

DEPARTMENT OF THE NAVY

OFFICE OF THE ASSISTANT SECRETARY (ENERGY, INSTALLATIONS AND ENVIRONMENT) 1000 NAVY PENTAGON WASHINGTON, DC 20305-1000

June 20, 2016

MEMORANDUM FOR COMMANDER NAVAL INSTALLATIONS COMMAND DEPUTY COMMANDANT OF THE MARINE CORPS (INSTALLATIONS AND LOGISTICS)

SUBJECT: Perfluorinated Compounds/Perfluoroalkyl Substances (PFC/PFAS) – Identification of Potential Areas of Concern (AOCs)

Ref:

- (a) OPNAVINST 5090.1D
- (b) MCO P5090.2A
- (c) DoDI 4715.07
- (d) DoDI 4715.18
- (e) DoDM 4715.20
- (f) DASN(E) Memo, 21 Oct 2014

Encl: (1) PFC/PFAS DERP Site and AOC Identification, Validation, Prioritization, and Response Process

- (2) DERP Sites with Potential PFC/PFAS Contamination and Potential PFC/PFAS AOCs list
- (3) PFC/PFAS Release Mechanisms

The Department of the Navy (DON) is committed to identifying, evaluating, and where appropriate, remediating contamination resulting from its activities. DON will take immediate action to remove imminent threats to human health and the environment. References (a) through (f) set the policies and requirements for conducting environmental restoration within the DON and Department of Defense (DoD) under the Defense Environmental Restoration Program (DERP), including those relative to emerging contaminants, such as PFC/PFAS.

PFC/PFAS are a suite of chemicals of emerging public health concern, primarily in drinking water systems. In some cases, DON activities have resulted in the release of PFC/PFAS, which have contaminated drinking water sources. The primary DON release of PFC/PFAS was through the use of aqueous film forming foam (AFFF) for fire and emergency responses and during test and training activities. EPA recently established a lifetime health advisory level of 70 parts per trillion (ppt) for two PFC/PFAS, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), combined.

The DERP process can take many years to identify new sites, investigate soil and groundwater, and conduct cleanup actions. To expedite the timeframe to address PFC/PFAS, DON has developed and is implementing the process described in enclosure (1) to efficiently identify, validate, and prioritize the inventory of Sites and Areas of

Concern (AOCs) with known, or potential, PFC/PFAS releases. NAVFAC has identified and is validating the initial DERP Site and AOC list (step 6 of enclosure (1)) for active and Base Realignment and Closure (BRAC) installations. Enclosure (2) lists DERP Sites with potential PFC/PFAS contamination and potential AOCs identified to date. The list identifies the installations, Site or AOC name(s), description, and the NAVFAC Environmental Restoration (ER) managers for each installation, with contact information at the bottom.

We suspect there are additional AOCs that must be identified and addressed. Enclosure (3) contains a summary of potential PFC/PFAS release mechanisms. For each installation under your command, this policy directs you to review the information in Enclosures (2) and (3) to assist NAVFAC validating the potential AOCs in Enclosure (2) and identify additional PFC/PFAS AOCs based on staff review of historical records (e.g. crash sites, fire responses, operations, training, etc.), databases, personnel interviews, etc. For new AOCs, identify the source of release, location of the release on an installation map or figure, and the source of the information used to identify the release. The NAVFAC ER managers identified in enclosure (2) will assist your staff throughout this effort. In order to complete the prioritization of all potential DERP-eligible Sites and AOCs and begin investigations of priority 1 sites (steps 8-14 of enclosure (1)) this fiscal year, I request you report newly identified PFC/PFAS AOCs and supporting information described above to my office and the NAVFAC ER managers by July 22, 2016.

My point of contact is Mr. Richard Mach at richard.mach@navy.mil or (703) 614-5463.

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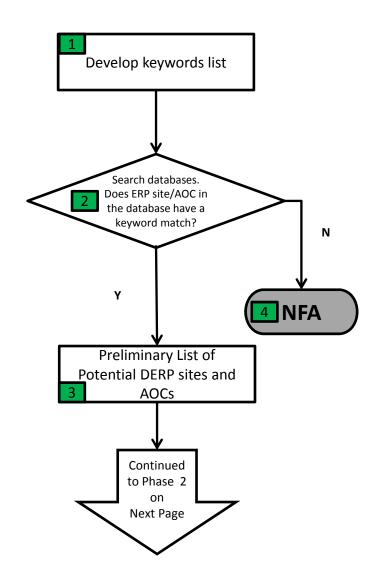
Deputy Assistant Secretary of the Navy

(Environment)

Phase 1 – Initial DERP Site Identification Database Screening

- Develop list of keywords related to use of PFCs (including AFFF and other specified keywords)
- ER Program (ER,N & BRAC)
 Databases (NORM, NIRIS,
 Delayed Disposal Report,
 Military Fire & Crash Training
 Sites Table, BRACMIS, Flash
 Card, NOSC.Net, and Other
 Databases)

Status/Schedule: COMPLETE



Business Rules:

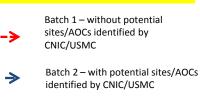
- Block 1: Develop a list of keywords to perform an initial screening of ERP (ER,N and BRAC) databases. Keywords provide a broad range of sites/AOCs that have the potential for PFC/PFAS use or release.
 - Keywords include but not limited to single or combinations of these words: fire crash training, burn area, plating shop, fire train, fire fight, firefight, burn, hangar, AFFF, foam, plating.
- Block 2: The ERP database search will develop an initial "universe" of potential evaluation areas [existing ERP sites (NORM) or AOCs (NIRIS, other databases).
- Block 3: Any ERP site/AOC in the databases with a keyword match will be included as a potential PFC/PFAS evaluation area for further screening.
- Block 4: ERP sites/AOCs in the databases having no keyword matches will be excluded from further PFC/PFAS use/release evaluation.

