



December 10th, 2020

Response Action Plan

Submitted to:

Maryland Department of the Environment

Voluntary Cleanup Program

1800 Washington Boulevard

Baltimore, Maryland 21230

Attn: Mr. Chris Hartman

Kip Realty, LLC

6264 Race road, Elkridge, Maryland

Prepared by:

Green Future Construction, LLC



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Response Action Plan

1.1 Site Overview

Green Future Construction, LLC (GFC) has prepared this Response Action Plan (RAP) in accordance with the provisions of Maryland's Voluntary Cleanup Program (VCP) for the participant, Kip Realty, LLC (KIP) located at 6264 Race rd., Elkridge, MD 21075.

1.1 Background

KIP initiated its participation in the VCP when Partner Engineering and Science submitted the VCP application to the Maryland Department of the Environment (MDE) no May 12, 2020. The application included Phase I and Phase II Environmental Site Assessments (ESAs) prepared by Urban Green Environmental and Partner Engineering.

During the Urban Green Phase II assessment, 10 soil borings (SB-1 through SB-10) were analyzed throughout the Site to depths of up to 20 feet below grade. Two soil borings (SB-3 and SB-10) were completed as temporary groundwater wells (TW-3 and TW-10, respectively). TPH DRO was detected in two soil samples at concentrations exceeding the MDE Cleanup Standard for Non-Residential Soil.

In a letter dated 18th of September 2020, MDE requested that additional sampling be conducted at the site as follows: 1) Additional sampling from current supply well giving that there was an unknown PID detection at location B-2 and the uncertainty whether the well is drawing from an unconfined aquifer. 2) Additional sampling from the septic system as the Land Restoration Program was unable to determined if the septic were a closed system or whether if the contamination could have leached from the concrete tank. 3) Additional sampling on the surface soils (1' to 3' deep) to determine the extent of contamination and definition of possible removal area. 4) Sample 10-point composite soil samples from the three soil stockpiles for new parameters. 5) Obtain sample of B-2 (14'-16') as well as a few adjacent borings for analysis.

All additional sampling was completed and re-submitted to MDE on October 13, 2020. Since the property does not qualify for a No Further Requirement Determination, MDE requested that a proposed response action plan (RAP) be prepared, approved, and implemented in order to address any potential future risk



to human health. Upon approval of the RAP by MDE, and the successful implementation of the response actions described herein, the participant expects to receive a Certificate of Completion (COC) in accordance with the provisions of the VCP.

1.2 Site Summary and History

The subject property consists of 4 acres and it is zoned industrial M-2 (heavy industrial) by Howard County. The site is currently developed with 7,200 square foot structure, which is currently occupied by Green Future Construction, Landscaping, and Tree Specialists. The subject property uses a 40-50 ft deep water well that is only used for restrooms. The property will remain for industrial use and at no time will be converted/re-zoned for residential purposes. The surrounding area is also used for industrial purposes. The property is secured with an 8-ft-fence on the entire 4 acres.

The building was constructed in 1957 and has been operating as a precast concrete products manufacturer from 1959 to 2019. Historical Site operations have utilized products or materials containing metals, volatile organic compounds (VOCs), or petroleum compounds. In addition, Site personnel indicated that in the 1960s, solvents and/or oils may have been applied for dust suppression along the access road surrounding the Site building.

Prior Underground Storage Tanks: MDE documents indicate one 2,000-gallon diesel underground storage tank (UST) was removed from the Site in May 1986 and replaced with a 10,000-gallon diesel UST removed from the Site along with a 10,000-gallon gasoline UST in September 1996 under Maryland Department of the Environment (MDE) Oil Control Program (OCP) oversight. Although severe pitting was observed in one UST, no soil contamination was observed in either UST excavation; therefore, the MDE issued case closure with no additional action required. The 2019 Phase II ESA evaluated environmental conditions in the vicinity of the former location of these UST and no detectable concentrations of VOCs, Total Petroleum Hydrocarbons – Diesel Range Organics (TPH DRO), or TPH – Gasoline Range Organics (GRO) were reported in the soil sample collected adjacent to the suspected location of the former USTs. As result of the regulatory statuses and lack of impact of these three USTs, the prior USTs represent a historical REC (HREC) whereby no further investigation appeared warranted.

2.0 Additional Investigatory Information

The VCP Application for the Site has the full Phase I and Phase II Environmental Site Assessment reports prepared by Urban Green in September 2019. Additional samplings were conducted by Partner in February 2020 and the reports were also included with the VCP application. Also, after the letter



received in July 2020, as requested by Mr. Chris Hartman, a supplemental investigative scope of work was also developed.

According to the report presented, a geophysical survey was completed in the property. As well as evaluation of the water well components/construction details and sampling; advancement of five borings (B1 through B5); advancement of nine test pits (TP-1 through TP-9); collection of one composite soil sample; and installation of two temporary sub-slab soil gas points (SG-1 and SG-2) to collect representative soil, groundwater, and sub-slab soil gas samples. Please see data summary attached (See Attachment 1).

2.1 Additional Monitoring

Additional monitoring is required on the water well. At least 3 samples for DRO, 1-raw water, 2-between GAC 1&2, 3-after GACs will have to be conducted at 6-month, 1 year, and annual until public water connection.

3.0 Exposure Assessment

3.1 Current and Future Use

The subject site is situated in an industrial area of Elkridge, Maryland. The area has a zoning classification of M-2 which is manufacturing: Heavy-industrial in Howard County. The Participant intends that future use of the Site will remain consistent with its current use. Which is industrial property frequented by trucks and human traffic. It is also used as warehouse and storage of construction materials.

3.2 Media of Concern

Prior sampling at the site conducted by Urban Green in September 2019 indicated that No concentrations of VOCs, PAHs, PPL metals, PCBs, TPH GRO, pesticides, or herbicides were reported above the MDE Cleanup Standards for Non-Residential Soil. TPH DRO was detected in two soil samples at concentrations exceeding the MDE Cleanup Standard for Non-Residential Soil of 620 milligrams per kilogram (mg/kg): SB-4 1-3 at a concentration of 4,640 mg/kg and SB-9 1-3 at a concentration of 766 mg/kg.

Supplemented sampling conducted by Partner indicated TPH-DRO was identified at a concentration above the Non-Residential SCS in the soil sample collected from test pit TP-2 (8,350 mg/kg).



Concentrations of TPH-DRO were not identified above the Non-Residential SCS in the soil samples collected from test pits TP-1 and TP-3 through TP-9.

On the supplemental testing conducted after MDE letter on the water well only TPH DRO was detected above laboratory MDL at a concentration of 292 micrograms per liter ($\mu\text{g/l}$), which exceeds the TPH aromatic and aliphatic medium Tap water MCLs of 47 $\mu\text{g/l}$, respectively. Concentrations of TCL VOCs, TCL SVOCs, chlorinated herbicides, organochlorine pesticides, organophosphorus pesticides, and PCBs were not identified at concentrations above the laboratory MDLs, which were reported below the EPA and MDE MCLs, in the sample collected from the non-potable well.

3.3 Potentially Exposed Population

Based on the nature of the contamination at the Site and the current and future use of the Site, the only population potentially exposed to groundwater at the Site is the worker population. There are approximately 7 employees who work at the Site daily. Bottle water is currently used at the Site for drinking purposes. The well water is only used to restrooms.

3.4 Exposure Pathways

As discussed above, the presence of an on-site supply well presents a potential exposure pathway to groundwater at the Site. Due to the lab results content of TPH DRO in the water well, the supply well is not used as routine drinking water supply. As a result of these uses, the potential for an exposure pathway to dermal contact and incidental ingestion of groundwater exists.

Exposure pathway for soil contamination include ingestion of soil, dermal contact with soil and inhalation of soil particles.

4.0 Cleanup Criteria

The contaminants of concern identified for the Site is TPH DRO. For the non-portable water well, MDE generic numeric cleanup criteria for this compound is 47 $\mu\text{g/L}$. Exposure to contaminants exceeding those concentrations will be prevented by the installation of carbon filtration system in the well and the use of an alternate water supply until public water connection happens.

For the soil contamination, the MDE generic numeric cleanup criteria is 620 mg/kg . The prevention of contamination will happen with the capping of the contaminated area to avoid the spread or contact.



5.0 Selected Technologies and Land Use Controls

The participant has evaluated several technologies for addressing the potential for TPH DRO migration from the contaminated area, soil and non-portable water well. As noted, water from this well is used for the onsite bathrooms only. Bottled water is brought on-site for routine drinking water use.

The technology selected by the participant is a double carbon filtration system for the non-portable water well as shown in the systematic diagram in the Attachment 4. A scheduled maintenance is in place as follow: 3 samples for DRO, 1-Raw Water, 2-Between GAC 1&2, 3-After GACs at 6 months, 1 year and annual until connection to public water supplied by the Washington Suburban Sanitation Commission (WSSC) and abandonment of water supply well, thereby eliminating the need and means for groundwater use at the Site.

As per the soil contamination, the technology selected is to cap the contaminated area with an Asphalt. The cap consists of 2" of #57 aggregate and an additional 4" of Asphalt as shown in the diagram attached (See Attachment 3). The cap will prevent the contaminated soil from spreading. The area will be inspected and maintained every twelve months. The inspections will consist of checking for alligator cracks, separations/erosions, and settlements.

5.0 Evaluation Criteria for The Selected Technologies

The selected remedial alternatives for the Site consist of the following components:

- Capping the contaminated area using asphalt
- Double carbon filtration system in the non-portable water well until permanent abandonment of the well.

This alternative will prevent the potential exposure to human health and the environment. In addition, the alternative is consistent and compliant with all the regulatory requirements.

7.0 Proposer Response Action

Installation and continued maintenance of Protective Cap:

Petroleum was detected at 1-3ft GB in boring SB4 at a concentration of 4,640 mg/kg. See attached Phase II Diagram (See Attachment 2). GFC is ready and willing to cap the contaminated areas as shown in the attached diagram within 30 days of RAP approval. The cap consists of 2" of #57 aggregate and an additional 4" of Asphalt as shown in the diagram attached (See attachment 3). No soil will be removed or disturbed. GFC will maintain the area every 12-months. The inspections will consist of checking for



alligator cracks, separations/erosions, and settlements. If any of these elements occur GFC will address it immediately.

Water Well Filtration:

While TPH-DRO was detected above the EPA Tap water MCLs for both aromatic and aliphatic medium TPH ranges in the water well sample, the water well is not utilized for potable purposes. The water is currently only being used for toilet water. The proposed response action here is to install and maintain two carbon filters within the well to ensure there will not be any ingestion of contaminated water. The installation will be done following the diagram attached and can be done immediately after approval (See Appendix A). A scheduled maintenance is in place as follow: 3 samples for DRO, 1-Raw Water, 2-Between GAC 1&2, 3-After GACs at 6 months, 1 year and annual until connection to public water supplied by the Washington Suburban Sanitation Commission (WSSC) and abandonment of water supply well, thereby eliminating the need and means for groundwater use at the Site. The participant is working diligently in securing funds to have public water installed in the property within 24-month. KIP has already contacted a government agency and applied for a grant for this purpose.

8.0 Permits, Notifications and Contingencies

The participant will comply with all federal, State, and local laws and regulations by obtaining all necessary approvals and permits to conduct all activities and implement this RAP.

9.0 Health and Safety Plan

All applicable Occupational Safety and Health Administration (OSHA) regulations will be followed during the implementation of this RAP. A site-specific Health and Safety Plan (HASP) for all personnel will be developed, implemented and maintained on-site. All on-site personnel must be made aware of and sign the HASP. The development of the HASP is the responsibility of the participant. On-site records of HASP signatures must be available to the Department upon request.

10.0 Implementation Schedule

The participant is prepared to initiate implement of the proposed response action immediately upon approval. Installation of the two carbon filters in the non-portable well water is expected to be completed before January 15th, 2021. The capping of the contaminated soil will be completed during the February/March 2021 timeframe. As per the public water connection, it will be completed within 24 months of approval.



11.0 Administrative Requirements

The administrative requirements include a written agreement and a zoning certification.

11.1 Written Agreement

Section 7-508 of the Environment Article, Annotated Code of Maryland, requires that the RAP shall “include a written agreement that if the RAP is approved, the participant agrees, subject to the withdrawal provisions set forth in Section 7-512 of this subtitle, to comply with the provisions of the plan.” The following language is approved as meeting this requirement and must be included verbatim in the final RAP accompanied by the participant’s dated signature:

If the response action plan is approved by the Maryland Department of the Environment, the participant agrees, subject to the withdrawal provisions of Section 7-512 of the Environment Article, to comply with the provisions of the response action plan. Participant understands that if he fails to implement and complete the requirements of the approved plan and schedule, the Maryland Department of the Environment may reach an agreement with the participant to revise the schedule of completion in the approved response action plan or, if an agreement cannot be reached, the Department may withdraw approval of the plan.

11.2 Zoning Certification

Section 7-508 of the Environment Article, Annotated Code of Maryland, requires that the participant develop a RAP that includes a “certified written statement that the property meets all applicable county and municipal zoning requirements.” A new signed Zoning Certification must be included in each RAP revision. The following language is approved as meeting this requirement and must be included verbatim in the final RAP accompanied by the participant’s dated signature:

The participant hereby certifies that the property meets all applicable county and municipal zoning requirements. The participant acknowledges that there are significant penalties for falsifying any information required by MDE under Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland, and that this certification is required to be included in a response action plan for the Voluntary Cleanup Program pursuant to Title 7, Subtitle 5 of the Environment Article, Annotated Code of Maryland.



11.3 Performance Bond or Other Security

A performance bond or other type of security is not necessary for this Site.

11.4 Response Action Plan Review and Approval

It is expected that the RAP will be approved at or before the end of the 75-day review period (the period of time for which MDE has to review the RAP). However, if RAP modifications are necessary, the participant will resubmit the plan within 120 days after receipt of notification by MDE. The participant understands that if the plan is not resubmitted within 120 days, MDE may consider the application withdrawn in accordance with section 7-512 of the Environmental Article.

The participant also understands that within 30 days following receipt of a resubmitted plan, MDE will notify the participant whether the plan is approved. Upon approval, MDE will notify the participant in writing that no further action will be required to accomplish the objectives set forth in the approved plan other than these actions described in the plan.



