ECM

environmental compliance monitoring, inc.

October 29, 2020

Mr. Scott Deyette
Chief, Inspection Unit, Remedial Bureau C, Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 11th Floor
Albany, New York 12233-7014

RE: FORMER KAY FRIES SITE – FINAL ENGINEERING REPORT
EVONIK CORPORATION
STONY POINT, NEW YORK
NYSDEC SITE NO. 344023
ECM PROJECT #1192

Dear Mr. Deyette:

As required by the New York State Department of Environmental Conservation (NYSDEC) regulation 6 NYCRR Part 375 and Division of Environmental Remediation (DER) DER-10 Guidance, Environmental Compliance Monitoring, Inc. (ECM) on behalf of Evonik Corporation has prepared this Final Engineering Report (FER) to document the remedial actions conducted and their completion at the above-referenced site. The remedial actions were completed according to the Record of Decision (ROD) issued on April 14, 1994, for Operable Unit 1 (OU1) and November 1997, for Operable Unit 2, (OU2) for the Former Kays Fries Site (NYSDEC Site No. 344023) located in Stony Point, Rockland County, New York.

1.0 INTRODUCTION

The site is located at the terminus of Kay-Fries Drive (also known as Holt Drive), east of Route 9W in Stony Point, Rockland County. The site occupies approximately 85 acres to the east of Route 9W at the town's southern boundary. The property is bounded on the north by Cedar Pond Brook and the east by Minisceongo Creek, both tidally influenced tributaries of the Hudson River Estuary. The surrounding area west of the site is generally commercial and residential; large industrial complexes are located to the north and south of the site. Directly south of the property is the Haverstraw municipal landfill. Figure 1 depicts the OU1 and OU2 sections of the site.

Operations as a chemical plant reportedly began at the site by predecessor companies to Dynamit-Nobel of America (DNA) during the 1930s. The facility operations consisted of the manufacture of industrial paints. Products were manufactured in one main building at the site. Two underground storage tanks (USTs) that were used to store solvents for paint additives were previously located in the northern section of the building. Drummed waste solvents and paints were stored in a partially enclosed corrugated steel building in the southern portion of the facility. The property was sold by DNA in 1988 after the relocation of production activities to the Theodore, Alabama facility. Site environmental investigation and remedial activities were initiated during 1981 as a result of on-site housekeeping and disposal practices.

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Based on the site investigations, the constituents of concern affecting the site ground water quality consisted of Volatile Organic Compounds (VOCs). Specifically, benzene and select chlorinated organics were detected above the NYSDEC – Ground Water Quality Criteria (GWQC). Based on the site investigation findings, the source area contributing to the ground water contamination was defined within a 15-acre section of OU1. Remedial alternatives were evaluated during the late 1980s, at which time ground water recovery and treatment was selected as the remedy for the site that would effectively mitigate the impacts to ground water quality.

The ground water recovery system at the former Kay Fries site consisted of three trenches. Trench 1 was installed as an Interim Remedial Measure (IRM) in August 1994. Trenches 2 and 3 were constructed during June 1995 as part of the final remedy required in the NYSDEC ROD for Operable Unit 1, dated April 14, 1994. The recovery trench network and Ground Water Treatment System (GWTS) was activated during 1995 and successfully processed and treated ground water through 2010.

A proposal to modify treatment system operation, monitoring and closure was submitted to the NYSDEC in May 2005 in a report entitled *Proposed Revision to OU1 Monitoring and Ground Water Treatment System (GWTS) Operational Plan*. This proposal documented the long-term decrease in the concentration of constituents of concern at the site. The plan proposed a supplemental ground water and trench influent monitoring program to evaluate cessation of recovery operations at Trench Nos. 1 and 3 and proposed enhanced in-situ bioremediation in the vicinity of MW-31 (up-gradient of Trench No. 2). NYSDEC issued their approval of the proposed modifications in correspondence dated July 21, 2005. ECM implemented the expanded monitoring program in October 2005. Results of that program were compiled and reported to NYSDEC in a report dated March 9, 2006, entitled *Expanded Ground Water Monitoring Program Results and Findings – Operable Unit 1*. The finding in this report documented the significant degradation of VOCs at the site and the NYSDEC subsequently issued an approval to commence closure of the ground water recovery network commencing with Recovery Trench 3.

