IBM Corporate Environmental Affairs
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September 22, 2023

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New York State Department of Environmental Conservation
21 S Putt Corners Rd, New Paltz, NY 12561

Re: Proposed Path to Site Closure
Former IBM Leased Buildings 952/982 (Neptune Commerce Center)
Poughkeepsie, Dutchess County, New York
Order on Consent Index #A3-0655-12-10
Site #314076

Dear Ms. Barry:

The purpose of this letter is to present a summary of planned work at the former International Business Machines Corporation (IBM) Leased Building 952/982 Site (Neptune Commerce Center) (Site) to support preparation of an updated Site Management Plan and associated Environmental Easement to attain final Site closure. The Site is located in the Town of Poughkeepsie, New York, with frontage on both South Road (U.S. Route 9) and Neptune Road as shown on Figure 1. The conceptual framework for these activities was discussed during a project status meeting with Mr. Scott Deyette of the New York State Department of Environmental Conservation (NYSDEC) on June 5, 2023.

At the time of initial remedial activities, IBM occupied the Site as a lessee when the Site was owned by South Road Associates. As of April 25, 2005, the Site was transferred to Neptune Capital Investors, LLC (NCI).

The Site is currently listed on the New York State Inactive Hazardous Waste Disposal Site Registry as a Class 4 Site, Site ID 314076. The Site is being remediated by IBM pursuant to Order on Consent Index A3-0655-12-10 executed on May 18, 2011[1] for Site #314076 between the NYSDEC and IBM (Order).

BACKGROUND

Site groundwater has been monitored since 1982 for various constituents, including Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOCs), Metals, Phenols (total); Pesticides, Poly-chlorinated Biphenyls and Oil and Grease. The principal constituents detected at the Site are chlorinated benzenes, chlorinated ethanes and chlorinated ethenes. Since 1993, Site groundwater has been monitored under a NYSDEC-approved Groundwater Monitoring Plan (GMP) that was originally submitted as

[1] New York State Department of Environmental Conservation, May 18, 2011. *In the Matter of the Development and Implementation of a Remedial Program for an Inactive Hazardous Waste Disposal Site under Article 27, Title 13 of the Environmental Conservation Law by International Business Machines, Corporation, Respondent, Order on Consent and Administrative Settlement, Index #A3-0655-12-10, Site No. 314076.*

part of the Site's *Operation and Maintenance Plan for the Groundwater Collection and Treatment System, IBM Building 952 and Building 982 Leased Property* (O&M Plan)[2]. Several minor modifications were made to the GMP and approved by the NYSDEC including decommissioning of several monitoring wells and a reduction in monitored constituents. The location of extraction well 952-30R and Site groundwater monitoring wells are shown on Figure 2.

The Order required the preparation of a Site Management Plan (SMP) as the final phase of the remediation, and for the continued operation and management of the Site. Following issuance of the Order, IBM prepared and submitted various documents to fulfill the need for a SMP and associated Environmental Easements. On December 2, 2011[3], IBM submitted a Final SMP and NYSDEC in consultation with the New York State Department of Health (NYSDOH) approved the SMP in a letter dated December 29, 2011[4].

In 2011, the Site owner received Site Plan approval from the local municipality to redevelop the Site. During redevelopment, IBM requested and NYSDEC approved suspension of the requirement to sample periphery wells at the Site as required under the GMP until such time as the redevelopment of the Site was complete. During the hiatus in sampling of the well field, IBM continued to operate and monitor the groundwater extraction well, 952-30R as per the approved GMP.

In addition, IBM submitted information pertaining to the metes and bounds written description for a Site Boundary Modification Request based on remedial actions and sampling results conducted during redevelopment of the Site. On March 17, 2017[5], IBM submitted an update to the SMP to reflect changes at the Site due to redevelopment and to account for changes in the GMP. On October 23, 2018[6], IBM submitted an update to the SMP to address comments received by NYSDEC on February 16, 2018[7].

The Site has a series of Institutional Controls (ICs) in the form of site restrictions to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to uses consistent with the Restricted Residential use defined in 6NYCRR Part 375-1(g)(2)(ii), unless otherwise determined based on soil sampling results to meet a more restrictive level. Adherence to the ICs are required under the SMP.

The SMP describes three Engineering Controls (ECs) at the Site including: the Cover System; Groundwater Pump and Treatment System; and the Former B982 sub-slab depressurization system (SSDS).

