ERM

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10 July 2019

Justin Starr, P.G.
Remedial Bureau C
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014

Reference: Former Macbeth Kollmorgen Facility, NYSDEC Site No. 3-36-037

Subject: MW-12 Quarterly Monitoring – Second Quarter 2019

Dear Mr. Starr:

In accordance with the monitoring requirements outlined for the above referenced site in the March 1997 Record of Decision (ROD) and subsequently modified during the September 14, 2001 conference call with Mr. John Rashak (NYSDEC) and H2M, bedrock monitoring well MW-12 was sampled on 24 April 2019 by ERM at the request of Fortive. After gauging water levels at 14 of the 15 on-site monitoring wells, MW-12 was purged and sampled via low-flow sampling methodology. MW-1 has been damaged but a water level was able to be collected. A request for the abandonment of MW-1 has been approved by the NYSDEC. ERM anticipates MW-1 will be abandoned in 2019. ERM could not locate monitoring well MW-16R during the quarterly monitoring event. Groundwater elevations and contour maps will be presented in the 2019 Periodic Review Report (PRR).

SGS Accutest Laboratories (NYSDOH ID # 10983) analyzed the sample for volatile organic compounds using United States Environmental Protection Agency (EPA) Method SW-846 8260C.

The second quarter 2019 analytical results indicate that trichloroethene (TCE) and total 1,2-dichloroethene (total 1,2-DCE) were detected at concentrations above the New York State Groundwater Quality Standards (NYSGQS). These concentrations (summarized on the following table) are consistent with results from the four previous quarters.

MW-12 Groundwater Sampling Summary

Compound	4/11/18	7/18/18	10/17/18	3/19/19	4/24/2019	NYSGQS
TCE	**62.1**	**59.7**	**42.4**	**86.7**	**92.3**	5
Total 1,2-DCE	**179.3**	**124.5**	**51.0**	**184.6**	**172.3**	5

Notes: **Bold** = exceeds NYSGQS
Results reported in micrograms per liter (µg/L)

The full laboratory analytical report for the April 2019 sampling event is attached. An EQuIS Electronic Data Deliverable (EDD) will be sent to the NYSDEC prior to submittal of the next PRR.

If you have any questions, please call me at (631) 756-8960.

Yours sincerely,

Karen Pickering
Senior Project Manager

Enclosure: SGS Laboratories Analytical Report for MW-12

cc: David Bozaan, Fortive Corporation
Ernie Rossano, ERM
Joe Robb, ERM

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

ERM, Inc.

Fortive, New Windsor, NY

0501429

SGS Job Number: JC86979

Sampling Date: 04/24/19

Report to:

ERM, Inc.

brice.lynch@erm.com

ATTN: Brice Lynch

Total number of pages in report: **11**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Brian McGuire
General Manager

Client Service contact: Tammy McCloskey 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

Sections: 1 2 3 4 5

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Sample Summary

ERM, Inc.

Job No: JC86979

Fortive, New Windsor, NY
Project No: 0501429

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC86979-1	04/24/19	11:55	DD	04/25/19	AQ	Ground Water	MW-12-042419

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	ERM, Inc.	**Job No**	JC86979
Site:	Fortive, New Windsor, NY	**Report Date**	4/30/2019 1:26:21 PM

On 04/25/2019, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. at a maximum corrected temperature of 2.6 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. Job Number of JC86979 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method SW846 8260C

Matrix: AQ **Batch ID:** V4D4125

- All samples were analyzed within the recommended method holding time.
- Sample(s) JC86895-1MS, JC86895-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 1,2-Dibromoethane, Bromomethane are outside control limits. High percent recoveries and no associated positive reported in the QC batch.
- Matrix Spike Recovery(s) for Chloroethane, Cyclohexane, Trichlorofluoromethane are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Chloroethane, Cyclohexane, Trichlorofluoromethane are outside control limits. Outside control limits due to matrix interference.
- JC86979-1 for Chloroethane: Associated CCV outside of control limits high, sample was ND.
- JC86979-1 for Dichlorodifluoromethane: Associated CCV outside of control limits high, sample was ND.
- JC86979-1 for Bromomethane: Associated CCV outside of control limits high, sample was ND.This compound in BS is outside in house QC limits bias high.
- JC86979-1 for 1,2-Dibromoethane: This compound in BS is outside in house QC limits bias high.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JC86979
Account: ERM, Inc.
Project: Fortive, New Windsor, NY
Collected: 04/24/19