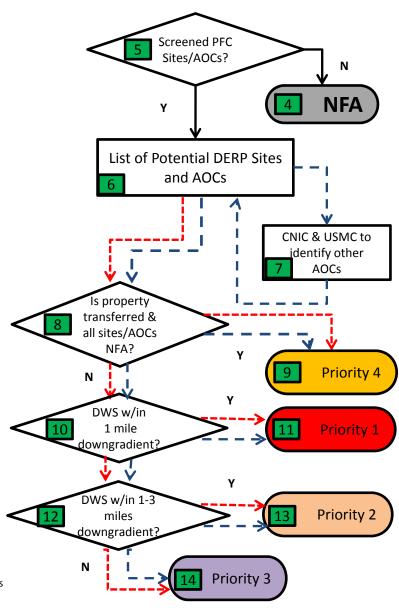
Phase 2 – Site/AOC Validation, Prioritization and Gap Analysis

- Managers and RPMs to validate sites/AOCs progressing from Phase 1
- Prioritize sites/AOCs based on property ownership status, response status, and distance to drinking water sources
- CNIC and USMC to review validated sites/AOC lists per installation with potential release mechanisms and identify additional sites/AOCs for prioritization
- May include limited sampling of groundwater.

Status/Schedule:

- Block 6: Initial list is due 15 June 2016 to DASN(E)
- Block 7: A continuous process; initial validated AOCs to be added to the list by 22 July 2016 with additional sites added as discovered.
- Blocks 11, 13, 14, and 9: Potential sites/AOCs list due to DASN(E):
 - Batch 1: 01 August 2016
 - Batch 2: 15 August 2016
- Additional AOCs from CNIC & USMC will be prioritized as they are identified.





Business Rules:

- Block 5: FEC RPMs to confirm/refute PFCs sites/AOCs based on available data on site history and site operations. RPM is to provide the supporting documentation of "negative" response. For example, a "burn pit" site/AOC for debris disposal and not associated with fire-fighting training can be eliminated. Because some of the required information pertains to on-base and off-base drinking water sources, the RPM will need to coordinate with Environmental Compliance, Public Work, and local municipalities.
- Block 7: Additional areas that have the potential for PFC releases will be identified by facility operations personnel (i.e. hangar, crash site, storage area). Coordinate and work closely with RPMs to identify and validate new potential AOCs.
- Block 8: Could be identified from NORM, NIRIS, Delayed Disposal Report, Military Fire & Crash Training Sites Table, BRACMIS, Flash Card, real estate, & other databases
- Block 10: DWS (Navy, public, and private wells) are located within 1 mile downgradient of sites/AOCs.
- Block 12: DWS (Navy, public, and private wells) are or may be located within 1 - 3 miles downgradient of sites/AOCs.
- Blocks 9, 11, 13, and 14: Refer to rules under Phase 3.

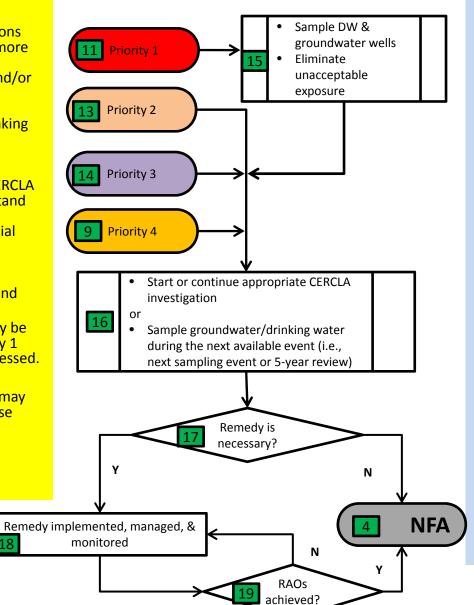
5/23/2016

Phase 3 - Responses

- Layout prioritization of actions which may include one or more of the followings:
 - Sample groundwater and/or drinking water wells
 - Eliminate exposure by providing alternate drinking water
 - Perform other time critical/interim actions
 - Perform appropriate CERCLA investigation to understand the CSM
 - Perform CERCLA remedial action, if necessary

Status/Schedule:

- Block 11: Immediate (CFY and FY+1)
- Block 13: FY+1 to FY+3; May be expedited only after Priority 1 Sites/AOCs have been addressed.
- Block 14: FY+3 to FY+5
- Block 9: FY+5 and beyond; may be expedited on case by case basis, in particular when requested by the regulators/stakeholders.



Business Rules:

- Block 11: PRIORITY 1 Perform actions per Blocks 15 and 16 and perform time critical actions as necessary.
- Blocks 13 and 14: PRIORITY 2 and PRIORITY 3 – Perform actions per Blocks 15 and 16.
- Block 9: PRIORITY 4 PFC/PFAS evaluation pending additional review by ASN/NAVFAC HQ and regulatory request for assessment and may proceed to Blocks 15 and 16.
- Blocks 15 and 16: Develop a CSM to understand GW flow, PFC/PFAS migration potential off-base, and aquifer characteristics. This information may be obtained using existing and/or new MWs to verify the presence and level of PFC/PFAS in GW. If these results indicate impact to the DWS (downgradient and greater than 1 mile away), the DWS should be sampled with additional "step-out" sampling, if necessary.

Next step is to initiate the CERCLA site investigation to define nature and extent of the PFC/PFAS contamination, evaluate risk, and develop remedial alternatives, if necessary. Consider implementation of a removal action to implement a short-term solution to eliminate the use of bottled water.

5/23/2016

Acronyms:

AFFF Aqueous film-forming foam

AOC Area of concern

BRAC Base Realignment and Closure

BRACMIS BRAC Management Information System

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CFY Current fiscal year

CNIC Commander Navy Installations Command

CSM Conceptual site model

DERP Department of Defense Environmental Restoration Program

DW Drinking water

DWS Drinking water system

ER,N Environmental Restoration, Navy Account

ERP Environmental Restoration Program

FEC Field Engineering Command

FY Fiscal year

GPRA Government Performance and Results Act

HQ Headquarters MW Monitoring well

NAVFAC Naval Facilities Engineering Command

NFA No further action

NIRIS Naval Installation Restoration Information Solution database

NORM Normalized database; used for ER,N and BRAC accounts budgeting NOSC.Net Navy On-Scene Coordinator; NAVSEA-hosted database to track releases

PFAS Perfluoroalkyl substances

PFC Perfluorinated chemicals/compounds

RPM Remedial Project Manager
USMC United States Marine Corps

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		Potential PFC/PI		ation and Potential PFC/PF	AS AOCs
NAVFAC FEC	Installation [DERP Name/iNFADS Activity (Host)]	iNFADS Special Area	SITE_NAME/POTENT	Site Short Description	NAVFAC ER Manage
HPAC	CNI PMRF HAWREA BARKING SANDS		SITE 00001	CRASH CREW FIRE FIGHTING PIT #1 FIREFIGHTING PIT #2	Kris Saboda
HPAC HPAC	CNI PMRF HAWREA BARKING SANDS JBPHH PEARL HARBOR HI		SITE 00004 SWMU 00006	FLETRAGRU FIRE FIGHTING TRAINING	Kris Saboda Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		SITE H0007	FT007-STE 7 FIRE TRNG AREA	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		SITE H0009	SS006-FUEL LEAK/VALVE PIT	Kris Saboda
HPAC	MCB HAWAII KANEOHE		SITE 00004	FIRE FIGHTING TRNG AREA	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		SWMU 00013	INDUST W/T PLNT WASTE UNLD A	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		SITE 0044	Pearl City Fuel Annex, (Tank #1)	Kris Saboda
HPAC	CSO BARBERS PT HI		Potential PFC AOC	Fire Station, Bldg 1890	Kris Saboda
HPAC	CNI PMRF HAWREA BARKING SANDS		Potential PFC AOC	Fire Station, Bldg 300	Kris Saboda
HPAC HPAC	CNI PMRF HAWREA BARKING SANDS CNI PMRF HAWREA BARKING SANDS		Potential PFC AOC Potential PFC AOC	FIRE TRAINING PIT HANGAR W/AFFF, BLDG 384	Kris Saboda Kris Saboda
HPAC	CNI PMRF HAWREA BARKING SANDS		Potential PFC AOC	HAZMINCEN w/AFFF, Bldg 338	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	FIRE STATION, BLDG 467	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Hangar: AT/FP Training Center, Bldg 54	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	HAZMIN Warehouse, Bldg 229	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Pumphouse/Foam Station, Bldg S235	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Upper Tank Farm, Bldg 1613	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	AFFF STORAGE	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Bldg 1070, Associated with B229	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI JBPHH PEARL HARBOR HI		Potential PFC AOC	Fire Station #6, Bldg 2036	Kris Saboda
HPAC HPAC	JBPHH PEARL HARBOR HI JBPHH PEARL HARBOR HI		Potential PFC AOC Potential PFC AOC	FIRE TRAINING PIT Fuel system maintenance hangar	Kris Saboda Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Runways	Kris Saboda Kris Saboda
HPAC	MCB HAWAII KANEOHE		Potential PFC AOC	ARFF Shed, BLdg 5068	Kris Saboda
HPAC	MCB HAWAII KANEOHE		Potential PFC AOC	Corrosion Control Hangar	Kris Saboda
HPAC	MCB HAWAII KANEOHE		Potential PFC AOC	Crash Crew ARFF, Bldg 6822	Kris Saboda
HPAC	MCB HAWAII KANEOHE		Potential PFC AOC	Fire Station #8, Bldg 4074	Kris Saboda
HPAC	MCB HAWAII KANEOHE		Potential PFC AOC	Runways	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Fire Station #11, Bldg 441	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Storage Shed, Bldg 485	Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Fire Station #9, Bldg 432	Kris Saboda
HPAC HPAC	JBPHH PEARL HARBOR HI JBPHH PEARL HARBOR HI		Potential PFC AOC Potential PFC AOC	Storage building, Bldg 240 Fire Station #1, Bldg 206	Kris Saboda Kris Saboda
HPAC	JBPHH PEARL HARBOR HI		Potential PFC AOC	Warehouse, Bldg 1526	Kris Saboda Kris Saboda
LANT	SAN JUAN PR MCRC*		SITE 00001	HANGAR 21	Byron Brant
MIDLANT	MCAS BEAUFORT SC		SITE 00013	WESTERN FIRE TRAINING AREA	Bob Schirmer
MIDLANT	MCAS BEAUFORT SC		SITE 00012	2 EASTERN FIRE TRAINING PITS	Bob Schirmer
MIDLANT	MCAS BEAUFORT SC		SITE 00036	CURRENT FFTA	Bob Schirmer
MIDLANT	MCAS BEAUFORT SC		UXO 000003	CRASH FIRE RESCUE SW-18	Bob Schirmer
MIDLANT	NWIRP BETHPAGE NY		SITE 00001	FORMER DRUM MARSHALING AREA	Bob Schirmer
MIDLANT	BLOOMFIELD CT NWIRP*		SITE 00001	OLD FIRE TRAINING AREA	Bob Schirmer
MIDLANT MIDLANT	BLOOMFIELD CT NWIRP* BLOOMFIELD CT NWIRP*		SITE 00004 SITE 00006	PROCESS SUMP AREA	Bob Schirmer Bob Schirmer
MIDLANT	BLOOMFIELD CT NWIRP*		SITE 00007	HAZARD WASTE STORAGE LOCATION	Bob Schirmer
MIDLANT	NWIRP CALVERTON NY		SITE 00007	FIRE RESCUE TRAINING AREA	Bob Schirmer
MIDLANT	NWIRP CALVERTON NY		SITE 00006	FUEL CALIBRATION AREA	Bob Schirmer
MIDLANT	MCB CAMP LEJEUNE NC		SITE 00009	FIRE FIGHTING TRNG PIT	Bob Schirmer
MIDLANT	MCB CAMP LEJEUNE NC		SITE 00054	CRASH CREW FIRE TRAINING	Bob Schirmer
MIDLANT	MCAS CHERRY POINT NC		SITE 00010	OLD SANITARY LANDFILL	Bob Schirmer
MIDLANT	MCAS CHERRY POINT NC		SITE 00012	CRASH CREW TRAINING AREA	Bob Schirmer
MIDLANT	MCAS CHERRY POINT NC		SITE 00029	CRASH CREW TRAINING AREA	Bob Schirmer
MIDLANT	MCAS CHERRY POINT NC		SITE 00034	CRASH CREW ACCUMULATION A	Bob Schirmer
MIDLANT MIDLANT	MCAS CHERRY POINT NC MCAS CHERRY POINT NC		SITE 00051 SITE 00052	PLATING SHOP - BLDG 137 PLATING SHOP - BLDG 133	Bob Schirmer Bob Schirmer
MIDLANT	MCAS CHERRY POINT NC MCAS CHERRY POINT NC		SITE 00052 SITE 00091	ELECTROPLATING SHOP SUMP	Bob Schirmer
MIDLANT	NAVAL SUPPORT STATION NRFK NSY	ST JULIENS CREEK EAST	SITE 00091	DIESEL FUEL,OTHERS	Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA	CRANEY ISLAND	SITE 00013	FIREFIGHTING TRAINING PIT	Bob Schirmer
MIDLANT	NAS OCEANA VA	DAM NECK	SITE 00001	Regulus Avenue Landfill	Bob Schirmer
MIDLANT	GREAT LAKES NAVAL STATION		SITE 00001	GOLF COURSE LANDFILL	Bob Schirmer
MIDLANT	GREAT LAKES NAVAL STATION		SITE 00004	FIRE FIGHTING TRG UNIT	Bob Schirmer
MIDLANT	GREAT LAKES NAVAL STATION		SITE 00023	BLDG 106 RELEASE SITE	Bob Schirmer
MIDLANT	JNTEXPBASE LITTLE CREEK FS VA		SITE 00011	SCHOOL OF MUSIC PLATING SHOP	Bob Schirmer
MIDLANT	JNTEXPBASE LITTLE CREEK FS VA		SITE 0005S	FIRE TRAINING AREA	Bob Schirmer
MIDLANT	NIROP MINNEAPOLIS MN		SITE 00005	PLANT WIDE GROUNDWATER PESTICIDE CTR/R-150TANK	Bob Schirmer
MIDLANT MIDLANT	NAVAL SUPPORT ACTIVITY CRANE NSS PORTSMOUTH NAVY SHIPYARD	NCTS CUTLER VHF AREA	SWMU 00009 SITE 00001	PESTICIDE CTR/R-150TANK FIRE TRAINING AREA	Bob Schirmer Bob Schirmer
MIDLANT	NSS PORTSMOUTH NAVY SHIPYARD	NCTS CUTLER VHF AREA	SITE 00001	AOC 31 FTA DRUM AREA	Bob Schirmer
MIDLANT	NAVSUBASE NEW LONDON CT	CIS COTLEN VIII ANLA	SITE 00003	FUEL FARM	Bob Schirmer
MIDLANT	NAVSUBASE NEW LONDON CT		SITE 00025	LOWER BASE INCINERATOR	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		SITE 00001	MCCALLISTER POINT LANDFILL	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		SITE 00007	TANK FARM #1	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		SITE 00008	NUSC DISPOSAL AREA	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		SITE 00009	OLD FIRE TRAINING AREA	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		SITE 00017	GOULD ISLAND ELECTROPLATING SHOP	Bob Schirmer

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EINC		Potential PFC/PI		ation and Potential PFC/PF	AS AOCs
NAVFAC FEC	Installation [DERP Name/iNFADS Activity (Host)]	iNFADS Special Area	SITE_NAME/POTENT	Site Short Description	NAVFAC ER Manager
MIDLANT	NAVAL MEADONS STATION FARIEN		SITE 00020	SWOS PARKING AREA	Bob Schirmer
MIDLANT MIDLANT	NAVAL WEAPONS STATION EARLE NJ NAVAL WEAPONS STATION EARLE NJ		SITE 00011 SITE 00046	CONTRACT ORDNANCE DISPOSAL MILITARY SEALIFT CMD FIRE TRAINING	Bob Schirmer Bob Schirmer
MIDLANT	NAVAL WEAPONS STATION YORKTOWN		SITE 00040	BURN PAD	Bob Schirmer
MIDLANT	NAVAL WEAPONS STATION YORKTOWN		SWMU 00002	FORMER EOD BURNING/DISPOSAL	Bob Schirmer
MIDLANT	NAVAL WEAPONS STATION YORKTOWN		SWMU 00003	FIRE TRAINING PITS AND VI	Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA		SITE 00001	CAMP ALLEN LANDFILL	Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA		SITE 00016	CHEMICAL FIRE BLDG X-136	Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA		SITE 00017	CHEMICAL FIRE BLDG SDA-21	Bob Schirmer
MIDLANT MIDLANT	NAVSTA NORFOLK VA NAVSTA NORFOLK VA		SITE 00022 SWMU 00006	SALVAGE YARD BLDG V-28 WASTE PIT	Bob Schirmer Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA		SWMU 00008	FIREFIGHTING SCHOOL	Bob Schirmer
MIDLANT	NAVSTA NORFOLK VA		SITE 00023	LP-20 PLATING SHOP	Bob Schirmer
MIDLANT	NAS OCEANA VA		SITE 00017	NALF FENTRESS FIREFIGHTING	Bob Schirmer
MIDLANT	NAS OCEANA VA		SWMU 00011	FIRE FIGHTING TRAINING AREA	Bob Schirmer
MIDLANT	NAS OCEANA VA		SWMU 00026	FIRE FIGHTING TRAINING AREA	Bob Schirmer
MIDLANT	MCRD/BEAUFORT PI SC		SITE 00004	DREDGE SPOILS AREA FF PIT	Bob Schirmer
MIDLANT	MCRD/BEAUFORT PI SC		SITE 00007	PAGE FIELD TRAINING PIT	Bob Schirmer
MIDLANT	MCRD/BEAUFORT PI SC		SITE 00013	INERT DISPOSAL AREAS	Bob Schirmer
MIDLANT MIDLANT	NSS PORTSMOUTH NAVY SHIPYARD		SWMU 00005	INDUSTRIAL WASTE OUTFALLS UNDERGROUND WASTE OIL PLUME	Bob Schirmer
MIDLANT	NAVAL SUPPORT STATION NRFK NSY NAVAL SUPPORT STATION NRFK NSY		SITE 00005 SITE 00017	BUILDING 195 AND VICINITY	Bob Schirmer Bob Schirmer
MIDLANT	NAS OCEANA VA		Potential PFC AOC	Fire Fighting Training Area	Bob Schirmer
MIDLANT	NAVAL SUPPORT ACTIVITY CRANE		Potential PFC AOC	B36	Bob Schirmer
MIDLANT	NSS PORTSMOUTH NAVY SHIPYARD		Potential PFC AOC	AOC 1	Bob Schirmer
MIDLANT	NAVAL STATION NEWPORT RI		Potential PFC AOC	Melville - Backyard Area	Bob Schirmer
MIDLANT	NSS PORTSMOUTH NAVY SHIPYARD		Potential PFC AOC	Bldg 357	Bob Schirmer
MIDLANT	NAVAL SUPPORT STATION NRFK NSY		Potential PFC AOC	Fire-Fighting Foam Storage area - Building 698	Bob Schirmer
MIDLANT	ALLEGANY BALLISTICS LAB		Potential PFC AOC	teflon coating facility	Bob Schirmer
MPAC MPAC	NAVBASE GUAM NAVBASE GUAM	NAVAL MAGAZINE NAVAL MAGAZINE	SITE 00014 SWMU 00022	USS PROTEUS F/F TRNG AREA OROTE F/F PRACTICE AREA	Kris Saboda Kris Saboda
MPAC	US NAVSUPACT ANDERSEN GUAM	NAVAL IVIAGAZINE	SITE 0025A	FIREFIGHTER TRAIN AREA 1	Kris Saboda Kris Saboda
MPAC	US NAVSUPACT ANDERSEN GUAM		SITE 0025A	FIREFIGHTER TRAIN AREA 2	Kris Saboda
MPAC	US NAVSUPACT ANDERSEN GUAM		SITE 0078A	FIREFIGHTER TRAIN AREA 3	Kris Saboda
NWEST	AMCHITKA AK FLTSURSPTDET1*		SITE 00008	NORTH HANGAR	Dina Ginn
NWEST	NAVAL BASE KITSAP		SITE 00005	AIRSTRIP FUELSPILLS SITE	Dina Ginn
NWEST	NAVAL BASE KITSAP	KEYPORT NUWC	SITE 00008	KEYPORT BLDG 72 CHROMATE	Dina Ginn
NWEST	NAVAL BASE KITSAP	KEYPORT NUWC	SITE 00009	KEYPORT LIBERTY BAY	Dina Ginn
NWEST NWEST	NAVAL BASE KITSAP	SHIPYARD PUGET SOUND	SITE 00007 SITE 00016	BLDG 99 OLD PLATING SHOP	Dina Ginn Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA NAS WHIDBEY ISLAND WA		SITE 00016 SITE 00027	RUNWAY DITCHES 1966 FIRE SCHOOL	Dina Ginn Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA		SITE 00027	CHAPEL FIRE SCHOOL	Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA		SITE 00029	CLOVER VALLEY ROAD FIRE S	Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA		SITE 00031	RUNWAY FIRE SCHOOL	Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA		SITE 00022	Hangar/Storage	Dina Ginn
NWEST	NAS WHIDBEY ISLAND WA		SITE 00030	FIRE SCHL CAN DISP AREA	Dina Ginn
NWEST	AMCHITKA AK FLTSURSPTDET1*			Pier/Fuel Farm Area	Dina Ginn
NWEST	AMCHITKA AK FLTSURSPTDET1*		Potential PFC AOC	Transmitter Area	Dina Ginn
NWEST	NAVAL BASE KITSAP		Potential PFC AOC	Bldg. 1006	Dina Ginn
NWEST SEAST	NAS WHIDBEY ISLAND WA BRISTOL TN NWIRP*		Potential PFC AOC SITE 00003	Outlying Facility- Coupville SLUDGE LAGOONS	Dina Ginn Marshall Knight
SEAST	BRISTOL TN NWIRP*		SITE 00003	PLATING WASTE DISPOSAL PI	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SWMU 00001	DPDO LANDFILL	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SITE 00002	NAS CORPUS CHRISTI LANDFI	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SWMU 00002	CCAD LIQUID WASTE DISPOSA	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SWMU 00004	AIRCRAFT FIRE TRAINING AR	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SWMU 00005	BLDG 8	Marshall Knight
SEAST	NAS CORPUS CHRISTI TX		SWMU 00009	NORTHGATE DISPOSAL AREA	Marshall Knight
SEAST SEAST	NAS JACKSONVILLE FL CBC GULFPORT MS		SITE 00001 SITE 00003	SLURRY AND BURN PIT NORTHWEST LANDFILL/FFTA	Marshall Knight Marshall Knight
SEAST	CBC GULFPORT MS		SITE 00003	FIRE FIGHTING TRAINING AREA	Marshall Knight
SEAST	NAS JACKSONVILLE FL		UST 000015	FIRE FIGHTING TRAINING AREA	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SITE 00011	HANGAR BUILDING 101	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SITE 00028	FIRE PIT AREA	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SWMU 00001	HANGAR 1000 (RCRA 1)	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SWMU 00003	BLDG 101 (RCRA 03)	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SITE 00051	FFTA ANTENNA FARM	Marshall Knight
SEAST	NAS JACKSONVILLE FL		SITE 00052	HANGAR 1000(SWMU 00001)	Marshall Knight
SEAST	NAS KEY WEST FL		SWMU 00003	BOCA CHICA FFTA	Marshall Knight
SEAST	SUBASE KINGS BAY GA		SITE 00002	FIRE FIGHTING PIT	Marshall Knight
SEAST SEAST	NAS KINGSVILLE TX NAVSTA MAYPORT FL		SITE 00006 SWMU 00002	FIRE FIGHTING TRAINING AR LANDFILL B	Marshall Knight Marshall Knight
JLAJ1	INVASIA MALI ON LE	1		•	
SEAST	NAVSTA MAYPORT FL		SWMU 00004	LANDFILL E	Marshall Knight

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LIV	LOSURE 2 - DERP Sites with	i Potentiai PFC/PF			AS AOCs
NAVFAC FEC	Installation [DERP Name/iNFADS Activity (Host)]	iNFADS Special Area	SITE_NAME/POTENT	Site Short Description	NAVFAC ER Manager
SEAST SEAST	NAVSTA MAYPORT FL NAVSTA MAYPORT FL		SWMU 00013 SWMU 00014	OLD FIRE FIGHTING TR AREA MERCURY/OILY WASTE SPILL	Marshall Knight Marshall Knight
SEAST	NAVSTA MAYPORT FL		SWMU 00014	WWTF WITH CLARIFIERS	Marshall Knight
SEAST	MCCLENNAN TX NIROP*		SWMU 00007	CID PLATING TANK, BLDG M	Marshall Knight
SEAST	NAS MERIDIAN MS		SITE 00001	OLD FFTA (1A)	Marshall Knight
SEAST	NAS MERIDIAN MS		SITE 00006	NEW FFTA (1B)	Marshall Knight
SEAST	NAVSUPPACT MIDSOUTH MEMPHIS TN		SWMU 00003	N-121 PLATING SHOP DRY B	Marshall Knight
SEAST	NAS JRB NEW ORLEANS LA		SITE 00004	FIRE FIGHTING TRAINING AREA	Marshall Knight
SEAST	NAVAL SUPPORT ACTY PANAMA CITY		SWMU 00008	SOLVENT DISPOSAL BLDG 40 - CLASS DOC	Marshall Knight
SEAST	NAVAL SUPPORT ACTY PANAMA CITY		SWMU 00009 SWMU 00013	CURRENT FIRE TRAINING CEN OLD FIRE FIGHTING CENTER	Marshall Knight Marshall Knight
SEAST SEAST	NAVAL SUPPORT ACTY PANAMA CITY NAS PENSACOLA FL		SITE 00001	SANITARY LANDFILL	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00007	FIREFIGHTING SCHOOL	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00030	BLDG 649/755 & 648	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00038	HAZARDOUS WASTE STORAGE - PAINT	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00100	BRONSON FLD FORMER FFTA	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00103	BRONSON FLD FLIGHT LINE	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00104	BRONSON FLD HANGERS	Marshall Knight
SEAST	NAS PENSACOLA FL		SITE 00105	BRONSON FLD PARTS YARD	Marshall Knight
SEAST	NAS PENSACOLA FL	CALIFIEVEIELD	UST 000018	CRASH CREW TRNG AREA	Marshall Knight
SEAST SEAST	NAS PENSACOLA FL	SAUFLEY FIELD SAUFLEY FIELD	SITE 00002 SITE 00004	FIRE FIGHTING TRG AREA FUELING FACILITY	Marshall Knight
SEAST SEAST	NAS PENSACOLA FL NAS WHITING FLD MILTON FL	SAUFLET FIELD	SITE 00004 SITE 00017	FIRE FIGHTING TRAINING AREA	Marshall Knight Marshall Knight
SEAST	NAS WHITING FLD MILTON FL		SITE 00017	SOUTH FIREFIGHTING TRAINING	Marshall Knight
SEAST	NAS WHITING FLD MILTON FL		SITE 00035	BLDG 1429 OIL PUBLIC WORKS	Marshall Knight
SEAST	NAS WHITING FLD MILTON FL		SITE 00124	OLF BARIN, FIREFIGHTING TRAINING	Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00006	Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00010	Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00005	Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00015	Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00017	Marshall Knight
SEAST SEAST	DALLAS TX NWIRP* DALLAS TX NWIRP*		Potential PFC AOC Potential PFC AOC	SWMU 00114 SWMU 00115	Marshall Knight Marshall Knight
SEAST	DALLAS TX NWIRP*		Potential PFC AOC	SWMU 00117	Marshall Knight
SEAST	FT WORTH TX NAS JRB		Potential PFC AOC	SWMU 18 - FTA-1, Site 11	Marshall Knight
SEAST	FT WORTH TX NAS JRB		Potential PFC AOC	SWMU 19 - FTA-2, Site 12	Marshall Knight
SEAST	NAS MERIDIAN MS		Potential PFC AOC	SITE 4	Marshall Knight
SEAST	NAVSUPPACT MIDSOUTH MEMPHIS TN		Potential PFC AOC	AST 798A - 1800 GAL AFFF Tank	Marshall Knight
SEAST	NAVSUPPACT MIDSOUTH MEMPHIS TN		Potential PFC AOC	AST 798B - 1800 GAL AFFF Tank	Marshall Knight
SWEST	MCLB BARSTOW CA	NEBO AREA	SITE 00001	CAOC1 LANDFILL N.GOLF COURSE,NEBO	Derral VanWinkle
SWEST	MCLB BARSTOW CA	NEBO AREA	SITE 00007	CAOC7 STRATUM 1 AND 2 LANDFILL	Derral VanWinkle
SWEST	MCLB BARSTOW CA	NEBO AREA	SITE 00014	MOJAVE RIVER BED, NEBO	Derral VanWinkle
SWEST SWEST	MCLB BARSTOW CA MCLB BARSTOW CA	NEBO AREA	SITE 00021 SITE 00037	INDUSTRIAL WASTE DISPOSAL CAOC 16-AFFF possible use-chrome plating	Derral VanWinkle Derral VanWinkle
SWEST				tank CAOC 10.27/SWMU 10.27	
SWEST	MCLB BARSTOW CA MCLB BARSTOW CA	NEBO AREA NEBO AREA	SITE 00039 SITE 00040	Building 371	Derral VanWinkle Derral VanWinkle
SWEST	MCB CAMP PENDLETON CA	NEBO ANLA	SITE 00040	FIRE FIGHTER DRILL FIELD	Derral VanWinkle
SWEST	MCB CAMP PENDLETON CA		SITE 00079	B43103 FIRE STATION	Derral VanWinkle
SWEST	MCB CAMP PENDLETON CA		SITE 00115	B63121 FIRE STATION	Derral VanWinkle
SWEST	MCB CAMP PENDLETON CA		SITE 00125	FRMR FIRE FIGHTING DRILL	Derral VanWinkle
SWEST	NAWS CHINA LAKE		SITE 00007	MICHELSON LAB DRAINAGE	Derral VanWinkle
SWEST	NAWS CHINA LAKE		SITE 00043	MINI DECK	Derral VanWinkle
SWEST	NAWS CHINA LAKE		SITE 00044	ARMITAGE FLD FIRE FIGHT	Derral VanWinkle
SWEST SWEST	NAWS CHINA LAKE		SITE 00059 SITE 00080	ARMITAGE FIELD WAREHOUSE POI VAR SMALL LOCATIONS	Derral VanWinkle Derral VanWinkle
SWEST	NAWS CHINA LAKE NAVBASE CORONADO SAN DIEGO CA	AMPHIB BASE CRNDO WEST	SITE 00080 SITE 00002	OLD REFUSE DISPOSAL AND B	Derral VanWinkle
SWEST	NAF EL CENTRO CA	WHITTID DUST CHINDO MES	SITE 00002 SITE 00001	MAGAZINE RD LANDFILL	Derral VanWinkle
SWEST	NAF EL CENTRO CA		SITE 00001	4TH ST FIREFIGHTING TRNG	Derral VanWinkle
SWEST	NAF EL CENTRO CA		SITE 00005	FREFGHTNG TRNG E HG3	Derral VanWinkle
SWEST	NAF EL CENTRO CA		SITE 00006	NW FIRE FGHTNG TRAIN AREA	Derral VanWinkle
SWEST	NAF EL CENTRO CA		SITE 00011	RUNWAY BURN AREA	Derral VanWinkle
SWEST	NAF EL CENTRO CA		SITE 00017	FIRE FGHTR TRAINING AREA	Derral VanWinkle
SWEST	NAS FALLON NV		SITE 00001	CRASH CREW TRAINING AREA	Derral VanWinkle
SWEST	NAS FALLON NV		SITE 00003	HANGAR 300 AREA	Derral VanWinkle
SWEST	NAS FALLON NV		SITE 00017	HANGAR 4	Derral VanWinkle
SWEST SWEST	NAS FALLON NV NAVBASE CORONADO SAN DIEGO CA	IMPERIAL BEACH NOLF	SITE 00021 SITE 00006	RECEIVER SITE LANDFILL FIRE FIGHTER TRAINING ARE	Derral VanWinkle Derral VanWinkle
SWEST	NAS LEMOORE CA	IIVICENIAL DEACH NOLE	SITE 00006 SITE 00001	LANDFILL	Derral VanWinkle
SWEST	NAS LEMOORE CA		SITE 00001	OLD FIRE TRAINING AREA	Derral VanWinkle
SWEST	NAS LEMOORE CA		SITE 00005	FIRE FIGHTING SCHOOL AREA	Derral VanWinkle
SWEST	MCAS MIRAMAR		SITE 00002	ROSE CANYON	Derral VanWinkle
SWEST	MCAS MIRAMAR		SITE 00004	FIRE FIGHTER DRILL FIELDS	Derral VanWinkle

