



Environmental, Planning, and Engineering Consultants

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December 12, 2018

Mr. Matthew Hubicki
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York, 12233-7017

Re: Polychrome Research and Development (R&D) Lab Site [Polychrome West (PW) Site]
137-145 Alexander Street, Yonkers, NY 10701
BCP Site: C360099
NAPL Monitoring Well Installation Workplan – Phase I

Dear Mr. Hubicki:

On behalf of Avalon Yonkers Sun Sites, LLC (AVB), AKRF, Inc. (AKRF) has prepared this Monitoring Well Installation and Monitoring Workplan (Workplan) for review and approval by the New York State Department of Environmental Conservation (NYSDEC).

As previously discussed with NYSDEC, AVB is planning installation of three (3) dense non-aqueous phase liquid (DNAPL) monitoring wells within the Polychrome West future building footprint. The preliminary locations were submitted to NYSDEC on October 25, 2018, and the well locations within the building footprint (NW-8, NW-9 and NW-10) were approved by NYSDEC on November 21, 2018. At that time, NYSDEC requested that one additional shallow light non-aqueous phase liquid (LNAPL) monitoring well be installed next to DNAPL monitoring well NW-10 (see Figure 1). Note that NW-11 (discussed in the November 21, 2018 email correspondence) is outside of the building footprint and is not part of this Workplan. Monitoring wells outside of the future building footprint will be discussed in a future submission to NYSDEC.

NAPL Monitoring Well Construction Methods and Details

AKRF will subcontract a driller to mobilize a truck mounted drill rig to the PW Site. The driller will utilize an 8-inch hollow stem auger to install the 4-inch DNAPL monitoring wells to the depths specified in the attached Table 1. DNAPL monitoring well construction will be in accordance with the PW Remedial Action Workplan (RAWP) and constructed as follows from bottom (lowest elevation) to top: a three-foot stainless steel sump, followed by a 10-foot 40-slot stainless steel screen, followed by stainless steel risers to stick up finishes above the ground surface to accommodate the future building grade. Hydrated bentonite or grout will be utilized in the annulus surrounding the sump and from 2 feet above the screen to grade, and pea gravel will be utilized as the filter pack surrounding the screen. NW-10s (LNAPL monitoring well) will be installed utilizing the same methods discussed above for the DNAPL monitoring wells, but will be constructed of PVC instead of stainless steel, have a 15-foot well screen, and the sump will be one-foot in length as opposed to three feet, as summarized in Table 2. Well construction logs will be provided to NYSDEC after installation activities are completed.

The bottom of the stainless steel screen for the DNAPL monitoring wells corresponds to the lowest adjacent elevated TarGOST reading(s) recorded in the pre-design investigation (PDI). Based on confirmation borings from the PDI and observations from the PW RAWP, the deepest elevated TarGOST readings appear to correspond with the interface between the historical fill and native river sediments (confining or semi-confining layer) at the PW Site. For the LNAPL monitoring well (NW-10s), the screen depths were chosen in order to span the groundwater table.

After installation, NAPL monitoring wells will be developed by surging and pumping. Groundwater will be pumped to the on-site groundwater treatment system for treatment and discharge as per Submittal #3 (Soil Reuse and Dewatering). Following NAPL monitoring well development, AKRF will gauge the NAPL monitoring well on a daily basis for a week to monitor NAPL accumulation. If significant NAPL is observed (up to 1 foot within the screened interval), and the accumulation of NAPL has stabilized, AKRF will assess the NAPL for transmissivity in general accordance with ASTM E2856-11. AKRF may also elect to complete fingerprint analysis of the NAPL.

Schedule

AKRF requests approval to complete NAPL monitoring well installation activities at the PW Site starting on Monday, December 17, 2018. As previously stated, additional NAPL monitoring wells outside of the future building footprint will be addressed in a future submittal.

If you have any questions, comments or concerns regarding this Workplan, please reach contact me at at (914) 922-2387.

Sincerely,
AKRF Engineering, P.C.



Patrick McHugh, P.E.
Environmental Engineer

Encl.: Figure 1 – NAPL Monitoring Well Locations
 Table 1 – DNAPL Well Construction
 Table 2 – LNAPL Well Construction

cc (electronic copy only): Kevin Carpenter – NYSDEC
 Aaron Levy – Avalon Bay
 Barry White – Avalon Bay
 Chris Capece – Avalon Bay
 John Fitzpatrick – Avalon Bay
 Jon Lariviere – Avalon Bay
 Robert Acampora – Avalon Bay
 Marc Godick – AKRF

ALEXANDER STREET



LEGEND

PROPERTY LINE



REMEDIAL EXCAVATION
OR ISS UNIT



NAPL MONITORING WELL



SHALLOW (LNAPL)
MONITORING WELL



MONITORING WELL
PENDING APPROVAL



120% RE RESPONSE



100% RE RESPONSE



60% RE RESPONSE



CSO COLLAR



SLURRY WALL



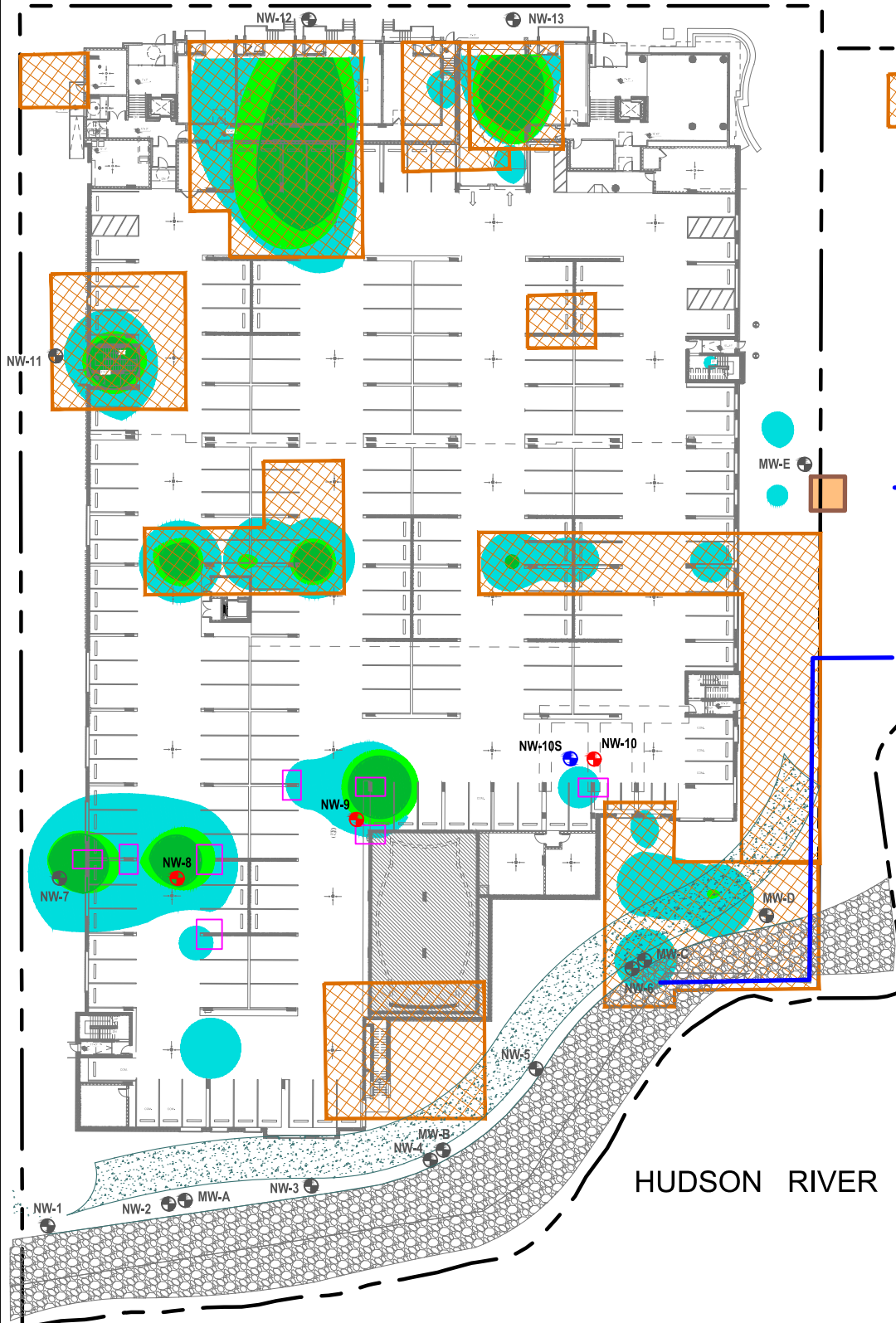
RIVETMENT STONE



WALKWAY



PILE MODIFICATION AREA



HUDSON RIVER



Source:

Drawing comprised of AutoCAD Layers provided by
Paulus, Sokolowski and Sartor Engineering, P.C.



440 Park Avenue South, New York, NY 10016

Polychrome West
NYSDEC Site
Yonkers, New York

NAPL MONITORING WELL LOCATIONS

DATE
12/12/2018

PROJECT NO.
180017

FIGURE
1

Table 1
DNAPL Well Construction
PW NAPL Monitoring Well Installation Workplan - Phase I

Table 1 - DNAPL Well Construction									
Well Number	Nearest TarGOST boring	Original Surveyed Ground Surface Elevation	Depth below ground surface of elevated TarGOST Reading	Bottom Elevation of Elevated TarGOST reading	Proposed Bottom Elevation of 3-foot sump	Bottom Elevation of 40-slot screen	Top Elevation of 40-slot screen	Top Elevation of Riser	Well Depth (feet)
NW-8	TG-96	4.85	28	-23.15	-26.15	-23.15	-13.15	11	37.15
NW-9	TG-80	5.01	25	-19.99	-22.99	-19.99	-9.99	11	33.99
NW-10	TG-83	5.09	25	-19.91	-22.91	-19.91	-9.91	11	33.91

Notes:

1. Total Well Depth is inclusive of the 3-foot steel sump
2. 10-foot section of 40-slot stainless steel screen with pea gravel filter pack to be installed at each location
3. Hydrated bentonite chips to be used around the 3-foot sumps
4. All elevations NAVD88 - units in feet
5. Survey performed by PS&S
6. All well materials to be constructed using 4-inch stainless steel

Table 2
LNAPL Well Construction
PW NAPL Monitoring Well Installation Workplan - Phase I

Table 2 - LNAPL Well Construction							
Well Number	Original Surveyed Ground Surface Elevation	Approximate Elevation of Groundwater Table	Proposed Bottom Elevation of 1-foot sump	Bottom Elevation of 40-slot screen	Top Elevation of 40-slot screen	Top Elevation of Riser	Total PVC Required (feet)
NW-10s	5.09	1.0	-10	-9	6	11	21

Notes:

1. Total well depth is inclusive of the 1-foot PVC sump
2. 15-foot section of 40-slot PVC screen with pea gravel filter pack to be installed
3. Hydrated bentonite chips to be used around the 1-foot sump
4. All elevations NAVD88 - units in feet
5. Survey performed by PS&S
6. Well materials to be constructed using 4-inch PVC