**VIA ELECTRONIC MAIL**

November 22, 2019

Mr. Christopher Mannes III, P.E.
Environmental Engineer II
New York State Department of Environmental Conservation
615 Erie Boulevard West
Syracuse, NY 13204-2400

**Subject:** **Third Quarter 2019 Progress Report**
**Former Rollway Bearing Corporation Facility, Liverpool, New York**
**Agreement Index Number: V7-1007-96-10**

Dear Mr. Mannes:

On behalf of Emerson Electric Co., WSP USA Inc. is submitting this Third Quarter 2019 Progress Report for the former Rollway Bearing Corporation facility in Liverpool, New York. This Quarterly Progress Report summarizes all work completed at the former Rollway Bearing facility from July through September 2019 and work planned for October through December 2019. The report was prepared in accordance with the requirements of the Site Management Plan (SMP), dated March 6, 2018, and includes the following information:

- a summary of all work completed and the results of sampling and testing performed during the reporting period
- a summary of reports and deliverables required by the Voluntary Cleanup Agreement that were completed and submitted during the reporting period
- an estimate of the percentage of completion of the approved work plan activities, problems encountered during the quarter and actions taken to alleviate those problems, and modifications to the Investigative Work Plan approved by the New York State Department of Environmental Conservation (NYSDEC)
- a description of activities anticipated to be completed during the next quarter

## WORK COMPLETED

The following work plan activities were completed during July through September 2019:

- On August 9, 2019, WSP submitted the Periodic Review Report (PRR) for the site, which evaluated the institutional and engineering controls, summarized monitoring results, and evaluated the OM&M activities for the reporting period of March 2018 through June 2019. The NYSDEC approved the PRR in letter, dated September 25, 2019.
- WSP conducted a bi-monthly operation, maintenance, and monitoring (OM&M) visit on August 20, 2019, to ensure proper operation of the light non-aqueous phase liquid (LNAPL) recovery system. Absorbent socks exhibiting staining were weighed and placed in a 55-gallon steel drum for subsequent characterization and offsite disposal, and new absorbent socks were installed in the wells. Absorbent socks exhibiting no noticeable evidence of staining were returned to the wells. The weight of each absorbent sock was recorded before installation and again when it is removed from the well for disposal. The weight of the new and spent absorbent sock is used to determine the mass of LNAPL removed, which is then converted to volume using an assumed density for the LNAPL. The OM&M log for the site visit is presented in Enclosure A.

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## RESULTS OF SAMPLING AND TESTING

Approximately 1.6 gallons of LNAPL were removed from the wells during the reporting period.

On October 28, 2019, WSP submitted a report to the NYSDEC summarizing the results of the sub-slab soil vapor sampling performed at the site on March 26, 2019. The objective of the sampling activities was to evaluate current sub-slab soil vapor conditions at select locations that were sampled in 2006 and 2007, and to further delineate the extent of volatile organic compounds (VOCs) in sub-slab soil vapor. As indicated in the report, the March 2019 sample results indicate that concentrations of trichloroethene have decreased from 58 percent to greater than 99 percent since 2006 and 2007. In addition, the sampling activities were effective in delineating the extent of VOCs in sub-slab soil vapor. Emerson is planning to install a sub-slab depressurization system in the eastern portion of the former Rollway Bearing facility building to limit the potential for vapor intrusion to indoor air. The system design was provided in Enclosure B of the report.

## REPORTS AND DELIVERABLES

WSP submitted the Second Quarter 2019 Progress Report to the NYSDEC on August 26, 2019, which contained a summary of activities conducted from April through June 2019.

## PERCENTAGE OF COMPLETION

WSP estimates that the project is 90 percent complete.

## DIFFICULTIES/MODIFICATIONS TO WORK PLAN

The operating parameters of the LNAPL recovery system were generally consistent with optimal conditions specified in the operation and maintenance manual. An absorbent could not be installed in OW-3 during the August 2019 site visit due to an obstruction in the well (potential silting-in of the well screen; Figure 1). WSP anticipates redeveloping select wells during the fourth quarter of 2019.

## WORK PLANNED

The following work has been completed, or is anticipated to be undertaken, from October through December 2019:

- On October 28, 2019, WSP submitted a report to the NYSDEC summarizing the results of the sub-slab soil vapor sampling performed at the site on March 26, 2019.
- WSP conducted a bi-monthly OM&M visit on October 31, 2019, to ensure proper operation of the LNAPL recovery system. In accordance with WSP's quarterly progress report, dated May 20, 2015, and WSP's email to the NYSDEC, dated May 29, 2014, the absorbents were removed from the wells during the October site visit to allow LNAPL to accumulate before collecting LNAPL thickness measurements in November 2019. Absorbent socks exhibiting staining were weighed and placed in a 55-gallon steel drum for subsequent characterization and offsite disposal. The weight of each absorbent sock was recorded before installation and again when it is removed from the well for disposal. The weight of the new and spent absorbent sock is used to determine the mass of LNAPL removed, which is then converted to volume using an assumed density for the LNAPL.
- WSP anticipates conducting a bi-monthly OM&M visit in late November 2019 to ensure proper operation of the LNAPL recovery system and to install new absorbent socks in each well following the collection of LNAPL thickness measurements.
- WSP anticipates submitting a work plan for the installation of a sub-slab depressurization system in the former manufacturing building, as requested by the NYSDEC during a telephone conversation on November 6, 2019.
- WSP anticipates redeveloping select LNAPL recovery and observation wells during the fourth quarter of 2019, including observation well OW-3 (Figure 1).
- WSP anticipates beginning the sub-slab depressurization system installation, pending review of the work plan by the NYSDEC.

Please contact us at (315) 655-3900 with any questions regarding this Third Quarter 2019 Progress Report, or other aspects of the project.

Sincerely yours,

Brian E. Silfer, P.G.
Practice Leader

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Enclosures

cc/encl.: Ms. Melissa Doroski, New York State Department of Health
Mr. Stephen L. Clarke, Emerson
Ms. Sheila M. Harvey, Esquire, Pillsbury Winthrop Shaw Pittman

FIGURE

FORMER DRUM STORAGE

FORMER HEAT TREAT AREA

FORMER BAGHOUSE

FORMER SCRAP CHIPS PAD

FORMER COMPRESSOR ROOM

FORMER INSTRUMENT ROOM

FORMER UNDERGROUND QUENCH OIL RETURN LINE

QUENCH OIL UST (CLOSED IN PLACE 1998)

FORMER UNDERGROUND PIPE

FORMER CUTTING OIL AST (REMOVED 1998)

WASTE OIL AST (REMOVED 1997)

LNAPL RECOVERY SYSTEM ENCLOSURE

SEWER LINE

MH

DRIVEWAY

SB-9 SB-10 SB-5 SB-7 SB-8 SB-17 SB-18 SB-20 SB-3

OW-10/FB-1 OW-9/FB-2 OW-8 OW-4 OW-7 OW-3 RW-1 RW-2 OW-2 OW-6 OW-11/FB-4 OW-1 OW-5 MW-4

| OW-10/FB-1 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.04 | 0.01 | DRY | NM | 0.01 | 0.14 | 0.03 |

| SB-8 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.02 | NM | NM | NM | NM | NM | NM |

| OW-9/FB-2 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NA | 0.17 | 0.03 | NM | NM | 0.05 | 0.08 |

| OW-8 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | 0.01 | NM | NM | 0.01 | NM | NM |

| OW-3 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | 0.06 | 0.01 | NM | 0.06 | 0.02 | 0.15 |

| RW-1 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | 0.02 | NM | NM | NM | NM | NM |

| OW-2 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.03 | 0.03 | 0.02 | NM | NM | 0.01 | 0.02 |

| OW-11/FB-4 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.23 | NM | NM | NM | NM | NM | NM |

| OW-5 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | 0.02 | 0.13 | 0.01 | NM | 0.02 | 0.03 |

| SB-10 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | NM | NM | NM | NM | NM | NM |

| SB-5 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.47 | 0.53 | 0.26 | 0.25 | 0.10 | 0.87 | 0.38 |

| SB-7 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | NM | NM | NM | NM | NM | NM |

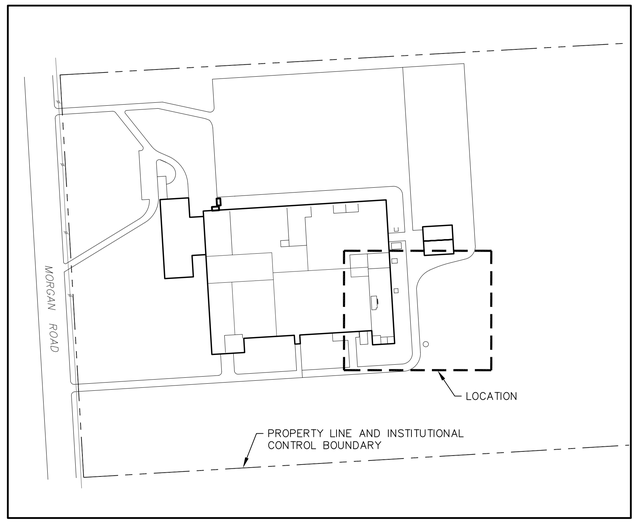
| RW-2 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | NM | NM | NM | NM | NM | NM |

| OW-4 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| NM | NM | NM | NM | NM | NM | NM |

| OW-1 | | | | | | |
|---|---|---|---|---|---|---|
| Oct-15 | May-16 | Dec-16 | Jul-17 | Feb-18 | Sept-18 | Apr-19 |
| 0.02 | 0.06 | 0.06 | 0.03 | 0.04 | 0.02 | 0.02 |

