TETRA TECH

April 24, 2018

Mr. Jason Pelton
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau D, Section B
625 Broadway
Albany, New York 12233-7015

Reference: CLEAN Contract No. N62470-16-D-9008
Contract Task Order WE13

Subject: Letter Work Plan for the 2018 Poly- and Perfluoroalkyl Substances (PFAS) Groundwater Investigation, Facility Wide, Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, New York

Dear Mr. Pelton:

On behalf of the Department of the Navy, Tetra Tech is submitting the subject document to the New York State Department of Environmental Conservation (NYSDEC). The following are responses to NYSDEC comments dated February 9, 2018. Also attached are the revised subject Work Plan. NYSDEC comments are provided in italic type followed by the Navy's responses in bold type.

Comment #1: The Work Plan indicates that groundwater and surface water samples will be analyzed for 14 PFAS compounds. The Department has identified a full PFAS target analyte list that includes 21 analytes (see attached table). Samples collected during the PFAS groundwater investigation should include laboratory analysis of the 21 analytes included in the attached table.

Response #1: The analyte consists of the 21 analytes provided by the DEC on February 9, 2018. The text and Table 2 have been revised to reflect this change.

Comment #2: Table 2 indicates that samples will be analyzed by Method 537. Samples should be analyzed by a New York State Department of Health ELAP approved laboratory using the modified EPA Method 537. Laboratories have been able to achieve reporting limits for PFOA and PFOS of 2 ng/l (part per trillion) in water using this method.

Response #2: The analysis listed on Table 2 has been updated from "Method 537 Compounds" to "Modified Method 537 Compounds." Vista Analytical Laboratory will be used for this project and is approved under the New York State Department of Health ELAP program. Vista Analytical can achieve a detection limit of 2.74 ng/L under modified Method 537.

Comment #3: The work plan indicates that an equipment blank will be collected once per day that samples are collected with reusable equipment. Due to the possible presence of PFC materials in sampling equipment, it is recommended that equipment blanks be collected once per day even when non-reusable equipment is used during the sampling program.

Response #3: The non-reusable equipment that will come in contact with the sample is high-density polyethylene (HDPE) tubing. Although there is uncertainty with PFC materials in sampling

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equipment, the non-reusable equipment has not been found to impact sample results on other projects. One equipment blank on the HDPE tubing will be collecting during this sampling event.

Comment #4: The monitoring well MW-302 series and MW-304I2 appear on Table 2, but do not appear on Figure 3 as locations to be samples for PFAS. Please provide clarification.

Response #4: The MW-302 series and MW304I2 will not be sampled during the 2018 event and have been removed from Table 2.

Comment #5: The work plan Figure Number 3 indicates a 2017 PFAS sampling program. The date should be revised to reflect that this is a 2018 sampling program.

Response #5: Figure 3 has been revised to reflect the 2018 sampling program.

If you have any questions please contact Mr. Brian Murray, NAVFAC Mid-LANT, at Brian.S.Murray@navy.mil or (757) 341-0491.

Sincerely,

David D. Brayack, P.E.
Project Manager

Enclosure: Final 2018 Poly- and Perfluoroalkyl Substance (PFAS) Groundwater Investigation Work Plan

Distribution (email only):
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Project File

LETTER WORK PLAN
2018 POLY- AND PERFLUOROALKYL SUBSTANCES (PFAS)
GROUNDWATER INVESTIGATION
FACILITY WIDE
NWIRP BETHPAGE, NEW YORK

Introduction

The Navy is conducting an investigation to evaluate the potential release of poly- and perfluoroalkyl substances (PFAS) by using the existing groundwater network located at the former Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, New York (Figures 1 and 2). This groundwater network is used to evaluate the release and cleanup of volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and/or metals in groundwater resulting from operations at NWIRP Bethpage. This letter work plan was prepared by Tetra Tech, Inc. (Tetra Tech) under the Naval Facilities Engineering Command (NAVFAC) Atlantic Comprehensive Long-Term Environmental Action Navy (CLEAN) under Contract Number N62470-16-D-9008 Task Order WE09. Groundwater testing of representative wells at Site 1 – Former Drum Marshalling Area, Site 2 – Recharge Basin Area, Site 3 – Salvage Storage Area, and Site 4 – Former Underground Storage (UST) Area will be used to evaluate for presence and magnitude of PFAS. Surface water in infiltration ponds from various on- and off-property sources at the Site 2 - Recharge Basin Area will also be evaluated for PFAS. There are twenty-one PFAS compounds that will be analyzed under the United States Environmental Protection Agency (U.S. EPA) Method 537. Two of the PFAS compounds, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS), have drinking water public health advisories (HAs). One PFAS, perfluorobutanesulfonic acid (PFBS) has a U.S. EPA Regional Screening Level (RSL). The remaining eighteen Method 537 compounds do not have criteria but will also be evaluated during this investigation. The objectives of this Investigation are as follows:

