

TABLES

**Table 1
Remedial Action Work Plan
Track 4 Soil Cleanup Objectives**

**AMN Site
260 Main Street
New Rochelle, New York
BCP Site No.: C360201
Langan Project No.: 170331704**

VOCs (mg/kg)	
1,1,1-Trichloroethane	100
1,1-Dichloroethane	26
1,1-Dichloroethene	100
1,2-Dichlorobenzene	100
1,2-Dichloroethane	3.1
cis-1,2-Dichloroethene	100
trans-1,2-Dichloroethene	100
1,3-Dichlorobenzene	49
1,4-Dichlorobenzene	13
1,4-Dioxane	13
Acetone	100
Benzene	4.8
Butylbenzene	100
Carbon tetrachloride	2.4
Chlorobenzene	100
Chloroform	49
Ethylbenzene	41
Hexachlorobenzene	1.2
Methyl ethyl ketone	100
Methyl tert-butyl ether	100
Methylene chloride	100
n-Propylbenzene	100
sec-Butylbenzene	100
tert-Butylbenzene	100
Tetrachloroethene	19
Toluene	100
Trichloroethene	21
1,2,4-Trimethylbenzene	52
1,3,5- Trimethylbenzene	52
Vinyl chloride	0.9
Xylene (mixed)	100
Inorganics (mg/kg)	
Arsenic	16
Barium	400
Beryllium	72
Cadmium	4.3
Chromium, hexavalent	110
Chromium, trivalent	180
Copper	270
Total Cyanide	27
Lead	400
Manganese	2,000
Total Mercury	0.81
Nickel	310
Selenium	180
Silver	180
Zinc	10000

SVOCs (mg/kg)	
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(g,h,i)perylene	100
Benzo(k)fluoranthene	3.9
Chrysene	3.9
Dibenzo(a,h)anthracene	0.33
Fluoranthene	100
Fluorene	100
Indeno(1,2,3-cd)pyrene	0.5
m-Cresol	100
Naphthalene	100
o-Cresol	100
p-Cresol	100
Pentachlorophenol	6.7
Phenanthrene	100
Phenol	100
Pyrene	100
PCBs/Pesticides (mg/kg)	
2,4,5-TP Acid (Silvex)	100
4,4'-DDE	8.9
4,4'-DDT	7.9
4,4'-DDD	13
Aldrin	0.097
alpha-BHC	0.48
beta-BHC	0.36
Chlordane (alpha)	4.2
delta-BHC	100
Dibenzofuran	59
Dieldrin	0.2
Endosulfan I	24
Endosulfan II	24
Endosulfan sulfate	24
Endrin	11
Heptachlor	2.1
Lindane	1.3
Polychlorinated biphenyls	1
PFAS (ppb)	
PFOA	33
PFOS	44

Notes:

1. The Site-Specific SCOs for a Track 4 Cleanup are the Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (6 NYCRR) Part 375 Restricted Use Restricted-Residential Soil Cleanup Objectives (SCO) for VOCs, SVOCs, PCBs, pesticides, herbicides, and metals and the guidance values for anticipated site use for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) as specified in Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (June 2021).
2. VOC = volatile organic compound
3. SVOC = semivolatile organic compound
4. PCB = polychlorinated biphenyl
5. mg/kg = milligram per kilogram
6. ppb = parts per billion