Attachment 1 – Data Summary

Table 1: Summary of Investigation Scope
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 February 7, 2020, July 22-23, 2020, and September 4, 2020

Sample Identification	REC/Issue	Sample Date	Location	Terminal Depth (feet bgs)	Matrix Sampled	Sampling Depths (feet bgs)	Target Analytes
B-1	Historical Cement Manufacturing Operations	2/7/2020	Southwestern portion of subject property	12	Soil	0 to 1 9 to 10	VOCs, TPH-DRO, TPH-GRO
B-2		2/7/2020	Western portion of subject property	16	Soil	0 to 1 7 to 8	
B-3		2/7/2020	Western portion of subject property	8	Soil	0 to 1 7 to 8	
B-4		2/7/2020	Northwestern portion of subject property	10*	Soil	0 to 1 9 to 10	
B-5		2/7/2020	Southwestern portion of subject property	8	Soil	0 to 1 7 to 8	
B-6		2/7/2020	Northwestern portion of subject property	7.5*	Soil	0 to 1 6.5 to 7.5	
Soil Stockpile	AOC 4: Soil Stockpiles	7/22/2020	North portion of the subject property	Not applicable	Soil**	Not applicable	TCL SVOCs, PCBs, TPH-DRO
Production Well	AOC 1: Non-Potable Water Well	7/22/2020	Production well sample spigot	Not applicable	Non-Potable Water	Not applicable	TCL VOCs, TCL SVOCs, PCBs, TPH-DRO, OCPs, OPPs, Chlorinated Herbicides
TP-1	AOC 3: Surface Soil Adjacent to the Western Driveway	7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	TPH-DRO
TP-2		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-3		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-4		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-5		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-6		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-7		7/23/2020	Driveway on the western portion of the subject property	4	Soil	2	
TP-8		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
TP-9		7/23/2020	Driveway on the western portion of the subject property	4	Soil	4	
B1	AOC 2: Septic System	9/4/2020	South of the first septic system component	10.5*	Soil	9.5 to 10.5	TCL VOCs, TCL SVOCs, PCBs, TPH-DRO, OCPs, OPPs Chlorinated Herbicides
B2		9/4/2020	North of the first septic system component	6.5*	Soil	5.5 to 6.5	
B3		9/4/2020	South of the second septic system component	8	Soil	3 to 4	
B4		9/4/2020	North of the second septic system component	8	Soil Groundwater	3 to 4 Screened 3 to 8	
B5		9/4/2020	West of the third septic system component	7*	Soil Groundwater	6 to 7 Screened 2 to 7	
SG-1	AOC 5: Sub-Slab Soil Gas	9/4/2020	Central portion of the Main Building	0.5	Sub-Slab Soil Gas	0.0 to 0.5	TCL VOCs
SG-2		9/4/2020	Central portion of the Small Products Building	0.5	Sub-Slab Soil Gas	0.0 to 0.5	

Notes:
 REC = recognized environmental condition
 bgs = below ground surface
 AOC = Area of Concern
 * = Refusal encountered at the terminal depth
 ** = 10-point composite soil sample
 TCL VOCs = Target Compound List volatile organic compounds
 TCL SVOCs = Target Compound List semi-volatile organic compounds
 PCBs = polychlorinated biphenyls
 TPH-DRO = Total Petroleum Hydrocarbons – diesel range organics
 TPH-GRO = Total Petroleum Hydrocarbons – gasoline range organics
 OCPs = Organochlorine pesticides
 OPPs = Organophosphorus pesticides

Table 2: Soil Sample Laboratory Results Summary - Partner Phase II
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 February 7, 2020

Analyte	SCS-PG	SCS-NR	Sample Identification - Sample Depth (feet bgs)											
			B1-1'	B1-9'	B2-1'	B2-7'	B3-7'	B4-1'	B4-1.0'	B5-1'	B5-7'	B6-1'	B6-7.5'	
VOCs via EPA Method 8260 (mg/kg)														
1,1,2-Trichloroethane	0.00026	0.63	<0.00028	<0.00025	<0.0002	<0.00021	<0.00022	<0.00027	<0.00023	<0.00025	<0.00026	<0.00022	<0.00027	<0.00024
1,1-Dichloroethane	0.016	16	0.00018 J	0.00018 J	<0.00011	<0.00011	<0.00012	<0.00015	<0.00012	0.0015	<0.00014	<0.00012	<0.00015	<0.00013
1,1-Dichloroethene	0.2	100	<0.00025	0.00061 J	<0.00018	<0.00019	<0.00024	<0.00024	<0.0002	0.0028	<0.00024	<0.00019	<0.00024	<0.00021
1,2-Dibromo-3-chloropropane	0.000028	0.064	<0.0001	<0.00095	<0.00076	<0.00079	<0.00084	<0.001	<0.00086	<0.00093	<0.00099	<0.00081	<0.001	<0.0009
1,2-Dibromoethane	0.000042	0.16	<0.00029	<0.00026	<0.00021	<0.00022	<0.00023	<0.00028	<0.00024	<0.00026	<0.00028	<0.00022	<0.00028	<0.00025
1,2-Dichlorobenzene	0.6	930	<0.00015	<0.00014	<0.00011	<0.00011	<0.00012	<0.00015	<0.00013	<0.00013	<0.00014	<0.00012	<0.00014	<0.00012
1,2-Dichloroethane, Total	NE	NE	0.0004 J	0.00062 J	<0.0001	<0.00011	<0.00012	<0.00014	<0.00012	<0.00013	<0.00014	0.00034 J	0.00041 J	<0.00012
2-Butanone	2.4	19,000	0.0068 J	<0.0021	<0.0017	<0.0018	0.0024 J	<0.0022	0.0068 J	<0.0021	<0.0022	<0.0018	<0.0022	<0.002
Acetone	5.8	61,000	0.053	<0.0095	<0.0076	<0.0079	0.012 J	<0.01	0.038	<0.0093	<0.0099	<0.0081	<0.01	<0.009
Chlorobenzene	0.11	130	<0.00013	<0.00012	<0.00009	<0.0001	<0.00011	<0.00013	0.0017	0.0019	<0.00012	<0.0001	<0.00013	<0.00011
Chloroform	0.00012	1.4	<0.00015	<0.00013	<0.00011	0.00013 J	0.00056 J	<0.00014	0.00028 J	<0.00013	<0.00014	<0.00011	<0.00014	0.00059 J
Ethylbenzene	0.034	25	<0.00015	<0.00013	<0.00011	<0.00011	<0.00012	<0.00014	0.00024 J	<0.00013	<0.00014	<0.00011	<0.00014	<0.00013
Methyl Acetate	NE	NE	<0.001	<0.0009	<0.00073	<0.00075	0.0024 J	<0.00096	0.0021 J	<0.00088	<0.00094	<0.00077	<0.00096	<0.00085
o-Xylene	NE	NE	<0.00031	<0.00028	<0.00022	<0.00023	<0.00024	<0.0003	0.00029 J	<0.00027	<0.00029	<0.00024	<0.00029	<0.00026
p/m-Xylene	NE	NE	<0.00059	<0.00053	<0.00043	<0.00044	<0.00047	<0.00057	0.0006 J	<0.00052	<0.00056	<0.00045	<0.00056	<0.0005
trans-1,2-Dichloroethene	0.22	2300	0.0004 J	0.00062 J	<0.0001	<0.00011	<0.00012	<0.00014	<0.00014	<0.00013	<0.00014	0.00034 J	0.00041 J	<0.00012
Vinyl chloride	0.00013	1.7	<0.00035	<0.00032	<0.00026	<0.00026	<0.00028	<0.00034	<0.00029	<0.00031	<0.00033	<0.00027	<0.00034	<0.00026
Xylenes, Total	0.38	250	<0.00031	<0.00028	<0.00022	<0.00023	<0.00024	<0.0003	0.00089 J	<0.00027	<0.00029	<0.00024	<0.00029	<0.00026
TPH-DRO via EPA Method 8015 (mg/kg)														
TPH-DRO	NE	620	4.7	2.1 J	1.4 J	1.2 J	0.82 J	0.68 J	0.86 J	1.2 J	1.6 J	2.2	1.5 J	0.64 J
TPH-GRO via EPA Method 8015 (mg/kg)														
TPH-GRO	NE	620	8,760	<4.4	2,640	9,44 J	726	14.9 J	160	7.01 J	1,350	20.2 J	542	<4.66