LEGEND

- MONITORING WELL LOCATION
- SMALL DIAMETER MONITORING WELL INSTALLED MAY – JUNE 1999
- RECOVERY WELL
- OBSERVATION WELL
- OBSERVATION WELL CONNECTED TO LNAPL RECOVERY SYSTEM
- RECOVERY WELL CONNECTED TO LNAPL RECOVERY SYSTEM
- FORMER PIT THAT HAS BEEN FILLED AND CAPPED WITH CONCRETE
- UNDERGROUND AIR CONVEYANCE PIPING
- OW-8 / May-16 / 0.01 — WELL ID, MEASUREMENT DATE, LNAPL THICKNESS IN FEET
- LNAPL THICKNESS IN WELL ABOVE REMEDIAL ACTION OBJECTIVE (>0.01 FOOT)
- LNAPL — LIGHT NON–AQUEOUS PHASE LIQUID
- NM — NO MEASUREABLE PRODUCT DETECTED IN WELL
- NA — WELL NOT ACCESSIBLE




KEY MAP

0 100 200 400
SCALE, FEET

N

0 10 20 30
SCALE, FEET

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK & WHITE REPRODUCTION MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

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REVISIONS

| REV | DESCRIPTION | |
|---|---|---|
| 1 | Revised: | Chkd: Appr.: |
| 2 | Revised: | Chkd: Appr.: |
| 3 | Revised: | Chkd: Appr.: |

SEAL

DATE

DRAWN BY ECG
CHECKED
APPROVED BES 8/10/2019



# LNAPL THICKNESS MEASUREMENTS FORMER HEAT TREAT DEPARTMENT

FORMER ROLLWAY BEARING CORPORATION FACILITY
LIVERPOOL, NEW YORK

PREPARED FOR
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ST. LOUIS, MISSOURI


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FIGURE 1

Drawing Number
314V1545.018–001

# ENCLOSURE A – OM&M LOG SHEETS

**Table 1**

**Checklist**
**LNAPL Recovery System**
**Former Rollway Bearing Facility**
**Liverpool, NY**

Date: August 20, 2019 Inspector (print): Nathaniel Winston .
Arrival Time: 0930 Inspector (sign): _____
Departure Time: 1430 Weather Conditions: 80F, sunny .

Reason for Visit: Monthly OM&M

## LNAPL Recovery System Skid

| Gauge | Reading | Units |
|---|---|---|
| Inlet Vacuum: Before Vapor-Liquid Separator | -74 | Inches of $H_2O$ |
| Vacuum Before Air Filter | -84 | Inches of $H_2O$ |
| Vacuum After Air Filter/Before Blower Inlet | -96 | Inches of $H_2O$ |
| Discharge Stack Pressure | 1 | Inches of $H_2O$ |
| Discharge Stack Temperature | 145 | °F |
| Kilowatt Hour Meter | 145575 | kWh |

## LNAPL Recovery Wells

| Well ID | Vacuum (Inches of $H_2O$) | Flow (scfm) |
|---|---|---|
| OW-2 | -38 | 3.5 |
| RW-1 | -8 | 2.5 |
| OW-3 | -8 | 11.0 |
| OW-8 | -10 | 6.5 |

## Notable Observations:

Currently unable to deploy an absorbent to the desired interval in OW-3 due to sand bridging

## System Maintenance:

Description of Maintenance Needed:
OW-3 needs to be redeveloped

Date of Maintenance Completion:

**Table 1**

**Checklist**
**LNAPL Recovery System**
**Former Rollway Bearing Facility**
**Liverpool, NY**

Date: October 31, 2019 Inspector (print): Nathaniel Winston .
Arrival Time: 1300 Inspector (sign): _____
Departure Time: 1600 Weather Conditions: 62°F, rainy .

Reason for Visit: Monthly OM&M

## LNAPL Recovery System Skid

| Gauge | Reading | Units |
|---|---|---|
| Inlet Vacuum: Before Vapor-Liquid Separator | -74 | Inches of $H_2O$ |
| Vacuum Before Air Filter | -82 | Inches of $H_2O$ |
| Vacuum After Air Filter/Before Blower Inlet | -96 | Inches of $H_2O$ |
| Discharge Stack Pressure | 2 | Inches of $H_2O$ |
| Discharge Stack Temperature | 158 | °F |
| Kilowatt Hour Meter | 148,426 | kWh |

## LNAPL Recovery Wells

| Well ID | Vacuum (Inches of $H_2O$) | Flow (scfm) |
|---|---|---|
| OW-2 | -38 | 4.0 |
| RW-1 | -9 | 3.0 |
| OW-3 | -6 | 12.5 |
| OW-8 | -9 | 6.0 |

## Notable Observations:

Currently unable to deploy an absorbent to the desired interval in OW-3 due to sand bridging

## System Maintenance:

Description of Maintenance Needed:
OW-3 needs to be redeveloped

Date of Maintenance Completion: