Letter Work Plan

2020 Facility Wide Groundwater Sampling Event
Per- and Polyfluoroalkyl Substances Site Inspection

NWIRP Calverton, New York

Introduction

The Navy is conducting a Facility Wide Site Inspection to evaluate the presence of per- and polyfluoroalkyl substances (PFAS) in groundwater at 12 Areas of Concern (AOCs) at Naval Weapons Industrial Reserve Plant (NWIRP) Calverton, New York (Figures 1 and 2). 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 N6247016D9008 Task Order WE05.

The draft 2018 Preliminary Assessment (PA) for PFAS identified 12 AOCs that should be considered for further PFAS assessment. These AOCs are summarized in the table below and shown on Figure 2.

AOC	BUILDING NUMBER / NAME	RATIONALE FOR FURTHER ACTION
01	Building 06-15 (168) – Aircraft Paint Hangar	Suppression system with aqueous firefighting foam (AFFF)
02	Buildings 06-66 (318) – New Aircraft Paint Hangar	Suppression system with AFFF
03	Former Building 06-75 – Paint Stripper Building	Suppression system with AFFF
04	Former Building 06-79 – Noise Suppression Hush House	Suppression system with AFFF
05	Building 06-78 (327) – Aircraft Fuel Storage Terminal	Suppression system with AFFF
06	Buildings 81-01 (ASTF Building) and 81-02 through 81-05 (Hangars 5, 6, 7, and 8)	Suppression system with AFFF
07	Building 07-04 (283) – Flight Emergency Shelter (Fire House)	Storage of AFFF inside building
08	Equipment Training Area	Discharge of AFFF during training of staff on equipment
09	Jet Fuel Spill Site – Side of Northwest Calverton Runway	Discharge of AFFF to address fuel spill
10	F-111 Aircraft Crash Site	Potential use of AFFF to address crash; however, no use of AFFF was reported
11	EF-111 Aircraft Crash Site	Potential use of AFFF to address crash; however, no use of AFFF was reported
12	Northeast Pond Disposal Area	Potential disposal area for soils excavated from jet fuel spills and crash sites

In 2019, as part of the ongoing Site Inspection (SI) activities for the 12 AOCs, 52 piezometers were installed throughout the facility. Two rounds of water level measurements were collected in September 2019 and January 2020 at these piezometers along with existing monitoring wells at Site 2, Site 7, and Site 6A with the objective to generate potentiometric surface maps and evaluate groundwater flow. Two additional quarters of water level measurements (Spring and Summer 2020) are warranted to further evaluate groundwater flow for seasonal fluctuations. Groundwater samples were initially collected in January 2020 and analyzed for PFAS. Results from this sampling event indicate that PFAS is present throughout the facility and an additional round of sampling is warranted to evaluate PFAS in groundwater.

To address the objectives, this Work Plan includes the collection of water level measurements in Spring and Summer 2020 and groundwater samples from the 2019 piezometers installed as part of the PFAS SI in Spring 2020. The analyte list for groundwater samples is presented in Table 1. The well locations selected for water levels are presented on Table 2 and Figure 3. The sample details and nomenclature for groundwater samples from piezometers is presented on Table 3. The proposed sampling locations are presented on Figure 3.

Water Level Measurement Collection and Groundwater Sampling

In Spring and Summer 2020, a round of water level measurements will be collected from piezometers to evaluate groundwater flow. Samples will be collected from the piezometers to evaluate PFAS in groundwater. For groundwater sampling, a peristaltic pump with high-density polyethylene tubing will be used for 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. Depending on the groundwater parameters, two to five screen volumes may be purged.

Quality Control Samples

Quality assurance (QA) and quality control (QC) samples will be collected for groundwater. Duplicate samples will be collected at a rate of 1 per 10 samples. Matrix spike and matrix spike duplicate (MS/MSD) samples (i.e., triple volume) will be collected at a rate of 1 per 20 samples. An equipment blank will be collected once a week that samples are collected with reusable equipment. A field reagent blank, using PFAS-free water supplied by the laboratory, will be collected once per day that groundwater samples are collected and at a rate of one per drinking water sample.

Equipment Decontamination

Decontamination of reusable sampling equipment will consist of washing using a non-phosphate detergent followed by a PFAS-free water rinse. IDW will be captured, containerized and stored at the Site 6A staging area.

Waste Management

IDW will consist of water from well purging, and equipment decontamination fluids. IDW will be transported to the staging area at Site 6A, treated with granular activated carbon to remove PFAS, and placed in the existing tank or 55-gallons drums. Waste profiling will be performed prior to proper transportation and offsite disposal. It is anticipated that all waste generated will be non-hazardous.

The granular activated carbon will be retained at the Site 6A 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 offsite.

Reporting

Results from the Facility Wide investigation will be presented in an SI Report with recommendations for the path forward.

TABLES

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TABLE 1
PFAS COMPOUNDS
2020 PFAS SITE INSPECTION
FACILITY WIDE
NWIRP CALVERTON NEW YORK

Chemical Name	Acronym	CAS Number	Method 537.1[(1)] Compound List	New York State Compound List
Perfluorobutanesulfonic acid	PFBS	375 73 5	X	X
Perfluorohexanesulfonic acid	PFHxS	355 46 4	X	X
Perfluoroheptanesulfonic acid	PFHpS	375 92 8		X
Perfluorooctanessulfonic acid	PFOS	1763 23 1	X	X
Perfluorodecanesulfonic acid	PFDS	335 77 3		X
Perfluorobutanoic acid	PFBA	375 22 4		X
Perfluoropentanoic acid	PFPeA	2706 90 3		X
Perfluorohexanoic acid	PFHxA	307 24 4	X	X
Perfluoroheptanoic acid	PFHpA	375 85 9	X	X
Perfluorooctanoic acid	PFOA	335 67 1	X	X
Perfluorononanoic acid	PFNA	375 95 1	X	X
Perfluorodecanoic acid	PFDA	335 76 2	X	X
Perfluoroundecanoic acid	PFUA/ PFUdA	2058 94 8	X	X
Perfluorododecanoic acid	PFDoA	307 55 1	X	X
Perfluorotridecanoic acid	PFTriA/ PFTrDA	72629 94 8	X	X
Perfluorotetradecanoic acid	PFTA/ PFTeDA	376 06 7	X	X
6:2 Fluorotelomer sulfonate	6:2 FTS	27619 97 2		X
8:2 Fluorotelomer sulfonate	8:2 FTS	39108 34 4		X
Perfluroroctanesulfonamide	FOSA	754 91 6		X
N methyl perfluorooctane sulfonamidoacetic acid	N MeFOSAA	2355 31 9	X	X
N ethyl perfluorooctane sulfonamidoacetic acid	N EtFOSAA	2991 50 6	X	X
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6	X	
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9	X	
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	9Cl-PF3ONS	756426-58-1	X	
4,8-dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4	X	

CAS- Chemical Abstract Service Number.

PFAS - per- and polyfluoroalkyl substances.

1. Groundwater samples will be analyzed for PFAS by Liquid chromatography with tandem mass spectrometry (LC/MS/MS) compliant with Quality System Manual (QSM) 5.1, Table B-15 (modification of Environmental Protection Agency [EPA] method 537). The list of analytes includes the 21 compounds from the New York State PFAS Target Analyte List and four additional compounds that are included under EPA Method 537.1.

TABLE 2
WATER LEVEL COLLECTION
FACILITY WIDE PER- AND POLYFLUOROALKYL SUBSTANCES SITE INSPECTION
NWIRP CALVERTON, NEW YORK

WELL LOCATION	DEPTH (FEET BGS)	ZONE	SITE
AOC01-PZ01S	20	SHALLOW	AOC 01
AOC01-PZ01I	35	INTERMEDIATE	AOC 01
AOC01-PZ01D	68	DEEP	AOC 01
AOC01-PZ02S	20	SHALLOW	AOC 01
AOC01-PZ02I	35	INTERMEDIATE	AOC 01
AOC01-PZ02D	68	DEEP	AOC 01
AOC01-PZ03S	20	SHALLOW	AOC 01
AOC01-PZ03I	35	INTERMEDIATE	AOC 01
AOC01-PZ03D	68	DEEP	AOC 01
AOC02-PZ01S	18	SHALLOW	AOC 02
AOC02-PZ01I	33	INTERMEDIATE	AOC 02
AOC02-PZ01D	51	DEEP	AOC 02
AOC02-PZ02S	18	SHALLOW	AOC 02
AOC02-PZ02I	33	INTERMEDIATE	AOC 02
AOC02-PZ02D	51	DEEP	AOC 02
AOC02-PZ03S	18	SHALLOW	AOC 02
AOC02-PZ03I	33	INTERMEDIATE	AOC 02
AOC02-PZ03D	51	DEEP	AOC 02
AOC04-PZ01S	16	SHALLOW	AOC 04
AOC04-PZ01I	31	INTERMEDIATE	AOC 04
AOC04-PZ01D	51	DEEP	AOC 04
AOC05-PZ01S	21	SHALLOW	AOC 05
AOC05-PZ01I	36	INTERMEDIATE	AOC 05
AOC05-PZ01D	59	DEEP	AOC 05
AOC06-PZ01S	25	SHALLOW	AOC 06
AOC06-PZ01I	40	INTERMEDIATE	AOC 06
AOC06-PZ01D	59	DEEP	AOC 06
AOC07-PZ01S	25	SHALLOW	AOC 07
AOC07-PZ01I	40	INTERMEDIATE	AOC 07
AOC07-PZ01D	62	DEEP	AOC 07
AOC08-PZ01S	23	SHALLOW	AOC 08
AOC08-PZ01I	38	INTERMEDIATE	AOC 08
AOC08-PZ01D	64	DEEP	AOC 08
AOC09-PZ01S	42	SHALLOW	AOC 09
AOC09-PZ01I	53	INTERMEDIATE	AOC 09
AOC09-PZ01D	64	DEEP	AOC 09
AOC09-PZ02S	25	SHALLOW	AOC 09
AOC09-PZ03S	47	SHALLOW	AOC 09
AOC09-PZ04S	28	SHALLOW	AOC 09
AOC09-PZ05S	13	SHALLOW	AOC 09
AOC10-PZ01S	33	SHALLOW	AOC 10
AOC10-PZ01I	48	INTERMEDIATE	AOC 10
AOC10-PZ01D	69	DEEP	AOC 10
AOC10-PZ02S	33	SHALLOW	AOC 10
AOC10-PZ02I	48	INTERMEDIATE	AOC 10
AOC10-PZ02D	69	DEEP	AOC 10
AOC11-PZ01S	33	SHALLOW	AOC 11
AOC11-PZ01I	44	INTERMEDIATE	AOC 11
AOC11-PZ01D	56	DEEP	AOC 11

TABLE 2
WATER LEVEL COLLECTION
FACILITY WIDE PER- AND POLYFLUOROALKYL SUBSTANCES SITE INSPECTION
NWIRP CALVERTON, NEW YORK

WELL LOCATION	DEPTH (FEET BGS)	ZONE	SITE
AOC12-PZ01S	22	SHALLOW	AOC 12
AOC12-PZ01I	42	INTERMEDIATE	AOC 12
AOC12-PZ01D	70	DEEP	AOC 12
FD-MW02I	51	INTERMEDIATE	SITE 7
FD-MW02S	23	SHALLOW	SITE 7
FD-MW04I	56	INTERMEDIATE	SITE 7
FD-MW04S	24	SHALLOW	SITE 7
FD-MW07I	NA	INTERMEDIATE	SITE 7
FD-MW07S	21	SHALLOW	SITE 7
FD-MW10S	NA	SHALLOW	SITE 7
FD-MW11I	50	INTERMEDIATE	SITE 7
FD-MW11S	25	SHALLOW	SITE 7
FD-MW12S	25	SHALLOW	SITE 7
FD-MW15S	25	SHALLOW	SITE 7
FD-MW16S	25	SHALLOW	SITE 7
FD-MW17S	25	SHALLOW	SITE 7
FD-MW18S	25	SHALLOW	SITE 7
FD-MW19S	25	SHALLOW	SITE 7
FD-MW20S	27	SHALLOW	SITE 7
FD-SV11 / MW40S	30	SHALLOW	SITE 7
FT-MW01S	28.5	SHALLOW	SITE 2
FT-MW01I	78	INTERMEDIATE	SITE 2
FT-MW02S	20.5	SHALLOW	SITE 2
FT-MW02I	80	INTERMEDIATE	SITE 2
FT-MW03S	31.5	SHALLOW	SITE 2
FT-MW07S	35	SHALLOW	SITE 2
FT-MW08S	14	SHALLOW	SITE 2
FT-MW08I	33	INTERMEDIATE	SITE 2
FT-PZ451S	17.28	SHALLOW	SITE 2
FT-PZ452S	16.17	SHALLOW	SITE 2
FT-PZ453S	15.51	SHALLOW	SITE 2
FT-PZ454S	14.85	SHALLOW	SITE 2
FT-PZ455S	37.71	SHALLOW	SITE 2
FT-PZ455I	75.38	INTERMEDIATE	SITE 2
FT-PZ456S	15.06	SHALLOW	SITE 2
FT-PZ456I	54.31	INTERMEDIATE	SITE 2
FT-PZ457S	16.18	SHALLOW	SITE 2
FT-PZ458S	16.11	SHALLOW	SITE 2
FT-PZ458I	46.85	INTERMEDIATE	SITE 2
FT-PZ459S	19.38	SHALLOW	SITE 2
FT-PZ459I	48.31	INTERMEDIATE	SITE 2
FT-PZ462S	14.71	SHALLOW	SITE 2
FT-PZ462I	50.8	INTERMEDIATE	SITE 2
FC-MW02SR1	14.5	SHALLOW	SITE 6A
FC-MW02IR1	52.5	INTERMEDIATE	SITE 6A
FC-MW03SR1	14.5	SHALLOW	SITE 6A
FC-MW05S	16	SHALLOW	SITE 6A
FC-MW05I	58	INTERMEDIATE	SITE 6A
FC-PZ05I1	30	INTERMEDIATE	SITE 6A