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ENCLOSURE 2 - DERP Sites with Potential PFC/PFAS Contamination and Potential PFC/PFAS AOCs					
NAVFAC FEC	Installation	iNFADS Special Area	SITE_NAME/POTENT		NAVFAC ER Manager
	[DERP Name/iNFADS Activity (Host)]		AL PFC AOC	· ·	_
SWEST	MCAS MIRAMAR		SITE 00005	SAN CLEMENTE CANYON DISPO	Derral VanWinkle
SWEST	NAVBASE VENTURA CTY PT MUGU CA NAVBASE VENTURA CTY PT MUGU CA		SITE 00005 SITE 00009	OLD 6 AREA SHOPS	Derral VanWinkle
SWEST			SITE 00009 SITE 00021	MAIN BASE FIRE TRAIN AREA CRASH CREW OIL DISPOSAL	Derral VanWinkle
SWEST SWEST	NAVBASE VENTURA CTY PT MUGU CA NAVBASE CORONADO SAN DIEGO CA		SITE 00021 SITE 00009	CHEM WASTE DISPOSAL AREA	Derral VanWinkle Derral VanWinkle
SWEST	NAVBASE CORONADO SAN DIEGO CA		SITE 00009	CHEMICAL DISPO GWATER	Derral VanWinkle
SWEST	NAVBASE SAN DIEGO		SITE 00098	FIRE FIGHTER TRAIN AREA	Derral VanWinkle
SWEST	NAVCOMTELSTA STOCKTON*		SITE 00008	FIRE FIGHTING TRNG SITE	Derral VanWinkle
SWEST	NAVBASE VENTURA CTY PT MUGU CA	PORT HUENEME	SITE 00003	BURNING PIT	Derral VanWinkle
SWEST	NAVBASE CORONADO SAN DIEGO CA	SAN CLEMENTE IS NALF	SITE 00003	FIRE FGHTNG TRAINING AREA	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	NAVMINEASWCOM	SITE 00004	FORMER FIRE FIGHTING AREA	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	OLD TOWN SITE 1	SITE 00005	BUILDING 1 PIPE DRAIN	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	OLD TOWN SITE 1	SITE 00003	BLDG 8 RR SPUR	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	OLD TOWN SITE 1	SITE 00001	PIPING OUTSIDE BLDG 8	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	OLD TOWN SITE 1	SITE 00002	BLDG 2 FLOOR VAULTS	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	OLD TOWN SITE 1	SITE 00003	BLDG 3 SEWER LINE BREAD	Derral VanWinkle
SWEST	MARCORPRCUITDEP SAN DIEGO CA	FORMER NTC	SITE 00011	FIRE FGHTR TRAINING AREA	Derral VanWinkle
SWEST	NAVBASE VENTURA CTY PT MUGU CA	SAN NICOLAS ISLAND	SITE 00005	SNI FIRE TRAINING	Derral VanWinkle
SWEST	NAVWPNSTA SEAL BEACH	5/11/11/00 15/15/11/15	SITE 00015	EXPLOSIVES BURNING GROUND	Derral VanWinkle
SWEST	NAVWPNSTA SEAL BEACH		SITE 00012	NASA ISLAND BURN TRENCHES	Derral VanWinkle
SWEST	NAVWPNSTA SEAL BEACH		SITE 00012	FOAM TESTING SITE	Derral VanWinkle
SWEST	NAVBASE POINT LOMA	SPAWARSYSCEN	SITE 00009	PWC BUILDING A-34 PLATING	Derral VanWinkle
SWEST	MCAGCC TWENTYNINE PALMS CA	5171171115150211	SITE 00002	CRASH TRAINING PIT NO. 1	Derral VanWinkle
SWEST	MCAGCC TWENTYNINE PALMS CA		SITE 00007	CRASH TRAINING PIT NO. 2	Derral VanWinkle
SWEST	MCAGCC TWENTYNINE PALMS CA		SITE 00008	CRASH TRAINING PIT NO. 3	Derral VanWinkle
SWEST	MCAGCC TWENTYNINE PALMS CA		SITE 00018	CRASH TRAINING PIT NO. 4	Derral VanWinkle
SWEST	MCAGCC TWENTYNINE PALMS CA		SITE 00022	CRASH TRAIN PIT 10TH AVE	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00001	FLIGHT LINE	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00002	SHOPS AREA	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00004	RADAR HILL DISPOSAL AREA	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00007	FIRE SCHOOL	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00008	SOUTHEAST STATION LANDFIL	Derral VanWinkle
SWEST	MCAS YUMA AZ		SITE 00014	LAGOON BLDG 97	Derral VanWinkle
SWEST	MCAS YUMA AZ		SWMU 00025	SWMU GOING TO RFI STAGE	Derral VanWinkle
WASH	JBAB ANACOSTIA BOLLING		SITE 00002	METRO FILL DUMP	Paula Gilbertson
WASH	JBAB ANACOSTIA BOLLING		SITE 0006B	FT001-FIRE TRAINING AREA	Paula Gilbertson
WASH	JBAB ANACOSTIA BOLLING		SITE 0018B	SS016 - BUILDING 1002	Paula Gilbertson
WASH	JBAB ANACOSTIA BOLLING		SITE 0020B	SS018 - HANGAR ZONE	Paula Gilbertson
WASH	JBAB ANACOSTIA BOLLING		SITE 0010B	SS005-HANGAR 2 APRON	Paula Gilbertson
WASH	BAINBRIDGE MD NTC*		SITE 00002	FIRE TRAINING AREA/OIL SE	Paula Gilbertson
WASH	NSA SOUTH POTOMAC		SITE 00014	CW EVAPORATION POND	Paula Gilbertson
WASH	NSA SOUTH POTOMAC		SITE 00020	CIRCUIT BOARD EFFLNT TANK	Paula Gilbertson
WASH	NAVAL SUPPORT ACTIVITY WASH		SITE 00001	BASE LANDFILL	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER		SITE 00004	HERMANVILLE DISPOSAL SITE	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER		SITE 00014	OLD FIRE FIGHTER BURN ARE	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER		SITE 00024	BUILDING 114 DISCHARGE TO	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER		SITE 00041	FIREFIGHTER BURN PAD	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER		UST 000004	FIRE BURN PIT (BUILDING 2	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00012	GRAVEL PIT	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00019	FIRE TRAINING AREA	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00046	B-28000 ACC AREA NO 2	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00022	PREVIOUS BURN PITS	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00023	INTERM BURN PIT & FILL	Paula Gilbertson
WASH	MARINE CORPS BASE QUANTICO VA		SITE 00099	DDT/PETROLEUM SOIL CONTAM	Paula Gilbertson
WASH	NAVAL AIR STATION PAX RIVER	SOLOMONS ISLAND, MD	SITE R2501	EAST LAND RANGE	Paula Gilbertson
	NAVSUPPACT BETHESDA MD	1	SITE 00002	NMRI XYLENE DISPOSAL	Paula Gilbertson
WASH	NAVSUPPACT BETHESDA MD		SWMU 00002	FORMER LAB DISPOSAL AREA	Paula Gilbertson
WASH WASH WASH	NAVSUPPACT BETHESDA MD NAVAL SUPPORT ACTIVITY WASH		SITE 00003	BLDG 40/41 PLATING SHOP	Paula Gilbertson
WASH	NAVSUPPACT BETHESDA MD				

