

EXPLANATION OF SIGNIFICANT DIFFERENCES

WHITE SWAN CLEANERS/SUN CLEANERS AREA GROUNDWATER CONTAMINATION SUPERFUND SITE

Site Name and Location

WHITE SWAN CLEANERS/SUN CLEANERS AREA GROUNDWATER
CONTAMINATION SUPERFUND SITE

Wall Township, Manasquan Borough, Sea Girt Borough
Monmouth County, New Jersey

Introduction

The purpose of this Explanation of Significant Differences (ESD) is to explain the United States Environmental Protection Agency's (EPA's) changes to the remedy selected in its September 30, 2013, Record of Decision (ROD) for the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Superfund Site (Site). This ESD provides cost estimates for the treatment of the identified downgradient groundwater "hot spots" and the work required to investigate potential indoor air contamination in buildings located above the Site's groundwater contamination plume, and remediate this contamination, if necessary. Cost estimates for these aspects of the selected remedy were not included in the September 2013 ROD.

The major components of the 2013 ROD include: excavation and off-Site disposal of contaminated soils at the White Swan Cleaners source area; in-situ soil vapor extraction/air sparging of soils and shallow groundwater at the Sun Cleaners source area; construction of a groundwater extraction and treatment system to capture and treat the most highly contaminated groundwater at the Site; monitored natural attenuation for lesser contaminated groundwater; establishment of a Classification Exception Area; indoor air monitoring of buildings in close proximity to groundwater contamination; and installation of vapor mitigation systems, as necessary.

Under Section 117 (c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA or Superfund), EPA is required to publish an ESD when, after issuance of a ROD, the remedial action taken differs significantly, but not fundamentally, from the selected site remedy. Sections 300.435(c)(2)(i) and 300.825(a)(2) of the National Oil and Hazardous Substances Contingency Plan (NCP) set forth the criteria for issuing an ESD and require that an ESD be published if the remedy is modified in a way that differs significantly in either scope, performance, or cost from the remedy selected in the ROD for the site. For this Site, although the remediation of downgradient groundwater hot spots and vapor intrusion sampling and mitigation work was clearly included in the ROD remedy, cost estimates for these aspects of the remedy were not developed and presented in the Administrative Record.

This ESD presents the details of significant differences to the cost of the remedy selected in the September 30, 2013 ROD for the White Swan/Sun Cleaners Superfund Site in Wall Township, New Jersey. This ESD provides a brief history of the Site, describes the remedy, and explains



how, subsequent to the finalization of the ROD, additional cost estimates were developed for portions of the remedy to establish a more accurate overall cost estimate for the remedy. The ROD included estimated costs for remediating contaminated site soils and the areas of the contaminated groundwater plume closest to the sources of contamination using a groundwater pumping and treatment system, but did not include costs associated with collecting and treating groundwater from the four identified downgradient groundwater hot spots. In addition, while the ROD selected ongoing indoor air monitoring of buildings in close proximity to groundwater contamination and installation of vapor mitigation systems as necessary, costs for this vapor intrusion work were not developed or presented in the ROD.

This ESD provides the basis of the modified cost estimate and will be incorporated into the administrative record for the Site in accordance with Section 300.825(a)(2) of the NCP. The administrative record is available for review during business hours at EPA Region 2, 290 Broadway, New York, New York, and at the information repository in the Wall Township Library, Reference Section, 2700 Allaire Road, Wall, New Jersey. The Site documents can also be found at <https://www.epa.gov/superfund/white-swan>.

Site Location, History, Contamination Problems, Selected Remedy

The Site is an area of soil and groundwater contaminated with dry cleaning chemicals and/or their breakdown products located in portions of three municipalities: Wall Township, Manasquan Borough and Sea Girt Borough, New Jersey. The Site includes two source areas located approximately 0.2 miles apart that contributed the same contaminant, tetrachloroethylene (also known as perchloroethylene or PCE), to the soils, sediments, groundwater and indoor air. The former White Swan Cleaners was located at 1322 Sea Girt Ave., Wall Township, New Jersey, and the former Sun Cleaners was located at 2213 Route 35 (also known as Manasquan Circle) in Wall Township, New Jersey. (See Figure 2-1.) PCE and its breakdown products continue to migrate in groundwater from the two source areas located near Route 35 eastward toward the Atlantic Ocean, approximately two miles away. There are narrow contaminant plumes emanating from the two source areas. These two contaminant plumes join and mix in an area underlying Old Mill Road and Laurel Ave. The joined contaminant plume then expands laterally as it moves generally eastward.

Densely developed residential/commercial neighborhoods are located to the north, east and south of the two former dry cleaners' properties. To the west, there are mixed residential, commercial and rural areas. The Site groundwater contamination covers approximately two square miles. The two former dry cleaners are located on either side of Route 35 and Manasquan Circle, a heavily travelled highway system. The Site is bordered on the north by Hannabrand Brook and Wreck Pond, which flow east into the Atlantic Ocean, a distance of approximately two miles. To the southeast, the Site is bordered by Judas Creek, Mac Pond and Stockton Lake, which also flow east into the Atlantic Ocean. Impacted groundwater in the vicinity of the Site is utilized by many of the residents through shallow irrigation wells, but not as a potable water supply. The Wall Township, Manasquan and Sea Girt residents in the area of the Site get their drinking water from the public water supply system that uses deep wells which are not impacted by the Site contamination.

The White Swan Cleaners and Sun Cleaners both operated from approximately 1960 through 1991. Both operations used the same chemical, PCE, as a dry cleaning solvent and disposed of used solvent on the ground or in septic tanks, from which it migrated to the soil, groundwater, and indoor air. In the late 1990s, a resident of Magnolia Avenue notified the Monmouth County Health Department (MCHD) that their private irrigation well contained PCE. MCHD sampled an additional 29 irrigation wells located east of Route 35, and found extensive PCE contamination. Subsequently, approximately 100 irrigation wells were sampled by MCHD and the New Jersey Department of Environmental Protection (NJDEP), and levels of up to 1,648 parts per billion (ppb) of PCE were detected.

In 1999, MCHD sampled Hannabrand Brook and Wreck Pond and found PCE levels in excess of the NJDEP Surface Water Quality Standard. In 2002, PCE was detected in the surface water of Judas Creek. In January 2000, soil and groundwater samples were collected by NJDEP at the White Swan property. PCE was detected in both soil and groundwater samples. NJDEP concluded that the White Swan property was a source of groundwater contamination. In 2001, NJDEP collected soil and groundwater samples from the Sun Cleaners property that revealed the presence of elevated levels of PCE in soils and groundwater. These data confirmed the Sun Cleaners property as a source of groundwater contamination.

On September 23, 2004, EPA included the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Site on the National Priorities List of Superfund Sites. On September 21, 2006, Bank of America, a potentially responsible party for Site contamination, commenced remedial investigation and feasibility study (RI/FS) activities under an administrative order on consent issued by EPA. The purpose of the study was to identify the nature and extent of contamination and to develop cleanup alternatives.

The RI/FS was completed in 2013. The RI/FS findings indicated that volatile organic compounds (VOCs), primarily PCE and its breakdown products, are the primary contaminants of concern at the Site. PCE and other compounds found at the Site are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14).

The data indicate that soils in the two source areas (the White Swan and Sun Cleaners properties) contain highly elevated levels of PCE. It is evident that the contamination from these two source areas have commingled a short distance downgradient from the two properties, forming one plume. Together the two source areas have contributed significant amounts of PCE to the aquifer and are a continuing source of groundwater contamination at the Site. The PCE contamination originates at the two source areas, migrates, and dissolves in the groundwater and then flows primarily to the east to the Atlantic Ocean. The groundwater plume of VOC contamination is approximately one mile wide and two miles long. As this groundwater contamination moves eastward, it moves downward in the aquifer toward a low permeability layer and spreads laterally.

Volatilization of PCE and trichloroethylene (TCE) is occurring from the shallow groundwater, and vapor-phase PCE and TCE is entering the air spaces within the soil vadose zone. Elevated levels of PCE in the vapor phase are accumulating under some building slabs and these contaminants have migrated into the indoor air in some buildings. To date, 36 out of

approximately 500 structures sampled have required the installation of vapor mitigation systems. These structures are generally located above the areas of the groundwater plume with the highest concentrations of VOCs. This vapor intrusion work was not part of the RI/FS activities performed by Bank of America. Initially the New Jersey Department of Environmental Protection conducted indoor air sampling and installed 21 mitigation systems. Then EPA took over the vapor intrusion investigation and the installation of vapor mitigation systems as a removal action. However, Bank of America, under the terms of an Administrative Settlement Agreement and Order on Consent (AOC) issued by EPA on August 8, 2013, upgraded existing vapor mitigation systems which were previously installed by EPA and NJDEP, and installed several new systems. The work under that AOC is now complete and EPA is currently performing vapor intrusion sampling at the Site as part of the selected remedy, as discussed below.

On September 30, 2013, EPA issued a ROD that describes the selected remedy for contaminated groundwater, soil and indoor air at the Site. The ROD included the following remedial action objectives:

- Prevent or minimize current and future human exposures, including ingestion of groundwater and/or inhalation of vapors, from Site-related VOCs in groundwater that present a risk to public health and the environment;
- Prevent or minimize migration of Site-related soil contamination to groundwater;
- Restoration of the Site groundwater to meet drinking water standards within a reasonable time frame; and
- Prevent or minimize the migration of Site-related contaminated groundwater to surface water and sediment that presents a risk to the environment.

To achieve these objectives, the major components of EPA's selected remedy are:

- Excavation and off-site disposal of soil contaminated with VOCs at the White Swan source area;
- *In-situ* soil vapor extraction/air sparging of soils and shallow groundwater at the Sun Cleaners source area;
- Construction of a groundwater extraction and treatment system to capture and treat the most highly contaminated groundwater at the Site;
- Monitored natural attenuation for lesser contaminated groundwater;
- Establishment of a Classification Exception Area, which is an institutional control, to minimize the potential for exposure to contaminated groundwater until the groundwater meets the cleanup goals; and

- Indoor air monitoring of buildings in close proximity to groundwater contamination, and installation of vapor mitigation systems, as necessary.

Since the issuance of the Site's ROD in September 2013, a significant amount of remediation work has been completed at the Site. Highly contaminated Site soils at the Sun Cleaners source area are currently being treated by a soil vapor extraction/air sparging system. Construction of the system was completed by EPA in March 2016 and treatment is ongoing. The engineering design for the remediation of the White Swan source soils through excavation and off-site disposal has been recently completed by Bank of America. Construction of this aspect of the work was initiated by Bank of America in 2017. The groundwater extraction and treatment system design was initiated by EPA in 2016 and this design work is ongoing. In addition, EPA's sampling of residential and commercial buildings in the vicinity of the Site for indoor air contamination is ongoing.

Description of the Significant Differences and the Basis for those Differences

As described above, the 2013 ROD established cleanup goals for the source area soils and the contaminated groundwater and established remediation methods for achieving those goals. The groundwater extraction and treatment remedy addresses the most highly contaminated part of the aquifer located at and downgradient of the two source areas. The ROD identified two portions of the large groundwater contaminant plume at the Site as the Near Field and the Far Field Areas. The Near Field Area of the plume is the area of the groundwater plume with highly contaminated groundwater (levels of PCE generally greater than 1,000 ppb) located in close proximity to the soil source areas. The Far Field Area of the plume is the area of groundwater located further from the soil source areas with levels of PCE generally below 1,000 ppb. The ROD further indicated that within the Far Field Area of the plume, a number of groundwater hot spots containing PCE levels near or above 1,000 ppb were identified. The ROD stated that these Far Field hot spots will be further evaluated in the remedial design and may be addressed through the groundwater extraction and treatment system, or smaller, localized treatment systems. Four hot spots identified to date are located downgradient of the source areas near Magnolia Ave, Old Mill Road, Christie Lane and Terrace Place (See Figure 2-3).

Consistent with EPA requirements, cost estimates were developed for remedial alternatives included in the Feasibility Study for the Site. These costs are summarized in the ROD. The estimates are based on the data gathered during the RI/FS. Cost estimates developed during the RI/FS process are not actual project cost estimates, rather, they are used to compare and contrast the different remedial alternatives as one of EPA's nine evaluation criteria used to select a remedy.

The cost estimates developed for each of the groundwater alternatives in the Feasibility Study did not include costs associated with the extraction and treatment of the Far Field groundwater hot spots. Further, although the investigation and remediation of contaminated indoor air was included in each alternative (except the No Action alternative), costs associated with implementing this aspect of the remedy were not included in the ROD.