TABLE 2
WATER LEVEL COLLECTION
FACILITY WIDE PER- AND POLYFLUOROALKYL SUBSTANCES SITE INSPECTION
NWIRP CALVERTON, NEW YORK

WELL LOCATION	DEPTH (FEET BGS)	ZONE	SITE
FC-MW06S	19	SHALLOW	SITE 6A
SA-MW126S	15	SHALLOW	SITE 6A
SA-MW126I	50	INTERMEDIATE	SITE 6A
SA-MW126D	84	DEEP	SITE 6A
SA-MW127S	15	SHALLOW	SITE 6A
SA-MW127I	46	INTERMEDIATE	SITE 6A
SA-MW127D	78	DEEP	SITE 6A
SA-MW128S	17	SHALLOW	SITE 6A
SA-MW128I	40	INTERMEDIATE	SITE 6A
SA-MW128D	68	DEEP	SITE 6A
SA-MW129S	29.5	SHALLOW	SITE 6A
SA-MW129I	60	INTERMEDIATE	SITE 6A
SA-MW129D	90	DEEP	SITE 6A
SA-MW130S	19	SHALLOW	SITE 6A
SA-MW130I	50	INTERMEDIATE	SITE 6A
SA-PZ135I	47	INTERMEDIATE	SITE 6A
SA-PZ138I1	42	INTERMEDIATE	SITE 6A
SA-PZ149I1	37	INTERMEDIATE	SITE 6A
SA-PZ157I1	38	INTERMEDIATE	SITE 6A
SA-PZ157I	46	INTERMEDIATE	SITE 6A
SA-PZ180I	43	INTERMEDIATE	SITE 6A
SA-PZ193I	40	INTERMEDIATE	SITE 6A
SA-PZ194I	50	INTERMEDIATE	SITE 6A
FT-GA10	NA	SHALLOW	STAFF GAUGE
FT-GA13	NA	SHALLOW	STAFF GAUGE

AOC - Area of Concern.
BGS - Below Ground Surface.
MSL - Mean Sea Level.
NA - Not Available.

TABLE 3
GROUNDWATER SAMPLING DETAILS AND NOMENCLATURE
FACILITY WIDE PER- AND POLYFLUOROALKYL SUBSTANCES SITE INSPECTION
NWIRP CALVERTON, NEW YORK

LOCATION	WELL DIAMETER (INCHES)	DEPTH (FEET BGS)	SCREEN INTERVAL DEPTH (FEET BGS)	SCREEN INTERVAL DEPTH (FEET MSL)	NOMENCLATURE
AOC-01					
AOC01-PZ01S	1	20	10-20	38.1 to 28.1	AOC01-PZ01S-YYYYMMDD
AOC01-PZ01I	1	37	27-37	21.1 to 11.1	AOC01-PZ01I-YYYYMMDD
AOC01-PZ01D	1	55	45-55	3.1 to -6.9	AOC01-PZ01D-YYYYMMDD
AOC01-PZ02S	1	18	8-18	37.7 to 27.7	AOC01-PZ02S-YYYYMMDD
AOC01-PZ02I	1	37	27-37	18.7 to 8.7	AOC01-PZ02I-YYYYMMDD
AOC01-PZ02D	1	55	45-55	0.7 to -9.3	AOC01-PZ02D-YYYYMMDD
AOC01-PZ03S	1	20	10-20	39.4 to 29.4	AOC01-PZ03S-YYYYMMDD
AOC01-PZ03I	1	37	27-37	22.4 to 12.4	AOC01-PZ03I-YYYYMMDD
AOC01-PZ03D	1	55	45-55	4.4 to -5.6	AOC01-PZ03D-YYYYMMDD
AOC-02					
AOC02-PZ01S	1	18	8-18	38.1 to 28.1	AOC02-PZ01S-YYYYMMDD
AOC02-PZ01I	1	37	27-37	19.1 to 9.1	AOC02-PZ01I-YYYYMMDD
AOC02-PZ01D	1	55	45-55	1.1 to -8.9	AOC02-PZ01D-YYYYMMDD
AOC02-PZ02S	1	18	8-18	37.8 to 27.8	AOC02-PZ02S-YYYYMMDD
AOC02-PZ02I	1	33	23-33	22.8 to 12.8	AOC02-PZ02I-YYYYMMDD
AOC02-PZ02D	1	51	41-51	4.8 to -5.2	AOC02-PZ02D-YYYYMMDD
AOC02-PZ03S	1	18	8-18	42.1 to 32.1	AOC02-PZ03S-YYYYMMDD
AOC02-PZ03I	1	37	27-37	23.1 to 13.1	AOC02-PZ03I-YYYYMMDD
AOC02-PZ03D	1	55	45-55	5.1 to -4.9	AOC02-PZ03D-YYYYMMDD
AOC-04					
AOC04-PZ01S	1	16	6-16	39.8 to 29.8	AOC04-PZ01S-YYYYMMDD
AOC04-PZ01I	1	31	21-31	24.8 to 14.8	AOC04-PZ01I-YYYYMMDD
AOC04-PZ01D	1	51	41-51	4.8 to -5.2	AOC04-PZ01D-YYYYMMDD
AOC-05					
AOC05-PZ01S	1	21	11-21	40.9 to 30.9	AOC05-PZ01S-YYYYMMDD
AOC05-PZ01I	1	36	26-36	25.9 to 15.9	AOC05-PZ01I-YYYYMMDD
AOC05-PZ01D	1	59	49-59	2.9 to -7.1	AOC05-PZ01D-YYYYMMDD
AOC-06					
AOC06-PZ01S	2	25	15-25	39.4 to 29.4	AOC06-PZ01S-YYYYMMDD
AOC06-PZ01I	2	40	30-40	24.4 to 14.4	AOC06-PZ01I-YYYYMMDD
AOC06-PZ01D	2	64	54-64	0.4 to -9.6	AOC06-PZ01D-YYYYMMDD
AOC-07					
AOC07-PZ01S	2	25	15-25	40.5 to 30.5	AOC07-PZ01S-YYYYMMDD
AOC07-PZ01I	2	40	30-40	25.4 to 15.4	AOC07-PZ01I-YYYYMMDD
AOC07-PZ01D	2	62	52-62	3.3 to -6.7	AOC07-PZ01D-YYYYMMDD
AOC-08					
AOC08-PZ01S	2	23	13-23	43.1 to 33.1	AOC08-PZ01S-YYYYMMDD
AOC08-PZ01I	2	38	28-38	28.1 to 18.1	AOC08-PZ01I-YYYYMMDD
AOC08-PZ01D	2	64	54-64	1.9 to -8.1	AOC08-PZ01D-YYYYMMDD

TABLE 3
GROUNDWATER SAMPLING DETAILS AND NOMENCLATURE
FACILITY WIDE PER- AND POLYFLUOROALKYL SUBSTANCES SITE INSPECTION
NWIRP CALVERTON, NEW YORK

LOCATION	WELL DIAMETER (INCHES)	DEPTH (FEET BGS)	SCREEN INTERVAL DEPTH (FEET BGS)	SCREEN INTERVAL DEPTH (FEET MSL)	NOMENCLATURE
AOC-09					
AOC09-PZ01S	2	42	32-42	40.4 to 30.4	AOC09-PZ01S-YYYYMMDD
AOC09-PZ01I	2	53	43-53	29.3 to 19.3	AOC09-PZ01I-YYYYMMDD
AOC09-PZ01D	2	64	54-64	18.2 to 8.2	AOC09-PZ01D-YYYYMMDD
AOC09-PZ02S	2	25	15 - 25	42.7 to 32.7	AOC09-PZ01S-YYYYMMDD
AOC09-PZ03S	2	47	37 - 47	42 to 32	AOC09-PZ02S-YYYYMMDD
AOC09-PZ04S	2	28	18 - 28	44.2 to 34.2	AOC09-PZ03S-YYYYMMDD
AOC09-PZ05S	2	13	3 - 13	42.8 to 32.8	AOC09-PZ04S-YYYYMMDD
AOC-10					
AOC10-PZ01S	2	33	23-33	32.3 to 22.3	AOC10-PZ01S-YYYYMMDD
AOC10-PZ01I	2	48	38-48	17.4 to 7.4	AOC10-PZ01I-YYYYMMDD
AOC10-PZ01D	2	69	59-69	-3.6 to -13.6	AOC10-PZ01D-YYYYMMDD
AOC10-PZ02S	2	33	23-33	25.5 to 15.5	AOC10-PZ02S-YYYYMMDD
AOC10-PZ02I	2	48	38-48	10.5 to 0.5	AOC10-PZ02I-YYYYMMDD
AOC10-PZ02D	2	69	59-69	-10.5 to -20.5	AOC10-PZ02D-YYYYMMDD
AOC-11					
AOC11-PZ01S	2	33	23-33	35.8 to 25.8	AOC11-PZ01S-YYYYMMDD
AOC11-PZ01I	2	44	34-44	25 to 15	AOC11-PZ01I-YYYYMMDD
AOC11-PZ01D	2	56	46-56	13 to 3	AOC11-PZ01D-YYYYMMDD
AOC-12					
AOC12-PZ01S	2	22	12-22	32.2 to 22.2	AOC12-PZ01S-YYYYMMDD
AOC12-PZ01I	2	42	32-42	12.3 to 2.3	AOC12-PZ01I-YYYYMMDD
AOC12-PZ01D	2	70	60-70	-15.8 to -25.8	AOC12-PZ01D-YYYYMMDD

AOC - Area of Concern.

BGS - below ground surface.

YYYYMMDD - Four digit year, two digit month and day that the sample is collected.

NA - Not available.