1. Are PFAS in NWIRP Bethpage Site groundwater and if present, do they exceed current EPA HAs or the RSL?

2. If present, are PFAS associated with former plating activities at Plant 3 or other former activities at NWIRP?

3. If present, are there continuing sources of PFAS to Site groundwater through the recharge basins from on-property or off-property sources?

Plant 3 was the main manufacturing plant at NWIRP Bethpage beginning in the 1940s. Production lines at Plant 3 were used for a variety of aircraft metal treatment and finishing procedures, including chemical surface preparation, electroplating, chemical milling, alodine treatment, and process inspection. PFAS may have been used as an active ingredient in the chemical fume suppressant system during electroplating applications and if used, may be present in industrial waste streams generated at Plant 3.

In accordance with applicable regulations, Plant 3 concentrated industrial wastes were reportedly disposed of via a licensed vendor for disposal. Dilute rinse waters were discharged to cesspools and dry wells located around Plant 3 and groundwater recharge basins (Site 2), which are used to channel surface water

back into groundwater. Other areas that may have been impacted by a potential indirect release are the sludge drying beds at Site 1 – Former Drum Marshalling Area and Site 2 – Recharge Basin Area. The western portion of NWIRP Bethpage, Site 4 – Former Underground Storage (UST) Area, could have been impacted by potential direct leaking of drains at Plant 3. The Industrial Wastewater Treatment Plant (IWTP) at Plant 3 was completed in 1984 and treated waste rinse waters containing metals, hexavalent chromium, and phenols. In 1996, manufacturing operations ended at the facilities. A review of Site history did not indicate the presence of any large scale releases. PFAS has not been investigated at NWIRP Bethpage.

To address the objectives, this Work Plan includes groundwater sample collection from the existing monitoring well network at the former NWIRP Bethpage (Figure 2) and surface water from the Recharge Basin Area. Proposed sampling locations are presented on Figure 3 and the rationale for sample selection is summarized on Table 1. The well details, nomenclature, and analysis are summarized on Table 2.

Well Development

Monitoring wells selected for PFAS evaluation at NWIRP Bethpage, with the exception of AOC22-MW10 and –MW11, have not been purged since or before 2013. In order to ensure that formation water is being sampled and turbidity has reached an acceptable level or stabilized, wells will be developed prior to being sampled. An extended purge of the well will be conducted (three screen volumes). Development water will be managed as investigation derived waste (IDW) as discussed below. The wells will be sampled after redevelopment by low-flow methods as detailed below.

Groundwater Sampling

Groundwater sampling will be conducted at select wells from the existing monitoring well network throughout the facility. Monitoring well locations selected for sampling are presented on Figure 3, and the rationale is summarized on Table 1.

A peristaltic pump or a down-hole pump with high-density polyethylene (HDPE) tubing will be used for groundwater sample purging and collection activities, in combination with a continuous flow-through cell suitable for taking water quality measurements. Turbidity measurements will be made using a separate field turbidity meter specifically designated to measure turbidity only. Depending on the groundwater parameters, two to five screen volumes may be purged. The groundwater monitoring wells will be analyzed as indicated on Table 2.

Surface Water Sampling

Surface water will be collected at the inlet of the northeast recharge basin, inlet to the southwest recharge basin, and from the manhole (Figure 3) to evaluate if there are other potential sources of PFAS that are impacting shallow groundwater. During a storm event (greater than a ¼ inch), surface water samples will be collected at the inlet of the northeast and southwest recharge basins and the manhole as practical.

During a non-storm event, surface water will be collected from the inlet of the northeast recharge basin only because it receives a continuous flow of water from an unknown source on the former Northrop Grumman property to the North and treated groundwater from Bethpage Community Park Operable Unit 3 treatment system. Surface water samples will be analyzed as indicated on Table 2.

Quality Control Samples

Quality assurance (QA) and quality control (QC) samples will be collected for groundwater, and surface water samples. Duplicate samples will be collected at 10 percent (1 per 10 samples). Matrix spike (MS) and matrix spike duplicate (MS/MSD) samples (i.e., triple volume) will be collected at a rate of 5 percent (1 per 20 samples). MS/MSDs will receive the same sample ID as the respective parent samples, and the triple volume will be noted in the field log book and on chain-of-custody form. An equipment blank will be collected once per day that samples are collected with reusable equipment. One equipment blank on the HDPE tubing will be collected during this sampling event. A field reagent blank will be collected once per day that groundwater and surface water samples are collected.

Equipment Decontamination

Reusable sampling equipment decontamination will consist of washing using a non-phosphate detergent followed by a rinse with PFAS-free water provided by the laboratory. IDW will be captured, containerized and stored at Site 2.

Waste Management

IDW will include water from well development and purge, and equipment decontamination fluids. Water from monitoring wells stored in a tank will be tested for PFAS. If the PFAS concentration exceeds the EPA HA, they will be treated onsite with granular activated carbon. Waste profiling will be performed prior to discharge to the sanitary sewer system. The IDW will be discharged once approval is received from the State. It is anticipated that all waste generated will be non-hazardous.

If used, granular activated carbon will be retained at the staging area for use during subsequent events. Effluent samples from the carbon will be collected for every 5,000 gallons of water treated and at the end of each sample event to evaluate remaining capacity of the carbon for treating PFAS. The carbon will be disposed off-site.

Reporting

A Data Summary Report will present results from the sampling event and evaluate results by direct comparison to U.S. EPA HAs and RSL. Recommendations will be made on whether to proceed with additional action, risk assessment, or no action.

TABLES

TABLE 1
GROUNDWATER SAMPLING LOCATIONS AND SAMPLE RATIONALE
FACILITY WIDE PFAS INVESTIGATION
NWIRP BETHPAGE, NEW YORK

Well ID	Area of NWIRP Bethpage			2004-2013 Results				Screen Interval (feet bgs)	Depth (feet bgs)	2018 PFAS Sampling	Rationale for Sample Selection[3]		
	Upgradient	Downgradient	Potential Release from Plant 3[1]	VOCs[2]	PCBs	Total Chromium	Hexavalent Chromium				Objective 1	Objective 2	Objective 3
Site 1 - Former Drum Marshalling Area													
FW-MW01				E	E	NX	ND	48.5-63.5	63.5	No			
FW-MW02				E	NX	NX	ND	49-64	64	No			
FW-MW03				E	E	NX	ND	52-67	67	No			
HN-MW27I				NS	E	NX	NX	120-130	130	No			
HN-MW27S				NS	NS	NS	NS	44.3-54.3	54.3	No			
HN-MW29D				NS	NS	NS	NS	210-220	220	No			
HN-MW29IR				NX	E	NX	NX	120-130	130.5	No			
MW301D			✓	NX	E	NX	NX	210-220	220	Yes	✓		✓
MW301I			✓	ND	E	NX	NX	130-140	140	Yes	✓		✓
MW301S			✓	NS	E	NX	NX	51-61	61	Yes	✓		✓
MW302D				E	E	NX	ND	203-213	213	No			
MW302I1				NX	E	NX	ND	110-120	120	No			
MW302I2				NX	E	NX	NX	140-150	150	No			
MW302S				NX	E	NX	NX	41-51	51	No			
MW303D				NX	E	NX	E	208-218	218	No			
MW303I1				E	E	NX	NX	95-105	105	No			
MW303I2				NX	E	NX	ND	146-156	156	No			
MW303S				NX	NX	NX	NX	46-56	56	No			
MW304D				ND	E	NX	ND	180-190	190	No			
MW304I1				E	E	NX	NX	102-112	112	No			
MW304I2		✓		NX	E	E	E	140-150	150	No			
MW304S				NS	NS	NX	NX	43-53	53	No			
MW305D				E	NX	NX	ND	286-296	296	Yes	✓		
MW305I		✓		E	E	NX	NX	190-200	200	Yes	✓		
MW305S		✓		NS	NS	NX	ND	40-50	50	Yes	✓		
MW306D		✓		NX	E	NX	ND	284-294	294	Yes	✓		
MW306I		✓		NX	E	NX	ND	189-199	199	Yes	✓		
MW306S		✓		NX	E	NX	NX	50-60	60	Yes	✓		
MW307D		✓		NS	E	NX	NX	276-286	286	Yes	✓		
MW307I		✓		NX	E	NX	ND	188-198	198	Yes	✓		
MW307S		✓		NX	NS	NX	ND	40.5-50.5	50.5	Yes	✓		
Site 2 - Recharge Basin and Site 3 - Salvage Storage Area													
MW308D			✓	NX	ND	NX	NX	250-260	260	Yes	✓	✓	✓
MW308I			✓	NS	NX	NX	ND	156-166	166	Yes	✓	✓	✓
MW308S			✓	NX	NX	NX	ND	54-64	64	Yes	✓	✓	✓
MW309D			✓	NX	NS	NX	ND	252-262	262	Yes	✓	✓	✓
MW309I			✓	NX	NX	NX	NX	160-170	170	Yes	✓	✓	✓
MW309S			✓	NX	E	NX	NX	53-63	63	Yes	✓	✓	✓

