD is greater than 15% in the Initial Calibration (Method 82N100114W.M)

for Methylene Chloride, Cyclohexane, 1,2-Dibromo-3-Chloropropane these compounds are passing on Linear regression.

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

E. Additional Comments:

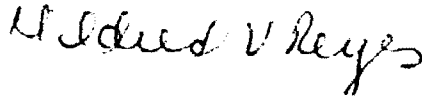
Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value 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.

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

**APPROVED***By Mildred V Reyes QA/QC Supervisor at 9:03 am, Oct 10, 2014*

ATTACHMENT 2

DATA PACKAGE

METALS

PROJECT NAME : BETHPAGE COMMUNITY PARK BCP**H2M ARCHITECTS + ENGINEERS****538 Broad Hollow Road****4th Floor East****Melville, NY - 11747****Phone No: 631-756-8000****ORDER ID : F4813****ATTENTION : Smita P. Day**

DoD ELAP

Table Of Contents for F4813

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Cover Page

Order ID : F4813

Project ID : Bethpage Community Park BCP

Client : H2M Architects + Engineers

Lab Sample Number

F4813-01

Client Sample Number

DRUMSTORAGESS-1

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 :



APPROVED
Date: 12/3/2014
By Mildred V Reyes QA/QC Supervisor at 12:37 pm, Dec 03, 2014

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Bethpage Community Park BCP****Project # N/A****Chemtech Project # F4813****Test Name: Metals Group3****A. Number of Samples and Date of Receipt:**

1 Solid sample was received on 11/19/2014.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Metals Group3. This data package contains results for Metals Group3.

C. Analytical Techniques:

The analysis of Metals Group3 was based on method 6010C and digestion based on method 3050 (soils).

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

**APPROVED**

By Mildred V Reyes QA/QC Supervisor at 12:37 pm, Dec 03, 2014

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

APPENDIX A**QA REVIEW GENERAL DOCUMENTATION**

Project #: F4813

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 ✓

1st Level QA Review Signature: PRADIP PRAJAPATI

Date: 12/03/2014

2nd Level QA Review Signature:

*Mildred V Reyes***APPROVED**

By Mildred V Reyes QA/QC Supervisor at 12:37 pm, Dec 03, 2014



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

Hit Summary Sheet
SW-846

SDG No.: F4813

Order ID: F4813

Client: H2M Architects + Engineers

Project ID: Bethpage Community Park BCP

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID :	DRUMSTORAGESS-1								
F4813-01	DRUMSTORAGESS-1	SOIL	Arsenic	4.790		0.252	0.252	1.01	mg/Kg
F4813-01	DRUMSTORAGESS-1	SOIL	Chromium	18.000		0.126	0.126	0.504	mg/Kg
F4813-01	DRUMSTORAGESS-1	SOIL	Nickel	9.940		0.463	0.504	2.01	mg/Kg

SAMPLE
DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	11/18/14
Project:	Bethpage Community Park BCP	Date Received:	11/19/14
Client Sample ID:	DRUMSTORAGES-1	SDG No.:	F4813
Lab Sample ID:	F4813-01	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.6

Cas	Parameter	Conc.	Qua.	DFMDL	LOD	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
7440-38-2	Arsenic	4.79	1	0.252	0.252	1.01	mg/Kg	11/21/14 08:00	11/21/14 17:35	SW6010
7440-47-3	Chromium	18	1	0.126	0.126	0.504	mg/Kg	11/21/14 08:00	11/21/14 17:35	SW6010
7440-02-0	Nickel	9.94	1	0.463	0.504	2.01	mg/Kg	11/21/14 08:00	11/21/14 17:35	SW6010

Color Before:	Brown	Clarity Before:	Texture:	Medium
Color After:	Yellow	Clarity After:	Artifacts:	No
Comments:	Metals Group3			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits



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

LAB CHRONICLE

OrderID: F4813	OrderDate: 11/19/2014 11:53:08 AM
Client: H2M Architects + Engineers	Project: Bethpage Community Park BCP
Contact: Smita P. Day	Location: F52

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
F4813-01	DRUMSTORAGESS-1	SOIL	Metals Group3	6010C	11/18/14	11/21/14	11/21/14	11/19/14

SHIPPING
DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
 (908) 789-8900 Fax (908) 789-8922
 www.chemtech.net

CHEMTECH PROJECT NO. _____
 QUOTE NO. F4813
 COC Number 031231

CLIENT INFORMATION			CLIENT PROJECT INFORMATION			CLIENT BILLING INFORMATION													
REPORT TO BE SENT TO: COMPANY: <u>H2M</u>			PROJECT NAME: <u>Bethpage Community Park BCP</u>			BILL TO: <u>H2M</u> PO#:													
ADDRESS: <u>539 Broadhollow Rd. 4th Fl. East</u>			PROJECT NO.: <u>Toby 1307</u> LOCATION:			ADDRESS: <u>same</u>													
CITY: <u>Melville</u> STATE: <u>NY</u> ZIP: <u>11747</u>			PROJECT MANAGER: <u>Smita Day</u>			CITY: _____ STATE: _____ ZIP: _____													
ATTENTION: <u>Smita Day</u>			e-mail: <u>sday@h2m.com</u>			ATTENTION: <u>same</u> PHONE: _____													
PHONE: <u>631-750-8000</u> FAX: _____			PHONE: _____ FAX: _____			ANALYSIS													
DATA TURNAROUND INFORMATION			DATA DELIVERABLE INFORMATION			ANALYSIS 1 2 3 4 5 6 7 8 9 <u>Arsenic</u> <u>Chromium</u> <u>Nickel</u>													
FAX: _____ DAYS * HARD COPY: _____ DAYS * EDD: <u>Standard</u> DAYS * PREAPPROVED TAT: <input type="checkbox"/> YES <input type="checkbox"/> NO * STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS			<input checked="" type="checkbox"/> LEVEL 1: Results only <input type="checkbox"/> Others _____ <input type="checkbox"/> LEVEL 2: Results + QC <input type="checkbox"/> LEVEL 3: Results (plus results raw data) + QC <input type="checkbox"/> LEVEL 4: Results + QC (all raw data) <input type="checkbox"/> EDD Format: _____																
CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl B-HNO ₃ C-H ₂ SO ₄ D-NaOH E-ICE F-Other		
			COMP	GRAB	DATE	TIME		E	E	E									
1.	<u>Drum Storage SS-1</u>	<u>Soil</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>11/18/14</u>	<u>11:40</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
2.																			
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>11/18/14 12:46</u>	RECEIVED BY: 1. <u>Smita Day</u>	DATE/TIME: <u>11/18/14 12:46</u>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> Compliant <input type="checkbox"/> Non Compliant MeOH extraction requires an additional 4 oz jar for percent solid. Comments: Cooler Temp. <u>32</u> Ice in Cooler?: <u>yes</u>
RELINQUISHED BY: 2. <u>[Signature]</u>	DATE/TIME: <u>11/18/14 5:27</u>	RECEIVED BY: 2. <u>[Signature]</u>	DATE/TIME: <u>11/18/14 5:37</u>	
RELINQUISHED BY: 3. <u>[Signature]</u>	DATE/TIME: <u>11/19/14 9:41</u>	RECEIVED FOR LAB BY: 3. <u>[Signature]</u>	DATE/TIME: _____	
Page _____ of _____				SHIPPED VIA: CLIENT: <input type="checkbox"/> HAND DELIVERED <input type="checkbox"/> OVERNIGHT CHEMTECH: <input type="checkbox"/> PICKED UP <input type="checkbox"/> OVERNIGHT Shipment Complete: <input type="checkbox"/> YES <input type="checkbox"/> NO