FIGURES

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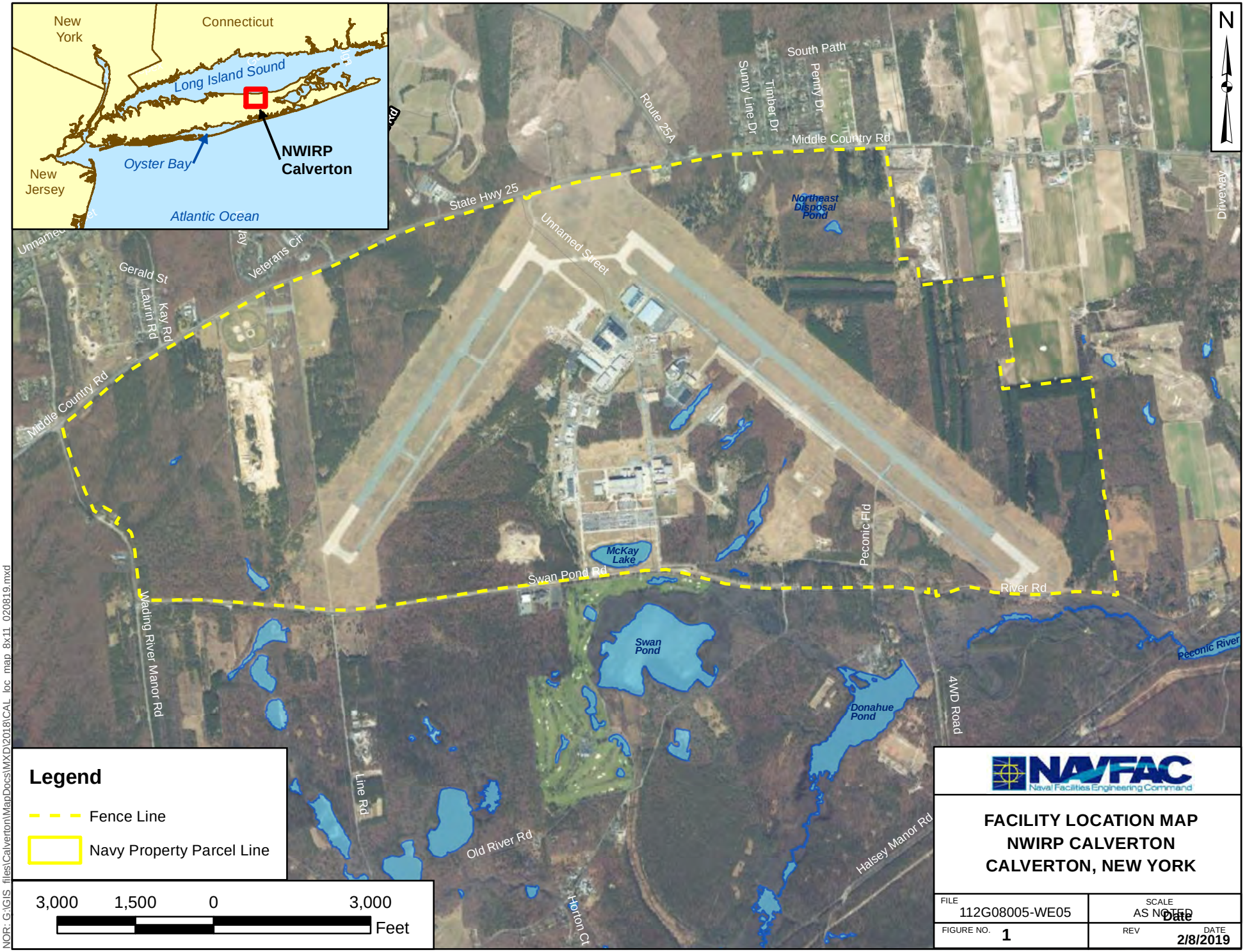
New York
Connecticut
Long Island Sound
NWIRP Calverton
Oyster Bay
New Jersey
Atlantic Ocean
N
South Path
Sunny Line Dr
Timber Dr
Penny Dr
Route 25A
Middle Country Rd
State Hwy 25
Unnamed Street
Northeast Disposal Pond
Driveway
Gerald St
Laurin Rd
Kay Rd
Veterans Cir
Middle Country Rd
McKay Lake
Swan Pond Rd
Peconic Rd
River Rd
Wading River Manor Rd
Swan Pond
Peconic River
Donahue Pond
4WD Road
Line Rd
Old River Rd
Halsey Manor Rd
Horton Ct
Legend
Fence Line
Navy Property Parcel Line
3,000 1,500 0 3,000
Feet
NAVFAC
Naval Facilities Engineering Command
FACILITY LOCATION MAP
NWIRP CALVERTON
CALVERTON, NEW YORK
FILE 112G08005-WE05
SCALE AS NOTED
FIGURE NO. 1
REV
DATE 2/8/2019
Date
NOR: G:\GIS files\Calverton\MapDocs\MXD\2018\CAL loc map 8x11 020819.mxd

N

AOC-12

Northeast Disposal Pond

AOC-08

AOC-09

AOC-07

AOC-06

AOC-11

AOC-05

AOC-03

AOC-01

AOC-10

AOC-04

AOC-02

Site 2

Runway 5-23

Runway 32-14

McKay Lake

Swan Pond

Donahue Pond

Peconic Field

Peconic River

Garfield Dr

Cavalga

John Jay Rd

Route 25A

South Path

Timber Dr

Penny Dr

Old Stone Rd

Unnamed Street

Fresh Pond Ave

Middle Country Rd

Calverton Dr

Princeton Blvd

Middle Country Rd

Driveway

Triangle Ln

Riley Ave

Karlin Dr

Jakes Ln

Unnamed Street

Edwards Ave

Jan Way

Burman Blvd

Scott Ave

Swan Pond Rd

Line Rd

Connecticut Ave

River Rd

4WD Road

Mill Rd

Interstate 495

Hill Rise

Nugent Dr

Legend

1997 Groundwater Flow Direction

Further PFAS Assessment Recommended

Current Navy Property (2018)

Aerial photographs provided by the NYS GIS Clearinghouse, 2016.

