Permit No. WA1170023419
U.S. Navy
Naval Undersea Warfare Center
Keyport, Washington

Attachment Part 2 -
Section E to Section K

SECTION E

RELEASES FROM SOLID WASTE MANAGEMENT UNITS

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TABLE OF CONTENTS

Section			Page
E1.	Solid Waste Management Units and Known or Suspected Releases of Dangerous Wastes or Constituents		E-4
	E1.1	Solid Waste Management Units	E-4
		E.1.1.1 TSD Facility Building Descriptions	E-12
		E.1.1.2 Non-Facility Building Descriptions	E-12
	E1.2	Releases	E-24
E2.	Corrective Actions Implemented		E-24

LIST OF TABLES

Table		Page
E1-1	TSD Facility Solid Waste Management Units (SWMUs)	E-5
E1-2	Non-Facility SWMUs	E-6

APPENDICES

Appendix

E1 Facility Topographic Map and SWMU Locations
E2 Facility SWMU Locations

E1. SOLID WASTE MANAGEMENT UNITS AND KNOWN OR SUSPECTED RELEASES OF DANGEROUS WASTES OR CONSTITUENTS

WAC 173-303-646; -646(2); -806(4)(a)(xxiv)

E1.1 SOLID WASTE MANAGEMENT UNITS

Table E1-1 is a summary of all Solid Waste Management Units (SWMUs) at the TSD Facility along with those not associated with the facility as defined by WAC 173-303-040, but have the same EPA ID number. SWMUs identified in these reports are included in the table whether they are closed or currently active. Data from current Facility Maintained Database (FMD) is also included if the SWMU has been closed or is scheduled to be closed. Data from current Naval Undersea Warfare Center (NUWC) Division Keyport records for SWMUs that are currently active is further detailed in Section B. The table includes the following information in concise, summarized form:

- Column 1, SWMU #: The various numbers by which the location is known in the FMD (the K- numbers), the RFA (the S- and A- numbers in this column), and in the SWMU records (the remaining numbers).
- Column 2, Building description: The title by which the building is known on the NUWC facility records. Usually associated with the process conducted in the building at the time it was designated.
- Column 3, Location: The location of the SWMU with respect to the building with which it is associated.
- Column 4, Type & description: A short description of the management unit, or 'how it was used to manage solid waste'.
- Column 5, Wastes managed: A list of dangerous wastes managed at the unit, extracted from FMD.
- Column 6: Period of Operation: The best available data of when the SWMU was first placed in operation until the closure date (if the unit has been closed)
- Column 7: Status: The status of the unit, including closure information if the unit was closed or reclassification information if the unit was reclassified. Reports noted as completed have been submitted to Department of Ecology Northwest Regional Office.

Locations of closed and active SWMU locations at the TSD Facility are provided on the topographic map in appendix E1, SWMU locations within the facility are identified in appendix E2. Additionally, SWMU locations not affiliated with the facility but have the same EPA ID number are identified on a map located in Part A, attachment A and in a table located in Section B, appendix B3.

A more detailed description of each building and its associated SWMUs and AOCs follows the table.

Table E1-1. TSD Facility Solid Waste Management Units

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
Container Storage/Fabric Structures	Previous TSD Facility	Entire site	Container Storage Areas	Acids, bases, Oil/Oily wastes, Flammable and Combustible, solids and sludge, Reactive, Oxidizer, Industrial wastewater, PGDN wastes, PCBs, Toxic and carcinogenic	12/89 – 1997	RCRA removed, Report: HW Container Storage/Fabric Structures Closure Plan & Certificate of Closure on 10/2000
884	Previous TSD Facility	Entire site	Bulk Storage & Alodine Pretreatment	Mineral spirits, PGDN wastes, cyanide wastes, cutting oil, waste oil, oily water, alodine waste	12/89 – 03/00	RCRA removed, Report: HW Storage Facility Building 884/1032 Closure Plan & Certificate of Closure on 10/2000
1032	Previous TSD Facility	Entire site	Bulk Storage and Paint Consolidation	Oily wastewater, waste oils, paints	12/89 – 03/00	RCRA removed, Report: HW Storage Facility Building 884/1032 Closure Plan & Certificate of Closure on 10/2000
K1051-110 & 111	TSD Facility	Room 124	Bulk Waste Storage	Oily wastewater	12/89 – 2006	Moved from Bldg. 884 (Previous TSD Facility); tanks were cleaned and processed through DLA for disposal
K1051-04	TSD Facility	Room 129	Oxidizer Storage Cell	Oxidizing solid, toxic, n.o.s.	1996 - present	Active – Part B Permit
K1051-05	TSD Facility	Room 130	Acid Storage Cell	Corrosive solid, acidic, inorganic, n.o.s.	1996 - present	Active – Part B Permit
K1051-06	TSD Facility	Room 138	Caustic Storage Cell	Batteries, dry, containing Potassium hydroxide Solid	1996 - present	Active – Part B Permit
K1051-07	TSD Facility	Room 132	Poison Storage Cell	Toxic solid, inorganic, n.o.s.	1996 - present	Active – Part B Permit
K1051-08	TSD Facility	Room 133	Organic Peroxide Storage Cell	Organic peroxide type D, solid	1996 - present	Active – Part B Permit
K1051-09	TSD Facility	Room 134	Flammable Storage Cell	Solids containing flammable liquid, n.o.s.	1996 - present	Active – Part B Permit
K1051-10	TSD Facility	Room 136	Flammable, Class 1A Storage Cell	Solids containing flammable liquid, n.o.s.	1996 - present	Active – Part B Permit
K1051-20	TSD Facility	Room 131	Reactive When Wet Storage Cell	Lithium	1996 - present	Active – Part B Permit
K1051-21	TSD Facility	Room 123 South end Room 140/19	Class 9 Storage Racks Class 9 Storage	Environmentally hazardous substance, liquid & solid, n.o.s.	1996 - present	Active – Part B Permit
K1051-24	TSD Facility	North Loading Area, Outside NE corner of Bldg.	Flammable Debris	Solids containing flammable liquid, n.o.s.	1996 - present	Active – SAA
K1051-101	TSD Facility	Room 124	Bulk Waste Storage	Oily Water	1996 - present	Active – Part B Permit
K1051-102	TSD Facility	Room 124	Bulk Waste Storage	Oily Water	1996 - present	Active – Part B Permit
K1051-103	TSD Facility	Room 124	Bulk Waste Storage	Wastewater	1996 - present	Active – Part B Permit
K1051-104	TSD Facility	Room 124	Bulk Waste Storage	Flammable liquid, n.o.s.	1996 - present	Active – Part B Permit

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K1051-105	TSD Facility	Room 124	Bulk Waste Storage	Flammable liquid, n.o.s.	1996 - present	Active – Part B Permit
K1051-106	TSD Facility	Room 124	Bulk Waste Storage	Wastewater	1996 - present	Active – Part B Permit
K1051-603	TSD Facility	Room 126	Acid Pretreatment	Wastewater, Hexavalent Chrome Pretreatment	1996 - 2010	Process Suspended – RCRA cleaned but not removed.

Table E1-2. Solid Waste Management Units not affiliated with the TSD Facility identified in the RCRA Facility Assessment