TABLE 1
GROUNDWATER SAMPLING LOCATIONS AND SAMPLE RATIONALE
FACILITY WIDE PFAS INVESTIGATION
NWIRP BETHPAGE, NEW YORK

Well ID	Area of NWIRP Bethpage			2004-2013 Results				Screen Interval (feet bgs)	Depth (feet bgs)	2018 PFAS Sampling	Rationale for Sample Selection[3]		
	Upgradient	Downgradient	Potential Release from Plant 3[1]	VOCs[2]	PCBs	Total Chromium	Hexavalent Chromium				Objective 1	Objective 2	Objective 3
MW310S	✓			NS	NS	NX	NX	57.5-67.5	67.5	Yes	✓		✓
MW311I	✓			NX	NX	NX	ND	160-170	170	No			
MW311S	✓			NS	NX	NX	NX	55-65	65	Yes	✓		✓
MW312I	✓			NS	NX	NX	NX	160-170	170	No			
MW312S	✓			NS	NS	NX	ND	53-63	63	Yes	✓		✓
MW313S	✓			NS	NS	NX	ND	53-63	63	Yes	✓		✓
MW314I			✓	NS	NX	NX	NX	144-154	154	Yes	✓		✓
MW314S			✓	NS	NX	NX	ND	55-65	65	Yes	✓		✓
Site 4 - Former Underground Storage Tank Area (West End of Plant 3)													
AOC22-MW02				NS	NS	NS	NS	46 - 66	66	No			
AOC22-MW03				E	NS	NX	NS	45.5 - 65.5	65.5	No			
AOC22-MW05				E	NS	NX	NS	47 - 67	67	No			
AOC22-MW06				NX	NX	NX	ND	52-62	62	No			
AOC22-MW07				NX	NS	NX	NS	52-62	62	No			
AOC22-MW08				NS	NS	NX	NS	52-62	62	No			
AOC22-MW09				E	NS	NX	NS	52-62	62	No			
AOC22-MW10			✓	E	NX	E	E	49-59	60	Yes	✓	✓	
AOC22-MW11			✓	NX	NS	NX	NX	53-63	64	Yes	✓	✓	
HN-MW24I			✓	NA	NA	NA	NA	148-158	158	Yes	✓	✓	
HN-MW24S			✓	NA	NA	NA	NA	49-59	59	Yes	✓	✓	
Surface Water Locations													
Manhole	✓		✓	NS	NS	NS	NS	NA	NA	Yes	✓		✓
Northeast Recharge Basin	✓		✓	NS	ND	NX	NX	NA	NA	Yes	✓		✓
Southwest Recharge Basin	✓		✓	NS	NX	NX	NX	NA	NA	Yes	✓		✓
Southeast Recharge Basin				NS	NS	NS	NS	NS	NA	No			

Shaded cells - hexavalent chromium analysis performed with a field test kit results.

bgs- below ground surface

E - Exceedance of the New York State Department of Health (NYSDOH) or United States Environmental Protection Agency (U.S. EPA) Maximum Contaminant Level (MCL).

NA - not available or not applicable.

ND - not detected.

VOCs - volatile organic compounds.

NS- not sampled.

NX - no exceedance.

PCBs - polychlorinated biphenyls.

1. Groundwater could have been impacted by releases as a result of activities at Plant 3. Indirect releases may have occured to the recharge basins and/or sludge drying beds. Potential direct releases may have occurred drains (AOC22-MW10, AOC22-MW11, HN-MW24S, and HN-MW24I).

2. VOCs: cis-1,2-dichloroethene, chlorofom, dichloroethane, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, toulene

3. The objectives are listed in the Work Plan.

TABLE 2
MONITORING WELL DETAILS AND SAMPLE NOMENCLATURE
FACILITY WIDE PFAS INVESTIGATION
NWIRP BETHPAGE, NEW YORK

Location/ Well ID	Screen Interval (feet bgs)	Depth (feet bgs)	Ground Surface Elevation (feet MSL)	TOC (feet MSL)	Screen Interval (feet MSL)	Depth (feet MSL)	Nomenclature	Analysis[(1)]
Site 1 - Former Drum Marshalling Area								
MW301D	210-220	220	126.32	128.9	-103.68 to -93.68	-93.68	BPTT-MW301D-2018MMDD	Modified Method 537 Compounds
MW301I	130-140	140	126.04	128.48	-23.96 to -13.96	-13.96	BPTT-MW301I-2018MMDD	Modified Method 537 Compounds
MW301S	51-61	61	126.38	128.88	55.38 to 65.38	65.38	BPTT-MW301S-2018MMDD	Modified Method 537 Compounds
MW305D	286-296	296	116.25	115.94	-189.75 to -179.75	-179.75	BPTT-MW305D-2018MMDD	Modified Method 537 Compounds
MW305I	190-200	200	116.38	116.16	-93.62 to -83.62	-83.62	BPTT-MW305I-2018MMDD	Modified Method 537 Compounds
MW305S	40-50	50	116.52	116.04	56.52 to 66.52	66.52	BPTT-MW305S-2018MMDD	Modified Method 537 Compounds
MW306D	284-294	294	115.59	118.06	-188.41 to -178.41	-178.41	BPTT-MW306D-2018MMDD	Modified Method 537 Compounds
MW306I	189-199	199	115.45	117.76	-93.55 to -83.55	-83.55	BPTT-MW306I-2018MMDD	Modified Method 537 Compounds
MW306S	50-60	60	115.33	117.82	45.33 to 55.33	55.33	BPTT-MW306S-2018MMDD	Modified Method 537 Compounds
MW307D	276-286	286	114.85	114.42	-181.15 to -171.15	-171.15	BPTT-MW307D-2018MMDD	Modified Method 537 Compounds
MW307I	188-198	198	114.67	114.16	-93.33 to -83.33	-83.33	BPTT-MW307I-2018MMDD	Modified Method 537 Compounds
MW307S	40.5-50.5	50.5	114.59	114.39	54.09 to 64.09	64.09	BPTT-MW307S-2018MMDD	Modified Method 537 Compounds
Site 2 - Recharge Basin and Site 3- Salvage Storage Area								
MW308D	250-260	260	128.78	130.98	-141.22 to -131.22	-131.22	BPTT-MW308D-2018MMDD	Modified Method 537 Compounds
MW308I	156-166	166	128.58	130.73	-47.42 to -37.42	-37.42	BPTT-MW308I-2018MMDD	Modified Method 537 Compounds
MW308S	54-64	64	128.586	131.05	54.586 to 64.586	64.586	BPTT-MW308S-2018MMDD	Modified Method 537 Compounds
MW309D	252-262	262	129.42	131.52	-142.58 to -132.58	-132.58	BPTT-MW309D-2018MMDD	Modified Method 537 Compounds
MW309I	160-170	170	129.44	131.83	-50.56 to -40.56	-40.56	BPTT-MW309I-2018MMDD	Modified Method 537 Compounds
MW309S	53-63	63	129.41	131.77	56.41 to 66.41	66.41	BPTT-MW309S-2018MMDD	Modified Method 537 Compounds
MW310S	57.5-67.5	67.5	127.42	127.422	49.92 to 59.92	59.92	BPTT-MW310S-2018MMDD	Modified Method 537 Compounds
MW311S	55-65	65	128.01	128.008	53.01 to 63.01	63.01	BPTT-MW311S-2018MMDD	Modified Method 537 Compounds
MW312S	53-63	63	127.74	127.737	54.74 to 64.74	64.74	BPTT-MW312S-2018MMDD	Modified Method 537 Compounds
MW313S	53-63	63	127.48	127.48	54.48 to 64.48	64.48	BPTT-MW313S-2018MMDD	Modified Method 537 Compounds
MW314I	144-154	154	126.28	126.279	-37.72 to -27.72	-27.72	BPTT-MW314I-2018MMDD	Modified Method 537 Compounds
MW314S	55-65	65	126.15	126.146	51.15 to 61.15	61.15	BPTT-MW314S-2018MMDD	Modified Method 537 Compounds
Site 4 - Former Underground Storage Tank Area (West End of Plant 3)								
AOC22-MW10	49-59	60	NA	NA	49-59	60	BPTT-AOC22-MW10-2018MMDD	Modified Method 537 Compounds
AOC22-MW11	53-63	64	NA	NA	53-63	64	BPTT-AOC22-MW11-2018MMDD	Modified Method 537 Compounds
HN-MW24I	148-158	158	122.69	121.78	148-158	158	BPTT-HN-MW24I-2018MMDD	Modified Method 537 Compounds
HN-MW24S	49-59	59	123.03	122.73	48.6-58.6	58.6	BPTT-HN-MW24S-2018MMDD	Modified Method 537 Compounds

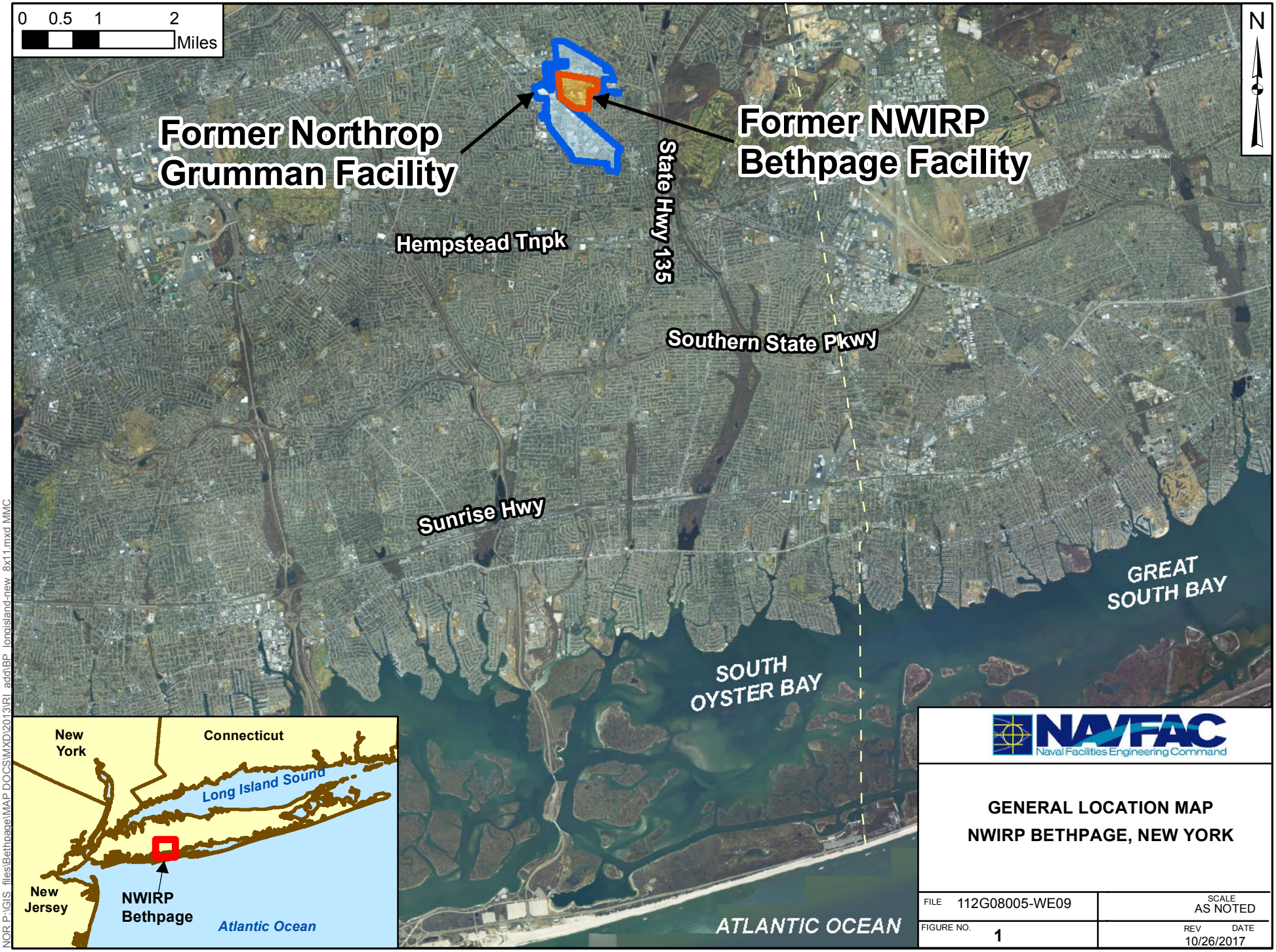
TABLE 2
MONITORING WELL DETAILS AND SAMPLE NOMENCLATURE
FACILITY WIDE PFAS INVESTIGATION
NWIRP BETHPAGE, NEW YORK