Estimated Costs for Groundwater Hot Spot Collection and Treatment

The ROD estimated the cost of the groundwater extraction and treatment system included in the selected remedy to be \$13.5 million. As explained above, this cost estimate included the extraction and treatment of the Site's most contaminated groundwater located in proximity to the source areas, also referred to as the Near Field area, which is described in further detail in the ROD. The cost estimate in the ROD did not include the additional costs required to address contaminated groundwater in the identified downgradient hot spot areas located in the Far Field area. EPA has developed an additional cost estimate for the treatment of contaminated groundwater in four currently identified hot spot areas consistent with the ROD. EPA estimates that the extraction and treatment of the contaminated groundwater located within the four hot spots could total approximately \$5,296,472. This results in the estimate to address all groundwater contamination at the site in accordance with the selected remedy to increase from \$13.5 million to \$18.8 million.

Separate cost estimates for each of the four currently identified hot spots were developed resulting in the total hot spot cost estimate of \$5,296,472. In developing the cost estimates, major factors considered for each hot spot included additional extraction and injection wells needed, and construction of piping from the hot spot area to the treatment plant. In addition, for each hot spot, other factors considered included in the cost estimate were: obtaining access; handling additional groundwater at the treatment plant; permitting and planning costs; increased costs for plant operation and maintenance; and additional equipment replacement costs. The Terrace Place hot spot, which is in the Far Field downgradient area, was included in the \$5,296,472 estimate as part of the groundwater extraction and treatment system. However, if a localized treatment system is installed at the Terrace Place hot spot, rather than pumping contaminated groundwater back to the treatment plant, the estimated cost for all four hot spots drops to \$4,142,210. Please see the attached cost estimate (Attachment 1) for details of the cost estimate broken down for each hot spot area. Two estimates are provided for the Terrace Place hot spot, one for having the hot spot included in the Extraction and Treatment system and one for using a localized treatment system. As stated above, assumptions used in developing the cost estimate are based on best professional judgment at this time and are not intended as an actual project budget. During the remedial design, additional data will be collected, detailed engineering analyses will be performed, and numerous determinations will be made on how best to implement the details of the selected remedy, which may vary from assumptions made for cost estimating purposes.

The cost estimates developed for the downgradient groundwater hot spot treatment using the extraction and treatment system only apply to the selected remedy, which was Alternative 4 in the Feasibility Study and ROD. The cost estimates for the other alternatives presented in the ROD (except the No Action alternative) would also significantly increase by varying amounts if they were revised to include hot spot treatment.

Estimated Costs for the Vapor Intrusion Program

The ROD called for an ongoing program of indoor air sampling and mitigation in numerous buildings where the indoor air is potentially impacted by the Site's groundwater contamination.

This program includes sampling of sub-slab air, indoor air and the installation of vapor mitigation systems, as necessary.

The selected vapor intrusion investigation/mitigation aspect of the remedy was included as part of each groundwater alternative developed in the Feasibility Study, except the No Action Alternative. The estimate of the cost of the required work to address vapor intrusion into buildings overlying the groundwater contaminant plume includes a number of activities. These activities include: sampling of sub-slab air and indoor air of buildings that have not yet been sampled; periodic re-sampling of a portion of the buildings sampled; installation of vapor mitigation systems, as required, and maintenance of all vapor mitigation systems. There are approximately 1,200 buildings located over the groundwater contaminant plume footprint at the Site. For cost estimating purposes, EPA has estimated approximately 800 of these buildings may need to be sampled, based on PCE and TCE concentrations in the sub-surface. The estimated cost of the above described work is \$7,348,365. Please see Attachment 2 for additional details regarding this cost estimate.

Since the cost for vapor intrusion work was not included for Groundwater Alternatives 2, 3 and 4 in the Feasibility Study, overall costs for each of those alternatives would increase by the same amount (\$7,348,365). The cost of the No Action alternative for groundwater still remains \$0. The inclusion of costs for vapor intrusion does not change EPA's assessment of each alternative under the cost criteria, as the cost for each alternative has increased by the same amount. The No Action Alternative was not selected as it was determined to be not protective of human health of the environment.

The attached cost estimates developed by EPA for the extraction and treatment of contaminated groundwater in the hot spot locations and the required vapor intrusion work are based on data collected at the Site to date. These cost estimates are not binding as a project budget, and the actual costs of implementing the selected remedy may vary from these estimates based on additional information from the Remedial Design.

This modified cost estimate results in the increase of the estimated total present worth cost to implement the groundwater and indoor air aspects of the selected remedy from \$13.5 million to \$26.1 million. The overall estimated present worth cost of all aspects of the selected remedy increases from \$18.9 million to \$31.6 million, which includes remediation of the Site's groundwater, soil source areas and indoor air as described in the September 2103 ROD.

Support Agency Comments

The State of New Jersey concurs with this ESD which modifies only the cost estimate for the remedy described in the 2013 ROD.

Affirmation of Statutory Determinations

EPA, after consultation with NJDEP, is issuing this ESD. The ESD modifies the estimated cost to implement the remedy. The scope and performance of the remedy is not being modified by this ESD, and the remedy remains protective of human health and the environment and will


comply with federal and State requirements that are legally applicable or relevant and appropriate to the remedial action.

The remedy is technically feasible, cost-effective, and satisfies the statutory requirements of CERCLA by providing for a remedial action that permanently and significantly reduces the toxicity, mobility and volume of hazardous substances at the Site.

Public Participation Activities

Although not required, EPA published a public notice in the Asbury Park Press newspaper on July 6, 2017 informing the public of the availability of the proposed ESD for review and comment. A thirty (30) day public comment period was established, and EPA accepted comments on the proposed ESD from July 6, 2017 through August 7, 2017. EPA's proposed ESD and responses to comments received during this public comment period are documented in a Responsiveness Summary, which is included as an attachment to this document ESD.

This ESD, and the documents which form the basis for the decision to modify the ROD by including the updated cost estimates associated with the indoor air and groundwater hot spot remediation, are incorporated into the Administrative Record maintained for the Site. The Administrative Record is available for review during business hours at the information repository in the Wall Township Public Library, 2700 Allaire Road, Wall, New Jersey, and at EPA Region 2 offices, 290 Broadway, New York, New York. In addition, the site documents can also be found at: <https://www.epa.gov/superfund/white-swan>.



Angela Carpenter, Acting Director
Emergency and Remedial Response Division

9.25.17
Date

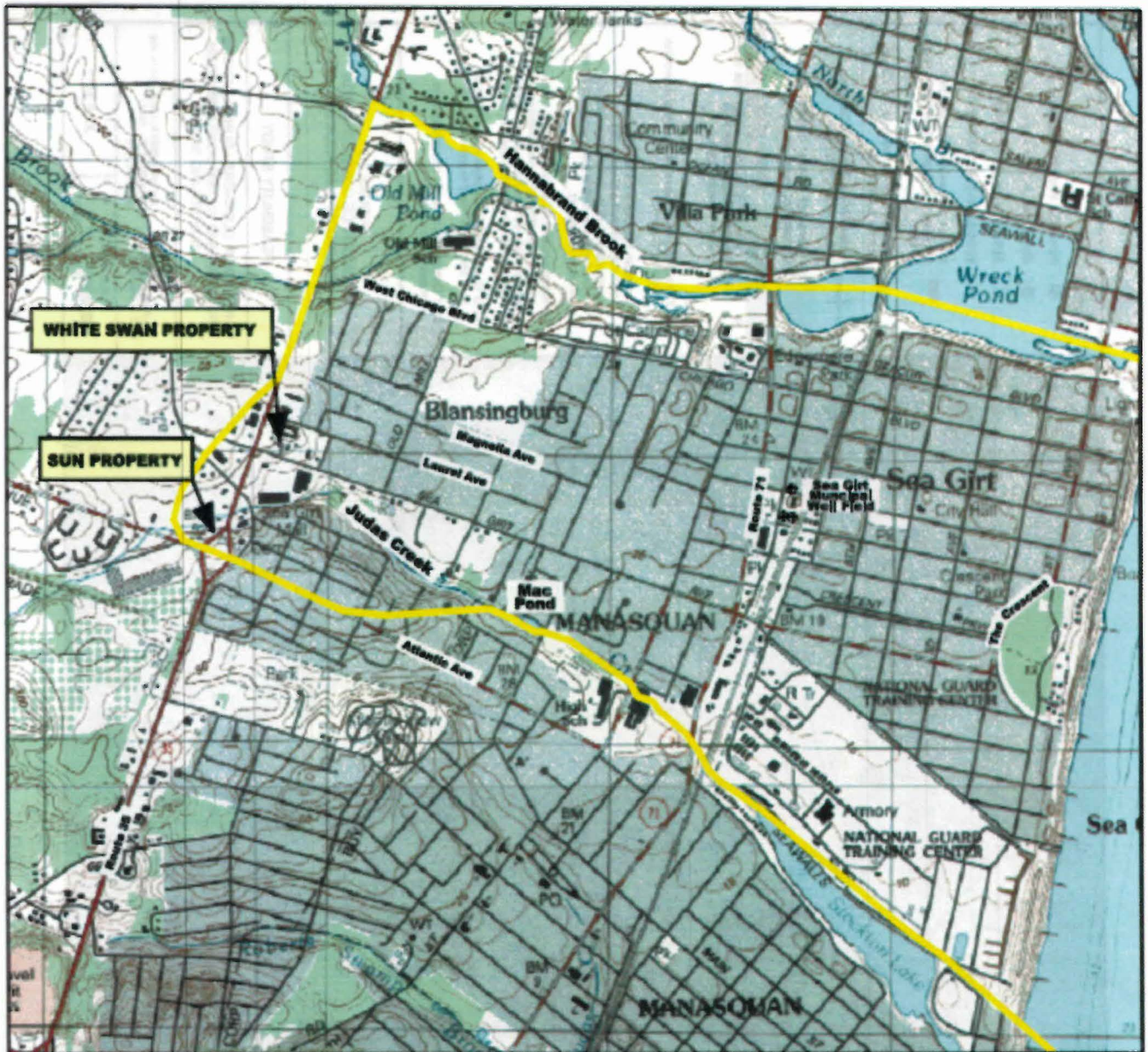


IMAGE SOURCE:
USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE
ASBURY PARK, NEW JERSEY, 1989



QUADRANGLE LOCATION

LEGEND

APPROXIMATE
SITE BOUNDARY

**FIGURE 2-1
SITE LOCATION MAP**

FEASIBILITY STUDY

**WHITE SWAN CLEANERS / SUN CLEANERS
AREA GROUND WATER CONTAMINATION
SUPERFUND SITE**



285 DAVIDSON AVENUE, SUITE 405
SOMERSET, NJ 08873
(732) 302-9500

SCALE IN FEET



JUNE 2012

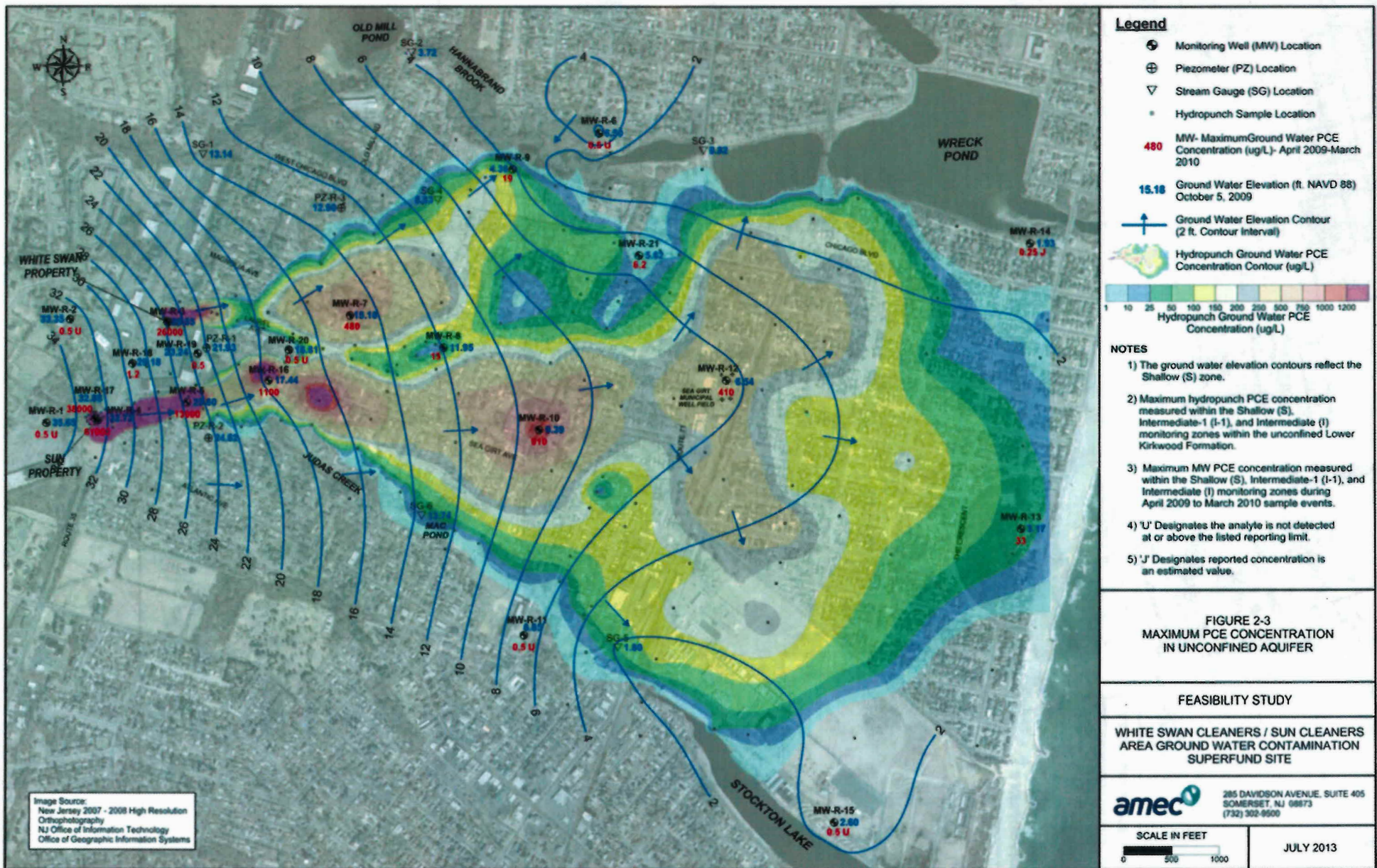


Table 1		White Swan/Sun Cleaners Groundwater Plume						
		Indoor Air Monitoring, Indoor Air Ventilation System Installation and O&M						
Row	Cost Type	Description	Quantity	Unit Rate	Frequency/ Amount	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)
1	Capital	Indoor Air Sampling (includes cost to acquire canisters, cleaning, labor to deliver/set up an average of 3-5 canisters per house, cost to drill and install ports through lower level floors, set up and retrieve canisters, package up for shipping to lab, collect duplicates, ambient air samples, interaction with lab for QC/QA, interpreting lab results)1	800	\$2,000	Once / \$1,600,000	15%	1,840,000	1,840,000
2	Capital	Project Management/ Administrative cost for RPM to identify houses, gather block/lot/names/address, send information packages, access agreements, follow-up calls and letters, and visiting houses to explain sampling program)	800	\$250	Once / \$200,000	15%	\$230,000	\$230,000
3	Capital	Indoor air system installation (estimated cost for a complex system installation as experienced by RA Data and Bank of America). Assumes same 5% rate of needing systems as with the previous sampling experience. 5% of 800 houses = 40 houses	40	\$8,000	Once / \$320,000	15%	\$368,000	\$368,000
Subtotal Capital Costs							2,438,000	2,438,000
4	Capital	Construction Management 2	222	\$150	74	15%	\$38,295	\$38,295
5	Capital	Remedial Design 3	296	\$150	74	15%	\$51,060	\$51,060
6	Annual	Project Management4 O&M	30 Yr	\$2,090	Years 1-30	15%	\$72,095	\$29,821
7	Annual	Indoor Air Sampling: (10% of 800= 80), does not include port installation or admin costs. 80 houses @ \$2000 per house, each year x 30 years	30 Yr	\$160,000	Years 1-30	25%	6,000,000	2,481,808
8	Annual	Indoor Air Sampling: (10% of 450 houses already sampled between = 45), does not include port installation or admin costs. 45 houses @ \$2,000 per house, each year x 30 years.	30 Yr	\$90,000	Years 1-30	25%	3,375,000	1,396,017
9	Annual	Annual Reporting (Sampling and O&M) 5	30 Yr	\$30,000	Years 1-30	10%	\$990,000	\$409,498
10	Periodic	Replace complete indoor air system once in Year 30. 85% of (40 new systems + 34 existing systems) = 63 total systems @ \$8,000 per house.	1 replacement system	\$504,000	Once in Year 30	25%	\$630,000	\$82,761
11	Periodic	40 new systems + 34 existing systems = 74 total systems @ \$1300 per house. Replace Fan in Years 10 and 20 @\$650	2 fans in 30 years per	\$48,100	Fans Years 1-30, replaced in Year 10	25%	\$120,250	\$46,102
12	Periodic	Re-sample, inspect, and maintain indoor air systems for 74 houses, 10 times total each in Years 1-30, @ \$1,000 per house	10 events	\$74,000	10 times in Years 1-30	25%	\$925,000	\$375,002
Total Capital + Annual + Periodic Costs Years 1-30							14,639,700	7,348,365
1 Assume 800 structures between Village Rd and Atlantic Ocean, Hannabrand Brook and Stockton Lake								
2 Assumes 3 hours/install (74) @ \$150/hour								
3 Assumes 4 hours/install (89) @ \$150/hour								
4 assumes 6% of upfront capitol cost over lifespan of the project. This is pro-rated per year and summed for years 1-30								
5 Assume one sampling / data / O&M report annually. Broken out per year and summed for years 1-30								

Table 2 - Estimated Hot Spot Treatment Costs, page 1 of 5

Magnolia Lane Hot Spot

Row	Cost Type	Description	Quantity	Units	Frequency	Unit Cost	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)
1	Capital	Land Acquisition or Use Agreement	0.25	LS	Once	\$50,000	25%	\$15,625	\$15,625
2	Capital	Permitting and Planning	0.25	LS	Once	\$25,000	15%	\$7,188	\$7,188
3	Capital	Magnolia Hot Spot Extraction Well/Piping/Electrical	1	LS	Once	\$436,000	15%	\$501,400	\$501,400
4	Capital	Additional Injection Wells	0.5	EA	Once	\$80,000	15%	\$46,000	\$46,000
5	Capital	Incremental P&T equipment cost from increased flow rate	0.25	LS	Once	\$529,519	15%	\$152,237	\$152,237
Capital Subtotal Capital Costs								\$722,449	\$722,449
6	Capital	Construction Management (6%)	1	LS	Once	6%	15%	\$43,347	\$43,347
7	Capital	Remedial Design (8%)	1	LS	Once	8%	15%	\$57,796	\$57,796
8	Capital	Project Management (8%)	1	LS	Once	8%	15%	\$57,796	\$57,796
9	Annual	P&T System O&M (4 addnl EWs)	30	YR	Years 1-30	\$24,250	25%	\$909,375	\$376,149
10	Periodic	P&T System Replacements over 30 years	5	LS	Every 5 years	\$22,685	25%	\$141,778	\$57,461
								\$1,932,541	\$1,314,998

1- Includes 1/4 of the total estimated costs for obtaining easements for extraction well and piping runs for all 4 hot spot areas

2- Includes 1/4 of the total estimated costs for permitting and traffic control for all 4 hot spot areas

3- Includes 1 ea. 30-gpm extraction well and pump installed to 45' bgs; electrical hookup at the extraction well; additional 3,000 linear feet of piping back to the White Swan source area

4- Includes 1/4 of the total estimated cost to install 2 additional injection wells to handle all 4 new extraction wells located 2,000 ft from the treatment plant

5- Includes 1/4 of the total increase from baseline FS pump and treat equipment and building costs based on industry-standard scaling factors for an additional 120 gpm total capacity

6- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

7- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

8- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

9- Includes 1/4 of the total 12% increase in baseline FS O&M costs based on the estimated costs for additional carbon change-outs, operator labor, maintenance, utility markouts, and sampling

10- Includes 1/4 of the total 15% increase in baseline FS equipment replacement costs based on industry-standard scaling factors for equipment cost increases at increasing production rates.

Table 2 - Estimated Hot Spot Treatment Costs, page 2 of 5

Old Mill Road Hot Spot

Row	Cost Type	Description	Quantity	Units	Frequency	Unit Cost	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)	
1	Capital	Land Acquisition or Use Agreement	0.25	LS	Once	\$50,000	25%	\$15,625	\$15,625	
2	Capital	Permitting and Planning	0.25	LS	Once	\$25,000	15%	\$7,188	\$7,188	
3	Capital	Old Mill Road Hot Spot Extraction Well/Piping/Electrical	1	LS	Once	\$264,000	15%	\$303,600	\$303,600	
4	Capital	Additional Injection Wells	0.5	EA	Once	\$80,000	15%	\$46,000	\$46,000	
5	Capital	Incremental P&T equipment cost from increased flow rate	0.25	LS	Once	\$529,519	15%	\$152,237	\$152,237	
Capital		Subtotal Capital Costs							\$524,649	\$524,649
6	Capital	Construction Management (6%)	1	LS	Once	6%	15%	\$31,479	\$31,479	
7	Capital	Remedial Design (8%)	1	LS	Once	8%	15%	\$41,972	\$41,972	
8	Capital	Project Management (8%)	1	LS	Once	8%	15%	\$41,972	\$41,972	
9	Annual	P&T System O&M (4 addnl EWs)	30	YR	Years 1-30	\$24,250	25%	\$909,375	\$376,149	
10	Periodic	P&T System Replacements over 30 years	5	LS	Every 5 years	\$22,685	25%	\$141,778	\$57,461	
								\$1,691,225	\$1,073,682	

- 1- Includes 1/4 of the total estimated costs for obtaining easements for extraction well and piping runs for all 4 hot spot areas
- 2- Includes 1/4 of the total estimated costs for permitting and traffic control for all 4 hot spot areas
- 3- Includes 1 ea. 30-gpm extraction well and pump installed to 55' bgs; electrical hookup at the extraction well; additional 1,500 linear feet of piping back to the White Swan source area
- 4- Includes 1/4 of the total estimated cost to install 2 additional injection wells to handle all 4 new extraction wells located 2,000 ft from the treatment plant
- 5- Includes 1/4 of the total increase from baseline FS pump and treat equipment and building costs based on industry-standard scaling factors for an additional 120 gpm total capacity
- 6- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 7- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 8- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 9- Includes 1/4 of the total 12% increase in baseline FS O&M costs based on the estimated costs for additional carbon change-outs, operator labor, maintenance, utility markouts, and sampling
- 10- Includes 1/4 of the total 15% increase in baseline FS equipment replacement costs based on industry-standard scaling factors for equipment cost increases at increasing production rates.

Table 2 - Estimated Hot Spot Treatment Costs, page 3 of 5

Christie Lane Hot Spot

Row	Cost Type	Description	Quantity	Units	Frequency	Unit Cost	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)
1	Capital	Land Acquisition or Use Agreement	0.25	LS	Once	\$50,000	25%	\$15,625	\$15,625
2	Capital	Permitting and Planning	0.25	LS	Once	\$25,000	15%	\$7,188	\$7,188
3	Capital	Christie Lane Hot Spot Extraction Well/Piping/Electrical	1	LS	Once	\$305,000	15%	\$350,750	\$350,750
4	Capital	Additional Injection Wells	0.5	EA	Once	\$80,000	15%	\$46,000	\$46,000
5	Capital	Incremental P&T equipment cost from increased flow rate	0.25	LS	Once	\$529,519	15%	\$152,237	\$152,237
Capital		Subtotal Capital Costs						\$571,799	\$571,799
6	Capital	Construction Management (6%)	1	LS	Once	6%	15%	\$34,308	\$34,308
7	Capital	Remedial Design (8%)	1	LS	Once	8%	15%	\$45,744	\$45,744
8	Capital	Project Management (8%)	1	LS	Once	8%	15%	\$45,744	\$45,744
9	Annual	P&T System O&M (4 addnl EWs)	30	YR	Years 1-30	\$24,250	25%	\$909,375	\$376,149
10	Periodic	P&T System Replacements over 30 years	5	LS	Every 5 years	\$22,685	25%	\$141,778	\$57,461
								\$1,748,748	\$1,131,205

1- Includes 1/4 of the total estimated costs for obtaining easements for extraction well and piping runs for all 4 hot spot areas

2- Includes 1/4 of the total estimated costs for permitting and traffic control for all 4 hot spot areas

3- Includes 1 ea. 30-gpm extraction well and pump installed to 55' bgs; electrical hookup at the extraction well; additional 2,100 linear feet of piping back to the White Swan source area

4- Includes 1/4 of the total estimated cost to install 2 additional injection wells to handle all 4 new extraction wells located 2,000 ft from the treatment plant

5- Includes 1/4 of the total increase from baseline FS pump and treat equipment and building costs based on industry-standard scaling factors for an additional 120 gpm total capacity

6- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

7- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

8- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

9- Includes 1/4 of the total 12% increase in baseline FS O&M costs based on the estimated costs for additional carbon change-outs, operator labor, maintenance, utility markouts, and sampling

10- Includes 1/4 of the total 15% increase in baseline FS equipment replacement costs based on industry-standard scaling factors for equipment cost increases at increasing production rates.

Table 2 - Estimated Hot Spot Treatment Costs, page 4 of 5

Terrace Place Hot Spot - New Extraction and Production Well

Row	Cost Type	Description	Quantity	Units	Frequency	Unit Cost	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)	
1	Capital	Land Acquisition or Use Agreement	0.25	LS	Once	\$50,000	25%	\$15,625	\$15,625	
2	Capital	Permitting and Planning	0.25	LS	Once	\$25,000	15%	\$7,188	\$7,188	
3	Capital	Terrace Place Hot Spot Extraction Well/Piping/Electrical	1	LS	Once	\$654,000	15%	\$752,100	\$752,100	
4	Capital	Terrace Place New Deep Production Well	1	LS	Once	\$111,000	15%	\$127,650	\$127,650	
5	Capital	Additional Injection Wells	0.5	EA	Once	\$80,000	15%	\$46,000	\$46,000	
6	Capital	Incremental P&T equipment cost from increased flow rate	0.25	LS	Once	\$529,519	15%	\$152,237	\$152,237	
Capital		Subtotal Capital Costs							\$1,100,799	\$1,100,799
7	Capital	Construction Management (6%)	1	LS	Once	6%	15%	\$66,048	\$66,048	
8	Capital	Remedial Design (8%)	1	LS	Once	8%	15%	\$88,064	\$88,064	
9	Capital	Project Management (8%)	1	LS	Once	8%	15%	\$88,064	\$88,064	
10	Annual	P&T System O&M (4 addnl EWs)	30	YR	Years 1-30	\$24,250	25%	\$909,375	\$376,149	
11	Periodic	P&T System Replacements over 30 years	5	LS	Every 5 years	\$22,685	25%	\$141,778	\$57,461	
								\$2,394,128	\$1,776,585	

1- Includes 1/4 of the total estimated costs for obtaining easements for extraction well and piping runs for all 4 hot spot areas

2- Includes 1/4 of the total estimated costs for permitting and traffic control for all 4 hot spot areas

3- Includes 1 ea. 30-gpm extraction well and pump installed to 45' bgs; electrical hookup at the extraction well; additional 4,700 linear feet of piping back to the White Swan source area

4- Includes abandonment of the existing production well and installation of a new 500-gpm production well to a depth of 110' bgs based on the aquifer profile at this location with hookup to existing piping system

5- Includes 1/4 of the total estimated cost to install 2 additional injection wells to handle all 4 new extraction wells located 2,000 ft from the treatment plant

6- Includes 1/4 of the total increase from baseline FS pump and treat equipment and building costs based on industry-standard scaling factors for an additional 120 gpm total capacity

7- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

8- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

9- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance

10- Includes 1/4 of the total 12% increase in baseline FS O&M costs based on the estimated costs for additional carbon change-outs, operator labor, maintenance, utility markouts, and sampling

11- Includes 1/4 of the total 15% increase in baseline FS equipment replacement costs based on industry-standard scaling factors for equipment cost increases at increasing production rates.

Table 2 - Estimated Hot Spot Treatment Costs, page 5 of 5

Terrace Place Hot Spot - Wellhead Treatment

Row	Cost Type	Description	Quantity	Units	Frequency	Unit Cost	Contingency	Total \$ (non-Discounted)	Present Worth Total (i=7%) (Discounted)
1	Capital	Land Acquisition or Use Agreement	0.25	LS	Once	\$50,000	25%	\$15,625	\$15,625
2	Capital	Permitting and Planning	0.25	LS	Once	\$25,000	15%	\$7,188	\$7,188
3	Capital	Terrace Place Wellhead Treatment	1	LS	Once	\$81,000	15%	\$93,150	\$93,150
Capital		Subtotal Capital Costs						\$115,963	\$115,963
4	Capital	Construction Management (6%)	1	LS	Once	6%	15%	\$6,958	\$6,958
5	Capital	Remedial Design (8%)	1	LS	Once	8%	15%	\$9,277	\$9,277
6	Capital	Project Management (8%)	1	LS	Once	8%	15%	\$9,277	\$9,277
7	Annual	Terrace Place Wellhead Treatment System O&M	30	YR	Years 1-30	\$31,000	25%	\$1,162,500	\$480,850
								\$1,303,974	\$622,325

- 1- Includes 1/4 of the total estimated costs for obtaining easements
- 2- Includes 1/4 of the total estimated costs for NJDEP and NPDES permitting and traffic control for all 4 hot spot areas
- 3- Includes 2 ea. 6,000 lb carbon vessels to treat production well water
- 4- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 5- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 6- Based on standard markups on additional costs in accordance with USEPA FS Cost Estimating Guidance
- 7- Includes O&M costs for carbon change-outs, operator labor for maintenance, and sampling

Responsiveness Summary

White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Superfund Site

Explanation of Significant Differences

Wall Township, Manasquan Borough, Sea Girt Borough

Monmouth County, New Jersey

September 2017

Introduction

On July 6, 2017, EPA issued a proposed Explanation of Significant Differences (ESD) which described a modification to the September 2013 Record of Decision (ROD) for the Site. This Responsiveness Summary provides a summary of comments on the proposed ESD for the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Superfund Site (Site), and the EPA's responses to those comments. All comments received have been considered in EPA's issuance of the final ESD.

The Responsiveness Summary is divided into the following sections:

- I. Background of community involvement and concerns: This section provides the history of community involvement and interests regarding the Site.
- II. Comprehensive summary of major questions, comments, concerns and responses: This section contains summaries of written comments received during the public comment period.

The last section of the Responsiveness Summary includes attachments which document public participation in the ESD process for this Site. They are as follows:

Attachment A: contains the public notice which was published in the Asbury Park Press.

Attachment B: contains the written comments received by EPA during the public comment period.

I. Background of community involvement and concerns

This Responsiveness Summary provides a summary of the public's comments and concerns regarding the proposed ESD. EPA made the proposed ESD document available for review and public comment by adding it to the Administrative Record established for the Site maintained at EPA's Region 2 office, 290 Broadway, New York, NY 10007. EPA published a notice of availability of this document in the Asbury Park Press on July 6, 2017. EPA established a public comment period which ran from July 6, 2017 through August 7, 2017. Written comments were

received from Bank of America, N.A. (“BOA” or also referred to as the “Bank”) during the public comment period and are summarized and responded to below.

II. **Comprehensive summary of major questions, comments, concerns and responses:**

Response to August 4, 2017 written comments from Bank of America (BOA)

1. **BOA Comment:** BOA believes that EPA may not make the proposed changes to the ROD through an ESD. Contrary to the rationale in the ESD, the September 2013 ROD did not select a remedy for areas of “hot spot” groundwater contamination, but rather, the ROD left that question to be evaluated at a later time.

EPA Response: EPA disagrees with BOA’s comment. EPA selected a Site-wide remedy, which included a remedy for areas of groundwater “hot spot” contamination, in the September 2013 ROD. The ROD specifically selected extraction and treatment for the groundwater “hot spots” and did not leave the question of how to remediate the hot spots for a later time, as stated by BOA. The modification to the ROD made in the ESD did not select, change or modify the selected remedy, but only modified the cost estimate presented in the ROD. The cost estimate in the September 2013 ROD did not include costs required to implement two portions of the selected remedy: 1) the remediation of groundwater “hot spots” selected in the ROD, and 2) the implementation of vapor intrusion investigations and remediation. In accordance with EPA guidance, this type of modification to a ROD is appropriately done through an ESD.

Please see the ROD page 33, which reads as follows:

A number of localized “hot spots” of groundwater contamination have been identified in the Far Field area. These Far Field Hot Spots generally have PCE contamination at levels of approximately 1,000 ppb or higher. These hot spot areas in the Far Field will be further evaluated in the remedial design and may be addressed through the groundwater extraction and treatment system, or smaller, localized treatment systems.

To clarify, groundwater extraction and treatment was selected as the remedial technology for the most contaminated groundwater at the Site. The most contaminated groundwater at the Site includes groundwater located in the Near Field portion of the site, as well as groundwater within Far Field “hot spots”. In the last sentence in the above paragraph, EPA intended to convey that further evaluation will be done in the remedial design to determine if the groundwater “hot spots” will be extracted, and then piped and treated at the centralized groundwater treatment plant likely to be constructed somewhere in the Near Field, or if any of the hot spots are more effectively extracted and treated using a smaller scale, local treatment system in place. During the remedial design phase, EPA will be further assessing groundwater conditions throughout the Site and collecting additional data. Based on this data, EPA will evaluate the current locations and levels of contamination present in “hot spots” within the Far Field area of the Site. Based on this

evaluation, EPA will determine, consistent with the selected remedy, where and how best to extract and treat localized elevated areas of contamination within the Far Field.

To add clarity to the ESD, EPA slightly modified some language in the Description of the Significant Differences and the Basis for the Differences section of the ESD to reflect the exact language from the ROD listed above.

2. **BOA Comment:** In selecting a pump and treat remedy for the hot spots, EPA failed to take into account the actual water quality data that has been gathered in 2015 and 2017 that demonstrates a decrease in the levels of contaminants below the “trigger set” for the pump and treat in the Near Field area. If EPA were to perform the required evaluation, the current data would strongly suggest that some of the hot spots do not require a pump and treat remedy.

EPA Response: EPA selected the remedy for the groundwater “hot spots” in the 2013 ROD and based this remedy on a large data set collected during the Remedial Investigation and Feasibility Study performed by BOA from 2007 through 2013. Groundwater data collected in 2015 and 2017 are post-ROD data, performed in support of EPA’s ongoing performance of the remedial design of the selected remedy. The groundwater data collected in 2015 and 2017, as well as other important data collected in the ongoing remedial design will be used by EPA to make determinations regarding the engineering design of the remedy, including the treatment of “hot spots.” If any information collected during the remedial design warrant any modification to the remedy, EPA will proceed as appropriate. BOA’s assertion that current data suggests that some of the “hot spots” do not require extraction and treatment is premature, and based on limited data and analysis.

3. **BOA Comment:** The ROD did not conduct the required nine-factor analysis of the various groundwater treatment alternatives for the Far Field “hot spots.” EPA, recognizing that it was premature because treatment of the “hot spots” needed further evaluation, chose not to evaluate the merits of pump and treat or any other remedial approach for the “hot spots” in the ROD and now seeks to circumvent the required evaluation by selecting a predetermined remedy in an ESD.

EPA Response: The ROD addressed the entire Site groundwater contaminant plume. The “hot spots” are located within the plume. EPA did not circumvent the required nine criteria evaluation for any aspect of the remedy. Four remedial alternatives to address the entire Site groundwater contaminant plume were developed and evaluated for each of the nine criteria, as described in the ROD (see ROD pages 20 through 24 for a description of the four groundwater alternatives and pages 24 through 31 for the analysis of the alternatives under each of the nine criteria).

Alternative 4 was selected as the Site wide groundwater remedy and included treatment of “hot spots” through groundwater extraction and treatment. The ROD at page 33 qualified that:

These hot spot areas in the Far Field will be further evaluated in the remedial design and may be addressed through the groundwater extraction and treatment system, or smaller, localized treatment systems.

Most of the area covered by the Far Field portion of the plume contains PCE levels that are not considered “hot spot” levels, and will be addressed through MNA. The Far Field “hot spots” are limited areas of the Far Field portion of the plume that contain elevated levels of PCE compared to surrounding areas of contamination. Although the ROD described hot spots as small areas with contaminant levels of PCE that are approximately 1,000 ppb or higher, this level was not selected based on a promulgated number, and EPA may reconsider the best way to define a “hot spot” in the remedial design. EPA recognized that these “hot spots” would require active remediation. EPA’s selected remedy included the remediation of Far Field “hot spots” through groundwater extraction and treatment, as stated on page 33 of the ROD.

4. **BOA Comment:** We note that the ESD expressly indicated that an evaluation of MNA was not even considered for the hot spots. This predetermined result expressed in the ESD constitutes arbitrary decision-making.

EPA Response:

“Hot spots” are located within the boundaries of the groundwater plume at the Site. The ESD did not select any remedy for the Site, but rather only modified the 2013 ROD to modify estimated costs to implement the selected remedy.

MNA was considered in the ROD. Specifically, the ROD on page 21 states:

Based on modeling results, it was determined that active treatment of groundwater with approximately 1,000 ppb of PCE or greater, coupled with MNA, would result in the restoration of the Site in a reasonable timeframe.

Based on this finding, four groundwater alternatives were developed to address all portions of the substantial groundwater contaminant plume. In addition to the required No Action alternative, active remediation was included for the most highly contaminated portions of the Site’s plume, which are located in the Near Field area and within hot spots identified within the Far Field area of the plume. Lesser contaminated portions of the plume in the Far Field will be address through MNA. This is clearly explained in the ROD. The decisions made in the ROD in selecting the remedy and further clarified in the ESD were not predetermined or arbitrary.

5. **BOA Comment:** The Bank disagrees with EPA’s statements regarding the extent of mixing between the contaminants plume for the two separate source areas. The

overwhelming weight of evidence of the RI established that two distinct and separate groundwater plumes emanate for each of the two distinct and separate source areas. RI data further establish that the plumes maintain their separate characteristics past the so-called "mixing zone" (i.e., the area underlying Old Mill Road and Laurel Ave) where the low concentration peripheral edges of the plumes appear to meet. The Bank disagrees with EPA's statements and conclusions in the ESD that there is one groundwater contaminant plume associated with the Site.

EPA Response: No information presented by the Bank, or collected to date supports modification of EPA's findings with respect to the Site's plume. EPA stands by its findings with respect to the Site's groundwater contaminant plume. EPA's findings regarding the groundwater plume were presented in the ROD and reiterated in the ESD. There is no "overwhelming weight of evidence" supporting the Bank's incorrect assertion that two separate plumes mix, and after mixing, maintain their separate characteristics.

BOA's comment is the same comment it submitted to EPA during the public comment period for the 2013 ROD. BOA's comment and EPA's response as documented in the 2013 Administrative Record are provided below. EPA's response to this 2013 comment continues to describe EPA's current position regarding the plume.

BOA's 2013 comment: Contrary to EPA's characterization of the Site's groundwater contamination as being one plume, the RI data clearly establish that there are two largely distinct and separate groundwater plumes at the Site, and the edges of these plumes overlap in a limited area (primarily Laurel and Magnolia Avenues and Old Mill Road). Where the plumes overlap, they retain their separate characteristics. The two plumes also exhibit distinct characteristics relative to solvent daughter product ratios. Further, a contaminant plume is defined by a longitudinal center of mass aligned along an orientation controlled by the hydraulic gradient.

EPA 2013 response: EPA disagrees with the comment. As stated in the Proposed Plan, the Site groundwater contamination emanates from two separate source areas. As the contaminated groundwater from these two sources flows in a primarily easterly direction, it joins and mixes together and in the area around Old Mill Road, Laurel Ave and Magnolia Ave. After that, the combined plume continues to migrate to the northeast, east and southeast. The contaminated plume also sinks deeper in the aquifer as it migrates downgradient. There are not two separate plumes exhibiting different characteristics after they join together in the mixing area. For the purposes of EPA's study, the widely accepted industry standard definition of the term "plume" refers to all areas of groundwater contamination at the Site (above 1 part per billion in this case) that flow downgradient from the source areas. Both source areas contributed the same contaminant, PCE, to the plume. The PCE from the White Swan source areas was

found to be completely indistinguishable from the PCE that originated from the Sun Cleaners source area once combined in the groundwater plume. The theory that White Swan's PCE contamination would mix in the plume yet remain separate and head off in a different direction after such contact was not proven during the remedial investigation despite a number of attempts to do so. Isotope and Daughter Product Ratio studies conducted by the responsible party failed to differentiate the PCE molecules from different sources in the plume, therefore no determination of the source contributions could be made based on the data gathered during the remedial investigation. The intricate combinations of groundwater flow patterns present in the entire plume during the 40 years the contamination was spreading were not fully characterized during the remedial investigation, therefore assumptions based on present day flow pathways could not be used to identify fate and transport of separate sources over the years.

6. **BOA Comment:** The ESD provides no estimate of cost, no evaluation, and no cost comparison for a MNA remedy. This failure highlights the deficiency of using the ESD to select a remedy for the "hot spot" areas. The problem is further aggravated because, since completion of the RI and issuance of the ROD, EPA has collected two rounds of groundwater data. This new data has not been evaluated in order to assess the appropriate remedial option.

EPA Response: The ESD does not select the remedy for the groundwater "hot spots." The ESD provides the estimated cost to implement the selected remedy for the "hot spot" groundwater contamination as presented in the ROD, which is extraction and treatment, as well as the costs associated with the vapor intrusion work (indoor air/subslab monitoring and the cost of installing vapor mitigation systems as necessary). As per the ROD, MNA will be implemented to address the Far Field groundwater contaminant plume, except for the "hot spot" areas, which require extraction and treatment. The two rounds of groundwater data collected since the issuance of the ROD were *not* collected for the purposes of remedy selection, but rather, were collected to support the performance of the remedial design of the selected remedy.

7. **BOA Comment:** Comparison of PCE levels in groundwater during the performance of the RI in 2010 and during recent EPA sampling events in 2015 and 2017 indicate an ongoing and widespread decrease in concentrations. Of the 60 wells, concentrations have decreased in 54 wells while they have increased only slightly or remained at prior levels in only 6 wells at 3 well cluster locations.

EPA Response: BOA provides an interpretation and analysis of groundwater data collected at the Site that is at odds with the data collected. The data in no way supports BOA's assertion that there is an ongoing and widespread decrease in concentrations throughout the plume. EPA is still collecting data to be used for the remedial design it is performing. EPA will continue to collect data and will then perform a complete analysis

of the whole data set in order to make engineering determinations with respect to implementing the selected remedy.

BOA's assertions that concentrations of PCE are decreasing or have increased only slightly or remained at prior levels in only 6 wells at 3 cluster locations are factually incorrect. The 3 locations at which BOA asserts that levels have increased slightly or stayed the same were identified as MW-R-8S and 8I; MW-R-10S and 10I; and MW-R-12S and 12I. Upon analysis, the data do not support BOA's conclusions.

Included in the 54 wells that BOA contends demonstrate decreased levels of PCE over time are monitoring well MW-R-3S which shows levels of PCE increasing from 26,000 ppb in May 2009 to 36,000 ppb in June 2015, and monitoring well MW-R-17I-1 which shows an increase of PCE levels from 40 ppb in October 2009, to 180 ppb in May 2017. These are only two examples, but there are numerous additional examples that demonstrate that BOA's analysis of the data is not supported by facts. As stated above, EPA will continue to collect data during the remedial design and will use the data to perform an engineering design supported by the data collected.

8. **BOA Comment:** In September 2016, the Bank submitted a conceptual design proposal to treat PCE contaminated groundwater using a dynamic groundwater recirculation approach for the Near Field area. With these comments, the Bank again submits this proposal attached to its comments on the proposed ESD and continues to believe that this approach presents positive benefit for all stakeholders.

EPA Response: This conceptual design does not relate to the issues addressed by the ESD. Rather it relates to the remedy selected in the ROD. This proposal was submitted to the Agency in August 2016, with supplemental information provided in September 2016.

EPA performed a detailed technical analysis of this proposed groundwater remedial approach and discussed it at length with the Bank and its contractors during conference calls on August 26 and again on October 6, 2016. Based on EPA's review and discussion with the Bank and its representatives, EPA rejected the Bank's proposal on November 22, 2016. The proposal was rejected because the Bank did not agree to meet performance standards for the active groundwater remedy and instead proposed to shift the risk to EPA after only five years of operation of the extraction and treatment system. The decision was also based on significant flaws in the proposal's technical approach. Since the proposal submitted in response to the proposed ESD is the same proposal submitted in August and September 2016, and no new information was submitted to support the proposal, EPA's position remains the same as communicated to the Bank in 2016, and EPA continues to find the proposal unacceptable.

A summary of the most significant technical deficiencies in the proposal are summarized below:

- a. The Bank used a "batch flush" type model which, as it mentioned, is a simple tool. Matrix diffusion and contaminant rebound are not taken into account in a "batch flush" type model, rendering the results less accurate than a model which takes these factors into account.
- b. Even after source removals at the Sun Cleaners and White Swan facilities are completed (neither are yet completed), residual source will remain, particularly in the saturated zone. This residual source will contribute to the groundwater plume over time. The proposal does not consider this important fact, which will result in a longer cleanup time than predicted.
- c. The Bank's batch flush model considers the Site to essentially be a sandbox with 35% porosity. The Site Effective Porosity on Table 42 in the Remedial Investigation (RI) report prepared by the Bank in 2013 is given as 30%. Bulk Density reported by the Bank is 1.7225 gm/cm³ whereas the bulk density reported on Table 42 is 1.5 gm/cm³. There was no clear explanation given as to why the Bank used different values for porosity and bulk density in its proposal. The Bank's model does not consider future contaminant diffusion from finer-grained aquifer material. This is a typical cause of rebound at similar sites and would lengthen cleanup times predicted by the Bank.
- d. The retardation factor (Rf) used in the Bank's model is 1.05 for PCE. Site-specific retardation factors presented in the Bank's 2013 RI Report, Table 42, range from 2.54 - 13.3. As the Rf increases, so does concentration at any time, and, therefore, overall cleanup timeframe. No sensitivity analysis on the Rf was presented, nor was there an acceptable justification for the low Rf value used.
- e. The RI estimated a total PCE mass in the entire plume of 4,730 pounds, yet, in the Bank's proposal, polygon 1 contains 1,840 pounds of PCE, which is 39% of the total. This is incorrect.
- f. EPA determined there were a number of errors related to the polygons used in the Bank's model. The Bank's use of inappropriate values for cell thickness and maximum concentrations resulted in an unrealistically low estimate for aquifer cleanup time. Details of EPA's concerns in this regard include:
 - i. PCE levels in a number of polygons used in the model are not accurate as they do not account for migration of PCE since 2009.
 - ii. In the modeling performed by the Bank, maximum PCE concentrations used in some of the designated polygons were incorrect. For Polygon 1, the maximum PCE level from the 2013 RI Report is documented at 75,000 ug/L in well MS-WS-3S, not 32,00 ug/L as used in the Banks's proposal. For Polygon 2, the maximum PCE level is 4,900 ug/L (in hydropunch H-WS-2I), not 1,500 ug/L as reported by the Bank in its proposal.

iii. The thickness of a number of polygons used in the Bank's model are inaccurate and inconsistent with the thickness measured and reported in the 2013 RI Report (Figure 16). These errors have led the Bank to inaccurate conclusions regarding the aquifer. Examples of multiple errors in this regard include: Polygon 4 saturated thickness is actually 52 feet, not 42 feet as stated; Polygon 5 is actually 42 feet thick, not 36 feet; Polygon 6 is actually 38 feet thick not 29 feet; and, Polygon 7 is actually 35 feet thick not 29 feet.

9. **BOA Comment:** It appears that active remediation is not warranted at this time at either the Magnolia Lane or Old Mill Road areas, and that well head treatment represents a reasonable and cost-effective remedy for the Terrance Place area. While the current concentration distribution at the Christie Lane "hot spot" is not known, the fact that downgradient Terrance Place concentrations have not increased significantly over the past seven years indicate that these concentrations are not increasing and can only decrease over time as a result of the decreasing concentrations observed at the upgradient Old Mill Road and Philadelphia Avenue areas and Sun Cleaners Property.

EPA Response: As explained previously, EPA is performing a comprehensive remedial design, and is currently collecting field data to make appropriate engineering determinations to be used in the design. The Bank's observations are based on limited data, and neither relevant nor useful. EPA continues to perform remedial design investigations and continues to collect the vital data required to make the appropriate determinations on how the selected remedy will be best implemented.

10. **BOA Comment:** EPA's decision to implement a pump and treat remedy at each of the four hot spots without completing the remedial design and performing an evaluation, as stated in the ROD, is fundamentally different than the ROD and represents an arbitrary decision, not based on facts, but predetermined without any real analysis. We strongly urge the EPA to delay issuance of a decision on the appropriate remedy for the hot spots until after the remedial design for the Near Field are is complete and EPA has fully evaluated the current data and appropriate options as required by the applicable rules.

EPA Response: This comment illustrates a lack of understanding of the Superfund process by the commenter. In Superfund, pursuant to the NCP and EPA guidance, an RI/FS is performed to evaluate the nature and extent of contamination at a site and to identify and develop a set of remedial alternatives to address the site's contamination. After those activities are completed, EPA proposes a remedy and accepts public comments on this proposal. After considering all comments, a remedy is selected. After remedy selection, a remedial design is performed, where often additional data are collected for the purpose of preparing a detailed engineering design of the selected remedy. Consistent with this process, EPA made the decision to pump and treat Far Field hot spots in the ROD, after which EPA undertook the remedial design. EPA is currently performing the remedial design which includes continued collection of important data, as appropriate, to use in making a myriad of engineering determinations on how to best

implement the various aspects of the selected remedy. EPA's actions are completely consistent with the NCP and EPA guidance. EPA cannot delay its decision on the appropriate remedy for the hot spots, as requested by this comment, because that decision was made in the 2013 ROD.

EPA developed cost estimates in the ESD for pumping and treating groundwater in the "hot spots" consistent with the selected remedy presented in the ROD. These cost estimates are not binding and as stated above, EPA continues to perform remedial design investigations to collect the vital data required to make the appropriate determinations on how the selected remedy will be best implemented.

11. **BOA Comment:** The Bank believes that the estimated number of homes identified by EPA for investigation is unsupported and much higher than would be reasonably estimated through review of extensive field data, experience from mitigation system installation in the western portion of the Site, and technical guidance from both the EPA and NJDEP. The Bank provides an interpretation of EPA guidance and data in which an estimate of 450 properties requiring vapor intrusion investigation is derived, versus EPA's estimate of 800 properties which may require investigation and/or remediation. Therefore, the Bank proposes that the basis for the cost estimate for future vapor investigations and remediation should be 450 properties, rather than 800 properties. EPA's estimated costs in the proposed ESD are significantly inflated and are not supportable.

EPA Response: EPA's estimate of the number of properties that may require vapor investigation and remediation takes into account EPA's guidance and Site conditions, and is appropriately conservative. The number of properties estimated to be included in future vapor investigations is reasonable for cost estimation purposes, however, it is not binding in any way. EPA's estimate of 800 properties requiring investigation may be modified upward or downward as data continues to be collected, at EPA's discretion, and with the goal of protecting human health. This is explained in the ESD.

Vapor intrusion investigation and remediation are a very important aspect of the Site's remedy and are required to assure protection of public health, as Site contaminants have been detected in elevated levels under a number of building slabs and in indoor air at levels that threaten human health. There are over 1,200 properties, most of which are residential, that are located directly above or in very close proximity to the Site's groundwater contaminant plume. To be clear, EPA will require sampling of as many of the 1,200 properties as necessary in order to assure that people are protected from Site contaminants in indoor air, despite the number of properties used to prepare a cost estimate for this work. The cost estimate is not binding. EPA developed its estimate of 800 properties potentially requiring sampling based on EPA and NJDEP guidance, and knowledge of Site conditions, including the consideration of the continuous uncontrolled migration of contamination groundwater at the Site.

Attachment A

COVER STORY

Voter data

Continued from Page 1A

What are they trying to hide? Trump wrote in a Tweet over the weekend.

The statement by Giles Wednesday afternoon came hours after the American Civil Liberties Union of New Jersey wrote him a letter urging the state to refuse the comply with the commission's request.

"New Jersey should not participate in a sham process that will be used to falsely justify attacks on voting rights," wrote ACLU-NJ senior staff attorney Alexander Shalom. "We should be doing every-

thing we can to encourage, rather than hinder, participation in our democracy." Several Democratic lawmakers had also spoken out against the request Wednesday morning.

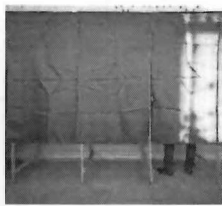
"Thruout over sensitive voter information to the federal government with no clear indication of how the Trump administration intends to use it simply is bad for our democracy," said Assemblywoman Annette Quijano, D-Union. "Our nation ought to focus on reducing voter suppression and increasing civic engagement, which are the real threats to our voting process."

Republican Lt. Gov Kim Guadagno, who also serves as secretary of state and oversees New Jersey's elections, said she had recused herself from matters that

could affect this year's governor's race, in which she is running to replace Gov. Chris Christie.

"Protecting the integrity of elections is a top priority, but it has been the policy of the Division of Elections to protect private personal information and only provide publicly available data to those who file a proper open public records request," Guadagno said in a statement Sunday on Facebook. "However, since I am recused from matters regarding the Division of Elections because I am also running for governor, I am not involved with handling the federal government's request for voter information."

Email: pugliese@northjersey.com



People vote in a voting booth at a polling station.

Horizon

Continued from Page 1A

Commerce.

"It still seems pretty nutty to me that that's what held up the entire budget process and shut down the government for three days," said Jon Whitten, spokesman for New Jersey Policy Perspective, a left-leaning research group.

Behind the striking aerial photos by the Star-Ledger of Christie and his family enjoying Island Beach State to themselves and the mocking memes that followed on Twitter, the issue had real-world consequences.

Newark-based Horizon has 3.8 million members. It controls \$5 percent of the state's individual insurance market. It has been praised for new initiatives that have helped slow down the rising cost of health care in New Jersey. And it has been condemned for narrowing its networks of health care providers.

Here is a Q&A about where it goes from here.

What just happened?

Christie in his February budget address said he wanted to establish a fund from what he said was Horizon's abundant surplus to fund drug addiction treatment for low-income residents — an issue that he has made a priority in his final year in office.

"It still seems pretty nutty to me that that's what held up the entire budget process and shut down the government for three days."

JON WHITTEN

NEW JERSEY POLICY PERSPECTIVE SPOKESMAN

He called for the insurer to provide \$300 million from its \$2.4 billion surplus. Horizon officials noted that its surplus — money it keeps in reserve in case of an emergency health crisis — has been dwindling each year since 2013, largely because it has covered consumers who have signed up for Obamacare and needed more health care.

They said Christie's proposal would have forced it to increase premiums and make it more difficult to compete. They countered, offering Christie \$160 million spread over two years, as long as there were offsets to help it recoup the money.

It apparently wasn't sufficient. Christie began publicly bashing Horizon, noting its executive pay and an army of lobbyists were more akin to a for-profit company than a nonprofit organization.

"Horizon is a taxpayer-supported charity with a responsibility to prioritize and facilitate access to quality health care for New Jerseyans," Christie said in April, calling on legislators to protect constituents, no matter how many internal and external Horizon lobbyists are deployed to Trenton.

Could he do what? Just take a com-

pany's money?

The second legislation, but the short answer is yes. Horizon was created by the state in 1932 as a nonprofit organization that was an insurer of last resort, covering residents regardless of their health.

It left them with a riskier customer base than its competitors. It lost money. By 1992, it had a D credit rating from Standard & Poor's.

But the state reformed the insurance market by requiring all insurers to cover consumers no matter their pre-existing condition. The federal government followed suit with the Affordable Care Act nearly two decades later.

Horizon's financial health improved. Last year, it had revenue of \$12 billion and net income of \$85 million. And S&P gave it an A rating.

But its mission includes "improving the lives of its members and the communities it serves," leaving room for interpretation. Communities it serves? What does that mean?

"They are a really unique animal," said Linda Schwimmer, president and chief executive officer of New Jersey Health Care Quality Institute, an advocacy group. The Legislature "can tweak it and change it because it is created by statute. It is their lump of clay to mold as they see fit."

Christie has low approval ratings and is in the last year of his term, so Democrats told him to take a hike, right?

No. Christie offered to approve key Democratic spending initiatives in the budget if they were accompanied by a bill to reform Horizon.

State Democrats, led by its key health care leader Sen. Joseph Vitale, D-Middlesex, struck a deal. They introduced a bill that would have:

• Renewed Horizon's role as the state's insurer of last resort.

• Reconfigured Horizon's board of directors to include three members elected by Horizon's policyholders.

• Required Horizon to provide more transparency about its finances, including executive compensation.

• Allowed the state to take what it determined to be excess reserves.

The idea was roundly rejected by interest groups, some of whom saw it as a chance to turn Horizon's surplus into a piggy bank. Perhaps Christie would have used it to fund a health initiative. But what about future governors who need to scramble to balance a budget?

In the end, Horizon's customers would bear the brunt. It would potentially have triggered higher insurance premiums to replace

those reserves that were shifted," said Christine Stearns, executive director of Better Choices, Better Care NJ, a health care advocacy group.

We're going to pay higher premiums?

Probably, but in the end, it won't be because of changes to Horizon.

Speaker Vincent Prieto, D-Hudson, refused to allow the Assembly to vote on the bill, bringing the state government to a standstill.

As photos of Christie in a beach chair went viral, Prieto met privately with Horizon CEO Bob Marino. Then the two met with Senate President Stephen Sweeney and Vitale. They reached a compromise that Christie was on board with.

Horizon would add two members to its 15-member board — one appointed by the Assembly president, the other appointed by the Senate president.

It would disclose its executive compensation to the Department of Banking and Insurance website.

It won't be tagged as the insurer of last resort.

Its surplus would be capped at a higher level than it currently is. If it exceeds that, Horizon will return money to its policyholders.

"I think Horizon came out OK, all things considered," said Tom Considine, a former commissioner of the Department of Banking and Insurance under Christie and now CEO of the National Conference of Insurance Legislators.

"It avoided a raid on its reserves for channeling to the public coffers, which would have set an awful precedent," he said. "Additionally, it avoided a return to the 'insurer of last resort' status, which would have been a huge step back in time, when companies like Horizon need to be moving forward."

What was the point again? Lawmakers didn't need to go after Horizon to pass a budget, so why risk shutting down the state government over it?

That much isn't clear, but Trenton observers say it was a matter of politics over policy.

Despite Christie's famously low approval rating, the business community was heartened by recent deals to replenish the transportation trust fund, lower the sales tax and eliminate the estate tax.

But there business leaders were over the weekend, powerless.

No, the Jersey Shore wasn't closed. Municipal beaches and county parks were open and thriving. But it didn't matter. One of the state's biggest businesses was fending off attacks, while beach photos of the governor moved worldwide at light speed.

The biggest problem with this is it tarnishes the image of New Jersey at a time where we need to be polishing as bright as possible our image," the chamber's Bracken said.

Michael L. Diamond: 732-643-4038; mdiamond@gannett.com

U.S. Environmental Protection Agency Invites public comment on a Proposed Explanation of Significant Differences (ESD) for the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Superfund Site located in Wall Township, Manasquan Borough and Sea Girt, New Jersey

On September 30, 2013, the Environmental Protection Agency (EPA) issued a Record of Decision (ROD) selecting a remedy to address soil, groundwater and indoor air contamination at the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Site. Although the selected remedy included, among other elements, remediation of indoor air and downgradient hot spots, the cost estimate in the ROD did not include costs associated with these particular aspects of the remedy. The proposed ESD modifies the cost estimate included in the ROD and provides detailed costs estimates associated with the selected vapor intrusion program and treatment of downgradient groundwater hot spots.

The comment period for this proposed ESD begins on July 6, 2017 and ends on August 7, 2017. Written comments on the ESD, posted no later than August 7, 2017 may be mailed to Matthew Westgate, EPA Project Manager, at U.S. EPA, 290 Broadway, 19th Floor, New York, NY 10007-1866, or sent by email to westgate.matthew@epa.gov.

The Explanation of Significant Differences is available electronically at: https://www.epa.gov/superfund/white-swan

Project documents including the Record of Decision and ESD are also available for public review at the following site information repository locations: Wall Township Public Library Reference Section, 2700 Alaire Road, Wall, NJ 07719 or the EPA Region II Records Center, 290 Broadway, 18th Floor, New York, NY 10007 (212) 637-4306, Mon. - Fri., 9am - 5pm.

EPA will consider all comments received during the public comment period before issuing a final ESD. If you have questions or need additional information, contact the EPA's Community Involvement Coordinator for the White Swan Cleaners site, Cecilia Echols, at (212) 637-3678 or echols.cecilia@epa.gov.

www.epa.gov

DATEBOOK

1-877-735-SELL (7355) Prices are based on a 5 line ad. Additional lines may be purchased for an extra charge.

- THE SECRET GARDENS OF BRICK TOWN & TEA Tuesday July 11th, 10am-3pm. Tour 7 gardens of Brick townships. ... COINS, SPORT CARDS, CURRENCY, COLLECTIBLES SHOW ... O.C. LADIES AUXILIARY ANNUAL BOOK SALE 7/7-7/8 ... OPEN HOUSE - ALCOHOL GARDENS/ACTIVATED LIVING ... QUAKERS 61st FRIENDLY FAIR - SAT, JULY 8th ... ALAIRE VILLAGE'S SUMMER FLEA MARKET 7/8 ... BLUEBERRY DAY ...

Databook Guidelines: Databook ads are limited to event listings. Advance payment is required prior to publication. All ads run 1-5, 6-10, or 11-15 consecutive days. Ads will appear in the Asbury Park Press.

Atlantic Highlands Annual Arts & Craft Fair: Sponsored by Atl. Highlands Historical Society. Sat 7/15, 10am-5pm. ... Seasonal Dining Series: Focus on Healthy Recipes. ... Neptune City Day at Memorial Park: 5K Race, Food Festival, Entertainment & Concerts. ... 28th Annual Postcard & Antique Show: Saturday, August 19th, 10am-5pm. ... Giant Outdoor Flea Market: Atlantic Highlands Historical Society. 40th Annual Flea Market. Sat 8/19, 10am-5pm. ... Vendors & Crafters Wanted: Welcome City of River View. Vendor at the adult care clubhouse in Manchester. 10/17/16-3:30. Open to the public. In-person in charity. Vendor 732-937-8107 or 734-9423.