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K0011-02 (S-1)	Freight shop	Outside bldg on Pier 1	Covered, secured cage w/ 2nd cont	Petroleum wastes, cleaners, solvents, lubricants, paints, epoxies, adhesives, barium peroxide, ethylene glycol, waxes	12/89 – 05/99	Removed, no report
K0021-03 (S-2)	Oil storehouse	Northeast trench	Lined concrete trench	Waste fluids from machining scrap	12/91 – 08/99	CERCLA removed
K0021-103	Oil storehouse	North sump	Concrete sump	Spill containment for Bldg 21 materials	12/91 – 08/99	CERCLA removed
K0021-104 (S-3)	Oil storehouse	WW tank in 21-106	2000 G Steel AST	Waste cutting oil	12/91 – 08/99	CERCLA removed
K0021-105 (S-3)	Oil storehouse	WW tank in 21-106	2000 G Steel AST	Wastewater with cutting oil	12/91 – 08/99	CERCLA removed
K0021-106 (S-3)	Oil storehouse	Containment/ washdown area	Concrete sump	2nd containment & equipment washdown	12/91 – 08/99	CERCLA removed
K0024-01 (S-4 & S-5)	Weapons quality testing	Outside storage cage N of Bldg 24	Covered cages w/ 2nd cont	Petroleum wastes, sulfurous acid wastes, batteries, OF II wastes, sealers, solvents, paints, adhesives, silicones	10/91 – 11/98	Removed, no report
K0033-01	Boat repair shop	Outside Bldg 33, north side	Secured drum storage	Bilge water, MEK, adhesives, paint, epoxy, ethylene glycol, glass beads, petroleum debris, water w/ paint chips, asphalt varnish	1/95 – 7/02	Removed, no report
K0038-101	Container shop	Sump inside NE corner of Bldg 38	10 G DW plastic, monitored PBR tank	Industrial wastewaters from deburring machines and water jet cutter	1976 – present	Active Permit-by-Rule tank
K0038-102	Container shop	Sump inside NW corner of Bldg 38	10 G DW plastic, monitored PBR tank	Spills & overflow from tanks 38 3 through 8	1976 – 02/04	Closed, no report
K0038-103 (S-6)	Container shop	Tank between Bldgs 12 & 233	DW plastic, monitored PBR tank in concrete tank	Photo lab waste, metal prep wastes	1976 – present	Active Permit-by-Rule tank
K0038-104	Container shop	Tank 6 – hot detergent	Steel AST	Hot Oakite 166 detergent	1961 – 12/01	RCRA removed, no report
K0038-105	Container shop	Tank 5 – caustic cleaner	Steel AST	Sodium Hydroxide Caustic	1961 – 12/01	RCRA removed, no report
K0038-106	Container shop	Tank 4 – rinse water tank	Steel AST	Rinse water	1961 – 12/01	RCRA removed, no report
K0038-107	Container shop	Tank 3 – rinse water tank	Steel AST	Rinse water	1961 – 12/01	RCRA removed, no report
K0038-108	Container shop	Tank 2 – Isoprep 184 tank	Steel AST	Isoprep 184	1961 – 12/01	RCRA removed, no report
K0038-109	Container shop	Tank 1 – hot water rinse tank	Steel AST	Hot rinse water	1961 – 12/01	RCRA removed, no report
K0040-101 & 102 (A-1)	Soldering school	Underground tanks south of Bldg 40	Two 1500 G Concrete tanks	Paint stripping, steam cleaning wastes, battery acid, oily water, metal chips	12/89 – 12/85	RCRA removed, with report
K0040-02	Soldering school	Outside Bldg 40, SE end	Covered, secured drum storage	Adhesives, ethylene glycol, machining debris, aerosols, paints, rosin flux, propane	05/92 – 08/02	Removed, no report

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K0047-01 (S-7)	Technical operations	Storage area inside NE corner of Bldg 47	Covered storage area	Used oil, spray cans, NiCad batteries, solvents, cleaners, paints, empty propane cylinders	08/92 – 11/97	Removed, no report
K0048-01 (S-8), (A-2)	Boat machine shop	Outside Bldg 48, W end of Pier 2	Enclosed building	Cutting oil, thinners, solvents, paints, aerosol cans	03/91 – 08/02	Removed, no report
K0072-101	Plating shop	Outside NE corner of bldg 72	300G steel raised PBR tank	trichloroethane	12/89 – 12/98	CERCLA removed
K0072-102	Plating shop	Outside NE corner of bldg 72	250G steel PBR tank in concrete 2nd cont	Cyanide wastes	12/89 – 12/98	CERCLA removed
K0072-105	Plating shop	Outside SE corner of bldg 72	2000G PBR concrete underground sump	Acid wastes	12/89 – 12/98	CERCLA removed
K0072-106	Plating shop	Outside, center of N wall of bldg 72	250G PBR Concrete underground sump	Cyanide wastes	12/89 – 12/98	CERCLA removed
K0072-108	Plating shop	Entire W portion of bldg 72	45,000G grated concrete PBR sump	Acid wastes	12/89 – 12/98	CERCLA removed
K0072-109	Plating shop	NE corner of 72-108	50G pump-out PBR sump for 72-108	Acid wastes	12/89 – 12/98	CERCLA removed
K0072-111	Plating shop	Outside, E of bldg 72	5000G aboveground plastic PBR tank	Acid wastes	12/89 – 12/98	CERCLA removed
K0072-112	Plating shop	Outside NE corner of bldg 72	2000G underground concrete/plastic PBR tank	Cyanide wastes	12/89 – 12/98	CERCLA removed
K0073-01 (S-9)	Machine shop	NW of Bldg 73	enclosed steel cabinet w/ 2nd cont	Oil-contaminated machine shop debris, solvents, oil, paints, metal scraps, cleaners	09/90 – 04/03	Removed, no report
73 (S-10)	Machine shop	Tank next to Bldg 73 (in SWMU referenced to Bldg 21)	5000 G Steel AST	Cutting oil & machine coolant	12/89 – 11/91	Removed, no report
K0081-01 (S-11 & 12)	Reload Bldg	W of Bldg 81, next to Bldg 105	Two covered cages w/ 2nd cont	Solvents, coatings, inks, oil, adhesives, paints, batteries, sealers, plastic compounds & resin, foam rubber	12/89 – 12/03	South cage removed, no report, N cage active CAA SWMU
K0081-07	Reload Bldg	North end of Bldg 81, riggers loft	Designated storage area	Adhesives, paints ,thinners, solvents, MEK, alodine, hydraulic oil, epoxies, waxes, mold release, curing agents, acetone, fiberglass, retarders, accelerators, aerosols, resins	05/95 – 11/95	Removed, no report
K0081-08	Reload Bldg	Inside Bldg 81, topside, southside, S wall	Designated storage area	Adhesives, paints, epoxies, resins, MEK	01/00 – 12/03	Removed, no report
K0082-01 (S-13)	Target shop	Outside SE corner of Bldg 82	Covered cage w/ 2nd cont	Hydrochloric acid, parts cleaner wastes	12/89 - present	Active CAA SWMU
K0083-02 (S-14)	Metals Forming Shop	Inside Bldg 83, NE corner	Plastic 2-drum clamshell storage w/ 2nd cont	Paints, thinners, filters, spray cans, adhesives, solvents, resin, paints, oil, dyes, plastic sands, silicone sealants, contaminated rags	09/90 – 08/02	RCRA removed, with report
K0083-10	Metals Forming Shop	Inside Bldg 83, north end	Covered, designated storage area	Adhesives, paints, inks, epoxies, used oil, lubricants	05/03 – 03/04	RCRA removed, with report
K0084-07	Paint stripping & painting shops, lead room	Inside NW corner of lead room	Secured drum storage	Blasting booth filters, soda blasting sludge, paints, solvents, epoxies, aerosols, inks	02/93 – 07/98	Removed, no report
K0084-12 (S-16)	Paint stripping & painting shops, lead room	Outside N end of Bldg 84	Covered, 3-sided structure	Paint, thinners, filters, blast media, spray cans, solvents, fluo tubes, wastes contaminated with lead	12/89 – present	Active CAA SWMU
K0084-14	Paint stripping & painting shops	Outside NE corner of Bldg 84	Designated drum storage area w/ 2nd cont	Lubricants, used oil, cleaners, alodine	10/96 – 11/02	Removed, no report

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K0084-101 (S-15)	Paint stripping & painting shops, lead room	Paint stripping sump inside N end of Bldg 84	6000 G Concrete sump	Steam cleaning and paint stripping wastes, paints and solvents, contaminated sand, soap, paint chips, dust,	1944 – 03/94	RCRA closed in place, with report
K0084-104	Heat treatment shop	Inside Bldg 84, heat treat area, NE corner	1500G concrete aqua quench tank with contaminated liquid	Metal-contaminated quench fluid	12/89 – 02/97	Removed, no report
K0085-01	Battery shop	East of building 85, north of door 1	Designated, covered storage site	Batteries, asbestos	12/89 – 08/03	RCRA removed, with report
K0085-102 (A-3)	Battery shop	Sump & trenches E of Bldg 85	SS lined concrete trenches & plastic tank w/ 2nd cont	electrolyte, potassium hydroxide, sulfuric acid	12/89 – 10/03	RCRA removed, with report
K0085-103	Battery shop	East of building 85, north of door 1	Plastic tank w/ 2nd cont	electrolyte, potassium hydroxide, sulfuric acid	9/92 – 08/03	RCRA removed, with report
K0098-01 (S-17)	Torpedo shop, electronic assembly	N of Bldg 98, SW of Bldg 825	Covered cage w/ 2nd cont	Spray cans, paints, thinners, solvents, sealers, adhesives, alodine, fluo tubes, waxes, epoxies, plastic compounds & resin, solder, flux, oil	12/89 - present	Active CAA SWMU
105N & 105S (S-18 & 19)	Torpedo shop, electronic assembly	Outside storage cages W of Bldg 105, moved to E side of Bldg	Roofed steel cages w/ 2nd cont	OF II-contaminated wastes, spray cans, adhesives, sealers, cleaners, alodine, Freon, batteries, fluo tubes, agitene, epoxies, paints, lacquers, oil, paints, solder, flux, photo wastes	12/89 – 6/90	Removed, no report
K0106-05	Torpedo engine test	Outside Bldg 106, west side, adjacent to Bldg 499	Covered, bermed, secured storage building	Waste actryl, tectyl, ethylene glycol	12/89 – 03/99	Removed, no report
K0106-101	Torpedo engine test	Outside SW corner of Bldg 106, E of Bldg 499	1000G concrete underground tank	OF II, cyanide wastes	12/89 – 10/99	CERCLA removed
K0106-102 (S-20)	Torpedo engine test	Outside E of Bldg 106	1500 G steel tank	Waste OF II, cyanide wastes	12/89 – 03/04	To be RCRA closed
K0106-103	Torpedo engine test	Outside E of Bldg 499	600 G plastic tank	Waste OF II	12/89 – 03/04	To be RCRA closed
K0106-104	Torpedo engine test	Outside E of Bldg 499	660 G concrete 2nd cont sump for 103-103	OF II spills	12/89 – 03/04	To be RCRA closed
K0106-105	Torpedo engine test	Outside NW corner of 106	25 G spill containment sump	OF II spills	12/89 – 10/99	To be RCRA closed
K0106-108	Torpedo engine test	Outside NW corner of 106	25 G spill containment sump	OF II spills	12/89 – 03/04	To be RCRA closed
110 (S-21)	Paint shop (bunker)	Storage cage SW of Bldg 110	Roofed steel cage w/ 2nd cont	Spray cans, paints, thinners, solvents, MEK, paint filters	Site predated FMD	Removed, no report
115 (S-22)	Lithium storage bunker	Entire building	Soil-covered concrete building w/ steel doors	Expended lithium boilers	12/89 – 05/99	RCRA closed, with report
K0134-101 (S-23)	Photo Lab	Underground tank north of Bldg 134	1250 G Concrete PBR tank	Photo lab wastes	1980 – 05/01	RCRA closed in place, with report
K0181-101	Storehouse	Outside Bldg 181, next to 804, at head of Pier 1	50,000 G concrete 2nd cont for AST 804-101 & 102	Oily wastewater	12/89 – 07/98	CERCLA removed
K0205-01	BOSC office	Outside NE corner of Bldg 205	Covered, secured storage area	Fluorescent bulbs, ballasts, paints, petroleum wastes, lead acid gel batteries,	04/92 – 04/04	Removed, no report
205	Exchange service station	Steel UST W Bldg 205, no tank #s	Steel used oil UST	Used oil	1961 – 06/90	UST removed, with reports

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K0206-01 (S-24)	Weapons quality engineering center	Outside storage cage NE of Bldg 206	Roofed steel cage w/ 2nd cont	Batteries, fluo tubes, paints, thinners, solvents, cleaners, adhesives, waste oils, ethylene glycol, OF II waste, lithium wastes, magnesium shavings, barium carbonate, lab wastes	12/89 - present	Active CAA SWMU
K0233-02 (S-25)	Machine shop	Outside, S of Bldg 233	Steel pallets in paved, roofed structure	Spray cans, cleaners, solvents, waste oils	12/89 - present	Active CAA SWMU
478 (S-26)	Special projects	Caged area SW of Bldg 478	Roofed area enclosed by Bldg 478 & fence	Batteries, adhesives, paints, solder, flux, sealants	3/90 – 2/92	Removed, no report
478-101 (A-4)	Special projects	Underground tank SW of Bldg 478	1350 G Concrete tank	Waste OF II	1966 – 02/98	RCRA removed, with report
478-102 (A-4)	Special projects	Underground tank W of Bldg 478	1350 G Concrete tank	Waste OF II	1966 – 02/98	RCRA removed, with report
478-103 (A-4)	Special projects	Underground tank NW of Bldg 478	1350 G Concrete tank	Waste OF II	1966 – 02/98	RCRA removed, with report
478 (A-5)	Special projects	Caged area SW of Bldg 478	2 steel tanks in 2nd cont	A and B grade OF II (material, not waste as indicated in the RFA)	1968 – 2/98	Removed, no report
K0489-03 (S-27)	Torpedo shop	Outside storage cage E of Bldg 489	Roofed steel cage for 4 drums w/ 2nd containment	OF II wastes, spray cans, agitene, alodine, adhesives, oil, solvents, paints, thinners, resins	12/89 - present	Active CAA SWMU
K0489-101 (S-28)	Torpedo shop	Underground tank outside E of Bldg 489	1200 G concrete tank with SS liner	Waste OF II, alcohol, cyanide contaminated wastewater	1975 – 11/92	Converted to 2nd containment for K0489-102, no report
K0489-102	Torpedo shop	Underground tank outside E of Bldg 489	50 G SS tank in 1200 G concrete secondary containment (K0489-101)	Waste OF II, alcohol, cyanide contaminated wastewater	11/92 – 11/97	RCRA cleaned with report
K0489-103	Torpedo shop	Tank outside E of Bldg 489	1500 G SS DW tank	Waste OF II, alcohol, cyanide contaminated wastewater	11/92 – 11/97	RCRA cleaned & changed to HM with report
K0489-104	Torpedo shop	Tank outside E of Bldg 489	1500 G SS DW tank	Waste OF II, alcohol, cyanide contaminated wastewater	11/92 – 08/99	RCRA cleaned & changed to HM with report
K0514-01 (S-33)	Torpedo shop	Outside storage cage NW of Bldg 514	Roofed steel cage w/ concrete containment	OF II - contaminated wastes, spray cans, paints, thinners, solvents, oil, grease, fluo tubes, adhesives, sealants, Freon, batteries	1985 – present	Active CAA SWMU
K0514-14	Torpedo shop	Post range flush area of Bldg 514	Covered designated storage area	OF II - contaminated wastes, spray cans, paints, thinners, solvents, oil, grease, fluo tubes, adhesives, sealants, Freon, batteries	12/91 – 10/95	Removed, no report
K0514-104 (S-29)	Torpedo shop	Sump NW of Bldg 514	4750 G steel lined concrete sump	Waste OF II, cyanide, water	1973 – 08/92	Converted to 2nd containment for K0514-105, no report
K0514-105 (S-30)	Torpedo shop	Steel tank inside caged area NW of Bldg 514	1500 G SS DW tank w/ alarms	Cyanide contaminated wastewater	1984 - present	Active CAA SWMU
K0514-106 (S-31)	Torpedo shop	Underground tank W of Bldg 514	625 G SS lined concrete tank	Wastewater from carbon columns (which remove residual OF II)	1980 – present	Active Permit-by-Rule tank
514 (S-32)	Torpedo shop	Plastic tanks inside NW corner of Bldg 514	Plastic tanks inside building	Carbon columns that remove residual OF II from OF II recycling system wastewater	1976 – present	Active Permit-by-Rule tanks
K0514-107 (S-34)	Torpedo shop	Outside NW corner of Bldg 514, in 514-01, replaced with K0514-108	350 G portable steel bongo in concrete 2nd cont	Alcohol contaminated with Otto Fuel II	11/85 – 04/98	Replaced, no report
K0726-01 (S-35)	Paint shop	Outside storage cage S of Bldg 726	Roofed steel cage w/ concrete containment	Paint & thinners	12/89 – 10/02	Removed, no report

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
K0790-01	Otto Fuel II recycling	Inside Bldg 790 compound, west bay area	Designated storage area	Otto fuel II contaminated drums and liners	1974 – 12/93	Removed, no report
790-102 (A-6)	Otto Fuel II recycling	Outside, S of Bldg 790	Steel underground storage tank	Recycled OF II until 1987, spilled OF II & OF II wastewater until 1993	1974 – 12/93	RCRA removed, with report
804-101 & 102 (A-7)	Fuel storage	Concrete sump S of Bldg 72	Steel tanks in concrete sump (Bldg 181)	Oily water	1947 – 12/98	CERCLA removed
820-101 (A-8)	Container refurb, decontamination	UST W of Bldg 820	2000 G Steel UST	Oily wastewater	1976 – 12/96	UST removed, with report
820 (S-36)	Container refurb, decontamination	Trench system inside S end of Bldg 820	Concrete trenches that lead to 820-106 & 107	Decon spill wastes	1990 – 9/03	To be RCRA closed, with report
K0820-109 (S-37)	Container refurb, decontamination	Trench system & sump outside S end of Bldg 820	Concrete trenches and secondary containment sump	Decon spill wastes	1990 – 9/03	To be RCRA closed, with report
K00820-106 (S-38)	Container refurb, decontamination	Under roofed, fenced area S end of Bldg 820	3000 G steel tank in concrete secondary containment	Lithium decontamination wastes	1990 – 9/03	To be RCRA closed, with report
K00820-107 (S-38)	Container refurb, decontamination	Under roofed, fenced area S end of Bldg 820	3000 G steel tank in concrete secondary containment	Lithium decontamination wastes	1990 – 9/03	To be RCRA closed, with report
K0820-103 (S-39)	Container refurb, decontamination	Outside plastic tank K0820-103, E of Bldg 820	Covered Poly tank on 2nd containment	Waste alodine	1988 – 11/95	Removed, no report
K0820-104 (S-39)	Container refurb, decontamination	Outside plastic tank K0820-104, E of Bldg 820	Covered Poly tank on 2nd containment	Waste alodine	1988 – 11/95	Moved to Bldg 82, active CAA SWMU
K0820-105 (S-39)	Container refurb, decontamination	Outside plastic tank K0820-105, E of Bldg 820	Covered Poly tank on 2nd containment	Waste alodine	1988 – 11/95	Moved to Bldg 84, active CAA SWMU
K0820-01 (S-40)	Container refurb, decontamination	Outside storage cage NE of Bldg 820	Roofed steel cage w/ 2nd containment	Alodine & blast booth wastes, spray cans, oily water, adhesives, cleaners	12/90 – 11/95	Removed, no report
K0820-02 (S-41)	Container refurb, decontamination	Outside storage cage S of Bldg 820	Roofed steel cage w/ concrete containment	lithium-contaminated debris, equipment & sludges, solvents	12/90 – 11/95	Removed, no report
K0824-01 (S-42)	Facilities Support	Outside storage cage NW of Bldg 824	Roofed steel cage w/ concrete containment	Asbestos fiberboard, waste oil, solvents	03/90 - present	Active CAA SWMU
K0825-101 (T-1) (S-43)	IWTP	Tank E of Bldg 825in the caustic containment area	6000G fiberglass caustic WW receiving tank	Cyanide plating wastes & OF II wastes	1982 - present	Active Permit-by-Rule tank
K0825-107 (T-7) (S-44)	IWTP	Tank E of Bldg 825 in the caustic containment area	6000G fiberglass caustic WW reactor tank	Cyanide treatment tank	1982 - present	Active Permit-by-Rule tank
K0825-105 (T-5) (S-45)	IWTP	Tank E of Bldg 825 in the acid containment area	40,000G polyester lined steel acid WW receiving tank	Acid plating, photo lab & metal prep wastes	1982 - present	Active Permit-by-Rule tank
K0825-108 (T-8) (S-46)	IWTP	Tank E of Bldg 825 in the acid containment area	40,000G polyester lined steel acid WW reactor tank	Acid treatment tank	1982 - present	Active Permit-by-Rule tank
K0825-110 T-10) (S-47)	IWTP	Tank E of Bldg 825 in the neutral containment area	50,000G coal tar epoxy lined steel intermediate storage tank	Treated wastewater during pH adjustment	1982 - present	Active Permit-by-Rule tank
K0825-112 T-12 A-D) (S-48)	IWTP	Four tanks inside N end of Bldg 825	1200G (ea) plastic sandfilter tanks	anthracite coal & silica sand filter material, treated wastewater	1982 - present	Active Permit-by-Rule tank
K0825-113 (T-13) (S-49)	IWTP	Tank E of Bldg 825 in neutral containment area	1500G coal tar epoxy lined steel sludge tank	Sludge storage	1982 - present	Active Permit-by-Rule tank
K0825-114 (T-14 A-B)(S-50)	IWTP	Tanks E of Bldg 825 in neutral containment area	Two 17,000G coal tar epoxy lined steel clearwater tanks	Treated water awaiting test results	1982 - present	Active Permit-by-Rule tank

SWMU #	Building description	Location	Type & description	Wastes managed	Period of Ops	Status
825 (S-51)	IWTP	Secondary containment E of Bldg 825	Epoxy-coated concrete secondary containment	acid wastewater spills	1982 - present	Active Permit-by-Rule site
825 (S-52)	IWTP	Secondary containment E of Bldg 825	Epoxy-coated concrete secondary containment	caustic wastewater spills	1982 - present	Active Permit-by-Rule site
825 (S-53)	IWTP	Secondary containment E of Bldg 825	Epoxy-coated concrete secondary containment	neutral wastewater spills	1982 - present	Active Permit-by-Rule site
K0825-01 (S-54)	IWTP	Inside south-central part of Bldg	designated drum area on epoxy-coated concrete floor	Dewatered wastewater treatment sludge, sludge-contaminated debris	1982 - present	Active CAA SWMU
K0893-01 (S-55)	Supply Traffic	Fenced storage inside E bay of Bldg 893	Roofed steel cage w/ concrete containment	Spray cans, adhesives, batteries, greases, solvents, paint & thinners, oil, grease, inks, solvents, adhesives, plastics & plastic resins	12/89 – present	Active CAA SWMU
K0894-01 (S-56)	Raytheon (KTR) Mk 46 Torpedo refurbishment	Storage area N of Bldg 894	Steel cage w/ 2nd cont, was replaced with dedicated room inside	Adhesives, benzene, toluene, paints, solvents, detergents, lithium wastes, cleaners, batteries, office supplies, paint cans, plastics & resins	02/92 – 12/20	Removed, no report
894 (S-57)	Mk 50 Torpedo shop	Outside storage area N of Bldg 894	Plastic clam shell w/ 2nd containment	Adhesives, adhesives, spray cans, paints, solvents, detergents, lithium wastes, sealers, plastics & resins	12/89 – 09/02	Removed, no report
K0894-101 (A-9)	Mk 50 Torpedo shop	Underground tank outside under canopy N of Bldg 894	Plastic tank inside epoxy-coated concrete	Tank was replaced with 894-102 before wastewater was generated	02/92 – 09/02	Never used, closed-in-place, no report
K0894-102 (S-58)	Raytheon (KTR) Mk 46 Torpedo refurbishment	Aboveground tank located outside, N of Bldg 894	Portable plastic tank w/ 2nd containment	BSS wash water (halogenated). Tank was incorrectly designated K0894-107 in FMD, now used by Raytheon for Indus wastewater	10/91 – present	Active CAA SWMU
K0940-02 (S-59)	Propulsion test facility	Storage area E of Bldg 940	Steel pallets w/o roof or 2nd containment	Spray cans, paints, solvents, waste oils, cleaners, contaminated OF II	12/89 – 12/98	Removed, no report
K1013-01 (S-60)	Auto hobby shop	Storage cabinet outside S of Bldg 1013	Enclosed cabinet w/ 2nd containment	Waste oils, grease, antifreeze	10/90 – 08/00	Removed, no report
K1013-101	Auto hobby shop	UST E of Bldg 1013	125 G steel UST	Used oil	10/92 – 08/98	UST removed, with report
K1019-101	Precious metal plating shop	Entire SW corner of bldg 1019 interior floor	30,000G grated sump	Acid wastes	12/89 – 12/98	CERCLA removed
K1019-102	Precious metal plating shop	NE corner of bldg 1019 floor	300G plastic tank in concrete	Cyanide wastes	12/89 – 12/98	CERCLA removed
K1058-06	Metal finishing facility	Inside Bldg 1058, along east wall of dark room	Designated storage area	Alodine, acids, caustics, dyes, aerosols, anodize stripping solution, profiler wastes	10/01 – 02/03	Removed, no report

E1.1.1 TSD Facility Building Descriptions

Container Storage/Fabric Structures was a component of the previous TSD Facility. These structures have been RCRA clean-closed and demolished.

Building 884 is the previous TSD Facility. All facilities have been RCRA clean-closed and demolished. Soils and groundwater are managed under the CERCLA program.