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC86979-1	**MW-12-042419**					
cis-1,2-Dichloroethene		171	1.0	0.51	ug/l	SW846 8260C
trans-1,2-Dichloroethene		1.3	1.0	0.54	ug/l	SW846 8260C
Trichloroethene		92.3	1.0	0.53	ug/l	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-12-042419		
Lab Sample ID:	JC86979-1	**Date Sampled:**	04/24/19
Matrix:	AQ - Ground Water	**Date Received:**	04/25/19
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Fortive, New Windsor, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4D93734.D	1	04/27/19 03:50	BK	n/a	n/a	V4D4125
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	6.0	ug/l	
71-43-2	Benzene	ND	0.50	0.43	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.48	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.58	ug/l	
75-25-2	Bromoform	ND	1.0	0.63	ug/l	
74-83-9	Bromomethane [a]	ND	2.0	1.6	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.95	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
75-00-3	Chloroethane [b]	ND	1.0	0.73	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	1.0	0.76	ug/l	
110-82-7	Cyclohexane	ND	5.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.2	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.56	ug/l	
106-93-4	1,2-Dibromoethane [c]	ND	1.0	0.48	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.53	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.54	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
75-71-8	Dichlorodifluoromethane [b]	ND	2.0	1.4	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.57	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
156-59-2	cis-1,2-Dichloroethene	171	1.0	0.51	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.3	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.51	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.47	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
76-13-1	Freon 113	ND	5.0	1.9	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12-042419
Lab Sample ID: JC86979-1
Matrix: AQ - Ground Water
Method: SW846 8260C
Project: Fortive, New Windsor, NY

Date Sampled: 04/24/19
Date Received: 04/25/19
Percent Solids: n/a

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-82-8	Isopropylbenzene	ND	1.0	0.65	ug/l	
79-20-9	Methyl Acetate	ND	5.0	0.80	ug/l	
108-87-2	Methylcyclohexane	ND	5.0	0.60	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.51	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	1.9	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
100-42-5	Styrene	ND	1.0	0.70	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.65	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
108-88-3	Toluene	ND	1.0	0.53	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.54	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.53	ug/l	
79-01-6	Trichloroethene	92.3	1.0	0.53	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.84	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	
	m,p-Xylene	ND	1.0	0.78	ug/l	
95-47-6	o-Xylene	ND	1.0	0.59	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		81-124%
2037-26-5	Toluene-D8	104%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%

(a) Associated CCV outside of control limits high, sample was ND.This compound in BS is outside in house QC limits bias high.
(b) Associated CCV outside of control limits high, sample was ND.
(c) This compound in BS is outside in house QC limits bias high.