Attachment B



**RIKER
DANZIG
SCHERER
HYLAND
PERRETTI LLP**

Samuel P. Moulthrop
Partner

Direct:
t: 973.451.8471
f: 973.451.8695

smoulthrop@riker.com
Reply to: Morristown

ATTORNEYS AT LAW

August 4, 2017

VIA E-MAIL and FED EX

Matthew Westgate, Remedial Project Manager
New Jersey Remediation Branch
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
Region II
290 Broadway, 19th Floor
New York, NY 1007-1866

**Re: White Swan/Sun Cleaners Ground Water Contamination Area Superfund Site
Comments on June 2017 Proposed Explanation of Significant Differences**

Dear Mr. Westgate:

This firm represents Bank of America, N.A. (the "Bank"). This letter provides the Bank's comments on the United States Environmental Protection Agency's ("EPA") proposed Explanation of Significant Differences ("ESD") for the White Swan Cleaners/Sun Cleaners Area Groundwater Contamination Superfund Site (the "Site"), dated June 2017. The stated purpose of the proposed ESD is to provide an explanation of changes to the remedy selected in EPA's September 2013 Record of Decision ("ROD") for the Site. Specifically, EPA states the proposed ESD provides "cost estimates for the treatment of the identified downgradient groundwater 'hot spots' and the work required to investigate potential indoor air contamination in buildings located above the Site's groundwater contamination plume, and remediate this contamination, if necessary." Through the ESD, EPA seeks to implement pump

Headquarters Plaza, One Speedwell Avenue, Morristown, NJ 07962-1981 • t: 973.538.0800 f: 973.538.1984
50 West State Street, Suite 1010, Trenton, NJ 08608-1220 • t: 609.396.2121 f: 609.396.4578
500 Fifth Avenue, New York, NY 10110 • t: 212.302.6574 f: 212.302.6628

www.riker.com

and treat at the hot spots at a cost of \$4,142,210 to \$5,296,472, depending on whether groundwater from one hot spot is treated with point-of-entry treatment or by piping the contaminated groundwater to the central treatment plant. It also estimates the cost of continuing vapor sampling in approximately 800 additional buildings and installing mitigation in 5% of those buildings at \$7,348,365.

Pursuant to the 2006 Administrative Settlement Agreement and Order on Consent for Remedial Investigation and Feasibility Study ("RI/FS") with EPA, the Bank, through its consultant Amec Foster Wheeler Environment & Infrastructure ("AMEC"), conducted the RI/FS, upon which the ROD is based. The Bank, without admitting liability, but as the current owner of the White Swan Property that was impacted by dry cleaning operations predating the Bank's ownership, devoted substantial resources and performed a comprehensive and thorough RI/FS for the entire Superfund Site, including contamination at and from the unrelated Sun Property for which the Bank has no responsibility or liability.

Procedurally, the Bank believes that EPA may not make the proposed changes to the ROD through an ESD. Contrary to the rationale in the ESD, the ROD did not select a remedy for the "hot spots" in the "Far Field" area, rather the ROD left that question to be evaluated at a later time. In order to select a pump and treat remedy for the hot spots now, EPA must, but failed to, evaluate all of the criteria for assessing an appropriate remedy selection. Significantly, EPA has failed to evaluate the nine criteria set forth in CERCLA 42 USC §9621 in accordance with the detailed analysis

set forth in 40 C.F.R. §300.430. In selecting a pump and treat remedy for the hot spots, EPA has failed to take into account the actual water quality data that has been gathered in 2015 and 2017 that demonstrates a decrease in the levels of contaminants below the trigger set for the pump and treat remedy in the "Near Field" area. In fact, if EPA were to perform the required evaluation, the current data would strongly suggest that some of the hot spots do not require a pump and treat remedy.

EPA states on page I of the proposed ESD that "although the remediation of downgradient groundwater hot spots and vapor intrusion sampling and mitigation work was clearly included in the ROD remedy, cost estimates for these aspects of the remedy were not developed and presented in the Administrative Record." With respect to the "hot spots" the proposed ESD mischaracterizes the ROD's discussion of future treatment of the Far Field area hot spots. Far from hot spots being "clearly included" in the remedy the ROD left the method of treating the hot spots open for further evaluation.

A number of localized "hot spots" of groundwater contamination have been identified in the Far Field area. These Far Field Hot Spots generally have PCE contamination at levels of approximately 1,000 ppb or higher. These hot spot areas in the Far Field will be further evaluated in the remedial design and may be addressed through the groundwater extraction and treatment system, or smaller, localized treatment systems.

ROD at page 33. The ROD discussion of Alternative 4, the selected groundwater remedy, also left the remedy selection open with respect to treatment of the hot spots: "During [the remedial design], it would be determined if additional extraction

Matthew Westgate, RPM
August 4, 2017
Page 4

wells would be used to treat hot spots [sic] areas within the Far Field portion of the groundwater plume." *Id.* at 23.

Significantly, the proposed ESD mischaracterizes the ROD's discussion of future treatment of the Far Field area hot spots:

The ROD stated that these Far Field hot spots would be further evaluated in the remedial design phase and *would likely* be addressed through the groundwater extraction and treatment system, or smaller, localized treatment systems.

ESD at page 5 (emphasis supplied). By changing the words "may be addressed" to "would likely," the ESD falsely gives the impression that treatment of the hot spots is necessary and that extending the pump and treat system to the hot spots is a foregone conclusion.

First, the determination of whether any treatment of the hot spots is necessary is to be determined as part of the Remedial Design for the pump and treat, which is currently underway. Accordingly, the ESD is premature. In the Proposed Plan, which is the document that provides the public with notice and opportunity to comment on EPA's selected remedy prior to issuance of the ROD, EPA described the preferred alternative for groundwater clearly stating that extraction and treatment is for the Near Field area, with extraction wells located adjacent to and downgradient of the source areas to address the most highly contaminated groundwater. Proposed Plan at page 15. With regard to the "[a]reas of elevated groundwater contamination (hot spots) in the Far Field" they are to be further evaluated and "*may be addressed*" through the pump and treat or smaller localized treatment systems. Proposed Plan at

page 16. (emphasis added). **“Determinations regarding whether to address these hot spots will be made during the R[emedial] D[esign].”** Id. (emphasis added).

In the ROD, it also stated that, “[d]uring R[emedial] D[esign], it would be determined if additional extraction wells would be used to treat hot spots [sic] areas within the Far Field portion of the groundwater plume.” ROD at page 23. Acknowledging the fact that treatment of the hot spots was to be further evaluated before a determination is made that treatment is necessary, the ESD states “[d]uring the remedial design, additional data will be collected, detailed engineering analyses will be performed, and numerous determinations will be made on how best to implement the details of the selected remedy, which may vary from assumptions made for cost estimating purposes.” ESD at page 6. In the ROD EPA appropriately deferred a decision on remedy selection for the hot spots precisely because additional sampling was to be performed and it was unclear whether active remediation would be necessary after further evaluation of the current data. Accordingly, until EPA has evaluated the recent data and completed the Remedial Design, a decision that treatment of the hot spots is necessary is premature.

Second, the ROD did not conduct the required nine-factor analysis of the various groundwater treatment alternatives for the far field hot spots and instead addressed the near field only. See, e.g., ROD at 28-29 (“Alternatives 2 and 3 would require the installation of numerous injection and sampling points throughout a highly

Matthew Westgate, RPM
August 4, 2017
Page 6

developed residential and commercial area in the Near Field area of the Site. Alternative 4, extraction and treatment of groundwater, would require the installation of several extraction wells in the Near Field area.”). EPA, recognizing that it was premature because treatment of the hot spots needed further evaluation, chose not to evaluate the merits of pump and treat or any other remedial approach for the hot spots in the ROD and now seeks to circumvent that required evaluation by selecting a pre-determined remedy with an ESD.

By pursuing this approach, EPA never will determine whether its hot spot remedy is cost-effective. For example, the major distinction between the proposed groundwater remediation alternatives in the ROD was that EPA considered pump and treat more implementable than other alternatives. ROD at pages 29-30. By pursuing an ESD, EPA inappropriately circumvents evaluation of these considerations as applied to the hot spots, such as whether access to private property is less of a concern in the hot spot locations, whether installing piping under public streets for the pump and treat system would be even more burdensome for the hot spots, or whether the potentially quicker timeframe to achieve remediation goals for the alternative technologies, see ROD at page 27, would outweigh the burdens of implementing those technologies in one or more hot spots. Also, if implementing MNA at one or more hot spots would restore the aquifer within the same time frame contemplated in the ROD, MNA should be considered, as it would achieve the same result at lower cost. See 40 C.F.R. § 300.430(f)(ii)(D)(we note that the ESD expressly indicates that an

evaluation of MNA was not even considered for the hot spots). This predetermined result expressed in the ESD constitutes arbitrary decision-making.

Substantively, the Bank disagrees with certain statements and conclusions in the proposed ESD. The primary disagreement involves EPA's statements regarding the extent of mixing between the contaminant plumes from the two separate source areas. The overwhelming weight of the evidence from the extensive RI data establishes that two distinct and separate groundwater plumes emanate from each of the two distinct and separate source areas. Unlike EPA's characterization in the proposed ESD, the RI data further establish that the plumes maintain their separate characteristics past the so-called "mixing zone" (i.e., the area underlying Old Mill Road and Laurel Avenue) where the low-concentration peripheral edges of the plumes appear to meet. Moreover, the most highly contaminated groundwater to be addressed by the pump and treat specified in the ROD for the "near-field" are in the areas immediately down gradient from the source areas, before the mixing zone where there is no question that the harm is wholly distinct.

Specifically, the Bank disagrees with EPA's statements and conclusions in the ESD that there is one groundwater contaminant plume associated with the Site. These conclusions and statements are made throughout the ESD. Specific examples include, but are not limited to, in the Site Location, History, Contamination Problems, Selected Remedy section on page 2: "There are narrow contaminant plumes emanating from the two source areas. These two contaminant plumes join and mix in an area underlying

**Matthew Westgate, RPM
August 4, 2017
Page 8**

Old Mill Road and Laurel Ave. The joined contaminant plume then expands laterally as it moves generally eastward.” In the same section on page 3, EPA states “It is evident that the contamination from these two source areas have commingled a short distance downgradient from the two properties, forming one plume.” and “The groundwater plume of VOC contamination is approximately one mile wide and two miles long. As this groundwater contamination moves eastward, it moves downward in the aquifer toward a low permeability layer and spreads laterally.” Throughout Description of the Significant Differences and the Basis for those Differences section EPA repeatedly refers to a single groundwater plume e.g., “The ROD identified two portions of the large groundwater contaminant plume at the Site as the Near Field and the Far Field Areas.”

Contrary to EPA’s characterization as to one plume, the RI data clearly establish that there are two largely distinct and separate ground water plumes at the Site, and that the edges of these plumes overlap in a limited area (primarily Laurel and Magnolia Avenues, east of Old Mill Road). A contaminant plume is defined by a longitudinal center of mass aligned along an orientation controlled by the hydraulic gradient. Separate and distinct plumes emanating from the White Swan property and the Sun property have been fully and accurately characterized. As each plume emanates from its respective source area, the plumes do not overlap or mix at all for a distance of roughly 1,500 and 2,500 feet from the White Swan and Sun source areas, respectively. Even after the two plumes have traveled this distance to the area east of Old Mill Road

in the vicinity of Laurel and Magnolia Avenues, only the low-concentration peripheral edges of the two plumes appear to overlap, but they retain their separate plume characteristics (i.e., separate plume cores). The data do not support the conclusion that there is one plume associated with the Site or that there is substantial mixing and communication between the plume emanating from White Swan property and the plume emanating from the Sun property. Rather, the data indicate that the edges of the plumes within a portion of the Site where the plumes are in close proximity (i.e., the region between MW-R-20 and MW-R-8 and south of MW-R-7) appear to overlap.

Extensive additional data support the separation of the centers of mass between the two plumes. Specifically, the continuity of the highly concentrated contaminant plume from the Sun property to Waterbrook Florist, Christie Lane and the Barlow Flower Farm is mapped and confirmed consistently by every analytical technique applied during the RI. The two plumes also exhibit distinct characteristics relative to chlorinated solvent daughter product ratios. In addition, prior investigations by NJDEP also support the conclusion that there are two separate plumes with only a limited area of mixing at the edges.

Accordingly, the Bank objects to EPA's characterization of the contamination at the Site and reserves the right to challenge any EPA conclusions derived from its unfounded one plume theory.