[2] Groundwater Sciences Corporation, February 24, 1994. *Operation and Maintenance Plan for the Groundwater Collection and Treatment System, IBM Building 952 and Building 982 Leased Property.*

[3] IBM Corporation, December 2, 2011. *Site Management Plan, Neptune Commerce Center, Former IBM Building 952/ 982 Site, Dutchess County, New York, NYSDEC Site No. 314076.*

[4] NYSDEC, December 29, 2011. *Former IBM B952/982, Site No. 314076, Poughkeepsie, Dutchess County, New York, Final Site Management Plan.*

[5] IBM Corporation, March 17, 2017. *Site Management Plan, Neptune Commerce Center, Former IBM Building 952/ 982 Site, Dutchess County, New York, NYSDEC Site No. 314076.*

[6] IBM Corporation, October 23, 2018. *Site Management Plan, Neptune Commerce Center, Former IBM Building 952/ 982 Site, Dutchess County, New York, NYSDEC Site No. 314076.*

[7] NYSDEC, February 16, 2018. *Former IBM B952/982, Site No. 314076, Poughkeepsie, Dutchess County, New York, Final Site Management Plan.*

The SMP includes a Monitoring and Sampling Plan that describes the measures for evaluating the performance and effectiveness of the remedy.

SITE GENERAL DESCRIPTION AND GEOLOGIC SETTING

The Site lies topographically in a broad upland approximately 135 feet above mean sea level (amsl) between Casper Creek, 2,000 feet to the southeast, and a small unnamed stream, 3,500 feet to the northwest. The site is flanked on the northeast and southwest by two prominent hills with elevations greater than 200 feet above mean sea level (*amsl*). Surface water drainage from the site is primarily to the southeast toward Casper Creek.

The Site is underlain with dolostone, a calcium magnesium carbonate rock prone to solution weathering by groundwater, particularly in zones where the rock is highly fractured. Bedrock ranges from less than 20 feet to over 50 feet below the ground surface at the Site. Bedrock is overlain by a variable thickness of unconsolidated sediments, including primarily glacially derived tills, outwash materials consisting of gravels, sands, and silts, lake deposits consisting of alluvial silts and clays, and man-made fill material. The thickness of unconsolidated sediments ranges from more than 55 feet thick, southeast of Building 982, to less than ten feet thick along Route 9. The overlying contact with the unconsolidated sediments is an erosional surface. The primary unconsolidated sediments found under the Site are, from oldest to youngest:

- Glacial till, a poorly sorted mixture of boulders, gravel, sand, silt and clay deposited directly by contact with ice.
- Generally poorly sorted outwash material consisting of gravels, sands and silts which is the result of re-working of till and other materials by glacial meltwater.
- Alluvial silts and clays which are the result of deposition in a low-energy environment such as a glacial lake.
- Man-made fill materials which lack bedding or structure.

Beneath the Site, groundwater flow occurs primarily within the dolostone bedrock of the Wappinger Formation with the exception of a few isolated zones of perched water on top of silt and clay lenses within the unconsolidated sediments. Several nested bedrock piezometers have been constructed at this Site and water levels measured in these piezometers indicate a vertical gradient downward in the shallow bedrock and then horizontal flow within the deeper bedrock zone. The principal directions of groundwater flow are to the east, south and west from a location near the front of former B982 and pumping well, 952-30R.

SUMMARY OF INVESTIGATIONS AND REMEDIAL ACTIONS (1982 TO 2018)

Remedial Investigations (RI) were performed to characterize the nature and extent of contamination at the Site beginning in 1982. Initial remedial activities were conducted voluntarily by IBM, without a consent order but with NYSDEC oversight. Generally, the remedial investigations determined that the onsite groundwater and subsurface soils were contaminated by a former leaking underground waste chemical holding tank located in the courtyard between former Buildings 952 and Building 982 (Figure 2). The onsite soil chemical contamination was generally located in the vicinity of the underground waste chemical holding tank. Additionally, it was determined that soils under Building 952 and a

portion of Building 982 were also impacted. According to previous analytical data, compounds with the highest concentrations in the soil included 1,2- dichlorobenzene, methylene chloride, chloroform, bis(2-ethylhexyl)phthalate, and di-n-butyl phthalate. The results of the RIs are described in detail in various Site reports[8].

Major milestones in the Site history and remedial investigations and operations is provided below:

- October 1981 – A single monitoring well was installed near the abandoned storage tank. The well was screened in the dolostone bedrock since the overlying unconsolidated sediments appeared to be dry.
- 1982 - Removal of the chemical holding tank. Installation of 36 soil borings completed both interior to the buildings and exterior of the buildings to collect soil samples.
- 1984 – Removal of four tanks which included a fuel oil storage tank, a concrete tank, and two concrete vaults containing water main valves, fittings, and piping, removed as part of the remedial action approved by the NYSDEC.
- 1984 – Installation of a series of nested piezometers and commencement of the voluntary groundwater monitoring program at the Site. The monitored well locations included a series of perimeter wells that covered all segments of the property line.
- 1990 – Reinstallation of a monitoring well that had been abandoned (952-10RA) as part of the excavation in the courtyard between former B952 and B982.
- 1992 – Seven soil samples were collected from five of the historical soil sampling locations beneath the concrete slab floor of B952. These samples were collected at locations and depths previously sampled in 1982 to determine what changes had occurred in the intervening ten-year period. This comparison indicated that VOCs in the soil had dissipated and that SVOCs and oil and grease concentrations in the soil were essentially unchanged after ten years.
- 1993 –
    - IBM submits a Petition to Reclassify the Former Buildings 952 and 982 Site from a Class 2a to a Class 4 Site in the NYSDEC Inactive Hazardous Waste Disposal Registry[9].