The maximum concentration of VOC constituents in ground water at the site was detected in MW-31, located in the south-central portion of the site, upgradient of the former Recovery Trench No. 2. As such, during 2012, enhanced in-situ bioremediation was implemented in the area of MW-31 to further enhance the degradation of VOCs in this area. The total VOC concentration at this location declined from roughly 2,000 micrograms per liter (µg/L) in the mid-1990s, to 200 µg/L during 2019. 1,1-Dichloroethane, originally the constituent that represented the majority of contaminant mass, has transformed almost completely to chloroethane. Benzene concentrations have decreased from approximately 100 µg/L to 1.8 µg/L (2019). Chlorobenzene has remained in the range of 100-200 µg/L over the monitoring period.

Based upon the successful remediation conducted in OU1 from 1995 through 2013 including the MW-31 in-situ remediation and the significantly decreased ground water contaminant levels remaining at the site, a GWTS Decommissioning Plan was submitted to the NYSDEC in August 2013. The NYSDEC approved permanent cessation of the GWTS during October 2013 and the OU1 GWTS was decommissioned from November through December 2016. Future site activities include the Annual Long Term Ground Water Monitoring Program (LTGWM), Soil Vapor Intrusion (SVI) Workplan and implementation in the former INSL-X building subsequent renovation, and activation of the heating system, and eventual abandonment of monitoring wells no longer used in the monitoring program.

The key documents that were submitted to the NYSDEC during the remediation of the OU1 section of the site and the NYSDEC approvals are summarized in the table below.

OPERABLE UNIT 1		
DOCUMENT	**DATE SUBMITTED**	**NYSDEC APPROVALS**
Proposed Revision to OU1 Monitoring and System GWTS Operational Plan	May 11, 2005	July 21, 2005
Expanded Ground Water Monitoring Program Results and Findings – Operable Unit 1 (Trench 3 Closure)	March 9, 2006	August 3, 2006
NYSDEC Approval of Enhanced In-Situ Remediation In The Vicinity of MW-31	March 9, 2006	August 28, 2006
Trench 3 Closure and Decommissioning Report	September 27, 2006	August 3, 2006
OU1 MW-31 In-Situ Chemical Oxidation/ORC Workplan	March 8, 2012	March 26, 20212
MW-24 (elevated VOCs) and MW-71 (DNAPL) Delineation Workplan	August 2, 2013	August 26, 2013
GWTS Closure and Decommissioning Workplan	August 2, 2013	August 15, 2013
OU1 MW-31 In-Situ Results Report	April 28, 2014	June 27, 2014
Revised OU1 MW-31 In-Situ Results Report	July 17, 2014	September 2, 2014
MW-24 and MW-71 Delineation Program Results	August 8, 2014	October 9, 2014
MW-71 Conceptual Remedial Workplan (DNAPL)	April 30, 2015	June 16, 2015 (2014 PRR Approval)
Draft Site Management Plan	August 29, 2016	March 15, 2017
Revised Final Site Management Plan	July 23, 2017	Pending 2020 Revisions
Operable Unit 1 & 2 GWTS Decommissioning and Closure Report	November 6, 2019	Pending
Recorded Environmental Easement	September 16, 2020	Pending Certificate of Completion

Relative to the OU2 section of the site, three phases of the remedial investigation were conducted from 1994 through 1995. The findings of the investigation were submitted to the NYSDEC within one report in June 1997, summarizing the comprehensive results of the three investigative phases conducted within OU2. The findings of the OU2 investigations concluded that two VOCs (tetrachloroethene [PCE] and 1,1,1-trichloroethane [TCA]) were the only compounds reported above the NYSDEC–GWQC in ground water and that the PCE and TCA levels were naturally attenuating.