Estimated Costs for Groundwater Hot Spot Collection and Treatment

EPA has provided cost information for collection and treatment of a groundwater at four "hot spot" locations. These costs represent installation of extraction wells, construction of piping from the wells to a centralized treatment plant, and operation of the treatment plant for a 30 year period. As discussed above, evaluation of whether the hot spots required treatment was to be assessed during the remedial design. The ESD provides no estimate of cost, no evaluation, and no cost comparison for a MNA remedy. This failure highlights the deficiency of using the ESD to select a remedy for the "hot spot" areas. This problem is further aggravated because, since completion of the RI and issuance of the ROD, EPA has collected two rounds of groundwater data. This new data has not been evaluated in order to assess the appropriate remedial option. Continuing review of monitoring well data from the Site, as well as the evaluation of more efficient methods to achieve groundwater cleanup, supports review of alternative strategies to address remaining contamination in these areas.

(1) **Monitoring Well Data:** There are a total of 60 monitoring wells located at 21 well clusters across the Site. Comparison of the groundwater concentrations of PCE measured in these wells during performance of the RI (2010) and those obtained by EPA in 2015 and 2017 indicates an ongoing and widespread decrease in concentrations (of the 60 wells, concentrations have decreased in 54 wells while they have increased only slightly or remained at prior levels in only 6 wells at 3 well cluster locations¹). Within the hot spot areas,

¹ These wells are MW-R-8S and 8I, MW-R-10S and 10I, and MW-R-12S and 12I. The MW-R-8 well cluster lies within a "separation zone" between the plumes emanating from the White Swan Cleaners and Sun Cleaners source areas; PCE concentrations at this location are low (< 20 ppb) and do not influence decision-making regarding treatment of "hot-spots". Well cluster MW-R-10 is located at the 4867176v5

concentrations have decreased significantly at "Magnolia Lane" (40%-50%), and recently at "Old Mill Road" (40%-70%). While no monitoring wells are located at "Christie Lane", this area is located hydraulically downgradient of Old Mill Road, and will ultimately reflect the reductions observed at Old Mill Road. Similarly, due to significant reductions in concentration achieved at the Sun Cleaners property due to the ongoing operation of the source area remedial action, Old Mill Road concentrations will continue to decrease. Concentrations of PCE at "Terrace Lane" have remained consistent over time, and wellhead treatment appears to represent the appropriate action at that location given the distance to the proposed treatment system. A summary of PCE concentrations over time from all monitoring well locations is contained in Table 1. These data are also plotted on several time-series graphs attached that more clearly illustrate the trends: Figure 1 (White Swan Plume: Source Area and Downgradient Groundwater Monitoring Locations), Figure 2 (Sun Cleaners Plume: Source Area and Downgradient Groundwater Monitoring Locations [1 of 2]), Figure 3 (Sun Cleaners Plume: Downgradient Groundwater Monitoring Locations [2 of 2]), and Figure 4 (Area Between White Swan Cleaners and Sun Cleaners Plumes).

- (2) **Enhancement of Groundwater Treatment Remedy:** In September 2016 the Bank provided EPA with a detailed proposal for the enhancement of aquifer treatment using a dynamic groundwater recirculation approach for the Near Field area. The proposed approach distributes injection wells along the periphery of the plume that will promote restoration in low concentration areas away from the extraction wells, focusing groundwater flow towards the extraction wells. The source area and near field hot spot areas are broken into polygons for treatment via recirculation / flushing. Breaking the plume up into smaller segments with more extraction wells and recirculation with treated ground water in parallel will dramatically shorten the remedial time frame compared to a design with extraction only approach. The Bank's proposal represents a much more aggressive approach to groundwater cleanup than a conventional extraction and treatment system, will significantly increase the efficiency of the remedy (due to increased pore volume exchanges), and as a result, will allow for a significantly decreased timeframe to achieve interim and final remedial action objectives. We have again provided this proposal and

Terrace Place "hot-spot"; PCE concentrations there have been variable over time, but remain elevated and support continued consideration for point-of-entry treatment. The MW-R-12 well cluster lies in the vicinity of the Sea Girt municipal DPW and well field. Concentrations in the shallow well at this location have been variable over time but have increased recently (note that a historic discharge is also documented from the DPW). At the deeper monitoring location (representing the downgradient core of the plume emanating from Sun Cleaners, the PCE concentration has decreased significantly (more than 50%) since 2010, and has increased only slightly (about 5%) since 2015.

Matthew Westgate, RPM
August 4, 2017
Page 12

supporting detail to these comments (Attachment I), and continue to believe that this enhanced approach represents positive benefit for all stakeholders.

In summary, groundwater monitoring data document widespread decreases in the concentration of PCE across the Site. These decreases are the result of the ongoing reduction in contaminant mass flux from the White Swan Cleaners and Sun Cleaners source areas. At the White Swan property, these reductions have occurred primarily as a result of the Bank's actions including source removals performed in 2001 and 2002, and will continue following completion of contaminated soil removal at the property later this year. At the Sun property, reductions have occurred over time as a result of flushing (due to the lack of an impermeable cover at the property), as well as active source remediation currently being performed by EPA. As a result of these processes, the current PCE concentrations at several "hot spot" locations are well below 1,000 ppb, which represents the metric identified in the FS (and documented in the ROD) below which natural attenuation processes will result in the restoration of the Site in a reasonable timeframe. It therefore appears that active remediation is not warranted at this time at either the Magnolia Lane or Old Mill Road areas, and that well head treatment represents a reasonable and cost-effective remedy for the Terrace Place area. While the current concentration distribution at the Christie Lane "hot spot" is not known, the fact that downgradient Terrace Place concentrations have not increased significantly over the past seven years indicates that these concentrations are not increasing, and can only decrease over time as a result of the decreasing

concentrations observed at the upgradient Old Mill Road and Philadelphia Avenue (MW-R-5) areas and Sun Cleaners property (MW-R-4).

The EPA's decision to implement a pump and treat remedy at each of the four hot spots without completing the remedial design and performing an evaluation, as stated in the ROD, is fundamentally different than the ROD and represents an arbitrary decision, not based on facts, but predetermined without any real analysis. We strongly urge the EPA to delay issuance of a decision on the appropriate remedy for the hot spots until after the remedial design for the Near Field area is complete and EPA has fully evaluated the current data and appropriate options as required by the applicable rules.

Estimated Costs for the Vapor Intrusion Program

EPA notes that approximately 1,200 buildings are located over the contaminated groundwater footprint within the eastern portion of the Site (roughly east of Village Road/McGreevey Drive) where vapor intrusion investigations have not yet been performed. Of these, EPA estimates that 800 of these buildings may need to be sampled based on PCE and TCE concentrations in the sub-surface. A present value cost estimate of \$7.4M was provided by EPA to perform such sampling, install vapor mitigation systems (sub-slab depressurization systems or SDS), inspect and periodically replace these systems, and provide necessary project management and reporting over a 30 year period. As discussed and fully documented previously with EPA, the Bank believes that the estimated number of homes identified by EPA for investigation is

unsupported and much higher than would be reasonably estimated through review of extensive field data, experience from mitigation system installation in the western portion of the Site, and technical guidance available from both EPA² and the NJDEP³. The elevated number of buildings assumed to require investigation directly results in an excessive estimate of the cost to perform the identified work over time. A technically sound basis for estimation of the appropriate area of investigation, drawn from field data and agency guidance, is provided below. These data provide the basis for derivation of a reasonable and defensible cost estimate for performance of the vapor intrusion investigation in the eastern portion of the Site.

- (1) **Area of Investigation/Number of Buildings:** The initial area of investigation for a vapor intrusion investigation corresponds to the area of shallow (water table) groundwater within which contamination exceeds a trigger level concentration. EPA calculates this trigger as a "Target Groundwater Concentration" that is estimated through their vapor intrusion screening level (VISL) calculator, and NJDEP defines this trigger as a "Ground Water Screening Level" or GWSL, which is contained in Table I of the NJDEP VITG. For PCE, the EPA Target Groundwater Concentration is 25 ppb (when the groundwater temperature is correctly adjusted to 16° C, as measured in the field); the NJDEP GWSL is 31 ppb. In the RI, the full concentration distribution of PCE in the shallow (water table) monitoring zone was documented through the collection of over 880 ground water samples and mapped. Through use of these data, it is possible to provide isocontour lines that map the estimated distribution of PCE at any concentration level across the Site. This was performed for both the 15 and 30 ppb PCE contours, and the number of properties (buildings) lying within these areas was counted. These numbers are 548 and 340 properties, respectively. A conservative estimate of 450 homes was assumed for a contour interval of 25 ppb.

² OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, OSWER Publication 9200-2-154, June 2015

³ Vapor Intrusion Technical Guidance (VITG), Version 4, August 2016

Both the EPA and NJDP guidance recommend that a vapor intrusion investigation not be limited only to those areas where groundwater triggers are exceeded; EPA recommends a buffer area of 100 ft beyond these limits, and the NJDEP requires "step-out" sampling where indoor air screening levels are exceeded. Adding a 100 ft buffer to the areas calculated above resulted in the addition of approximately 100 properties to the vapor intrusion investigation area, for a total of 550 homes. This number, based on field data and regulatory agency guidance, clearly represents an appropriate basis upon which to base projected cost estimates. EPA has provided no basis for their estimate of 800 homes. The difference between these numbers alone would represent a reduction in EPA's cost estimate of over 30 per cent.

(2) Number of New SDS: The western portion of the Site represents the area closest to the source area properties where groundwater concentrations of PCE are highest. The NJDEP and EPA initially prioritized vapor intrusion sampling within this area, and based on the results of this sampling at over 600 homes, approximately 40 SDS were installed in residential and commercial buildings by the NJDEP or EPA (all of these systems were subsequently replaced by the Bank to meet current municipal code requirements). In the development of the cost estimate for the vapor intrusion program in the eastern portion of the Site, EPA assumes that the number of new vapor mitigation systems that will need to be installed in that area will be equal to the number installed in the western portion of the Site. This assumption clearly does not reflect the relationship between groundwater concentrations and the locations where SDS were actually installed, nor the significant differences in the levels of groundwater contamination present in the eastern portion of the Site relative to the western portion.

Review of the location of installed vapor mitigation systems relative to the mapped concentration distribution of PCE (as documented in the RI), indicates that 36 of the 40 installed SDS lie over shallow (water table) groundwater with concentrations exceeding 100 ppb. Within the eastern portion of the Site, less than 25 percent of the area that exceeds the groundwater vapor intrusion trigger (25 ppb) is at a concentration in excess of 100 ppb. As a result, significantly fewer SDS would be expected to be required for installation within that area in the future, particularly since, as noted previously in this response, PCE concentrations are declining nearly everywhere across the entire Site. This difference in the assumed number of new SDS is significant, because EPA's cost projections assume SDS installation, inspection, replacement, and periodic performance sampling at 40 locations over a 30 year period.

(3) Trichloroethene: EPA suggests that the evaluation of TCE may result in the identification of additional structures requiring VI investigation. The distribution of TCE within the shallow (water table) monitoring zone was mapped in the RI. Because of the aerobic nature of the aquifer at the Site, biodegradation of PCE to TCE is limited, and it is observed at elevated concentrations only near the source areas, and particularly at and immediately downgradient of the Sun property. Within the eastern portion of the Site (the subject of the projected cost estimates), TCE was detected in the shallow aquifer at a concentration above the VI trigger of 2 ppb⁴ at only one location (2.9 ppb) out of a total of over 60 shallow (water table) sample locations. In addition, review of hundreds of indoor air samples obtained by EPA over the past decade (and more recent data performed by the Bank) indicate that TCE has never been detected over the site-specific indoor air criterion of 2 ug/m³. As a result, it is not expected that TCE will represent a driver for vapor mitigation within the area of the Site exhibiting the lowest ground water concentrations for TCE (non-detect in almost all cases).

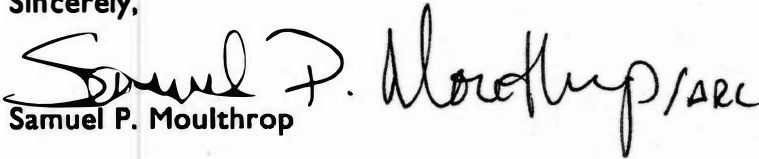
In summary, ample site-specific data exist to develop reasonable and defensible estimates of the number of buildings requiring vapor intrusion investigation within the eastern portion of the Site. These estimates are fully compliant with both EPA and NJDEP technical guidance. The number of homes that should be evaluated based on final technical guidance from both EPA and the NJDEP, is significantly less than EPA's arbitrary number of 800. Accordingly, EPA's estimated costs in the proposed ESD are significantly inflated and are not supportable.

⁴ EPA VISL (16° C groundwater temperature) = 1.9 ppb; NJDEP GWSL = 2 ppb
4867176v5

Matthew Westgate, RPM
August 4, 2017
Page 17

The Bank does not waive any argument, defense, or other issue not raised in these comments and specifically reserves the right to raise these issues when appropriate.

Sincerely,


Samuel P. Moulthrop

Encls.