VIA ELECTRONIC MAIL

February 24, 2023

Karen A. Cahill
Division of Environmental Remediation
New York State Department of Environmental Conservation
Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400

Subject: **Buildings 3 and 4 NAPL Observation Wells Work Plan**
Former Emerson Power Transmission Facility, Ithaca, New York (NYSDEC Site No. 755010)

Dear Ms. Cahill:

WSP USA Inc. (WSP) has prepared this work plan to provide the details for installation and monitoring of four observations wells in Buildings 3 and 4 at the former Emerson Power Transmission (EPT) site (Site) in Ithaca, New York. The wells are being installed as part of a pre-design study to evaluate the potential presence and extent of non-aqueous phase liquid (NAPL) beneath the building slab. Should NAPL be identified in the subsurface, the results of the monitoring activity will be used to design recovery of the NAPL.

BACKGROUND INFORMATION

During the Phase II Environmental Site Assessment conducted in 2013, a small diameter hole was cored through the wall in Building 4 to investigate the source of staining and evaluate soil and groundwater conditions behind the wall. Following removal of the concrete core at sample location "LB-WB-1 WALL", a water and NAPL mix seeped through the hole. The product was found to be primarily comprised of motor oil (73 percent) with a lesser amount of No. 2 fuel oil (27 percent). Following further delineation activities, as shown on Figure 1 wall borings "B5-WALL" and "LB-WB-2 WALL" define the extent of NAPL behind the wall in Building 4. At both the Boring B1 and B2 locations along the east wall of Buildings 3 and 4, a second boring was drilled approximately 4 feet above the finished floor; neither boring contained any liquid.

PRE-DESIGN STUDY

A pre-design study will be conducted to evaluate the bedrock/fill interface and presence of NAPL along the eastern wall of Buildings 3 and 4. Four observation wells will be installed behind the walls of Buildings 3 and 4. Due to the terraced construction of the buildings, the eastern wall of Buildings 3 and 4 extends above the floor of Building 9. Figure 1 shows the location of the four proposed observation wells (OW-01 through OW-04).

A review of historical underground utility and floor plan drawings of the buildings will be conducted before initiation of the field work activities. A private utility survey will then be conducted to confirm underground utility and concrete subsurface features (e.g., footings, grade beams, utility corridors). The proposed locations of the new observation wells will be upgradient, in proximity to the small diameter holes cored into the wall during the Phase II site assessment where NAPL was observed. As practical, the new wells will be evenly spaced between boring locations "B4 WALL" and "B6 WALL" to evaluate the full extent of the impacted area (Figure 1).

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WELL INSTALLATION

In preparation for drilling activities, the drilling subcontractor will core appropriately sized holes into the 6- to 7-inch-thick concrete slab to expose the subsurface soils beneath. To construct the observation wells, boreholes will be advanced through the subsurface fill material to refusal at the bedrock surface (approximately 10 to 15 feet below grade) using nominal 8-inch outer diameter hollow stem augers. The wells will be constructed of nominal 4-inch inside diameter, Schedule 40 polyvinyl chloride (PVC) risers and 0.010-inch slot screens, 5 or 10 feet in length depending on the depth of the boreholes. At each location, No. 2 sand will be placed in the annular space between the PVC and outer borehole to approximately 2 feet above the top of the screen; a cement-bentonite mix will be placed from the top of the sand to the bottom of the existing concrete slab. The wells will be completed with flush mount well covers equipped with a lockable watertight cap. Concrete will be restored around each well to match existing conditions.

WELL DEVELOPMENT

If sufficient groundwater is present in each well, they will be developed a minimum of 12 hours following installation by surging the screened intervals to loosen and remove sediments and ensure effective communication between the screen and the surrounding zone. Groundwater will then be removed using a surge block and appropriate pump. Turbidity, pH, temperature, and specific conductance will be periodically monitored during the development process, in accordance with WSP SOPs. The development will continue until the discharge is relatively free of suspended sediments and in-situ readings are stable. If water is added to the well borehole during drilling and installation activities, an equal volume of water will be removed during well development.

SURVEYING

The locations and top-of-casing and ground surface elevations will be surveyed by a New York-licensed surveyor; the locations will be measured to the nearest +/- 0.1 foot and the elevations to the nearest +/- 0.01-foot. The well locations will be placed on a site map for inclusion in future reports.

HEALTH AND SAFETY

WSP will use the current Site Health and Safety Plan (HASP) that was prepared in accordance with OSHA 29 Code of Federal Regulations (CFR) 1910.120 and 40 CFR 311, with any necessary modifications appended to the document. The HASP provides information on the objectives, project organization, and specific procedures that will be required for all activities conducted during field activities. This includes activities conducted by WSP personnel. WSP's subcontractors conducting field activities are also required to prepare their own HASP, a copy of which is provided to WSP, and provide employees trained pursuant to the OSHA requirements. All WSP personnel and subcontractors are required to review the HASP before beginning work, and a safety meeting is held before the beginning of each work day.

GENERAL INVESTIGATION PROCEDURES

All investigation activities will be conducted in accordance with WSP's Standard Operating Procedures (SOPs) and the NYSDEC's Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10). All field activities will be conducted using cleaned equipment; decontamination of non-disposable equipment will be conducted in accordance with WSP's SOPs and manufacturer's specifications.

Before drilling is conducted, the location of the wells will be identified during a site reconnaissance. The proposed locations may be adjusted in the field based on underground utilities information and surface conditions. The locations will be marked with a unique sample identifier.