0 1,000 2,000 4,000 Feet

NAVFAC

AREA OF CONCERN (AOC)
LOCATION MAP
NWIRP CALVERTON, NEW YORK

CTO	112G08005-WE05
DRAWN BY	DATE 03/04/20
CHECKED BY	DATE 03/04/20
FIGURE NUMBER	2

NOR: G:\GIS files\Calverton\MapDocs\MXD\2017 PA\PFAS furtheraction Noboundary new.mxd

N

AOC12-PZ01D
AOC12-PZ01I
AOC12-PZ01S

AOC09-PZ01D
AOC09-PZ01I
AOC09-PZ01S

AOC09-PZ02S

AOC08-PZ01D
AOC08-PZ01I
AOC08-PZ01S

AOC07-PZ01I
AOC07-PZ01D
AOC07-PZ01S

AOC06-PZ01I
AOC06-PZ01D
AOC06-PZ01S

AOC11-PZ01D
AOC11-PZ01I
AOC11-PZ01S

AOC09-PZ03S

FDMW19S
FDMW12S
FDMW11I
FDMW11S
FDMW16S
FDMW07S
FDMW07I
FD-SV11/MW40S
FDMW15S
FDMW02I
FDMW02S

AOC05-PZ01I
AOC05-PZ01D
AOC05-PZ01S

AOC02-PZ03D
AOC02-PZ03S
AOC02-PZ03I
AOC02-PZ02I
AOC02-PZ02D
AOC02-PZ02S

AOC01-PZ03D
AOC01-PZ03S
AOC01-PZ03I

FC-MW02IR1
FC-MW02SR1
FC-MW03SR1

AOC09-PZ04S

AOC10-PZ01D
AOC10-PZ01I
AOC10-PZ01S/SB01

AOC01-PZ01I
AOC01-PZ01D
AOC01-PZ01S

FC-MW06S

AOC04-PZ01D
AOC04-PZ01S
AOC04-PZ01I

FC-PZ05I1
FC-MW05I
FC-MW05S

AOC01-PZ02I
AOC01-PZ02D
AOC01-PZ02S

AOC02-PZ01S
AOC02-PZ01D
AOC02-PZ01I

SA-MW130S
SA-MW130I
SA-PZ194I1

FT-MW01I
FT-MW01S
FT-PZ451S
SA-PZ193I1

FT-MW03S
FT-MW02I
FT-MW02S
FT-PZ452S
FTGA10
FT-PZ454S
SA-PZ149I1

AOC10-PZ02D
AOC10-PZ02I
AOC10-PZ02S

McKay Lake

FT-MW07S
FT-MW08I
FT-MW08S
FT-PZ453
SA-MW126S
SA-MW126I
SA-MW126D
SA-PZ-180I
SA-MW127D
SA-MW127I
SA-MW127S
SA-PZ135I
SA-MW128S
SA-MW128I
SA-MW128D
SA-MW129S
SA-MW129D
SA-MW129I

AOC09-PZ05S

FT-PZ-455I
FT-PZ-455S

Peconic River

Swan Pond

FT-PZ-459I
FT-PZ-459S
FT-PZ-462I
FT-PZ-462S
FT-PZ-458I
FT-PZ-458S
FTGA13
FT-PZ-457S
FT-PZ-456I
FT-PZ-456S

Donahue Pond

1,250 0 1,250
Feet

Legend

- Proposed Sampling Locations
- Monitoring Well/Piezometer
- Staff Gauge

Aerial photographs provided by the NYS GIS Clearinghouse, 2016.

NAVFAC

PROPOSED SAMPLING LOCATIONS
FACILITY WIDE PFAS SITE INSPECTION
NWIRP CALVERTON, NEW YORK

CTO	112G08005-WE05
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—	—
CHECKED BY	DATE
—	03/05/20
FIGURE NUMBER	3

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