[8] Lawler, Matusky, and Skelly, Engineers, August 1982. *Interim Report on Building 952/982.*
Lawler, Matusky, and Skelly, Engineers, March 1983. *Final Report: Hydrogeology and Chemistry of Building 952 Area.*
Conestoga-Rovers & Associates Limited, April 1984. *Soil Sampling & Analysis Buildings 952 and 982.*
Conestoga-Rovers & Associates Limited, May 1985. *Remedial Action Project Soil and Sampling and Analysis Buildings 952 and 982 (Volume 1).*
Conestoga-Rovers & Associates Limited, September 1985. *Remedial Action Plan Construction Implementation Buildings 952 and 982 (Volume 2).*
Milton Chazen Associates, May 1986. *Groundwater Quality Data Report 1984-1985, Building 952 Site.*
Groundwater Sciences Corporation, March 1993. *IBM B952/982 Site Reclassification Petition, Volumes 1 & 2.*
Henningson, Durham & Richardson Architecture & Engineering, P.C., December 2011. *Revised February 2012. B952 Excavation Work Plan.*
Sanborn, Head Engineering, P.C., September 2013. *Subslab Depressurization System (SSDS) Design/Installation Work Plan.*
Sanborn, Head Engineering, P.C., February 2014. *Subslab Depressurization System Start-Up and Performance Testing Report.*
Henningson, Durham & Richardson Architecture & Engineering, P.C., January 2017. *B952 Excavation Work Plan Summary Report.*

[9] Groundwater Sciences Corporation, March 8, 1993. IBM B952/982 Site, Reclassification Petition, 2 Volumes.

  - Start-up of groundwater extraction well 952-30R and associated on-site treatment system (December 1, 1993).
  - NYSDEC reclassifies[10] the Site to a Class 4 Site on the Registry of Inactive Waste Disposal Sites.

- 1994 – IBM transmits[11] the Operation and Maintenance Plan for the Groundwater Collection and Treatment System (O&M Plan).
- 2005 to 2010 – Former B952 and 982 remained vacant and the Site undeveloped.
- 2011 – NCI received Site Plan and Subdivision approval from the Town of Poughkeepsie. NCI redevelopment activities included the demolition of former IBM leased Building 952 and the construction of two new commercial buildings in its place. Former IBM leased Building 982 would remain intact and be renovated.

  IBM prepared an Excavation Work Plan (EWP) as required by its approved SMP. The EWP was initiated in September 2012 and IBM completed field activities in June 2013. Soils that exhibited detections on the PID and/or an odor were excavated, stockpiled and sampled for laboratory analyses of VOCs and BN-SVOCS via EPA Methods 8260B and 8270D, respectively, as required by the EWP. There were no detections of VOCs or BN-SVOCs above NYSDEC required site soil cleanup objectives (SCOs) of restricted residential use. Post-excavation samples were collected from each of the excavation areas in accordance with NYSDEC DER-10[12] for VOCs and BN-SVOCs by EPA Methods 8260B and 8270D, respectively. Post excavation sample results indicate that there were no detections of VOCs or BN-SVOCs above NYSDEC required site SCOs of restricted residential use.

- 2013 – An indoor air assessment was required under the Order and a sub-slab depressurization system was installed in B982 and placed into operation in 2013. This work was done prior to occupancy to facilitate building redevelopment by its owner. As documented in the SSDS Startup Report, the results of indoor air sampling prior to the installation of the SSDS indicated that indoor air had not been affected by soil vapor intrusion. The SSDS Startup Report also indicated that IBM, in consultation with the Agencies, may conduct a temporary shut-down of the SSDS to evaluate the need for continued operations to mitigate potential soil vapor intrusion.
- 2018 – On April 23, 2018[13], IBM received a request from the NYSDEC to complete sampling at the Site for emerging contaminants, including specific poly and perfluoroalkyl substances (PFAS) and 1,4-dioxane. An *Emerging Contaminants, PFAS and 1,4-dioxane Work Plan* (Emerging Contaminants Work Plan) for the Site was submitted to NYSDEC on June 15, 2018[14]. The NYSDEC approved the

[10] NYSDEC, December 2, 1993. Petition to Reclassify, IBM 952/982, Site ID. No.314076.
[11] Groundwater Sciences Corporation, February 24, 1994. Operation and Maintenance Plan for the Groundwater Collection and Treatment System. IBM Building 952 and Building /982 Leased Property,
[12] NYSDEC, May 2010. DER-10 Technical Guidance for Site Investigation and Remediation.
[13] NYSDEC, April 23, 2018. Request for sampling of Emerging Contaminants, Former IBM 952/982, Site ID: 314076
[14] IBM, June 15, 2018. *Emerging Contaminants Poly- and Perfluoroalkyl Substances and 1,4-Dioxane Sampling Work Plan, Neptune Commerce Center (Former B952/982 Site), Site ID: 314076.*

Emerging Contaminants Work Plan on July 12, 2018[15]. Groundwater samples were collected on May 1, 2019, and a report on the findings was submitted to the NYSDEC on July 26, 2019[16]. Based on the findings, it appears that municipal water has a meaningful impact on the PFAS and 1,4-dioxane concentrations detected in groundwater at the Site. Only 1,4-dioxane was detected in samples at concentrations above the current NYS screening levels (1 ppb). Given the lack of private and public supply wells near the site, the NYSDEC required no further sampling at this time with respect to emerging contaminants in groundwater[17].

REMEDIAL PROGRAM

As part of Site investigations, groundwater monitoring wells were installed by IBM beginning in 1981 to monitor the horizontal and vertical variation in groundwater elevation and chemistry. Two remediation systems have been operated at the Site by IBM. Groundwater extraction well 952-30R was operated by IBM for nearly twenty-six years, providing removal of dissolved VOCs within and near the source area of the Site, localized around the extraction well. The second remediation system is a SSDS associated with soil vapor intrusion mitigation at the former IBM leased Building 982. The following paragraphs include a brief summary of the groundwater monitoring program and the two remedial systems.

Groundwater monitoring was performed by IBM on a periodic basis as part of the groundwater monitoring program to assess the performance of the Site remedy. Chlorinated benzene concentrations have been detected at perimeter monitoring wells only sporadically and have remained at levels below New York State Groundwater Quality Class GA Standards (6 NYCRR Part 703) (NYSGQS) since early 1999. Since the NYSDEC approval of the IBM O&M Plan in 1994 wherein the groundwater monitoring program was first described, there have been several modifications to the groundwater monitoring program that have been approved by the NYSDEC as follows:

- On November 17, 1999[18], the NYSDEC approved a decrease in monitoring frequency for all monitored wells from quarterly to twice annually.
- On April 23, 2004[19], the NYSDEC approved the decommissioning of monitoring wells 952- 8R, 952-14S, and 952-15RA. In addition, the monitoring frequency of wells 952-l0RA, 952-11R, 952-29R, and 952-31R was reduced to once per year.
- Monitoring well 952-15RB was decommissioned on December 13-14, 2012, as part of site redevelopment activities.
- On March 28, 2017[20], IBM submitted a request to decommission monitoring wells 952-6R, 952-9R, 952-11R, 952-12R, 952-13R, 952-14R, 952-14RA, 952-16R and 952-29R. In addition, IBM included a request to reduce the groundwater quality

[15] NYSDEC, July 12, 2018. *Emerging Contaminants, Poly- and Perfluoroalkyl Substances and 1,4-Dioxane Sampling Work Plan, Neptune Commerce Center (Former B952/982 Site), Site ID: 314076.*

[16] IBM, July 26, 2019. *Emerging Contaminants, Poly- and Perfluoroalkyl Substances and 1,4-Dioxane Sampling Report, Neptune Commerce Center (Former B952/982 Site), Site ID: 314076.*

[17] NYSDEC, April 14, 2022. *Review of Groundwater Sampling Results for Emerging Contaminants, Former B952/982 Site, Site ID: 314076, Poughkeepsie, Dutchess County*.

[18] NYSDEC, November 17, 1999. *IBM Buildings 952/982, Site No. 314076.*

[19] NYSDEC, April 23, 2004. *IBM Buildings 952/982, Site No. 314076, O&M Modifications*.

[20] IBM, March 28, 2017. *Groundwater Monitoring Well Decommissioning Request, Neptune Commerce Center, Former IBM Leased Buildings B952 & 982, Site No. 314076.*

monitoring requirements for the remaining two monitoring wells, 952-10RA and 952-31R, to include only volatile organic compounds (VOCs).

- On January 18, 2018[21], NYSDEC concurred with the recommendation to decommission 952-6R, 952-9R, 952-11R, 952-12R, 952-13R, 952-14R, 952-14RA, 952-16R and 952-29R with the condition that the decommissioning activities be performed in accordance with CP-43, *Commissioner Policy on Monitoring Well Decommissioning*[22]. In addition, the recommendation to reduce the analytical parameters for the remaining two monitoring wells (952-10RA and 952-31R) to include only the analysis for VOCs in the future was approved.

Based on a review and analysis of trends in VOC concentrations and mass removals during nearly twenty-six years of groundwater extraction operations at the Site, including the results of a baseline groundwater sampling event completed during May 2019, IBM requested to perform a shutdown test of groundwater extraction well 952-30R. The three-phase approach for the 952-30R groundwater extraction well shutdown test was presented in the work plan dated July 26, 2019 (952-30R Shutdown Test Work Plan)[23] submitted to the Department, and subsequently approved on October 11, 2019[24]. An interim report on the shutdown test findings was submitted to the NYSDEC on April 2, 2021[25]. On May 19, 2021[26], NYSDEC approved the continuation of the groundwater shutdown test at the Site. On June 20, 2022[27], a final report on the shutdown test findings was submitted to the NYSDEC which included a petition to terminate groundwater extraction operations at 952-30R. On February 23, 2023[28], NYSDEC in consultation with NYSDOH agreed with the report conclusion that groundwater extraction at 952-30R can be terminated.

The SSDS for the former IBM leased Building 982 was installed in the fall of 2013 during redevelopment of the building by its current owner. IBM elected to install the SSDS as a pro-active, pre-emptive mitigation measure to address potential soil vapor intrusion at former IBM leased Building 982. The SSDS was put into operation on December 13, 2013. The former IBM leased Building 982 houses two tenants: one in the western half of the building, and a second, in the eastern half of the building. The start-up and performance testing of the SSDS was documented in a February 2014 report (2014 SSDS Startup Report)[29], which was approved by the Departments in an April 25, 2014, letter to IBM.

[21] NYSDEC, January 18, 2018. Former IBM B952/982 (Neptune Commerce Center), Site No. 314076, Poughkeepsie, Dutchess County, Groundwater Monitoring Well Decommissioning Request.
[22] NYSDEC, November 3, 2009. Commissioner Policy on Monitoring Well Decommissioning.
[23] IBM Corporation, July 26, 2019. *Request for Extraction Well 952-30R Shutdown Test Former IBM Leased Building 982 (Neptune Commerce Center) Poughkeepsie, Dutchess County, New York, NYSDEC, Order on Consent Index #A3-0655-12-10, Site No. 314076.*
[24] NYSDEC, October 11, 2019. *Request for Extraction Well 952-30R Shutdown Test, Former IBM B952/982 Site (Neptune Commerce Center) Poughkeepsie, Dutchess County, New York, NYSDEC Site No. 314076.*
[25] Groundwater Sciences Corporation and Groundwater Sciences, P.C., April 1, 2021. *Interim Groundwater Monitoring Report, 952-30R. Shutdown Test, Former IBM B952/982 Site (Neptune Commerce Center) Poughkeepsie, Dutchess County, New York, NYSDEC Site No. 314076.*
[26] NYSDEC, May 19, 2021. *Former IBM B952/982, Site No. 314076, Poughkeepsie, Dutchess County, New York, Interim Groundwater Monitoring Report, 952-30R Shutdown Test.*
[27] Groundwater Sciences Corporation and Groundwater Sciences, P.C., June 20, 2022. *Final Groundwater Monitoring Report, 952-30R Shutdown Test, Former IBM B952/982 Site (Neptune Commerce Center) Poughkeepsie, Dutchess County, New York, NYSDEC Site No. 314076.*
[28] NYSDEC, May 19, 2021, *Former IBM B952/982, Site No. 314076, Poughkeepsie, Dutchess County, New York, Interim Groundwater Monitoring Report, 952-30R Shutdown Test*.
[29] IBM Corporation and Sanborn, Head Engineering P.C., February 2014. *Subslab Depressurization System Start-up and Performance Testing Report, Former Building 982 – Neptune Road, Poughkeepsie, New York, NYSDEC Site No. 314076*.

Between February 2019 and February 2021[30], with the approval of the Departments[31], IBM conducted an initial, one-month shutdown test, followed by a long-term, 19-month shutdown test of the SSDS system. As reported to the Departments in an April 1, 2021 letter report[32], the results of indoor air sampling at the end of the shutdown periods did not indicate soil vapor intrusion. However, subslab vapor sampling conducted concurrently with the indoor air sampling indicated rebound of trichloroethene (TCE) concentrations at two locations beneath the eastern portion of the building. When compared to Matrix A of the 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York[33], the TCE concentrations in sub slab vapor fell under the category of recommended mitigation. Therefore, at the request of the Departments, IBM restarted the SSDS on June 2, 2021.

REMEDIAL STATUS

Groundwater quality results indicate the groundwater remedy implemented at the Site has been successful. Groundwater extraction at 952-30R has been terminated with NYSDEC and NYSDOH concurrence. Chlorinated benzene concentrations have been detected at perimeter monitoring wells only sporadically and have remained at non-detect levels below NYSGQS since early 1999. No further groundwater monitoring is currently being conducted, and decommissioning of nine groundwater monitoring wells has been authorized by NYSDEC.

Given that the SSDS has operated for more than two years since the last shutdown test, IBM intends to reassess potential termination of the SSDS

PROPOSED FUTURE WORK SCOPE

As discussed above, and as described in the SMP, ECs implemented at the Site include the Site Cover System, the Groundwater Pump and Treatment System and the Former B982 SSDS. A Monitoring and Sampling Plan, also described in the SMP, was developed to evaluate the performance and effectiveness of the remedy.

As documented above, the NYSDEC together with the NYSDOH have concurred with the termination of groundwater extraction at 952-30R and the decommissioning of nine groundwater monitoring wells. Considering the current Site remedial status and the NYSDEC's approval of termination of the groundwater engineering control, IBM proposes a phased work scope as described below to support final Site closure. Anticipated schedules for each of the work items have been provided and in general, the proposed work will occur over the next three years.

The proposed future work scope generally follows the discussions with NYSDEC during our June 5, 2023, meeting. The first phase of the proposed future work includes steps to close out the existing inactive (terminated) groundwater ECs. The second phase of the

[30] Sanborn Head and Associates, February 15, 2019. Work Plan for Subslab Depressurization System Shutdown Testing Former IBM Leased Building 982 (Neptune Commerce Center) Poughkeepsie, Dutchess County, New York NYSDEC Site No. 314076.

[31] NYSDEC, July 2, 2019. Former IBM B952/982, Subslab Depressurization System Shutdown Testing Results, Site No. 314076, Poughkeepsie, Dutchess County.

[32] IBM Corporation and Sanborn, Head Engineering P.C., April 1, 2021. *Subslab Depressurization System Shutdown Testing Results, Former IBM Leased Building 982, Poughkeepsie, New York, NYSDEC Site No. 314076*.

[33] New York State Department of Health, October 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York (FINAL)*.

proposed future work includes steps to evaluate the potential termination of the Former B982 SSDS. The third phase of work includes steps to be taken to achieve final Site closure.

Phase I: Closeout of Existing, Terminated Engineering Controls (2023 to 2024)

- Groundwater Pump and Treatment System including the associated Structure
    - The treatment equipment associated with the Groundwater Pump and Treatment System will be removed and disposed of in accordance with all applicable rules and regulations.
    - Following removal of the treatment system components including system controls, the Structure will either be removed or provided to the property owner as a storage shed.
    - Former groundwater extraction well 952-30R, located inside the groundwater treatment system structure, will be secured and remain intact until properly decommissioned.
- Groundwater Monitoring Well Network
    - NYSDEC previously approved[21] decommissioning of the following nine groundwater monitoring wells: 952-6R, 952-9R, 952-11R, 952-12R, 952-13R, 952-14R, 952-14RA, 952-16R and 952-29R.
    - As required in the NYSDEC approval letter[21], decommissioning activities for the nine groundwater monitoring wells will be performed in accordance with the *Commissioner Policy on Monitoring Well Decommissioning (CP-43)*[34]. IBM will provide at least seven (7) days advance notice prior to the start of field activities associated with the decommissioning of the nine groundwater monitoring wells.
    - Following hiatus in sampling, and prior to execution of the Environmental Easement under a future revised SMP, IBM will also decommission the three remaining groundwater monitoring wells: 952-10RA, 952-31R and the former groundwater extraction well 952-30R. Decommissioning activities will be performed in accordance with the Commissioner Policy on Monitoring Well Decommissioning (CP-43). IBM will provide at least seven (7) days advance notice prior to the start of field activities associated with the decommissioning of the three groundwater monitoring wells.

Phase II: Evaluation of Potential Termination of the SSDS (Shutdown Test) (2023-2024)

- Former IBM Leased Building 982 Sub Slab Vapor Depressurization System (SSDS)
    - Given that the SSDS has operated for more than two years since the last shutdown test, IBM intends to reassess potential termination of the SSDS. The purpose of the shutdown test is to evaluate if the SSDS is still needed to mitigate potential soil vapor intrusion.
    - In advance of the upcoming 2023-2024 heating season, a shutdown test work plan for the SSDS currently operating at the former IBM leased building 982

[34] New York State Department of Environmental Conservation, November 3, 2009. *DEC Policy*, *CP-43: Groundwater Monitoring Well Decommissioning Policy.*

will be submitted to NYSDEC and NYSDOH. The work plan will provide details on the anticipated indoor air and subslab vapor samples to be collected, quality assurance and quality control measures and, will include information relating to data usability review, evaluation, and reporting.
- Field work will begin after approval of the shutdown test work plan and the start of the heating season on November 15, 2023.
- Validated sample results will be compiled, and a report of findings will be prepared with recommendations for next steps, including potential termination of SSDS operations, depending on the results.

Phase III: Implement Final Site Controls and Closure (2024)

The Site requires site management in the form of ICs and ECs. With the approved termination of the Groundwater Pump and Treatment System and NYSDEC's concurrence with the proposed work outlined in this letter, the ECs that remain include the Cover System and the former IBM leased Building 982 SSDS system.

- Data collected during multiple prior sampling events without the SSDS in operation have not indicated any indoor air impacts due to soil vapor intrusion. Although data collected shows rebound of TCE concentrations in soil vapor has occurred beneath a portion of the building during prior shut down tests, the combination of the building floor slab and the operation of the HVAC system has served to effectively mitigate potential soil vapor intrusion. As discussed above, IBM intends to conduct a shutdown test of the SSDS system during the 2023-2024 heating season to re-evaluate possible termination of the EC. Should the data collected under the shutdown test work plan conclude that SSDS can be permanently shut down, a petition to terminate and decommission the SSDS will be submitted to the NYSDEC / NYSDOH.
- The SMP will be revised and updated by IBM to account for the termination of the Groundwater Pump and Treatment System, decommissioning of groundwater monitoring network wells, and will include updates and revisions to the Monitoring and Sampling Plan, Inspections and Periodic Reporting requirements and any changes based on the SSDS shutdown test findings.
- The remaining final site control measures will be memorialized in an Environmental Easement to be filed with the Dutchess County Clerk. The draft Environmental Easement package prepared previously will be reviewed and modified by IBM to ensure that the Cover System for the B982 footprint remains intact (no excavation).

CLOSING

IBM remains committed to the objectives of the Consent Order. With the approval of termination of certain aspects of the remedial program and, in consideration of the proposed scope of additional work described above to demonstrate there is no further need for an active vapor mitigation system and work towards implementing final controls for the Site, IBM anticipates submittal of an updated Site Management Plan and associated Environmental Easement to achieve final Site closure. If you have any questions, please contact me at (540) 535-8993.

Sincerely,

Stephen Brown

Stephen Brown, P.E.
Program Manager, IBM Corporate Environmental Affairs

cc: R. S. Deyette (NYSDEC)
A. Perretta (NYSDOH)
M. Doroski (NYSDOH)
D. Kaminski (Neptune Capital Investors, LLC)

Attachments:
Figure 1: Former B952/982 Site Location Map
Figure 2: Former B952/982 Well Location Map

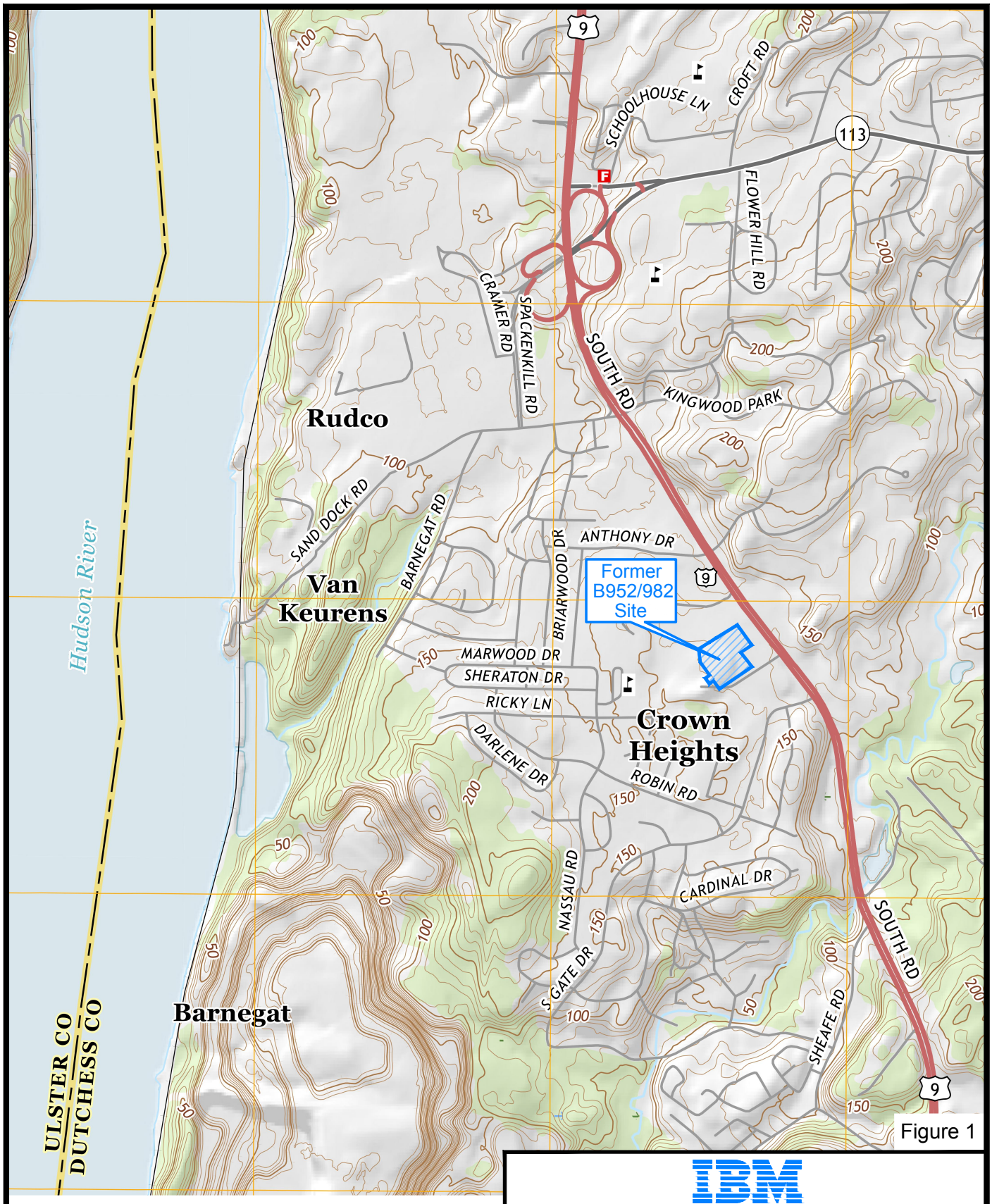

Figure 1

Portion of the Poughkeepsie, New York
7.5-minute USGS Quadrangle (2016)

Approximate

Scale
0 500' 1000' 1500'

Source: USGS National Map US Topo

IBM
Poughkeepsie, New York

Former B952/982
Site Location Map

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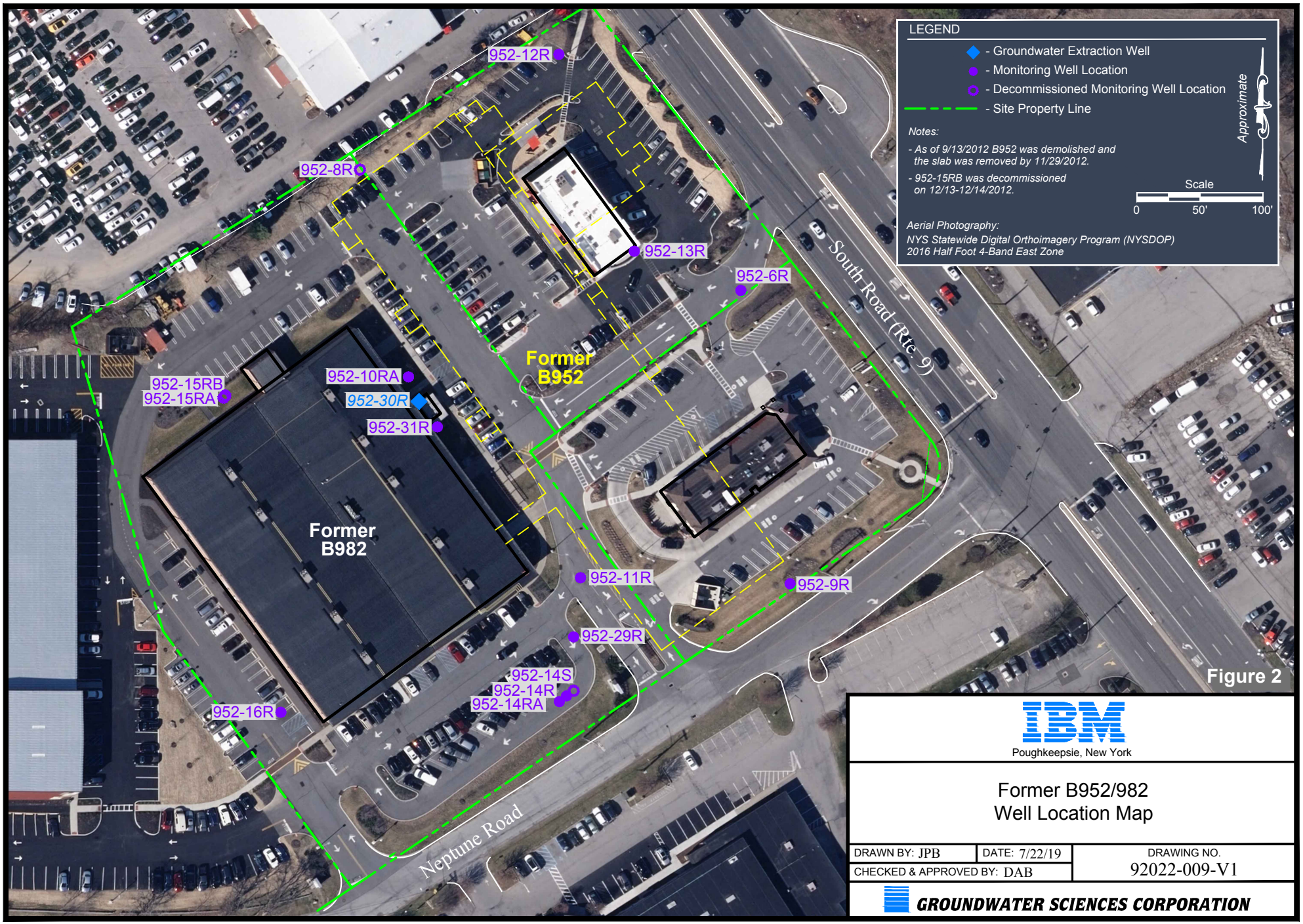

Figure 2

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Former B952/982 Well Location Map

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