**Table 2
Remedial Action Work Plan
Alternative I: Track 1 Remedial Cost Estimate**

**AMN Site
260 Main Street
New Rochelle, New York
BCP Site No.: C360201
Langan Project No.: 170331704**

Item No.	Description of Environmental Item	Quantity	Unit Cost	Total Cost	
REMEDIAL ACTION CONTRACTOR FEES					
1	Remediation Facilities, Equipment, Mobilization, Demobilization, Permits, and Site Maintenance - Remediation and decontamination facilities include trailer, truck cleaning facilities, etc.		Allowance	\$120,000	
2	Asbestos Abatement and Demolition - Includes abatement of asbestos containing materials (ACM) and hazardous materials (HAZMAT), demolition of existing structures and below-grade foundation elements, and removal of building demolition debris.		Allowance	\$300,000	
3	Perimeter Support of Excavation (SOE) (soldier piles, lagging, and tiebacks) - Includes installation of soldier piles, lagging, and tiebacks along the site perimeter.	21,000	SF	\$165 per SF	\$3,465,000
4	Perimeter Sheet Pile SOE - Assumes installation of sheet pile walls along the site boundary line.	17,000	SF	\$150 per SF	\$2,550,000
5	Management and Handling of Excavated Soil (Contaminated and Hazardous) - Excavation of source soil (excludes excavation required for redevelopment)	61,100	CY	\$40 per CY	\$2,444,000
6	Dust, Odor, and Vapor Control - Includes odor, dust, and organic vapor control during remediation of the site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	18	Months	\$20,000 per Month	\$360,000
7	Off-Site Transport and Disposal of Non-hazardous Soil - Includes transport vehicles and disposal of nonhazardous soil/fill at a permitted facility	74,400	Tons	\$60 per Ton	\$4,464,000
8	Off-Site Transport and Disposal of Petroleum-Impacted Soil - Includes transport vehicles and disposal of petroleum-impacted soil at a permitted facility	14,900	Tons	\$70 per Ton	\$1,043,000
9	Off-Site Transport and Disposal of Hazardous Lead-Impacted Soil - Includes transport vehicles and disposal of hazardous lead-impacted soil at a permitted facility	2,500	Tons	\$210 per Ton	\$525,000
10	Off-Site Transport and Disposal of PCB-Impacted Soil - Includes transport vehicles and disposal of PCB-impacted soil at a permitted facility	170	Tons	\$330 per Ton	\$57,000
11	Underground Storage Tank (UST) Removal - Registration, cleaning, removal and disposal of any encountered USTs.	5	Tanks	\$10,000 per Tank	\$50,000
12	Dewatering and Groundwater Treatment Design, Permitting, and Installation		Allowance	\$250,000	
13	Dewatering and Groundwater Treatment	12	Months	\$50,000 per Month	\$600,000
14	Backfill - Import and placement of clean fill to bring site to development grade. An additional 30% of fill is included to account for compaction.	65,800	CY	\$35 per CY	\$2,303,000
15	In-Situ Groundwater Treatment Contingency		Allowance	\$250,000	
				\$18,531,000	
ENGINEERING FEES					
16	Waste Characterization - Sampling and reporting to obtain disposal facility approval for excavated soil.		Allowance	\$400,000	
17	Construction Phase Engineering Services - Includes construction administration and environmental monitoring.	18	Months	\$55,000 per Month	\$990,000
18	Confirmation Sampling - Includes sampling to confirm attainment of the Track 1 Unrestricted Use Soil Cleanup Objectives.	226	Samples	\$1,500 per Sample	\$339,000
19	BCP Engineering Services - Construction Documents/Bid Support, Construction Meetings and Construction Administration, Regulatory Agency Reporting, data management and validation, and the FER		Lump Sum	\$173,000	
20	BCP Environmental Legal Services (provided by others)		Lump Sum	\$191,000	
21	General Contractor Fees and Insurance		Allowance	\$6,120,000	
				ENGINEERING FEES SUBTOTAL	\$8,213,000
Remediation Contingency (15% of Engineering and Contractor Fee Subtotal)				\$4,012,000	
ESTIMATED REMEDIATION COST - ALTERNATIVE I				\$30.8 MM	

General Assumptions and Conditions:

- Based on the Remedial Investigation (RI) and the Limited Site Investigation (LSI), Track 1 remediation excavation depths range between about 0 and 20 feet below grade surface (bgs). Groundwater was encountered at depths ranging from about 1 to 9 feet bgs.
- Implementation of remediation is estimated to take about 18 months.
- Total costs are rounded up to the nearest thousand.
- Costs provided are estimates and are based on Langan's past experience and the November 18, 2020 Concept Estimate Rev 9, prepared by Hunter Roberts Construction Group. A 10% increase in costs was applied to the 2020 costs presented in the Hunter Roberts estimate, and unit costs for off-site disposal were rounded up to convert the costs into 2022 unit dollars.
- This cost estimate is not a stand-alone document and should be used in concert with the Remedial Action Work Plan (RAWP).
- The conversion factor from cubic yards (CY) to tons is 1.5 tons per cubic yards
- This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this cost estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. This cost estimate is expected to be within -30% to +50% of the actual cost. Utilization of this cost estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this cost estimate information is not intended to be utilized for complying with financial reporting requirements associated with liability services.
- VOC = Volatile organic compound
- SVOC = Semivolatile organic compound
- PFAS = Per-and polyfluoroalkyl substances
- PCB = Polychlorinated biphenyls
- CAMP = Community Air Monitoring Plan
- FER = Final Engineering Report

Item No. Contractor Cost Notes and Assumptions:

- This allowance includes items to support earthwork, i.e. temporary site fencing, installation of gates, temporary electricity, security, trailers/facilities, mobilization, and monitoring.
- This allowance includes abatement, handling, and management of asbestos-containing and hazardous building materials.
- Remedial excavations along the inland site boundaries cannot be sloped and thus require excavation support. Perimeter support assumes that localized soldier piles and lagging will be required along the northern, eastern, and western site perimeters to accommodate excavation between about 2 and 20 feet bgs.
- Remedial excavation along the Echo Bay shoreline cannot be sloped and thus require excavation support. Perimeter support assumes that a sheet pile wall will be necessary along the Echo Bay
- Management and handling of contaminated and potentially hazardous soil assumes 25 percent increase in labor costs for Occupational Safety and Health Administration (OSHA) trained labor. Baseline labor fees assumes \$40 per cubic yard. Soil handling includes excavation for off-site disposal.
- Dust, odor and vapor control may be required during soil excavation. Equipment and material necessary to monitor and mitigate vapor/odor emission. Cost estimate includes application of vapor/odor suppressing foam and/or water during remedial excavation. Area 4 includes about 170 tons of PCB-impacted soil that has been delineated based on the results of the RI, LSI, and Supplemental Remedial Investigation (SRI) completed by Langan. The estimated volumes for the remaining material are based on the sampling results of the RI, LSI, and the SRI. Soil volumes were calculated by averaging the approximate excavation depth required in each excavation zone as presented in Figure 8 of the RAWP. The following assumptions were made based on the contaminant concentrations identified within each excavation zone: Zone 1 (el. +32 to +22) will consist of all non-hazardous soil/fill; Zone 2 (el. +22 to +12) will consist of 10% petroleum-impacted soil and 90% non-hazardous soil/fill; Zone 3 (el. +12 to +2) will consist of 20% petroleum-impacted soil, 5% hazardous lead-impacted soil/fill, and 75% non-hazardous soil/fill; Zone 4 (el. +2 to -8) will consist of 30% petroleum-impacted soil, 5% hazardous lead-impacted soil/fill, and 65% non-hazardous soil/fill. This estimate includes the closure of up to five potential USTs, including decommissioning and cleaning costs, and off-site disposal of the USTs as scrap metal.
- This estimate assumes dewatering with pre-treatment will be necessary to achieve development depth. Pre-treatment can include the following: (1) settling tank for the removal of large solids and free product, (2) granular activated carbon (GAC) filters for removal of dissolved organic compounds, (3) oil-water separator tank if free product is encountered, (4) ion exchange chambers, and (5) flocculation tanks.
- This estimate assumes backfilling the entire site, excluding the existing and proposed new building footprints. The quantity of soil has been increased by 30% to account for compaction.
- Contingent application of Oxygen Release Compound (ORC), PetroFix, or approved alternative.

Item No. Engineering Cost Assumptions:

- This estimate includes the completion of a waste characterization investigation to classify soil to be excavated for off-site disposal and associated reporting. Samples will be required at a frequency of about 1 per 800 cubic yards of soil.
- Estimate includes, but is not limited to, implementation of a CAMP as required by the NYSDEC, the presence of on-site environmental personnel throughout remediation, health and safety including purchase and maintenance of appropriate personal protective equipment (PPE), and periodic reporting to the regulatory agency. This estimate assumes 226 documentation endpoint samples, including quality assurance/quality control (QA/QC) samples, collected at a frequency of 1 sample per 900 square feet to verify attainment of the Track 1 Unrestricted Use Soil Cleanup Objectives. Confirmation endpoint samples will be analyzed for the NYSDEC Part 375 VOCs, SVOCs, metals (including hexavalent and trivalent chromium), PCBs, pesticides/herbicides, and PFAS. Sidewall samples are not anticipated due to the presence of bedrock and SOE along sidewalls.
- Costs are based on Langan's experience with regulatory programs and include the preparation of daily and monthly reports during site remediation, data management and validation, and engineering fees associated with the FER required through the Brownfield Cleanup Program (BCP).
- A contingency fee is included for legal fees associated with participation in the BCP, is assumed to be equal to 10% of the engineering fees, and is based on Langan's experience.
- Costs include new building construction, insurance, and general contractor (GC) costs including: construction contingency, sub default insurance, general conditions, Contractor-Controlled Insurance Program (CCIP), and fee, for a total of about 33% of brownfield-eligible contractor fees.