Location/ Well ID	Screen Interval (feet bgs)	Depth (feet bgs)	Ground Surface Elevation (feet MSL)	TOC (feet MSL)	Screen Interval (feet MSL)	Depth (feet MSL)	Nomenclature	Analysis[1]
Surface Water Locations[2]								
Manhole	NA	NA	NA	NA	NA	NA	BPTT-MH-SW4001-2018MMDD	Modified Method 537 Compounds
Northeast Recharge Basin	NA	NA	NA	NA	NA	NA	BPTT-SW4002-2018MMDD	Modified Method 537 Compounds
Southwest Recharge Basin	NA	NA	NA	NA	NA	NA	BPTT-SW4004-2018MMDD	Modified Method 537 Compounds

bgs - below ground surface.
msl - mean sea level.
MMDD - date which the sample is taken. For example, a sample collected on May 25, 2018 would end in "-20180525".
NA - Not applicable or not available.
PFAS - poly- and perfluoroalkyl substances.
TOC - top of casing.

1. Modified Method 537 compounds include, perfluorooctanoic acid, perfluorooctanesulfonic acid, perfluorobutanesulfonic acid, N-ethyl perfluorooctanesulfonamidoacetic acid, N-methyl perfluorooctanesulfonamidoacetic acid, perfluorodecanoic acid, perfluorododecanoic acid, perfluoroheptanoic acid, perfluorohexanesulfonic acid, perfluorohexanoic acid, perfluorononanoic acid, perfluorotetradecanoic acid, perfluorotridecanoic acid, perfluoroundecanoic acid, perfluoroheptanesulfonic acid, perfluorodecanesulfonic acid, perfluorobutanoic acid, perfluoropentanoic acid, 6:2 fluorotelomer sulfonate, 8:2 fluorotelomer sulfonate, and perfluroroctanessulfonamide.
2. Surface water will be collected from all three locations during a storm event. A surface water sample will be collected from the northeast recharge basin during a non-storm event.

FIGURES



NAVFAC
Naval Facilities Engineering Command

GENERAL LOCATION MAP
NWIRP BETHPAGE, NEW YORK

FILE	112G08005-WE09	SCALE	AS NOTED
FIGURE NO.	1	REV / DATE	10/26/2017

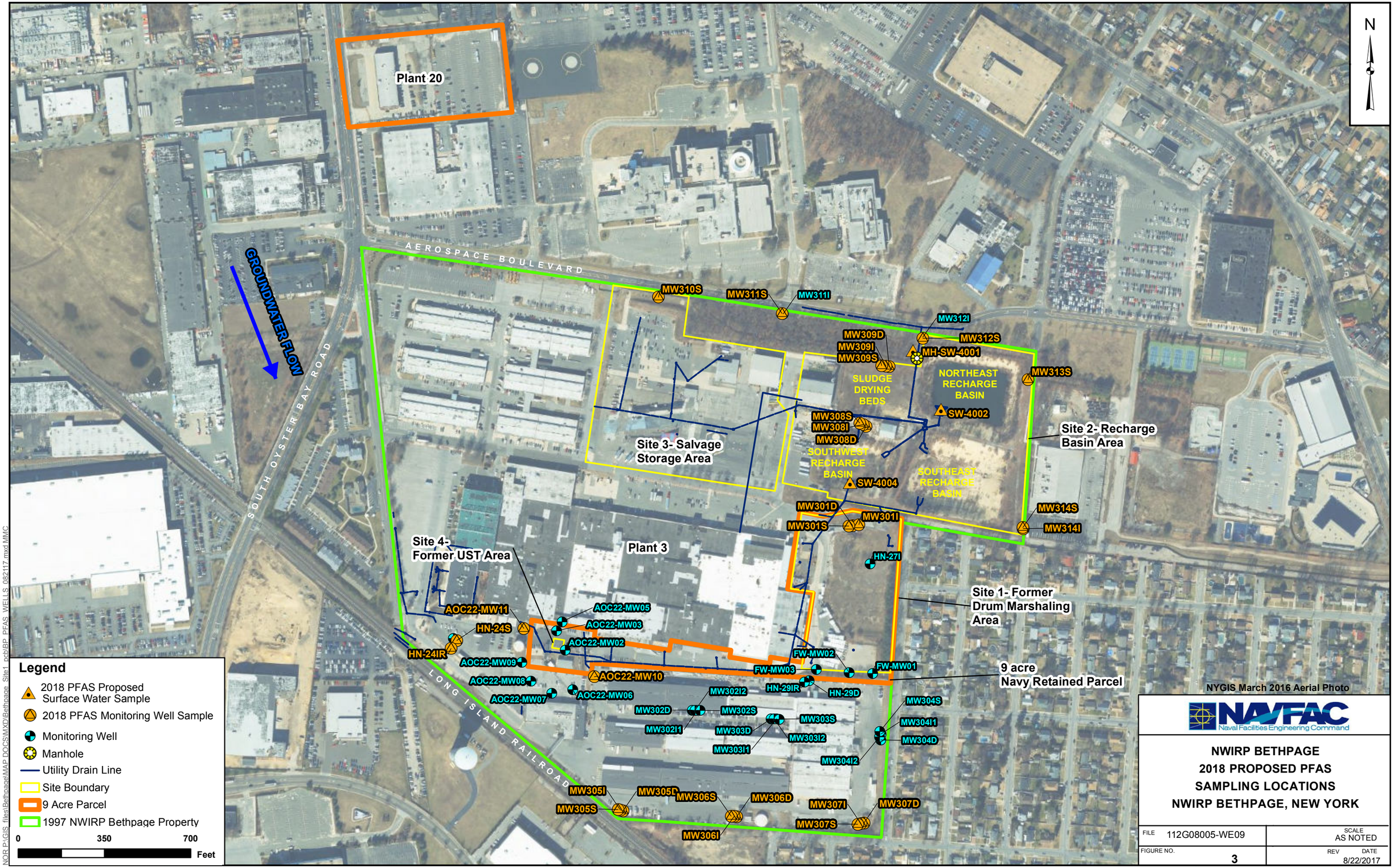
NOR P:\GIS_files\Bethpage\MAP DOCS\MXD\2013\RI_add\BP_longisland-new_8x11.mxd MMC

