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Region 2 RAC2 Remedial Action Contract

Draft Phase II Environmental Site Assessment

Targeted Brownfields Assessments

Former Lehigh Valley Railroad
Roundhouse

Manchester, New York

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**CDM
Smith**

Executive Summary

This report presents the results of CDM Federal Programs Corporation's (CDM Smith) Phase II Environmental Site Assessment (ESA) for the Lehigh Valley Railroad Roundhouse (LVRR) property located at Merrick Circle in the Village of Manchester (the Village), Ontario County, New York (the subject property). The Phase II ESA was conducted on behalf of the United States Environmental Protection Agency (EPA) to support a request from the Ontario County Planning Department (the User) for a Targeted Brownfields Assessment (TBA). The results of this Phase II ESA will assist the User in delineating the limits of any existing contamination and identifying options for the redevelopment of the subject property.

The subject property is currently owned by Springbrook Grain Co. Inc. and R.B. Crowell & Son, Inc. It is approximately 5.6 acres in size and is bordered by mixed residential, commercial, and industrial properties (Figure 1-1), including Merrick Circle to the east; vacant, undeveloped land to the north; Rochester Insulated Glass, Inc. (RIG), a glass fabricator to the west; and undeveloped land to the south (Figure 2-1). The subject property is not presently occupied but is zoned for general industrial use.

The subject property is unsecured and covered with vegetation and structures (Figure 2-2), including the roundhouse, a 3,000-square-foot building, a 100-foot turntable, a concrete vault, concrete aboveground storage tank saddles, and the former oil house building. The 44,000-square-foot roundhouse along with the attached 3,000-square-foot building to its north is located within the northern half of the subject property. The 100-foot turntable and concrete vault are located to the adjacent south of the roundhouse; all four structures are located within the 32.17-2-44.000 tax parcel (Figure 2-1). The concrete cradles are located near the southwest portion of the subject property. The former oil house building is located to the adjacent east, approximately 50 feet east of the concrete cradles. Three petroleum storage tanks are located in the basement of the former oil house; the contents were reportedly pumped out in 2006. Structural debris is present throughout the subject property.

The subject property was formerly owned and operated by the Lehigh Valley Railroad for maintenance and repair of railroad cars and engines. Operations began in 1892; the existing roundhouse structure was built in 1916 and was the last of the three that were built in Manchester. Around 1938, diesel locomotives came into regular use and began to replace the older steam engines. The fueling and servicing of diesel engines used hazardous materials, including engine fluids, cleaning solvents, petroleum products, and related lubricants. The last LVRR steam operation was in 1951. Regular diesel operations ceased at LVRR in 1970, before ending completely in 1975. In 2006, the contents of the storage tanks in the basement of the former oil building were reportedly pumped out. To prevent further contaminants from entering the nearby Canandaigua Outlet, New York State Department of Environmental Conservation (NYSDEC) excavated approximately 227 tons of soil from the subject property in 2009. NYSDEC completed the *Soil and Groundwater Management Plan* in 2012 to detail procedures for handling the contaminated media for any future intrusive work on the subject property.

A Phase I ESA investigation was conducted by CDM Smith in 2017 to identify the presence of recognized environmental conditions (RECs) at the subject property and to determine if a subject property site investigation (SI) was warranted. The following RECs were identified:

REC 1 – Historical Use: These parcels were formerly owned and operated by the LVRR for fueling, maintenance, and repair of railroad cars and engines. Infrastructure associated with potential contamination includes:

- Subsurface turntable structure, which possibly includes a pit that may contain any lubricants used on the turntable or in connection with the roundhouse bays where railroad cars and engines were serviced
- Three existing petroleum storage tanks in the basement of the oil house building
- Six concrete tank cradles, indicating the former presence of aboveground storage tanks
- Former diesel fueling and sanding area (an area used to provide bulk sand to locomotives, which was in turn used to provide the locomotives better traction during transit)
- Underground petroleum piping associated with the storage tanks and filling areas
- A concrete vault, for which the former use is unknown, located south of the western end of the roundhouse structure

REC 2 – Known Soil and Groundwater Contamination: An environmental investigation was performed at an adjacent property to the subject property in 1998 that resulted in NYSDEC Spill number (No.) 9807315 being generated for the subject property. The investigation consisted of five test pits excavated adjacent to the north and south of the roundhouse structure. Petroleum impacts were identified in two of the test pits. Spill No. 9807315 has since been closed; however, the subject property is currently listed under open Spill No. 0551048. NYSDEC performed a site characterization from 2003 to 2005 at the subject property, with samples collected from 20 passive soil gas locations, 29 soil borings, 9 monitoring wells, and 1 standing water location. NYSDEC's 2006 characterization report identified widespread volatile organic compound (VOC), semivolatile organic compound (SVOC), and petroleum hydrocarbon contamination in subsurface soils and to a lesser extent in groundwater at the site. VOCs were detected at total concentrations of up to 1,609 parts per million (ppm) in soil samples and up to 1.1 ppm in groundwater samples collected at the site. SVOCs were detected at total concentrations of up to 1,318 ppm in soil samples and up to 1.7 ppm in groundwater samples. Several inches of free product fuel oil and/or diesel fuel were identified on top of groundwater in the central area of the subject property (MW-3) near a former railcar turntable unit. According to the report, off-site migration via groundwater appeared to be limited; however, storm sewers appeared to be acting as a pathway for site-related contamination to reach Canandaigua Outlet. NYSDEC recommended removal of existing petroleum storage tanks and prevention of off-site migration via storm sewers. NYSDEC recommended a remedial investigation to fully define the nature and extent of contamination at the subject property and gather data necessary to evaluate remedial alternatives.