Notes:
 bgs = below ground surface
 EPA = United States Environmental Protection Agency
 VOCs = volatile organic compounds
 TPH = Total Petroleum Hydrocarbons
 GRO = Gasoline Range Organics
 DRO = Diesel Range Organics
 mg/kg = milligrams per kilogram
 NE = not detected above indicated laboratory Method Detection Limit (MDL)
 J = not established
 Values in bold were detected above the laboratory MDL
 SCS-PG: Maryland Protection of Groundwater Soil Cleanup Standards
 SCS-NR: Maryland Non-Residential Soil Cleanup Standards
 MDL exceeds the SCS-PG
Detected value exceeds the SCS-PG and/or SCS-NR

Table 3: Non-Potable Well Sample Laboratory Results Summary - AOC 1
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 July 22 and September 17, 2020

Analyte	MD-MCL	EPA MCLs	Production Well
<i>TCL VOCs via EPA Method 8260 (µg/l)</i>			
Analyzed TCL VOCs	Varies	Varies	<MDL
<i>TCL SVOCs via EPA Method 8270 (µg/l)</i>			
Analyzed TCL SVOCs	Varies	Varies	<MDL
<i>TCL SVOCs via EPA Method 8270 SIM (µg/l)</i>			
Analyzed TCL SVOCs	Varies	Varies	<MDL
<i>Chlorinated Herbicides via EPA Method 8151 (µg/l)</i>			
Analyzed Chlorinated Herbicides	Varies	Varies	<MDL
<i>OPP and OCP Pesticides via EPA Methods 8081 and 8141 (µg/l)</i>			
Analyzed OPP Pesticides	Varies	Varies	<MDL
Analyzed OCP Pesticides	Varies	Varies	<MDL
<i>PCBs via EPA Method 8082 (µg/l)</i>			
Analyzed PCBs	Varies	Varies	<MDL
<i>TPH-DRO via EPA Method 8015 (µg/l)</i>			
TPH-DRO	NE	5.5/100*	292

Notes:

EPA = United States Environmental Protection Agency

TCL = Target Compound List

VOCs = volatile organic compounds

SVOCs = semivolatile organic compounds

SIM = Select Ion Monitoring

PCBs = polychlorinated biphenyls

TPH = Total Petroleum Hydrocarbons

DRO = Diesel Range Organics

OCP = Organochlorine pesticides

OPP = Organophosphorus pesticides

µg/l = micrograms per liter

J = Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the MDL or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

<MDL = not detected above the laboratory MDL

NE = not established

MD-MCL: Maryland Maximum Contaminant Level (MCL) Standards Criteria per Maryland Department of the Environment Hazardous Substance Notification Standards, June 2014.

MCLs = EPA Maximum Contaminant Levels (May 2020)

*Aromatic/Aliphatic medium Tapwater MCLs

Values in **bold** and highlighted yellow exceed the EPA MCL.

Table 4: Soil Sample Laboratory Results Summary - AOC 2
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 September 4, 2020

Analyte	SCS-PG	SCS-NR	Sample Identification (Sample Depth - feet bgs)				
			B1 (9.5-10.5)	B2 (5.5-6.5)	B3 (3-4)	B4 (3-4)	B5 (6-7)
<i>TCL VOCs via EPA Method 8260 (mg/kg)</i>							
1,1,2-Trichloroethane	0.00026	0.63	<0.00021	<0.00025	<0.00022	<0.00026	<0.00024
1,2-Dibromo-3-chloropropane	0.000028	0.064	<0.00079	<0.00095	<0.00084	<0.00096	<0.00089
1,2-Dibromoethane	0.000042	0.16	<0.00022	<0.00026	<0.00023	<0.00027	<0.00025
1,2-Dichlorobenzene	0.6	930	0.00066 J	<0.00014	<0.00012	<0.00014	<0.00013
1,3-Dichlorobenzene	NE	NE	0.00031 J	<0.00014	<0.00012	<0.00014	<0.00013
1,4-Dichlorobenzene	0.0092	11	0.0013 J	<0.00016	<0.00014	<0.00016	<0.00015
2-Butanone	2.4	19,000	<0.0018	<0.0021	0.0057 J	<0.0021	<0.002
Acetone	5.8	61,000	<0.0079	<0.0095	0.028	<0.0096	0.023
Benzene	0.0046	5.1	0.00018 J	<0.00016	<0.00014	<0.00016	<0.00015
Chlorobenzene	0.11	130	0.005	<0.00012	<0.00011	<0.00012	<0.00011
Chloroform	0.00012	1.4	<0.00011	<0.00013	<0.00012	<0.00013	<0.00012
Methyl Acetate	NE	NE	0.019	0.0012 J	0.0082	0.0031 J	0.014
Tetrachloroethene	0.036	39	<0.00016	<0.00019	<0.00016	0.00034 J	<0.00018
Toluene	1.52	4,700	0.00057 J	0.00069 J	0.0006 J	0.00074 J	<0.00048
Vinyl chloride	0.00013	1.7	<0.00027	<0.00032	<0.00028	<0.00032	<0.0003
<i>TCL SVOCs via EPA Method 8270 (mg/kg)</i>							
2,4,6-Trichlorophenol	0.024	82	<0.036	<0.035	<0.035	<0.033	<0.036
2,4-Dinitrophenol	0.088	160	<0.089	<0.085	<0.085	<0.082	<0.087
2,4-Dinitrotoluene	0.0064	7.4	<0.038	<0.036	<0.037	<0.035	<0.038
2,6-Dinitrotoluene	0.0013	1.5	<0.033	<0.031	<0.031	<0.03	<0.032
3,3'-Dichlorobenzidine	0.016	5.1	<0.051	<0.048	<0.049	<0.047	<0.05
4-Chloroaniline	0.0032	11	<0.035	<0.033	<0.033	<0.032	<0.034
Atrazine	0.004	10	<0.067	<0.064	<0.064	<0.062	<0.066
Benzo(a)anthracene	0.22	21	<0.021	<0.02	0.038 J	<0.02	<0.021
Benzo(b)fluoranthene	6	21	<0.032	<0.031	0.035 J	<0.03	<0.032
Chrysene	230	2,100	<0.02	<0.019	0.033 J	<0.018	<0.02
Fluoranthene	178	3,000	<0.022	<0.021	0.075 J	<0.02	<0.022
Hexachlorobenzene	0.0024	0.96	<0.021	<0.02	<0.02	<0.02	<0.021
Hexachlorocyclopentadiene	0.0026	0.75	<0.17	<0.16	<0.17	<0.16	<0.17
Hexachloroethane	0.004	8	<0.031	<0.03	<0.03	<0.028	<0.03
Naphthalene	0.011	17	<0.023	<0.022	<0.022	<0.021	<0.023
Nitrobenzene	0.0018	22	<0.028	<0.027	<0.027	<0.026	<0.028
Pentachlorophenol	0.011	4	<0.042	<0.04	<0.04	<0.039	<0.041
Phenanthrene	26	2,300	<0.023	<0.022	0.07 J	<0.021	<0.023
Pyrene	26	2,300	<0.019	<0.018	0.062 J	<0.017	<0.019
<i>TCL SVOCs via EPA Method 8270 SIM (mg/kg)</i>							
n-Nitrosodi-n-propylamine	0.00016	0.33	<0.01	<0.0096	<0.0096	<0.0092	<0.0098
<i>Chlorinated Herbicides via EPA Method 8151 (mg/kg)</i>							
Analyzed Chlorinated Herbicides	Varies	Varies	<MLD	<MLD	<MLD	<MLD	<MLD
<i>OCP and OPP Pesticides via EPA Methods 8081 and 8141 (mg/kg)</i>							
Heptachlor epoxide	0.00056	0.33	<0.00104	<0.00097	<0.00099	<0.00094	<0.001
<i>PCBs via EPA Method 8082 (mg/kg)</i>							
Aroclor 1221	0.0016	0.83	<0.00368	<0.00361	<0.0037	<0.00343	<0.00373
Aroclor 1232	0.0016	0.72	<0.0078	<0.00763	<0.00782	<0.00725	<0.00789
Aroclor 1260	0.11	0.99	<0.0068	<0.00665	0.0187 J	0.01 J	<0.00688
PCBs, Total	0.024	0.94	<0.00326	<0.0032	0.0187 J	0.01 J	<0.0033
<i>TPH-DRO via EPA Method 8015 (mg/kg)</i>							
TPH-DRO	NE	620	<4.33	<4.05	255	262	32.6 J