Building 1032 was part of the original TSD Facility. The building was used for the paint consolidation and used oil storage tanks. RCRA clean-closure of the building was completed in October 2000.

Building 1051 is the current TSD Facility. Two 5000-gallon horizontal oily wastewater tanks were moved from the old TSD Facility site (Building 884) to room 124 of this building during construction, identified as tanks K1051-110 and K1051-111. During the integrity assessment completed in July 2006, it was determined that the tanks were out of compliance because wall thicknesses could not be measured (double walled tanks), the tanks were un-enterable (hatches sealed) for inspection, the wastes could not be sampled prior to shipping (no sample ports), and no destratification system was installed to ensure samples for shipping manifesting were representative of the entire contents of the tank. Tanks K1051-110 and K1051-111 were cleaned and processed through the DLA contract for disposal. Two unused 5000-gallon vertical tanks (K1051-101 and K1051-102) were upgraded to replace these tanks and store the oily wastewater wastes at the TSD Facility.

Acid pretreatment was conducted in room 126 using tank K1051-603 as the mixing tank to pretreat hexavalent chromium. The wastewater from this process was transferred to the Industrial Waste Treatment Plant located in Building 825 for final treatment. Process was stopped in 2010 and the tank was RCRA cleaned and left in place in a "suspended" status.

E1.1.2 Non-Facility Building Descriptions

Building 11 was used to stage loading and unloading materials for use onboard range craft at the end of Pier 1. A CAA SWMU was located outside near the building, identified in the RFA as S-1 and in the Facility Maintained Database (FMD) as K0011-02. The unit consisted of a 6′ X 6′ X 8′ high prefabricated enclosure manufactured for the storage of hazardous materials and dangerous wastes. The enclosure was constructed entirely of steel with locking doors, and a secondary containment pan >60 gallons with locking drain valve. The start date of dangerous waste management operations in Building 11 is undetermined. Operations ceased in October 1997, and the building was removed in August 2002.

Building 21 was divided into four parts. The north part of the wooden structure was used for the storage of oils, solvents, and cleaners. A 45-gallon blind sump, identified in FMD as K0021-103, was located in the center of this portion of the building to collect spills from these materials. The south part of the wooden structure was also used for the storage of dangerous materials. In 1990, a steel enclosure was added east of the wooden structure to house two machine cutting/cooling fluid waste collection tanks and a secondary containment wash rack, identified in the RFA as S-3 and in FMD as K0021-106. This site was used to clean machining equipment, and to transfer wastes from the tanks to tank trucks. At the same time, a canopy was installed north of the wooden structure to house the machining cutting solid/liquid separation and draining operations. This canopy was surrounded by stormwater and metal cutting/coolant oil collection

trenches, identified in the RFA as S-2 and in FMD as K0021-03. The trenches were designed to drain into the wash rack. Drained cutting and cooling fluids were collected from a trench at the bottom (north end) of the wash rack and pumped into two 2,000-gallon tanks, also identified in the RFA as S-3, and in FMD as K0021-104 and K0021-105, in preparation for shipping off base for further recycling. The start date of dangerous waste management operations in Building 21 is undetermined, though the wash rack installation was finished in 1991. Operations ceased in August 1999 and the building was removed in September 1999. The site was remediated under the CERCLA program.

Building 24 was used to perform periodic environmental testing on components. A CAA SWMU, identified in the RFA as S-4 and in FMD as K0024-01, was located outside the building. The SWMU consisted of a 5′ X 5′ X 8′ high, roofed, steel cage that incorporated a >60-gallon steel secondary containment pan. A satellite site, identified in the RFA as S-5, was located between the building and the seawall, consisting of a fenced area approximately 20′ X 160′. This area was used to stage hazardous materials pre- and post-testing, and miscellaneous hazardous materials and wastes associated with testing during the process. Those areas used to store hazardous materials and wastes were roofed but did not have secondary containment. Dangerous waste management operations were initiated in October 1991 at this site. Operations ceased in August 1998 and the building was demolished in November 1998.

Buildings 33 and 48 constituted the waterfront boat repair shop. A woodwork shop was located in building 33, and a machine shop and marine railway were located in Building 48 in support of various vessels. A CAA SWMU was located outside, northwest of Building 33, and a CAA SWMU was located on Pier 2, northeast of building 48. Both SWMUs consisted of a 6′ X 6′ X 8′ high, prefabricated enclosed all-steel structure manufactured for the storage of hazardous materials and dangerous wastes, had locking doors, a steel grate floor over a secondary containment, with a normally locked closed valve to drain accumulated liquids from the pan. The Building 33 SWMU was identified in FMD as K0033-01. The Building 48 SWMU was identified in the RFA as S-8 and in FMD as K0048-01. A dangerous material storage shed was also located on the pier adjacent to K0048-01 in support of these operations, identified in the RFA as A-2. The shed did not have any release controls such as secondary containment. The start date of dangerous waste management operations in Building 48 is undetermined. Operations ceased in August of 2002, at which time the SWMU and dangerous material locker were removed.

Building 38 was used to clean and prep metals prior to manufacturing processes and to construct and refurbish aluminum shipping containers. Six 2,000-gallon open-top process baths used in this process were located in the northwest corner of the building, identified in FMD as tanks 1 through 6, and K0038-104 through 109. Three of these tanks contained the following cleaning solutions: Oakite 166 detergent, Isoprep 184 acid solution, and a sodium hydroxide caustic solution. Wastes from these prep tanks were periodically pumped out and shipped off base through the Treatment, Storage and Disposal Facility (TSDF). The other three tanks were rinse tanks that were continuously supplied with fresh water. The overflows from these tanks were collected in a sump in the northwest corner of the building, identified in FMD as K0038-102. A water jet cutter and several deburring machines are located in the northeast corner of the building. Wastewater from these machines is gravity drained to a sump in that corner of the building, identified in FMD as K0038-101. Both 10-gallon sumps are constructed of concrete with a fiberglass liner and interstitial monitoring. The sumps gravity drain into an underground tank located between Buildings 233 and 12 through a secondarily contained fiberglass pipe with interstitial monitoring. This 1600-gallon tank was installed in 1976, and has a concrete secondary containment and a fiberglass liner with interstitial monitoring. It is identified in the

RFA as S-6, and in FMD as K0038-103. The secondary containment was installed in April 1994. Originally, photo processing wastes from Building 134 were also collected in this tank, but this connection was removed in 2001 (see Building 134 description below). Currently, only the deburring machines and water jet cutter in Building 38, and metal plating wastes from Building 1058 are collected in this tank. Wastewater is pumped from this tank through a secondarily contained, interstitially monitored fiberglass pipe to Building 825, the Industrial Wastewater Pretreatment Plant (IWTP). All interstitial spaces in the sumps, tanks and pipes are monitored in Building 825 for leakage. The start date of these dangerous waste management operations in Building 38 is estimated to be in 1961. The metal prep process was discontinued in 2001, at which time tanks K0038-104 though K0038-109 (the metal prep dip tanks) were decontaminated, removed, and disposed of through the TSDF. Only two of the deburring machines and the water jet cutter remain at this time. Currently Building 38 is used for sheet metal cutting and forming processes.

Building 40 was used for multiple varied processes over the years. Research indicates a machine shop and chemical treatment facility were located there at one time. In the eighties, the building was renovated for office space, and subsequently served as the Keyport Housing office, the soldering school, the safety office, and the security office, in that order. A CAA SWMU, identified in FMD as K0040-02, was located under a canopy southeast of the building. The SWMU consisted of a 5′ X 5′ X 8′ high, roofed, steel cage that incorporated a >60-gallon steel secondary containment pan. Two 1500-gallon, precast concrete underground tanks associated with Building 40 received wastes from the industrial activities in Building 40 as well as the steam-cleaning operations, paint stripping operations, and battery cleaning, charging, repairing, and recycling operations in Building 85. These tanks are identified in the RFA as A-1, and in FMD as K0040-101 and K0040-102. The start date of dangerous waste management operations in Building 40 is undetermined. Waste producing processes that discharged to these tanks ceased around 1985. The tanks were removed in December 1996.

Building 47 was used for a wide variety of processes. Though some processes generated dangerous wastes, in general very few of the processes carried out in this building produced any. The CAA SWMU in Building 47 was a designated, covered storage area on the northeast side of the building, identified in the RFA as S-7 and in FMD as K0047-01. The storage area had a concrete floor with no berm, and was used to store up to two 55-gallon drums. The start date of dangerous waste management operations in Building 47 is undetermined. Operations ceased in 1997 and the building was removed in August 2000.

Building 72 was the plating plant. The entire Building 72/1019 complex was removed and the site was remediated under the CERCLA program. Site remediation was completed in March 1999.

Building 73 was a machine shop used for component manufacture and repair. The CAA SWMU at Building 73 is a 6′ deep, 6′ wide, 8′ high steel structure with a steel roof located outside the northwest corner of the building, identified in the RFA as S-9 and in FMD as K0073-01. Flooring is a steel grate over a 130-gallon secondary containment reservoir. The SWMU has a capacity of six 55-gallon drums. A 5000-gallon waste oil tank was located outside the northwest corner of the building, identified in the RFA as S-10. The start date of dangerous waste management operations in Building 73 is September 1990. Machine shop operations ceased in 1995. The 5000-gallon waste oil tank was removed and disposed of in November 1991, and replaced with K0021-104 and 105 (see Building 21 description). An active CAA-day SWMU identified in FMD as K0073-02 remains in this location to service the other machine shop operations in the industrial area. Treatment by generator occurs in CAA

K0073-15, where metal fines from a 3D printing machine are treated with quartz sand and silicone oil to reduce flammability.

Building 81 is a manufacturing shop. Various plastics forming and machining processes have taken place in the center portion of the building over the years. A liquid nitrogen heat treatment and an alodine treatment process are located at the north end of the building. Two CAA SWMUs were located west of the building, next to Building 105, identified in the RFA as S-11 and S-12. The component refurbishment processes located in Building 105 also contributed to the Building 81 SWMUs. Both SWMUs consisted of prefabricated steel cages, one measuring 5′ X 5′ X 8′ high (south cage), and the other measuring 10′ X 5′ X 8′ high (north cage). Both units were constructed of galvanized steel with metal roofs, chain-link fence sides, and a steel grate floor over a containment reservoir. The north cage had a capacity of eight 55-gallon drums and a secondary containment capacity of 220 gallons, and the south cage could store four 55-gallon drums and had a secondary containment capacity of 115 gallons. The south cage was removed in 2003, and the north cage is a currently active CAA SWMU, identified in FMD as K0081-01. The start date of dangerous waste management operations in Building 81 is undetermined.

Building 82 is a repair/refurbishment shop. A currently active 500-gallon, double walled plastic tank with a high level alarm and interstitial monitoring is located in the southwest corner of the patio east of the building. This tank receives washwater from post-range component cleaning. This tank is identified in FMD as K0082-104. An active CAA SWMU that has a storage capacity of four 55-gallon drums is located outside under a large canopy at the southeast corner of the building. The unit is identified in the RFA as S-13 and in FMD as K0082-01. It consists of a single galvanized steel cage, 5′ X 5′ X 8′ tall, with chain-link fencing for walls, a metal roof, and a steel grate floor over a 115 gallon secondary containment pan. The start date of dangerous waste management operations in Building 82 is undetermined, and the CAA SWMU and plastic storage tank remain in this location to service the current operations in the building.

Building 83 was the Metals Forming Shop. A welding shop was located at the north end, a sheet metal shop in the middle and south ends, a machine shop in the middle, and a paint shop in the west side. A CAA SWMU was located in the northeast corner of the building, and was identified in the RFA as S-14 and in FMD as K0083-02. The unit consisted of a secured clamshell polyethylene container that can store two 55-gallon drums, and incorporated a 55-gallon secondary containment. A covered, designated CAA SWMU was located in the welding area at the north end of the building. This storage area is identified as K0083-10 in FMD, and was closed in March 2004. The start date of dangerous waste management operations in Building 83 is 1990. All industrial shop operations ceased in 2003, and the building was removed in 2004. The area under the building floor and the perimeter of the building were sampled in 2003 as part of plans for the demolition of Building 83.

Building 84 was used for various paint stripping and painting processes, and at one time contained a lead foundry and heat treatment process. The lead foundry and heat treatment processes were discontinued and removed in 1997. Initially, paint stripping took place in the north end of the building over a large grated sump that collected the stripping wastes. Stripping wastes included Turco 5555B, Turco 5469, MEK, alcohol and toluene. This sump is identified as S-15 in the RFA, and as K0084-101 in FMD. In 1988, these paint-stripping processes were discontinued and replaced with a bead blasting process. Soil samples were taken under and around the sump in June 1992. Test results of these samples indicate the soil around the sump is contaminated. A copy of the report of the test results titled 'The Paint Shop Waste Sump Building 84, Keyport, Washington', prepared by Seacor dated July 12 1992, was submitted to

Ecology Northwest Regional Office. Due to the proximity of the building foundations to the edge of the sump, it was determined that the contamination could not be removed without removing the concrete roof, brick walls and concrete foundation of the building. Because the risk of contaminants reaching receptors was low, it was decided to leave the contamination in place, clean the interior of the sump, and fill it with CDF. The contamination will be removed at some time in the future when the building will be demolished. A designated CAA SWMU identified in FMD as K0084-07 was located in the northwest corner of the lead room. This CAA SWMU was closed and removed in July 1998. A designated CAA SWMU with secondary containment, identified in FMD as K0084-14, was located outside the northeast corner of Building 84. This CAA SWMU was closed and removed in November of 2002. A three-sided, roofed structure is built against the north wall of Building 84. Inside this structure, along the north wall, a currently active CAA SWMU, identified on the RFA as S-16, and in FMD as K0084-12, is located. This SWMU was originally created to accumulate lead wastes from the lead foundry, and remains as a smaller footprint CAA SWMU for paint process waste accumulation. A 1500-gallon aqua quench tank was located in the heat treatment area in the northeast corner of Building 84. Quenching solutions included curing oil, detergent, Quench G, Dow Temp 225, and Aqua Quench 251. Because the quenching solution in this tank was contaminated with metals, it was designated as a SWMU, identified as K0084-104 in FMD. At the time the heat treatment processes were discontinued in 1997, the waste quench solution was disposed of through the TSDF, and the tank was decontaminated and disposed of as solid waste. The start date of dangerous waste management operations in Building 84 appears to be 1944.

Building 85 was used for steam-cleaning operations, paint stripping operations, and battery cleaning, charging, repairing, and recycling operations. Wastes from these processes were originally drained to the two tanks located southwest of Building 40 (see Building 40 description). The steam cleaning and paint stripping processes were discontinued in 1985. The battery cleaning, charging, repairing, and recycling wastes were originally collected in a sump inside the building that drained through a trench to the two tanks located southwest of Building 40 (see Building 40 description). The system of trenches, sump and tank were identified in the RFA as A-3, and in FMD as K0085-102. When the use of these tanks was discontinued in 1985, the trenches were lined with stainless steel and routed to an underground concrete sump with a stainless steel liner, and monitored interstitial space. This sump in turn drained to the Building 72 acid sump located north of Building 72. When plating operations in Building 72 were discontinued, the wastewater collected in this sump was rerouted into a 300-gallon portable plastic tank equipped with a secondary containment and high-level alarms. This CAA accumulation tank was located east of Building 85, north of door 1, and is identified in FMD as K0085-103. This tank was transported with a forklift to the IWTP where the wastes were treated prior to disposal to the sanitary sewer. In 1998, the use of the interior sump was also discontinued, and the process was modified to take place on top of grate-covered portable basins that collected the liquid battery wastes as they were drained. Wastes from these basins was pumped directly to the K0083-103 tank. Subsequent to this change, the sump and trenches were used only as spill containment. The area under the interior sump, the trenches, and the general patio area were sampled in 2003 as part of plans for the demolition of Building 85. A copy of the report of the test results of these samples was submitted to Ecology Northwest Regional Office. A designated CAA storage area, located east of the building under a canopy, and identified in FMD as K0085-01, was used to collect and store waste batteries. This CAA SWMU was closed and removed in 2003.

Building 98 was used for various mechanical component repair processes, as well as the technical documentation storage center, and various small laboratories in self-contained structures installed inside on the ground floor. The second floor of the building is used for

electronics repair. A currently active, CAA SWMU is located north of the building. This SWMU is identified in the RFA as S-17, and in FMD as K0098-01. The SWMU consists of a 5′ X 10′ X 8′ high, roofed, steel cage that incorporates a 115-gallon steel secondary containment pan. The start date of dangerous waste management operations in Building 98 is December 1989. The SWMU is currently active.