REC 3 – Potential Off-site Migration of Contamination: It is known that on-site soils were contributing contaminants to stormwater flows from the subject property into Canandaigua

Outlet. Off-site migration via a storm sewer that discharges to Canandaigua Outlet has been reported, including petroleum odors and sheen at the Route 21 railroad crossing. It has been reported that the turntable pit area of the subject property may drain to this storm sewer. Testing performed in storm sewers in association with a planned upgrade of the railroad crossing confirmed the presence of No. 4 fuel oil in the storm sewers, apparently emanating from the subject property.

REC 4 – Adjacent Property Contamination: RIG is located at 73 Merrick Circle, adjacent to the subject property. It is identified on multiple environmental databases including the Resource Conservation and Recovery Act (RCRA) Generators list and the Manifest list. In addition, this property is located hydraulically upgradient from the subject property. In August 2000, a Phase II environmental investigation report identified the presence of petroleum hydrocarbon contamination in soil and groundwater at significant concentrations at 73 Merrick Circle, concluding this adjacent property is suspected to be a potential contributor to the contamination at the subject property.

REC 5 – Existing Buildings: The roundhouse buildings and the former oil house building have the potential to contain asbestos-containing material (ACM) and/or lead-based paint (LBP).

Phase II ESA Investigation

CDM Smith conducted a Phase II ESA investigation in June 2018 to characterize the nature of contamination at the subject property. CDM Smith collected a total of 17 soil samples from 15 soil borings advanced via direct push technology (DPT) by a drilling subcontractor. Four surface soil samples (0 to 2 feet below ground surface [bgs]) were collected from four independent locations. Subsurface samples were collected from the borings at various depth intervals based on the location of the borings, historical data, visual and olfactory observations, and photoionization detector (PID) readings.

Surface and subsurface soil samples were analyzed via an off-site New York State Department of Health (NYSDOH)-accredited and authorized subcontract laboratory for target compound list (TCL) VOCs, TCL SVOCs, TCL polychlorinated biphenyls (PCBs), TCL pesticides, target analyte list (TAL) metals and total petroleum hydrocarbons (TPH) (gasoline range organics [GRO] and diesel range organics [DRO]).

Temporary monitoring well installation was performed using DPT. However, because of refusal due to shallow bedrock and former concrete foundations, only six of the ten wells could be installed at the proposed soil boring locations. Groundwater samples were analyzed via an off-site NYSDOH-accredited and authorized subcontract laboratory for TCL VOCs, TCL SVOCs, TCL PCBs, TAL metals, and TPH (GRO and DRO).

Phase II ESA Conclusions

CDM Smith's conclusions, based on analytical results, historical information, and visual observations from the Phase II ESA are summarized below.

- During the geophysical survey, nine anomaly areas were identified that were consistent with the historical use of the subject property. Ground-penetrating radar data for one of the

anomalies was inconclusive, though it is suspected to be highly conductive concrete. No underground storage tanks were identified.