Notes:
 bgs = below ground surface
 EPA = United States Environmental Protection Agency
 TCL = Target Compound List
 VOCs = volatile organic compounds
 SVOCs = semivolatle organic compounds
 SIM = Select Ion Monitoring
 PCBs = polychlorinated biphenyls
 OCP = Organochlorine pesticides
 OPP = Organophosphorus pesticides
 TPH = Total Petroleum Hydrocarbons
 DRO = Diesel Range Organics
 mg/kg = milligrams per kilogram
 < = not detected above indicated laboratory Method Detection Limit (MDL)
 NE = not established
 J = Estimated value. The Target analyte concentration is below the reporting limit (RL), but above the MDL or Estimated Detection Limit (EDL) for SPME-related analyses.
 This represents an estimated concentration for Tentatively Identified Compounds (TICs)
 Values in **bold** were detected above the laboratory MDLs
 SCS-PG: Maryland Protection of Groundwater Soil Cleanup Standards
 SCS-NR: Maryland Non-Residential Soil Cleanup Standards
 MDL exceeds the SCS-PG

Table 5: Groundwater Sample Laboratory Results Summary - AOC 2
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 September 4, 2020

Analyte	GWCS	B4-GW	B5-GW
<i>TCL VOCs via EPA Method 8260 (µg/l)</i>			
1,2-Dibromo-3-chloropropane	0.2	<0.35	<0.35
1,2-Dibromoethane	0.05	<0.19	<0.19
Acetone	1,400	<1.5	5.3
Chlorobenzene	100	0.2 J	<0.18
Methyl tert butyl ether	20	<0.17	0.26 J
<i>TCL SVOCs via EPA Method 8270 (µg/l)</i>			
2,4-Dinitrophenol	3.9	<6.6	<6.6
2,4-Dinitrotoluene	0.24	<1.2	<1.2
2,6-Dinitrotoluene	0.049	<0.93	<0.93
3,3'-Dichlorobenzidine	0.13	<1.6	<1.6
4-Chloroaniline	0.37	<1.1	<1.1
Fluorene	29	0.72 J	<0.41
Hexachlorobutadiene	0.14	<0.66	<0.66
Naphthalene	0.17	<0.46	<0.46
Nitrobenzene	0.14	<0.77	<0.77
Phenanthrene	12	0.85 J	<0.33
<i>TCL SVOCs via EPA Method 8270 SIM (µg/l)</i>			
Benzo(a)anthracene	0.03	0.03 J	0.07
Benzo(a)pyrene	0.2	<0.02	0.08 J
Benzo(b)fluoranthene	0.25	<0.01	0.09
Benzo(ghi)perylene	NE	0.03 J	0.09 J
Benzo(k)fluoranthene	2.5	<0.01	0.04 J
Bis(2-chloroethyl)ether	0.014	<0.02	<0.02
Bis(2-ethylhexyl)phthalate	6	6	<0.51
Dibenzo(a,h)anthracene	0.025	<0.01	0.02 J
Indeno(1,2,3-cd)pyrene	0.25	0.03 J	0.07 J
<i>Chlorinated Herbicides via EPA Method 8151 (µg/l)</i>			
Analyzed Chlorinated Herbicides	Varies	Varies	<MDL
<i>OPP and OCP Pesticides via EPA Methods 8081 and 8141 (µg/l)</i>			
Aldrin	0.00092	<0.002	<0.002
Dieldrin	0.0018	<0.003	<0.003
<i>PCBs via EPA Method 8082 (µg/l)</i>			
Aroclor 1221	0.0047	<0.067	<0.067
Aroclor 1232	0.0047	<0.046	<0.046
Aroclor 1242	0.0078	<0.039	<0.039
Aroclor 1248	0.0078	<0.049	<0.049
Aroclor 1254	0.0078	0.052 J	<0.039
Aroclor 1260	0.0078	<0.032	<0.032
PCBs, Total	0.5	0.052 J	<0.032
<i>TPH-DRO via EPA Method 8015 (µg/l)</i>			
TPH-DRO	47	6,500	524

Notes:
 EPA = United States Environmental Protection Agency
 TCL = Target Compound List
 VOCs = volatile organic compounds
 SVOCs = semivolatile organic compounds
 SIM = Select Ion Monitoring
 OCP = Organochlorine pesticides
 OPP = Organophosphorus pesticides
 PCBs = polychlorinated biphenyls
 TPH = Total Petroleum Hydrocarbons
 DRO = Diesel Range Organics
 µg/l = micrograms per liter
 < = not detected above indicated laboratory Method Detection Limit (MDL)
 J = Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the MDL or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs)
 NE = not established
 Values in **bold** were detected above the laboratory MDLs
 GWCS = Maryland Groundwater Cleanup Standards Criteria per Maryland Department of Environmental Cleanup Standards, Interim Final Guidance (Update 2.1), October 2018.
 MDL exceeds the MD-GWCS
Detected value exceeds the MD-GWCS

Table 6: Soil Sample Laboratory Results Summary - AOC 3
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 July 23, 2020

Analyte	SCS-PG	SCS-NR	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8	TP-9
<i>TPH-DRO via EPA Method 8015 (mg/kg)</i>											
TPH-DRO	NE	620	4.99 J	8,350	4.69 J	<4.41	36.2 J	7.77 J	119	4.58 J	5.53 J

Notes:
 EPA = United States Environmental Protection Agency
 TPH = Total Petroleum Hydrocarbons
 DRO = Diesel Range Organics
 mg/kg = milligrams per kilogram
 < = not detected above indicated laboratory Method Detection Limit (MDL)
 NE = not established
 J = Estimated value. The Target analyte concentration is below the reporting limit (RL), but above the MDL or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs)
 Values in **bold** were detected above the laboratory MDLs
 SCS-PG: Maryland Protection of Groundwater Soil Cleanup Standards
 SCS-NR: Maryland Non-Residential Soil Cleanup Standards
Detected value exceeds the SCS-NR