Building 105 is divided into three sections. The south section consists of two floors, the upper floor has always been used for office space. The lower floor of the south section and part of the middle section were used for mechanical component refurbishment until 1992. The north end of the building, and the middle section after 1998, were used to store supplies for shop processes throughout Keyport. Two roofed, 5′ X 10′ X 8′ high steel cages with grated floors were located over a concrete 440-gallon secondary containment west of the middle portion of the building. These two CAA SWMUs are identified as S-18 and S-19 in the RFA, as 105N and 105S in the SWMU data sheets. The start date of dangerous waste management operations in Building 105 is December 1989. In June of 1990, the dangerous wastes stored at this location were consolidated with S-11 and S-12, and the S-18 and S-19 cages were removed.

Building 106 was a Mechanical Test Facility. A CAA SWMU was located southwest of Building 106. The SWMU is identified in FMD as K0106-05. The SWMU was closed and removed in March of 1999. The south portion of Building 106 contained a pressure vessel used to perform operational (at-depth) tests on functional components. Several mechanical component test stands were also located throughout the rest of the building. Otto Fuel II spills that occurred during component testing were collected on the concrete, epoxy-sealed floor, and washed into trenches that directed the contaminated wastewater into two sumps located outside the northwest corner of the building, identified in FMD as K0106-105, and southeast corner of the building, identified in FMD as K0106-108. Whenever an engine test was completed, water from the pressure vessel, contaminated with Otto-Fuel II and combustion by-products generated during the engine testing, was washed into these trenches and sumps. Wastewater from the sumps was pumped to a 1000-gallon concrete underground tank, identified in FMD as K0106-101, where it was stored until shipped off-site. In November 1989, the use of the 1000-gallon concrete tank was discontinued, and it was replaced with a 600-gallon plastic tank, identified in FMD as K0106-103, located in a roofed, epoxy-sealed, 660-gallon concrete secondary containment, identified in FMD as K0106-104. The plastic tank was provided with a high level alarm. At this same time, most of the component test stands were provided with dedicated secondary containment. Because providing secondary containment in the test stand was not possible, the practice of draining the contaminated pressure vessel water to a trench and sump continued, but spill cleanups took place immediately after each engine test. This waste water was pumped from the K0106-108 sump to the K0106-103 tank, using secondarily contained, aboveground piping. At the same time a new, 1500-gallon steel tank, identified the RFA as S-20, and in FMD as K106-102, was installed in a concrete secondary containment to collect cyanide-contaminated wastewaters from the engine test afterburner and the pressure vessel. In 1991, the site was sampled extensively as part of the RI/FS study (Area 3 of Operable Unit 2), and was found to be uncontaminated (ROD of September 1994, paragraph 8.3, page 79). In December 1996, the 1000-gallon underground tank (K0106-101) was removed along with several aboveground product tanks and unused underground tanks as part of the Building 40 and 820 tank removals. Because the site was proven clean during the CERCLA RI/FS process, a closure report was not produced. The remaining tanks and sumps (K0106-102, K0106-103, K0106-104, K0106-105 and K0106-108) have been cleaned in preparation for final closure and removal.

Building 110 was constructed as a soil-covered concrete munitions storage bunker. After NUWC stopped storing munitions, the building was converted to a carpenters paint shop. A CAA SWMU was located inside the southwest portion of the building, identified in the RFA as S-21. This SWMU consisted of a 5′ X 5′ X 8′ high galvanized cage with chain link sides, a metal roof, and a grate floor over steel 115-gallon secondary containment. Because the SWMU was removed before FMD was created, there is no start or end date associated with this location.

Building 115 was also constructed as a soil-covered concrete munitions bunker. Beginning in 1989, the building was used to store spent lithium boilers. The entire building was identified in the RFA as SWMU S-22. When Building 115 was filled to capacity, spent lithium boilers were also stored in Buildings 116 and 117. These two buildings were also soil-covered concrete munitions bunkers. Dangerous waste storage in the bunkers was discontinued in 1996. All three buildings were RCRA clean-closed by May 1998, and a copy of the report was submitted to Ecology Northwest Regional Office.

Building 134 was the photo shop since 1967. Photolab wastes including developers, hypo solutions, stop baths and the associated silver salts were discharged directly from dedicated sinks to a 1250-gallon single walled concrete wastewater collection tank north of the building. This tank is identified in the RFA as S-23, and in FMD as K0134-101. All floor drains were also connected to this tank through single walled piping. Wastewater from this tank was pumped through single walled piping to a concrete wastewater collection tank between the north end of buildings 38 and 233, identified in the RFA as S-6 and in FMD as K0038-103, and from there to the IWTP. In April 1994, all piping from the Building 38 sumps to the K0038-103 tank and from there to the IWTP was replaced with double walled, interstitially monitored piping, and a plastic liner with monitored interstitial space was installed in the K0038-103 tank. The single walled pipe from K0134-101 was connected to the double wall pipe at the northwest corner of Building 38. Use of the tank was discontinued in May 2001, and the tank was closed and filled with CDF. Some contamination discovered during closure sampling was left in place in the soil adjacent to the tank because removal would endanger nearby building foundations due to the depth and proximity of the contamination. A closure report was submitted to Ecology Northwest Regional Office.

Building 181 was used to store hazardous materials for the plating facility in Building 72, the Plating Plant. From 1936 to 1982 the NUWC Keyport steam plant used Bunker C oil for station steam generation. The Bunker C oil was stored in two adjoining concrete underground storage tanks. In 1982, the steam plant was converted from bunker C to natural gas, and fuel oil was used for a backup source. After the Bunker C fuel was removed from the north and south portions of the underground concrete tank, the north portion of the concrete underground storage tank was converted to secondary containment for the hazardous materials stored in Building 181. At this same time, the south portion of the concrete underground storage tank was converted to secondary containment for two 50,000-gallon steel aboveground fuel oil reserve tanks. Both of these secondary containments are identified in FMD as K0181-101. In 1998, both fuel oil reserve tanks, Building 181, and both concrete underground storage tanks were removed as part of a CERCLA remedial action.

Building 205 was the Navy Exchange Gas and Service Station. The building was constructed for that purpose in 1961. Three underground gasoline storage tanks were located west of the building, one 10,000-gallon capacity and two 6,000-gallon capacity. A 500-gallon underground waste oil tank was located southwest of the building. In October 1989 the three product tanks were tightness tested. Because all three tanks failed tightness testing, the decision was made to close and remediate the site. Because Service Station operations ceased prior to the

implementation of FMD, there are no tank or waste sites associated with the Service Station operations at site in FMD. The site was not addressed in the RFA. All three gasoline tanks and the waste oil tank were removed in November 1990, and the site was over-excavated and sampled until all samples tested below MTCA levels. A copy of the final report on the soil excavation including sample results was submitted to Ecology Northwest Regional Office. Subsequent to Service Station Operations, the building was used for an onsite office by the Base Operations Services Contractor (BOSC). A CAA SWMU, identified in FMD as K0205-01, was set up to store dangerous wastes generated by the BOSC during building maintenance processes. The site was closed in April 2004 when the BOSC consolidated operations at Bangor.

Building 206 has housed the Weapons Quality Evaluation Center, the Failure Analysis Laboratory, the Chemical Testing Laboratory, the Metrology Laboratory, and a Model Shop. An active CAA SWMU, identified in the RFA as S-24, and in FMD as K0206-01, is located outside the northeast corner of the building. The SWMU consists of a 10′ X 5′ X 8′ high, roofed, steel cage that incorporates a 220-gallon steel secondary containment pan. The start date of dangerous waste management operations in Building 206 is December 1989.

Building 233 is a production machine shop. Originally, two metal 4′ X 4′ X 4″ pallets were located on a concrete base with no secondary containment or berm under a large patio roof at the south end of the building. This SWMU is identified in the RFA as S-25, and in FMD as K0233-02. The start date of dangerous waste management operations in Building 233 is December 1989. The SWMU was moved inside Building 233 and provided with secondary containment in October 2002, and is currently active in that location.