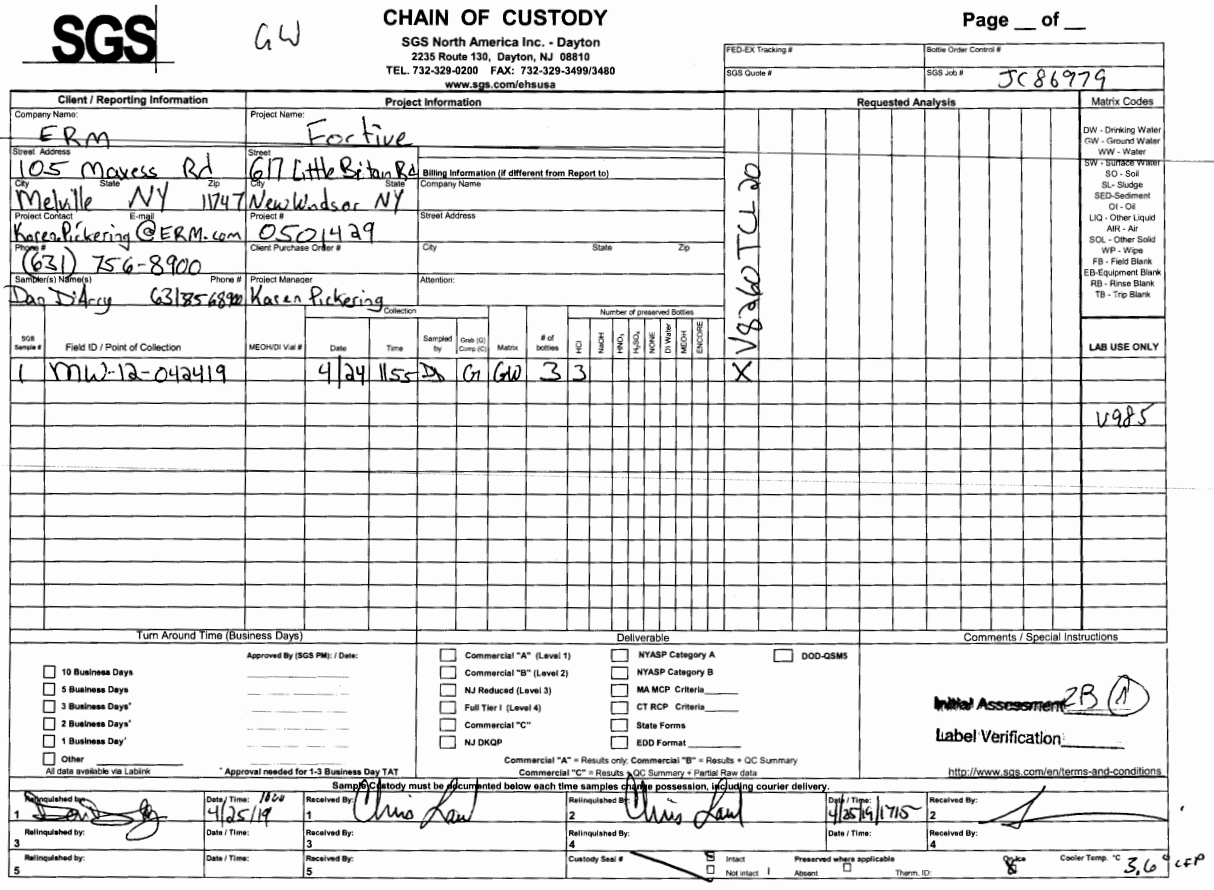
ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



SGS GW

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.sgs.com/ehsusa

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FED-EX Tracking # | Bottle Order Control #
SGS Quote # | SGS Job # JC86979

Client / Reporting Information

Company Name: ERM
Street Address: 105 Maxess Rd
City: Melville State: NY Zip: 11747
Project Contact: Karen.Pickering E-mail: @ERM.com
Phone #: (631) 756-8900
Sampler(s) Name(s): Dan D'Arcy Phone #: 631 756 8900

Project Information

Project Name: Fox Five
Street: 617 Little Britain Rd
City: New Windsor State: NY
Project #: 0501429
Client Purchase Order #:
Project Manager: Karen Pickering

Billing Information (if different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention:

Requested Analysis

VOA 8260 TCL 20

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipes
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	LAB USE ONLY
1	MW-12-042419		4/24	1155	DA	G	GW	3	3								X

V985

Turn Around Time (Business Days)

Approved By (SGS PM): / Date:

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via Labilink

* Approval needed for 1-3 Business Day TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format
- [ ] DOD-QSM5

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Initial Assessment ZB 4/25
Label Verification

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:
1		1100 4/25/19	1
2		4/25/19 1715	2
3			3
4			4
5			5

Custody Seal # | Intact | Not intact | Preserved where applicable | Absent | Therm. ID: | Cooler Temp. °C 3.6 CFP

EHSA-QAC-0023-02-FORM-Dayton - Standard COC.xlsx

JC86979: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JC86979 **Client:** _____ **Project:** _____

Date / Time Received: 4/25/2019 5:15:00 PM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (3.6);

Cooler Temps (Corrected) °C: Cooler 1: (2.6);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 206717 pH 12+: 208717 Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

JC86979: Chain of Custody
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