In the ROD issued for OU2 in November 1997, the NYSDEC agreed with the proposed remedy for OU2 for the installation of a ground water interceptor sump, and treatment via aeration. The interceptor sump was subsequently constructed and commenced operation from December 2000 through May 2004. As a result of the effective VOC removal from the operation of the interceptor trench, a proposal to terminate operation was submitted to the NYSDEC in May 2004, entitled *Request for Interceptor Trench Closure*. The NYSDEC approved permanent cessation of the interceptor sump operations in July 2004.

A GWTS Decommissioning Plan, inclusive of the OU2 interceptor sump, was submitted to the NYSDEC and approved in August 2013. Subsequently, the OU2 interceptor sump was decommissioned from November through December 2016. Future Site activities include continued annual monitoring of MW-54 within the OU2 section of the site and abandonment of several monitoring wells no longer used in the monitoring program.

The key documents that were submitted to the NYSDEC during the remediation of the OU2 section of the site and the NYSDEC approvals are summarized in the table below.

OPERABLE UNIT 2		
DOCUMENT	**DATE SUBMITTED**	**NYSDEC APPROVALS**
OU2 Interceptor Sump Installation	June 1, 2000	ROD (November 1997)
Interceptor Trench Operation	December 1, 2000 – June 1, 2004	NA
Request for Interceptor Trench Closure and Approval	May 28, 2004	July 8, 2004
Operable Unit 1 & 2 GWTS Decommissioning and Closure Report	November 6, 2019	Pending

3.0 SITE MANAGEMENT PLAN AND ENVIRONMENTAL EASEMENT

As required, the final Site Management Plan (SMP) was prepared and submitted to the NYSDEC in July 2017. The SMP is currently being revised as a result of the NYSDEC approved LTGWMP change in frequency and the discontinuation of sampling in several OU1 site monitoring wells. The SMP for the site outlines the controls, monitoring, maintenance, and reporting activities that are to be implemented at the Site to manage the remaining low-level VOC constituents.

The SMP will include the recorded Environmental Easement (EE) as the institutional control for the site to control potential exposure to remaining contamination and to ensure the protection of public health and the environment. The placement of an EE for the Site provides an effective and enforceable means of encouraging the reuse and redevelopment of the controlled property at a level that has been determined to

be safe for a specific use while ensuring the performance of the operation, maintenance, and/or monitoring requirements. The institutional controls of the EE will be implemented under the SMP and include:

- The property development for commercial and/or industrial use;
- The use of ground water underlying the property for potable use is prohibited without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) or the Rockland County Department of Health.
- Ground water monitoring must be performed as defined above and iterated in the SMP;
- Data and information pertinent to site management must be reported annually to the NYSDEC in the annual Periodic Review Report (PRR;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- One area located in the OU1 section of the site proximal to MW-71 contains contaminated soils at a depth of 14 feet below grade. The soils in this predefined area must be properly managed if removed during future site development; and,
- The potential for vapor intrusion must be evaluated for any buildings developed in the area of the institutional control boundaries. A Soil Vapor Intrusion Workplan and, implementation will be conducted within the OU1 building during the upcoming winter season.

The revised SMP will be recorded with the Rockland County Department of Health and the NYSDEC and will be the final guidance document for the Site.

Upon completion of ongoing and future site activities, it is anticipated that the NYSDEC will reclassify the site from a Class 2 Site to a Class 4 Site (Site properly closed – requires continued monitoring and management) and eventually a Class 5 Site (Site properly closed - does not require continued management).

If you have any questions regarding this information, please do not hesitate to contact our office.