Table 7: Soil Stockpile Sample Laboratory Results Summary - AOC 4
 6264 Race Road
 Elkridge, Maryland 21075
 Partner Project Number 20335258
 July 22, 2020

Analyte	SCS-PG	SCS-NR	Soil Stockpile
<i>TCL SVOCs via EPA Method 8270 (mg/kg)</i>			
2,4,6-Trichlorophenol	0.024	82	<0.04
2,4-Dinitrophenol	0.088	160	<0.098
2,4-Dinitrotoluene	0.0064	7.4	<0.042
2,6-Dinitrotoluene	0.0013	1.5	<0.036
3,3'-Dichlorobenzidine	0.016	5.1	<0.056
4-Chloroaniline	0.0032	11	<0.038
Anthracene	116	23,000	0.18
Atrazine	0.004	10	<0.073
Benzo(a)anthracene	0.22	21	0.51
Benzo(a)pyrene	0.58	2.1	0.41
Benzo(b)fluoranthene	6	21	0.52
Benzo(ghi)perylene	NE	NE	0.27
Benzo(k)fluoranthene	58	210	0.16
Carbazole	NE	NE	0.024 J
Chrysene	230	2,100	0.48
Dibenzo(a,h)anthracene	1.9	2.1	0.067 J
Dimethyl phthalate	NE	NE	0.046 J
Fluoranthene	178	3,000	1
Fluorene	10.8	3,000	0.026 J
Hexachlorobenzene	0.0024	0.96	<0.023
Hexachlorocyclopentadiene	0.0026	0.75	<0.19
Hexachloroethane	0.004	8	<0.034
Indeno(1,2,3-cd)pyrene	20	21	0.26
Naphthalene	0.011	17	<0.026
Nitrobenzene	0.0018	22	<0.031
Pentachlorophenol	0.011	4	<0.046
Phenanthrene	26	2,300	0.45
Pyrene	26	2,300	0.85
<i>TCL SVOCs via EPA Method 8270 SIM (mg/kg)</i>			
n-Nitrosodi-n-propylamine	0.00016	0.33	<0.011
<i>PCBs via EPA Method 8082 (mg/kg)</i>			
Aroclor 1016	0.26	5.1	<0.0036
Aroclor 1221	0.0016	0.83	<0.00406
Aroclor 1232	0.0016	0.72	<0.0086
Aroclor 1260	0.11	0.99	0.0149 J
PCBs, Total	0.024	0.94	0.0149 J
<i>TPH-DRO via EPA Method 8015 (mg/kg)</i>			
TPH-DRO	NE	620	318

Notes:

EPA = United States Environmental Protection Agency

TCL = Target Compound List

SVOCs = semivolatile organic compounds

PCBs = polychlorinated biphenyls

TPH = Total Petroleum Hydrocarbons

DRO = Diesel Range Organics

mg/kg = milligrams per kilogram

< = not detected above indicated laboratory Method Detection Limit (MDL)

NE = not established

J = Estimated value. The Target analyte concentration is below the reporting limit (RL), but above the MDL or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs)

Values in **bold** were detected above the laboratory MDLs

SCS-PG: Maryland Protection of Groundwater Soil Cleanup Standards

SCS-NR: Maryland Non-Residential Soil Cleanup Standards

MDL exceeds the SCS-PG

Detected value exceeds the SCS-PG

Table 8: Sub-Slab Soil Gas Sample Laboratory Results Summary - AOC 5

6264 Race Road

Elkridge, Maryland 21075

Partner Project Number 20335258

September 4, 2020

Analyte	Commercial Tier 1 (100X) Target Soil Gas Values	Commercial Tier 2 (500X) Target Soil Gas Values	SG-1	SG-2
<i>VOCs via EPA Method TO-15 ($\mu\text{g}/\text{m}^3$)</i>				
1,2,4-Trimethylbenzene	26,400	132,000	84.6	53.1
1,3,5-Trimethylbenzene	26,400	132,000	39.8	35.4
1,3-Butadiene	410	2,050	<2.77	2.15
2-Butanone	2,200,000	11,000,000	961	413
2-Hexanone	13,200	66,000	118	48.4
4-Ethyltoluene	NE	NE	12.1	8.6
4-Methyl-2-pentanone	1,320,000	6,600,000	72.1	18.5
Acetone	13,700,000	68,500,000	3,750	1,570
Benzene	1,600	8,000	<3.99	3.87
Carbon disulfide	310,000	1,550,000	<3.89	12.1
Chloromethane	40,000	200,000	<2.58	1.23
Cyclohexane	2,650,000	13,300,000	<4.3	1.49
Dichlorodifluoromethane	44,000	220,000	<6.18	2.13
Ethyl Alcohol	NE	NE	854	560
Ethylbenzene	5,000	25,000	<5.43	2.27
Heptane	NE	NE	<5.12	4.08
iso-Propyl Alcohol	88,000	440,000	165	101
n-Hexane	308,000	1,540,000	<4.41	3.74
o-Xylene	44,000	220,000	26.5	4.56
p/m-Xylene	44,000	220,000	18	7.34
Propylene	NE	NE	<5.37	21.3
Tetrachloroethene	18,000	90,000	8.48	81.4
Tetrahydrofuran	880,000	4,400,000	17.2	<2.95
Toluene	2,200,000	11,000,000	6.41	11.7
Xylene (Total)	44,000	220,000	44.3	11.9

Notes:

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

 $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

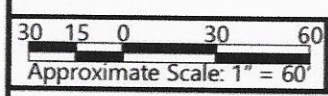
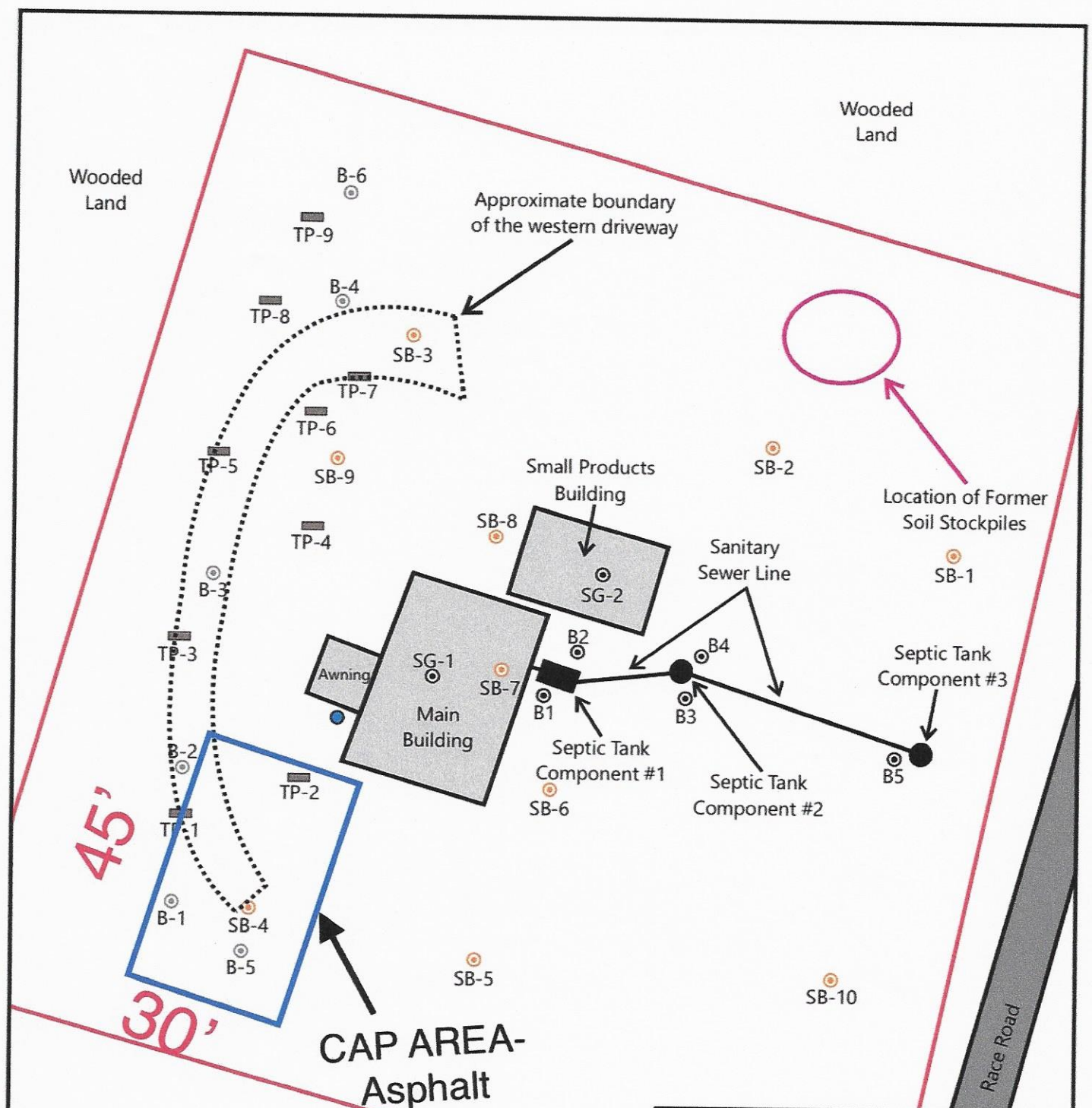
< = not detected above indicated laboratory method detection limit (MDL)

NE = not established

Values in **bold** were detected above the laboratory RLs



Attachment 2 – Phase II Diagram and Property Plat



Legend

- Subject Property
- Sample Location - Partner (September 2020)
- Sample Location - Partner (February 2020)
- Sample Location - UrbanGreen (September 2019)
- Production Well
- Test Pit Location

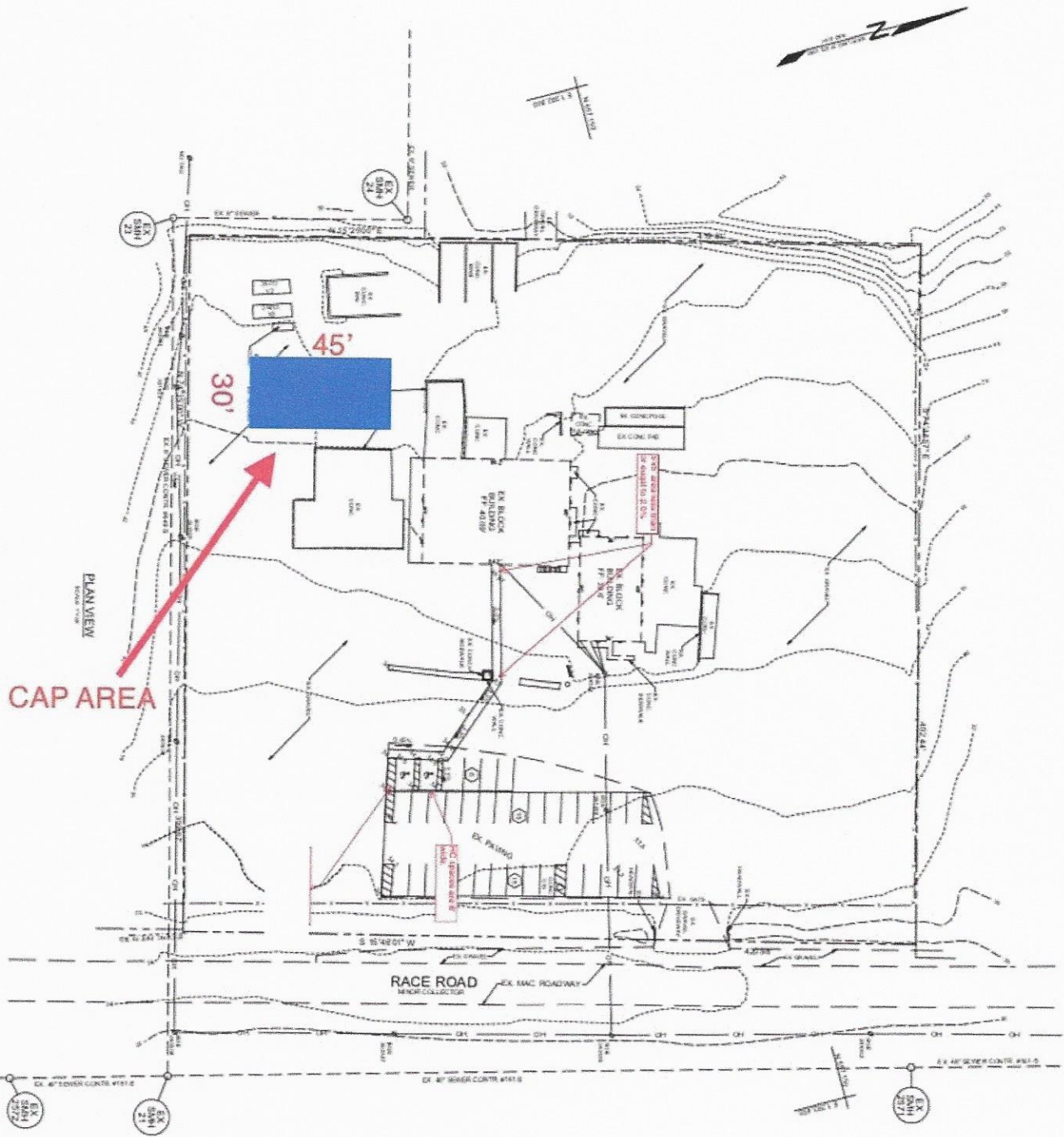
Legend

GFC
6264 Race Rd.
Elkridge Md. 21075

Sample Location Map

Figure	Prepared By	Date
3	C. Niedzwiecki	September 2020

6264 Race Road
Elkridge, Maryland 21227



PLAN VIEW

CAP AREA

OWNER/DEVELOPER/PLOTIONER

REVISID DEVELOPMENT PLAN
 KIP REALTY, LLC
 6264 RACE ROAD

SCALE: AS SHOWN

DATE: 10/11/2017

SILL ENGINEERING GROUP, LLC
 10000 N. 39TH AVENUE, SUITE 100
 DENVER, CO 80249
 303.751.1111

PROJECT: 17-012



Attachment 3 – Asphalt Diagram

ASPHALT CAP-4"