NOR P:\GIS_files\BethpageMAP DOCS\MXD\Bethpage_Site1_pcb\BP_EXISTINGWELLS_081417.mxd MMC

NAVFAC Naval Facilities Engineering Command

NWIRP BETHPAGE
EXISTING MONITORING WELLS
NWIRP BETHPAGE, NEW YORK

FILE 112G08005-WE09	SCALE AS NOTED
FIGURE NO. 2	REV DATE 1/5/2018


N
Plant 20
AEROSPACE BOULEVARD
GROUNDWATER FLOW
SOUTH OYSTER BAY ROAD
LONG ISLAND RAILROAD
MW310S
MW311S
MW311I
MW312I
MW312S
MW309D
MW309I
MW309S
MH-SW-4001
SLUDGE DRYING BEDS
NORTHEAST RECHARGE BASIN
MW313S
SW-4002
MW308S
MW308I
MW308D
Site 3- Salvage Storage Area
SOUTHWEST RECHARGE BASIN
SOUTHEAST RECHARGE BASIN
SW-4004
Site 2- Recharge Basin Area
MW301D
MW301S
MW301I
MW314S
MW314I
HN-27I
Site 4- Former UST Area
Plant 3
Site 1- Former Drum Marshaling Area
AOC22-MW11
AOC22-MW05
HN-24S
AOC22-MW03
AOC22-MW02
HN-24IR
AOC22-MW09
FW-MW02
FW-MW03
FW-MW01
AOC22-MW10
9 acre Navy Retained Parcel
AOC22-MW08
HN-29IR
HN-29D
AOC22-MW07
AOC22-MW06
MW302I2
MW302D
MW302S
MW304S
MW303S
MW304I1
MW302I1
MW303D
MW303I2
MW304D
MW303I1
MW304I2
MW305I
MW305D
MW306S
MW306D
MW307I
MW307D
MW305S
MW307S
MW306I
NYGIS March 2016 Aerial Photo
Legend
2018 PFAS Proposed Surface Water Sample
2018 PFAS Monitoring Well Sample
Monitoring Well
Manhole
Utility Drain Line
Site Boundary
9 Acre Parcel
1997 NWIRP Bethpage Property
0
350
700
Feet
NAVFAC
Naval Facilities Engineering Command
NWIRP BETHPAGE
2018 PROPOSED PFAS
SAMPLING LOCATIONS
NWIRP BETHPAGE, NEW YORK
FILE 112G08005-WE09
SCALE AS NOTED
FIGURE NO. 3
REV
DATE 8/22/2017
NOR P:\GIS_files\Bethpage\MAP DOCS\MXD\Bethpage_Site1_pcb\BP_PFAS_WELLS_082117.mxd MMC