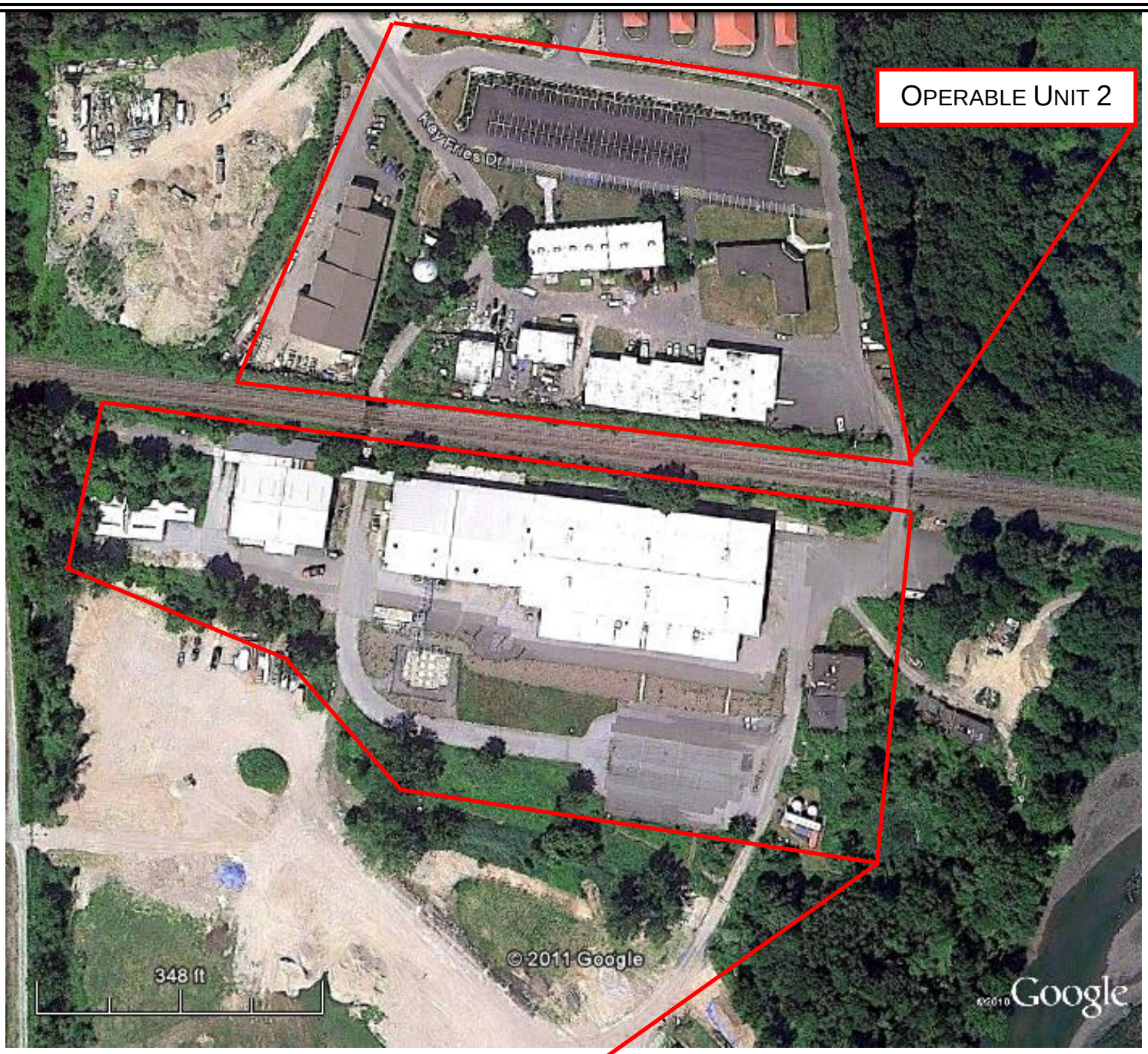
Sincerely,

ENVIRONMENTAL COMPLIANCE MONITORING, INC.

Bruce Manganiello

Bruce Manganiello
Operations Manager

cc: A. Kruczek, Evonik
P. Magee, MBC Holding LLC



Source: "Stony Point, NY." **Google Earth**. 2011. March 15, 2011.

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FIGURE 1
OPERABLE UNIT 1 AND 2 LOCATION MAP
FORMER KAY FRIES SITE
STONY POINT, NEW YORK

North →	Scale: As Shown	Date: 3/15/11	ECM Project # 1192