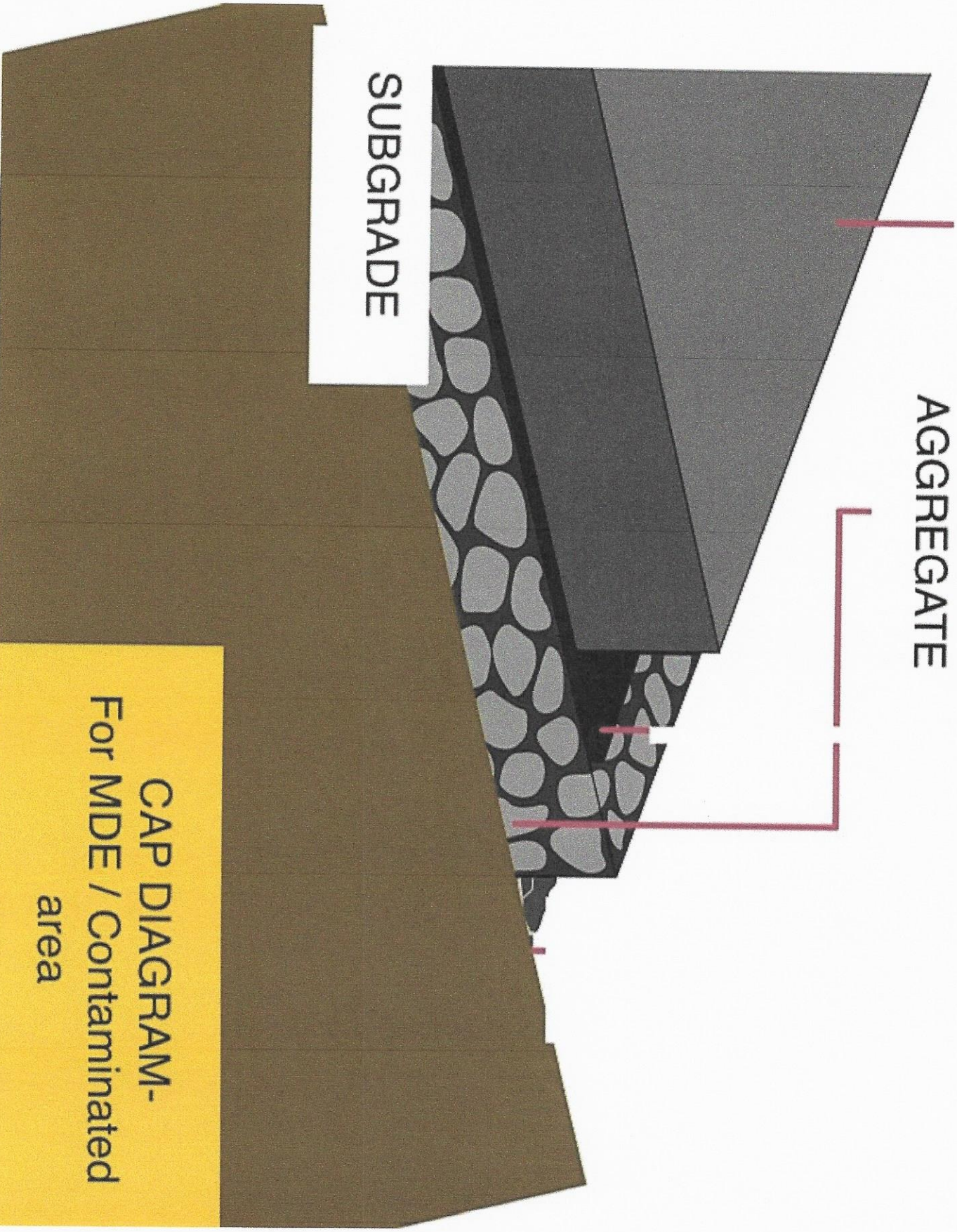
thickness

2" #57

AGGREGATE

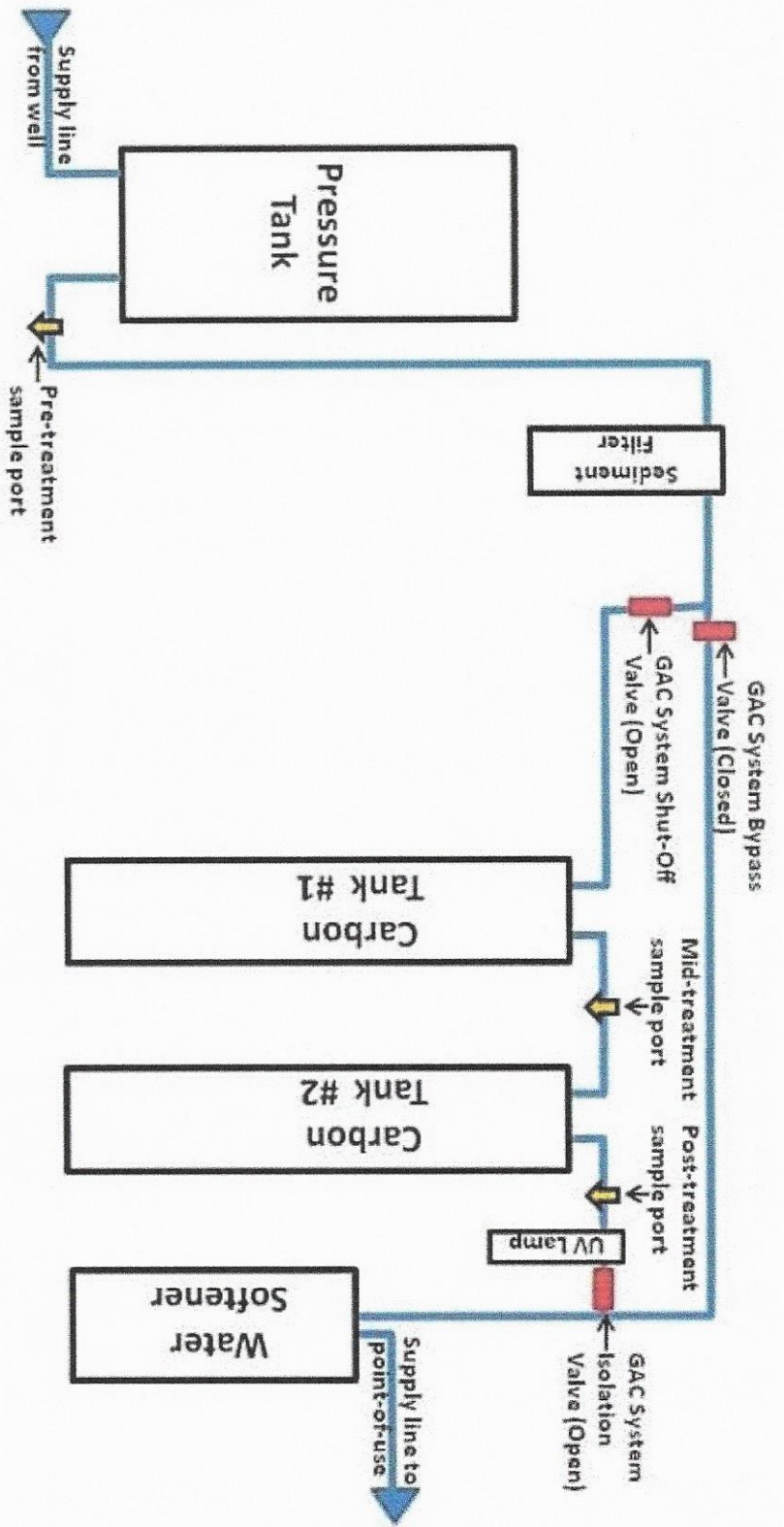
SUBGRADE

CAP DIAGRAM-
For MDE / Contaminated
area





Attachment 4 – Carbon Filter Schematics



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