Corrective Measures Work Plan

Former Leica, Inc. Facility

28 May 2021

Project No.: 0583070

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Acronyms and Abbreviations

Name	Description
CM	Corrective Measure
CMWP	Corrective Measures Work Plan
DER	Division of Environmental Remediation
EC	Engineering Control
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Heath
SMP	Site Management Plan
SSDS	Sub-slab depressurization system

1. INTRODUCTION

On behalf of Leica, Inc. (Leica), ERM Consulting & Engineering, Inc. (ERM) has prepared this Corrective Measures Work Plan (CMWP) for the former Leica facility (the "Site") located at 203 Eggert Road in Cheektowaga, New York. During the Periodic Review process, a deficiency was identified in one of the engineering controls (ECs) at the Site. As such, this CMWP is developed in accordance with paragraphs 6.3(a) 6 and 7 of New York State Department of Environmental Conservation's (NYSDEC) Division of Environmental Remediation (DER)-10 "Technical Guidance for Site Investigation and Remediation", effective 18 June 2010. The Site is listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 915156.

This CMWP was prepared to address repairs to the Warehouse Area sub-slab depressurization system (SSDS).

2. BACKGROUND

2.1 Site Description

The Site is in Cheektowaga, Erie County, New York and is identified as Section 91.00, Block 1, Lot 26.12 (owned by Calypso Development of WNY, Inc.) and Lot 26.11 (owned by Leica Microsystems, Inc.) on the Town of Cheektowaga Tax Map. The Site is approximately 24 acres of commercial land located in a mixed commercial and residential area. It is bound by Sugar Road and Saint Stanislaus Cemetery to the north, Saint John's Cemetery to the east, single-family residential dwellings to the south, and Eggert Road and a vacant undeveloped lot to the west.

2.2 Regulatory Background

Leica entered into an Order on Consent with NYSDEC on 8 October 1993 to remediate their former property.

An Environmental Easement for the Site was granted to NYSDEC on 1 December 2011, and it is recorded as the Declaration of Covenants and Restrictions with the Erie County Clerk. It requires compliance with the Site Management Plan (SMP) and all Institutional Controls (ICs) and ECs emplaced on the Site. The SMP was most recently updated on 27 August 2020, and approved by NYSDEC on 17 September 2020.

The SMP includes the following ECs at the Site:

- Access control via fence and gate;
- Groundwater Extraction System;
- Loading Dock SSDS; and
- Warehouse Area SSDS consisting of eight subsystems (System-01 through -08).

The SSDS EC, specifically blowers System-02 and System-06 of the Warehouse Area SSDS, are the subject of this CMWP.

3. CORRECTIVE MEASURES

During the annual Site inspection, ERM identified the blowers associated with Warehouse Area SSDS System-02 and System-06 were offline. ERM reset the SSDS; however, power was not restored to the System-02 and System-06 blowers after the reset.

The Warehouse Area SSDS is equipped with a remote telemetry unit that notifies ERM when the system is not operating as designed (i.e., power failure or insufficient vacuum). Consistent with the SMP, when a warning device indicates an operational failure (an "alarm") non-routine system operation and maintenance will occur. The scope of non-routine operation and maintenance activities varies depending on the reason for the activity, but typically includes resetting the system and resuming operation.

Prior to the annual Site inspection, 24 March 2021 was the last alarm notification, prior to discovery of the offline blowers for System-02 and System-06 on 30 April 2021. The lack of alarm notification for the offline blowers, and failure to restore power to the blowers upon resetting the system indicate the Corrective Measures (CMs) are needed to the Warehouse Area SSDS.

Further, several sub-slab vacuum measurements from system test ports did not meet the design performance goal of 0.004 inches of water column pressure differential. A plan to balance blower flows to adjust the sub-slab vacuum is included in this CMWP.

3.1 Corrective Measures

The following CMs are proposed to address repairs for the Warehouse Area SSDS identified during the annual Site inspection on 30 April 2021:

- Warehouse Area SSDS system inspection[1] by OBAR Systems, Inc. (OBAR) including electrical connections, telemetry and controls;
- As needed, replace electrical components including blowers System-02 and System-06 in-kind (OBAR Model GBR 89);
- Install eight (1 per system) OBAR GBR 25-T digital differential pressure gauges; and
- Replace current remote telemetry unit with a new OBAR EDG 4G/LTE wireless data gateway.

Following inspection, replacement, and installation of the Warehouse Area SSDS components, the system will be re-started in general accordance with Section 5.3.1 of the SMP. System start up and testing will include:

- Prior to start-up:
  - the system will be inspected for tightness, including accessible aboveground piping, valves, connections, and sumps;
  - the concrete slab will be inspected to identify potential short-circuiting conditions;
  - the blower will be visually examined for failures or other abnormal operations; and
  - connectivity with the Remote Terminal Unit will be tested.
- Following start-up, the sub-slab pressure at each monitoring point will be measured. If necessary, the blower flows will be balanced to propagate sub-slab vacuum to achieve the design performance goal of 0.004 inches of water column pressure differential across the majority of the monitoring points.

[1] Warehouse Area System-07 and System-08 will not be inspected due to *force majeure* conditions as the result of a roof collapse within their respective coverage areas.

If the design vacuum is achieved across the majority of the monitoring points normal system operations will resume.

If the design vacuum cannot be achieved, indoor air samples will be collected from the main floor of the Site building to verify the efficacy of the SSDS. The number and location of indoor air samples will be based upon the observed propagation by the system. Indoor air concentrations will be compared to the the New York State Department of Health (NYSDOH) Air Guideline Values. If indoor air concentrations are reported below their respective Air Guideline Values, then no further action will be necessary. If indoor air concentrations exceed their respective Air Guideline Values, then additional assessment of the system will be conducted in coordination with NYSDEC.

Following implemenation of the CMs, a memorandum will be prepared and submitted to NYSDEC summarizing the activities and monitoring results, as applicable. Upon completion of the CMs, the Periodic Review Report will be resubmitted with certification.

3.2 Schedule

The proposed CMs will be implemented within approximately four months following approval of this CMWP by NYSDEC. The anticpated schedule includes:

- 2 weeks – Mobilization, inspection, and assessment;
- 2 weeks – Procuring parts and materials necessary to implement the CMs;
- 4 weeks – Repairs for system repairs, start-up, system balancing / pressure differential confirmation;
- 4 weeks – Indoor air sampling; if required, and
- 4 week – Reporting.

Note: Given the on-going COVID-19 pandemic and the impact on the supply-chain, parts and materials delays may be inccured. The proposed schedule assumes parts and materials are readily available. If significant delays are encountered the NYSDEC Project Manager will be notified.

A memorundum report describing the activities will be submitted to NYSDEC within four weeks following implementation and reciept of final analytical (if necessary).

4. CERTIFICATION

I, Jaydeep Parikh, certify that I am currently a NYS registered professional engineer and that this Corrective Measures Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Professional Engineer: Jaydeep M. Parikh, P.E.

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Certificate of Authorization: 0014854

Date: 28 May 2021

Warning: It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

5. REFERENCES

ERM Consulting & Engineering, Inc. 2020. *Site Management Plan.* August 27.