Drill cuttings and water generated during the observation well installations will be contained in U.S. Department of Transportation (USDOT)-compliant, 55-gallon steel drums. The drums will be labeled and moved to an onsite staging area designated by WSP. Water generated during the well installation will be processed through the Dual Phase Extraction (DPE) and treatment system. Drums of soil will be disposed of by an authorized disposal facility upon completion of the drilling activities.

All drilling activities will be completed using decontaminated equipment. The drilling equipment (augers and rods) will be decontaminated using a portable steam cleaner prior to the start of drilling activities and also prior to demobilizing from the site. All decontamination fluids generated during the drilling activities will be contained in 55-gallon USDOT-approved drums and processed through the DPE and treatment system. Demolition wastes generated (concrete) will be placed in the general trash dumpster near the DPE building.

SCHEDULE

The wells will be installed during the week of February 27, 2023, and it will take approximately 5 days to complete. The wells will be monitored on a weekly basis for 1 month using an interface probe to determine if the thickness of NAPL, if present. The information collected during the monitoring period will be used during the remediation design phase of the overall project to determine the appropriate remedial action, if necessary.

Please feel free to contact me at (703) 709-6500 or by email at Scott.Haitz@wsp.com with any questions or if you require additional information.

Kind regards,

Scott P. Haitz
Senior Vice President

Lisa Kelly, PG
Vice President

SPH :lkk :dar
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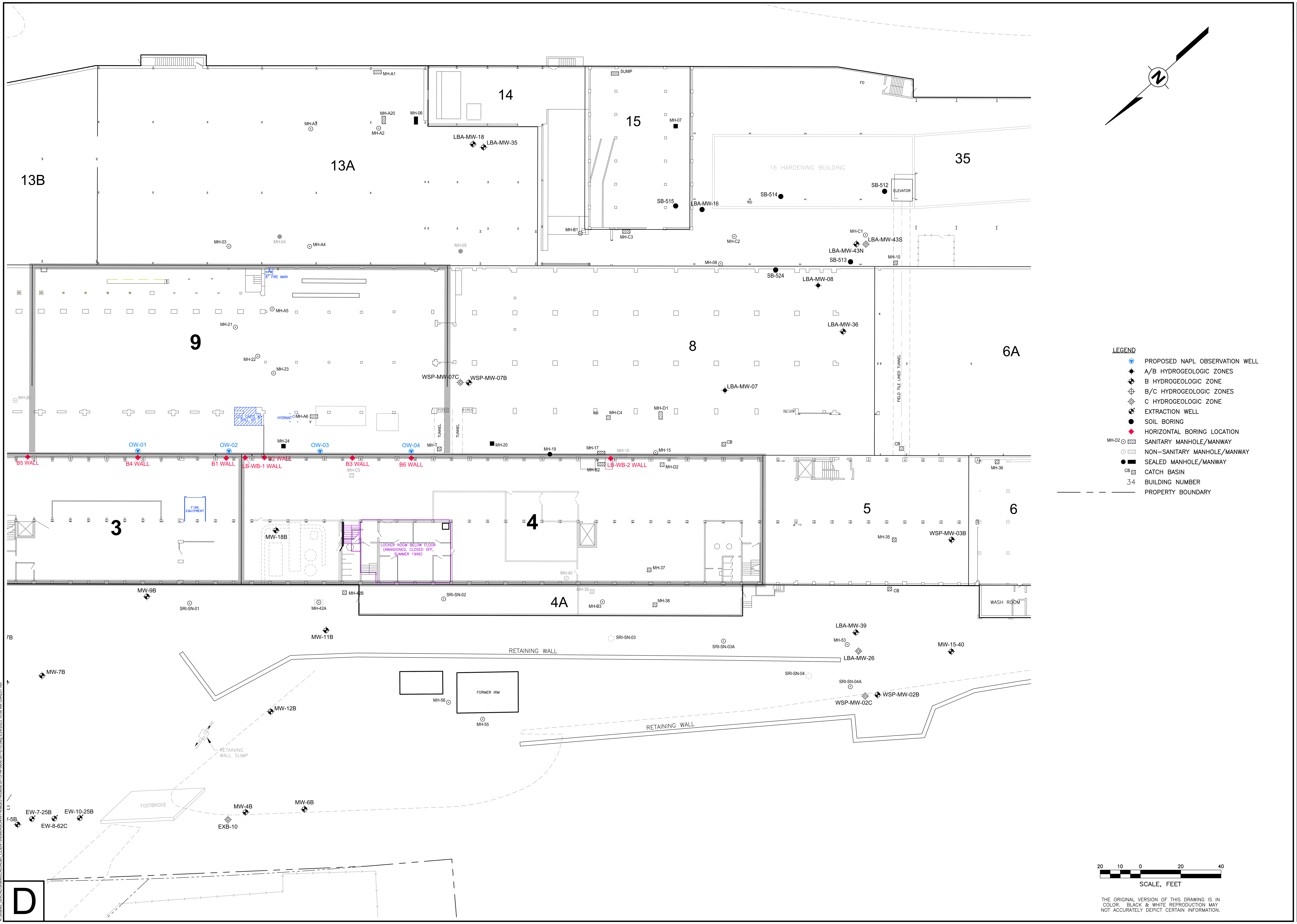
cc : Stephen L. Clarke, Emerson
Anthony Perretta, NYSDOH

FIGURE



REVISIONS

REV	DESCRIPTION

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PROPOSED NAPL OBSERVATION WELLS

FORMER EMERSON POWER TRANSMISSION SITE
ITHACA, NEW YORK

PREPARED FOR
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FIGURE 1

Drawing Number
314P5608.001-D10