Note: * Transferred sites

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ENCLOSURE 3 – PFC/PFAS RELEASE MECHANISMS

Within the Department of the Navy (DON)'s operations, PFC/PFAS are most commonly associated with AFFF, but can also be contained in some other materials and wastes/mixed wastes. The primary release mechanisms of PFC/PFAS to the environment within DON's operations consist of *uses, non-point and point source releases such as spills and leaks, training activities, emergency responses, and testing* of PFC/PFAS containing material and wastes. DON will identify potential PFC/PFAS sites or areas of concerns based on the installation-side historical review of *known or suspected releases of PFC/PFAS* from the following potential release mechanisms.

- 1. Uses of AFFF containing PFC/PFAS in the following activities:
 - a. Firefighting and crash response vehicle testing where AFFF is discharged and not completely collected for proper disposal
 - b. Fire training exercises such as flooding a fire pit or other built facility or structure with flammable liquids (e.g. jet fuel), igniting the fluids, and subsequently extinguishing the fire with AFFF where the liquid is not completely contained and collected for proper disposal
 - c. Crash crew training exercises where releases occur from spraying AFFF at training sites and the liquid is not completely contained and collected for proper disposal
 - d. Hangar system operations, testing, and flooding; releases may occur from improper capture and disposal of AFFF in and around the hangars ditches where the foam migrated to and was thus released the ground or into draining channels or ditches
 - e. Responses to class B or fuel fires or spills and there was no containment of the liquids for proper disposal
 - f. Emergency response actions such as crash sites (aircraft, vehicle, and others)
- 2. Uses of material containing PFC/PFAS in the following industrial operation:
 - a. Plating shops PFC/PFAS are sometimes contained in materials used in the vapor suppression system; releases could result from improper capture or disposal of material around floor drains, foundation cracks, and outdoor soil or ditch areas
- 3. Storage, handling, or disposal of PFC/PFAS contained in AFFF and materials or wastes
 - a. Release from improper filling of storage tanks, firefighting trucks, or crash response vehicles
 - b. Release from spills and leaks from storage tanks and piping
 - c. Releases from landfills or burn areas where the materials or wastes were/are disposed