**Table 3
Remedial Action Work Plan
Alternative II: Track 4 Remedial Cost Estimate**

**AMN Site
260 Main Street
New Rochelle, New York
BCP Site No.: C360201
Langan Project No.: 170331704**

Item No.	Description of Environmental Item	Quantity		Unit Cost		Total Cost
REMEDIAL ACTION CONTRACTOR FEES						
1	Remediation Facilities, Equipment, Mobilization, Demobilization, Permits, and Site Maintenance - Remediation and decontamination facilities include trailer, truck cleaning facilities, etc.	Allowance				\$120,000
2	Asbestos Abatement and Demolition - Includes abatement of asbestos containing materials (ACM) and hazardous materials (HAZMAT), demolition of existing structures, and removal of building demolition debris.	Allowance				\$300,000
3	Management and Handling of Excavated Soil (Contaminated and Hazardous) - Excavation of source soil (excludes excavation required for redevelopment)	14,300	CY	\$40	per CY	\$572,000
4	Dust, Odor, and Vapor Control - Includes odor, dust, and organic vapor control during remediation of the site. Assumes control measures will include, but not be limited to application of odor suppressant, foam or water.	12	Months	\$20,000	per Month	\$240,000
5	Off-Site Transport and Disposal of Nonhazardous Soil - Includes transport vehicles and disposal of nonhazardous fill/soil at a permitted facility	20,600	Tons	\$60	per Ton	\$1,236,000
6	Off-Site Transport and Disposal of Petroleum-Impacted Soil - Includes transport vehicles and disposal of petroleum-impacted soil at a permitted facility	180	Tons	\$70	per Ton	\$13,000
7	Off-Site Transport and Disposal of Hazardous Lead-Impacted Soil - Includes transport vehicles and disposal of hazardous lead-impacted soil at a permitted facility	600	Tons	\$210	per Ton	\$126,000
8	Off-Site Transport and Disposal of PCB-Impacted Soil - Includes transport vehicles and disposal of PCB-impacted soil at a permitted facility	170	Tons	\$330	per Ton	\$57,000
9	Underground Storage Tank (UST) Removal - Registration, cleaning, removal and disposal of any encountered USTs.	Allowance				\$50,000
10	Dewatering and Groundwater Treatment Design, Permitting, and Installation	Allowance				\$250,000
11	Dewatering and Groundwater Treatment	6	Months	\$50,000	per Month	\$300,000
12	Composite Cover System Backfill - Import and placement of clean fill to bring site to development grade. An additional 30% of fill is included to account for compaction.	13,600	CY	\$35	per CY	\$476,000
13	Sub-slab Depressurization System(s) - Installation, start-up, and operation of the sub-membrane depressurization (SSD) system(s) beneath the building slab in Block D2.	Allowance				\$275,000
14	Waterproofing/Vapor Barrier - The waterproofing/vapor barrier will be a minimum of 20 mils thick and will be installed as a continuous sub-slab membrane under all new building slabs. An extra 20% is included to account for overlap.	87,000	SF	\$20	SF	\$1,740,000
						\$5,755,000
ENGINEERING FEES						
15	Waste Characterization - Sampling and reporting to obtain disposal facility approval for excavated soil.	--		Allowance		\$170,000
16	SSD System(s) Design (Block D2)	--		Allowance		\$50,000
17	Construction Phase Engineering Services - Includes construction administration and environmental monitoring.	12	Months	\$55,000	per Month	\$660,000
18	Documentation Sampling - Includes sampling to document remaining site conditions following soil/fill removal.	165	Samples	\$1,500	per Sample	\$248,000
19	BCP Engineering Services - Construction Documents/Bid Support, Construction Meetings and Construction Administration, Regulatory Agency Reporting, Environmental Easement Survey, data management and validation, SMP, and the FER	Lump Sum				\$223,000
20	BCP Environmental Legal Services (provided by others)	Lump Sum				\$135,100
21	General Contractor Fees and Insurance	--		Allowance		\$1,900,000
ENGINEERING FEES SUBTOTAL						\$3,387,000
Remediation Contingency (15% of Engineering and Contractor Fee Subtotal)						\$1,372,000
ESTIMATED REMEDIATION COST - ALTERNATIVE II						\$10.5 MM

General Assumptions and Conditions:

- Based on the Remedial Investigation (RI) and the Limited Site Investigation (LSI), source removal excavation depths range between 2 and 12 feet below grade surface (bgs). Groundwater was encountered at depths ranging from about 1 to 9 feet bgs.
- Implementation of remediation is estimated to take about 12 months.
- Total costs are rounded up to the nearest thousand.
- Costs provided are estimates and are based on Langan's past experience and the November 18, 2020 Concept Estimate Rev 9, prepared by Hunter Roberts Construction Group in units of 2020 dollars. A 10% increase in costs was applied to the 2020 costs presented in the Hunter Roberts estimate, and unit costs for off-site disposal were rounded up to convert the costs into 2022 unit dollars.
- This cost estimate is not a stand-alone document and should be used in concert with the Remedial Action Work Plan (RAWP).
- The conversion factor from cubic yards (CY) to tons is 1.5 tons per cubic yards
- This estimate has been prepared for the purposes of comparing potential remedial alternatives. The information in this cost estimate is based on the available information regarding the site investigation and the anticipated scope of the remedial alternative. This cost estimate is expected to be within -30% to +50% of the actual cost. Utilization of this cost estimate information beyond the stated purpose is not recommended. Langan is not licensed to provide financial or legal consulting services; as such, this cost estimate information is not intended to be utilized for complying with financial reporting requirements associated with liability services.
- VOC = Volatile organic compound
- SVOC = Semivolatile organic compound
- PFAS = Per- and polyfluoroalkyl substances
- PCB = Polychlorinated biphenyls
- CAMP = Community Air Monitoring Plan
- FER = Final Engineering Report
- SMP = Site Management Plan

Item No. Contractor Cost Notes and Assumptions:

- This allowance includes items to support earthwork, i.e. temporary site fencing, installation of gates, temporary electricity, security, trailers/facilities, mobilization, monitoring.
- This allowance includes abatement, handling, and management of asbestos-containing and potentially hazardous materials.
- Management and handling of contaminated and potentially hazardous soil/fill assumes 25 percent increase in labor costs for Occupational Safety and Health Administration (OSHA) trained labor. Baseline labor fees assumes \$40 per cubic yard. Soil handling includes excavation for off-site disposal.
- Dust, odor and vapor control may be required during soil excavation. Equipment and material necessary to monitor and mitigate vapor/odor emission. Cost estimate includes application of vapor/odor suppressing foam and/or water.
- 5, 6, 7, 8 The estimated volumes for the differing types of soil are based on the sampling results of the RI, LSI, and Supplemental Remedial Investigation completed by Langan.
- This estimates includes the closure of up to five potential USTs, including decommissioning and cleaning costs, and off-site disposal of the USTs as scrap metal.
- This estimate assumes dewatering with pre-treatment will be necessary to achieve the remediation depth for the PCB- and Petroleum-impacted hotspots in the southwestern part of the site. Pre-treatment can include the following: (1) settling tank for the removal of large solids and free product, (2) granular activated carbon (GAC) filters for removal of dissolved organic compounds, (3) oil-water separator tank if free product is encountered, (4) ion exchange chambers, and (5) flocculation tanks.
- This estimate assumes that the equivalent of a 2-foot soil cover will be placed across the entire site, excluding the existing and proposed new building footprints. The quantity of soil has been increased by 30% to account for compaction.
- The Proposed Block D2 SSD system(s) will include a sub-slab collection layer (8-inch layer of 3/4-inch clean stone) with horizontal perforated collection pipes, riser pipes to convey the collected vapor to the roof, and a roof-mounted blower system that will maintain a constant negative pressure through the piping and collection layer.
- Assumes a waterproofing/vapor barrier membrane will be installed under the lowest level of all new buildings and along foundation sidewalls.

Item No. Engineering Cost Assumptions:

- This estimate includes the completion of a waste characterization investigation to classify soil to be excavated for off-site disposal and associated reporting. Samples will be required at a frequency of about 1 per 800 cubic yards of soil.
- Estimate includes, but is not limited to, implementation of a CAMP as required by the NYSDEC, the presence of an on-site environmental monitor throughout remediation, health and safety including purchase and maintenance of appropriate personal protective equipment (PPE), and periodic reporting to the regulatory agency.
- This estimate assumes the collection of documentation endpoint samples and quality assurance/quality control (QA/QC) samples, collected at a reduced frequency of 1 sample per 1,500 square feet to document soil quality left in-place after remedial excavations and under the final composite cover system. Documentation endpoint samples will be analyzed for the NYSDEC Part 375 list of VOCs, SVOCs, metals (including hexavalent and trivalent chromium), PCBs, pesticides/herbicides, PFAS, and 1,4-dioxane.
- Costs are based on Langan's experience with regulatory programs and include the preparation of monthly reports during site remediation, data management and validation, and engineering fees associated with the SMP and the FER required through the Brownfield Cleanup Program.
- A contingency fee is included for legal fees associated with participation in the BCP, is assumed to be equal to 10% of the engineering fees, and is based on Langan's experience.
- Costs include new building construction, insurance, and general contractor (GC) costs including: construction contingency, sub default insurance, general conditions, Contractor-Controlled Insurance Program (CCIP), and fee, for a total of about 33% of brownfield-eligible contractor fees.