- A total of 32,800 square feet of ACMs were identified in the roundhouse, office building, and shed structure. Lead was detected in the paint chips sampled from the roundhouse structure, office building, and shed. However, only the office building and shed structure had lead detections significant enough (0.5 %) to be considered LBP.
- Concentrations of VOCs, polycyclic aromatic hydrocarbons (PAHs), and TPH (DRO and GRO) detected in the surface and subsurface soils are likely a result of both the residual VOC and SVOC contamination (light non-aqueous phase liquid (LNAPL)) from historical operations and the extended use of diesel engine locomotives.
- Pesticide detections for endosulfan II were observed in the subsurface; however, no exceedances of the unrestricted use soil cleanup objectives (SCOs) were recorded. Pesticides are not considered to be a contaminant of concern at the subject property.
- One PCB, Aroclor 1260, was detected above the unrestricted use SCOs in the surface soil within close proximity to the former oil house. This indicates that PCBs were potentially used in the historical operations of the subject property, specifically within the former oil house.
- Subsurface soil samples collected within and around the roundhouse structure exhibited metals concentrations exceeding ambient concentrations and unrestricted use SCOs for arsenic, copper, lead, mercury, nickel, selenium, and zinc. Surface soil samples collected in the southern half of the subject property exceeded ambient concentrations and unrestricted use SCOs for arsenic, copper, lead and zinc. The presence of metals above the ambient concentrations suggest a site-related source.
- Soils borings performed in the extreme western portion of the property did not indicate significant exceedances or detections above NYSDEC unrestricted use SCOs. The lack of exceedances indicates the adjacent property (73 Merrick Circle) is not likely to be a contributor to contamination observed at the subject property. No soil borings were advanced outside of the subject property boundaries.
- TPH concentrations were identified in both subsurface soil and groundwater samples collected within the vicinity of the on-site turntable pit area. No subsurface soil samples collected within the vicinity of the turntable exhibited concentrations exceeding the unrestricted use SCOs. Exceedances for one VOC and one metal (above NYSDEC Ambient Water Quality Standards and Guidance Values (AWQS)) were identified in groundwater in the vicinity of the turntable pit. Further discussion of the recommendations associated with the turntable pit are provided below.
- Groundwater samples could not be collected from all planned locations due to multiple refusals on shallow bedrock and former structural foundations. One VOC, isopropylbenzene, was detected at a concentration exceeding the NYSDEC AWQS in the

northern portion of the property. Concentrations of metals exceeding AWQS were identified in groundwater samples collected from the northern half of the subject property.

- As stated, exceedances and detections for VOCs, SVOCs, and TPH (DRO and GRO) in groundwater were minimal. It is reasonable to suggest that the soil excavation in 2009 sufficiently removed the source material impacting the local groundwater.
- Exceedances for metals in groundwater did not significantly exceed the AWQS and were not generally consistent over the subject property. Of the metals exceeding the AWQS (antimony, magnesium, sodium, and thallium), only thallium and antimony would be considered of concern with respect to drinking water, and their concentrations represent only minor exceedances of the NYSDEC AWQS.
- As the current remedial goal of the subject property is unknown, soil results were compared to unrestricted use SCOs. VOC, SVOC, PCB, and metal exceedances were identified above the unrestricted use SCOs. These exceedances were not extensive, and the property is currently zoned for general industrial use. If the subject property were to continue its current zoning use, only minimal PAH and arsenic concentrations would be considered exceedances based on the industrial use SCOs.

Recommendations

Additional subject property characterization activities would be beneficial in delineating the extent of soil contamination. Proposed characterization activities are presented below.

- Long-term monitoring of groundwater is recommended in areas of the subject property where high concentrations of contaminants were detected, particularly in areas where high concentrations of SVOCs (PAHs) were identified during the Phase II ESA investigation of the roundhouse structure.
- Additional sampling of materials for PCBs and soil suspected to contain PCBs that are encountered during the demolition or repair of the former oil house should be characterized and disposed of properly.
- While minimal exceedances of contaminants were present in the subsurface soil and groundwater within the vicinity of the turntable pit area, TPH concentrations were detected. During redevelopment of the subject property, it is recommended that the turntable pit be disconnected from the stormwater sewer to help prevent potential further infiltration into the stormwater sewer and subsequent contamination of the Canandaigua Outlet.
- Materials encountered during the demolition or repair of the buildings and determined or suspected to contain asbestos or lead-based paint should be characterized and disposed of properly.

In general, the contamination detected at the property appears to be fairly minimal. Remediation by soil removal or isolation by capping of surface soils at concentrations above unrestricted use SCOs or the appropriate restricted use SCOs is recommended based on the future use of the

subject property. Based on the Phase II ESA analytical results, soil removal would be targeted to areas where subsurface contamination was identified within and surrounding the roundhouse structure.

When undertaking subject property development, it is recommended that the developer(s) enlist a professional engineer or scientist to prepare a health and safety plan (HASP), construction contingency plans, and a soils management plan to safely and appropriately remove (and control) impacted materials. It is recommended that any work performed at the subject property be led by an environmental professional (or if necessary a professional engineer) following such approved plans and a site-specific HASP approved by a certified industrial hygienist.

In the absence of excavation, engineering controls should be implemented. These controls would require (1) installation of pavement or topsoil and vegetative cover or installation and maintenance of a perimeter fence; (2) that any construction involving the disturbance of soils, fill materials, or demolition of uncharacterized structures located within the subject property (including non-emergency excavation, which may be part of utility repair, maintenance, or construction) should not be performed without the involvement of a professional engineer, must be conducted in accordance with local state and federal rules and regulations, and must provide adequate engineering controls and worker protection; and (3) implementation of an operation and maintenance plan to ensure that the cover remains intact and development of an inspection schedule for the cover so that direct contact is mitigated. In the absence of remediation, the values of adjacent and surrounding properties may be (and may currently be) negatively impacted. The loss of property value may represent some risk to public welfare, yet this risk may not be considered significant risk.