Building 478 was originally used to perform maintenance activities. Those functions were moved to Buildings 489 and 514 in 1968 and 1973 respectively. Since then, the building has been used as office space, Maintenance Training Center, and many special projects. A 10′ X 5′ X 8′ high, steel roofed cage was located on a concrete slab outside the southwest corner of Building 478. There was no secondary containment or berm for this unit. This CAA SWMU was identified in the RFA as S-26, and was removed in February 1992. Three 1350-gallon concrete dangerous waste collection tanks were installed outside the southwest and northwest corners of Building 478, and just outside the west wall halfway between the northwest and southwest tanks. These tanks are identified in the RFA as A-4, and in FMD as K0478-101, K0478-103, and K0478-102, respectively. A trench system throughout the first floor of the building collected wastewaters generated during maintenance and drained it to the nearest tank. In the early seventies, the tanks and trenches were cleaned and coated with epoxy paint. Some of the trenches were filled in at this time and replaced with underground pipes. The tanks were also lined with steel plate, and covers were installed on the tanks to keep stormwater out. The tanks were cleaned and deactivated in the eighties. The northwest tank was temporarily reinstated in 1989 to receive halogenated washwater from the maintenance process. The tank was cleaned again in 1990. All three tanks were RCRA-closed and removed in 1998, and a copy of the report was submitted to Ecology Northwest Regional Office. Two steel, 550-gallon aboveground Otto Fuel II product tanks were installed in 1968 southwest of Building 478. These tanks are identified in the RFA as A-5, where they were incorrectly described as waste storage tanks instead of material storage tanks. Both tanks were removed in 1998. The start date of dangerous waste management operations in Building 478 is December 1966.

Building 489 is used for maintenance processes. A 6′ X 8′ X 14′ high roofed steel cage is located outside the Building 489 east wall. This CAA SWMU is identified in the RFA as S-27, in FMD as K0489-03, and is currently active. A 1200-gallon underground concrete tank was

installed east of Building 489 in support of maintenance processes. This tank collected Otto Fuel II wastewater generated inside Building 489 immediately adjacent to the tank, and is identified in the RFA as S-28, and in FMD as K0489-101. In 1988, the 1200-gallon concrete tank was cleaned and converted to secondary containment for a stainless steel 50-gallon transfer tank with interstitial monitoring. This smaller transfer tank is identified in FMD as K0489-102. Otto Fuel II wastewater was transferred from this tank to two 1500-gallon stainless steel, double walled, interstitially monitored aboveground tanks equipped with level indicators, high-level alarms and interstitial monitoring. These two wastewater tanks are identified in FMD as K0489-103 and K0489-104. In October 1999, all Otto Fuel II operations were consolidated in Building 514. As a result, the Otto Fuel II wastewater piping was removed from Building 489, and the 50-gallon tank and both 1500-gallon tanks were cleaned and triple rinsed. Final rinsewater was sampled and tested for contaminants of concern. A report with test results and a request to reclassify these tanks as hazardous material (Otto Fuel II) storage tanks was submitted to Ecology Northwest Regional Office. The start date of dangerous waste management operations in Building 489 is December 1968.

Building 514 is used for maintenance processes. A CAA SWMU is located northwest of Building 514. This currently active, roofed, fenced, secondarily contained SWMU is identified in the RFA as S-33 and in FMD as K0514-01. A second CAA SWMU was located in the post range flush room in the northwest corner of Building 514, identified in FMD as K0514-14. In October 1995, this SWMU was combined with K0514-01. A concrete underground tank was installed in fenced area northwest of the building in support of maintenance processes. This tank was first used to collect all Otto Fuel II-contaminated wastewaters, and was identified in the RFA as S-29, and in FMD as K0514-104. From 1989 to 1992, a series of upgrades were installed that provided for Otto Fuel II recycling and waste water separation. The seawater and Otto Fuel II mixture from the Defueling process is now directed to a coalescing plate separator and a series of three double wall, stainless steel gravity separation tanks (K0514-101 and K0514-102 and K0514-103). Two of these tanks were installed in the concrete tank after it was decontaminated. Wastewater from the final separation tank at Building 514 is processed through two tanks that contain carbon to remove residual Otto Fuel II down to trace levels. These two tanks were identified in the RFA as S-32. Wastewater from these carbon columns is transferred to an underground concrete tank with a fiberglass liner identified in the RFA as S-31 and in FMD as K0514-106, and from there to the IWTP for final processing and testing before discharge to the sanitary sewer. Two other tanks store dangerous wastes at this location. One tank stores cyanide-contaminated wastewater, and is identified in the RFA as S-30, and in FMD as K0514-105. This is a double-walled stainless steel tank with interstitial monitoring and high level alarms, and is currently active. The other tank stored alcohol contaminated with Otto Fuel II, and is identified in the RFA as S-34, and in FMD as K0514-107. In 1998 this tank was RCRA cleaned and disposed of through the TSDF, and was replaced with a currently active, stainless steel, double walled tank with interstitial monitoring and high level alarms, identified in FMD as K0514-108. The start date of dangerous waste management operations in Building 514 is December 1973.

Building 726 was used as a paint shop. A roofed, fenced cage with bermed concrete secondary containment was located south of the building to store waste paints, thinners and filters. This CAA SWMU was identified in the RFA as S-35, and in FMD as K0726-01. The start date of dangerous waste management operations in Building 726 is December 1989. The SWMU was removed in October 2002 when painting operations were consolidated in Building 84. The start date of dangerous waste management operations in Building 726 is March 1991.

Building 790 was used to process Otto Fuel II before the upgraded system was constructed in Building 514 from 1989 to1992. Otto Fuel II and seawater from the defueling process was offloaded into a series of aboveground process tanks for separating the Otto Fuel from the seawater. Reusable Otto fuel II was drained to an underground tank, from which it was pumped and transported to Building 514 to be used as 'B' grade fuel. Seawater was siphoned off the top and transported to the IWTP for further treatment and testing prior to disposal to the sanitary sewer. After the Otto Fuel II reclamation process was moved to Building 514, the aboveground tanks were removed and the underground tank was used to store Otto Fuel II wastewater prior to shipment offsite. This underground tank was identified in the RFA as A-6, and was removed in December 1993. A copy of this report was submitted to Ecology Northwest Regional Office. A CAA SWMU was located under the canopy roof in the west bay to store Otto Fuel II-contaminated drum liners, rags and PPE. This SWMU was identified in FMD as K0790-01, and it was also removed in December 1993. The start date of dangerous waste management operations in Building 790 is December 1974.

Building 804 was used to store the reserve fuel oil for the Station steam plant. From 1936 to 1982 Bunker C oil, used for station steam generation, was stored in two adjoining concrete underground storage tanks. In 1982, the steam plant was converted from bunker C to natural gas, and fuel oil was used for a backup source. After the Bunker C oil was removed from the north and south portions of the concrete underground storage tank, the south portion was cleaned and converted to secondary containment for two new 50,000 gallon steel aboveground fuel oil storage tanks. These two tanks are identified in the RFA as A-7. In 1998, both fuel oil reserve tanks, and both concrete underground secondary containments were removed as part of a CERCLA remedial action.

Building 820 has been used for container refurbishment, the Station Decontamination Facility, and many special projects. A CAA SWMU, identified in the RFA as S-40 and in FMD as K0820-01, is located outside the northeast corner of the building. The SWMU consists of a 10' X 5' X 8' high, roofed, steel cage that incorporates a 220-gallon steel secondary containment pan, and was used to store wastes generated by the container refurbishment process. The SWMU was removed in November 1995 when the container refurbishment process was relocated to Building 38. A 2000 gallon underground storage tank was used to store waste oil from the container refurbishment process. This tank was identified in the RFA as A-8, and was removed in December 1996. Copies of the Buildings 40 and 820 Soil and Groundwater Investigation Report, and the Building 40 and Building 820 UST Decommissioning and Site Assessment Report was submitted to Ecology Northwest Regional Office. The south end of Building 820 was used as the Station Decontamination Facility. A system of epoxy-coated trenches were installed inside the building for collecting contaminated wastewater generated during decontamination. These interior trenches were identified in the RFA as S-36. The trenches drained to an epoxy-coated concrete sump located in a fenced area under a canopy roof outside the southeast corner of Building 820. This sump is identified in the RFA as S-37 and in FMD as K0820-109. Wastewater collected in the sump was transferred to two steel 3000 gallon aboveground storage tanks located on a steel grate above the sump. These tanks were identified in the RFA as S-38 and in FMD as K0820-106 and K0820-107. The trenches inside the building and the sump were never contaminated because decontamination processes were always carried out on counters and in sinks that drained directly to the tanks outside. The floor was only used as spill containment, and was cleaned after each decontamination process was completed. The tanks were used as CAA dangerous waste SWMUs. Both tanks were cleaned in September 2006 in preparation for an integrity inspection. The access hatches at the bottom of the tanks were left off after the tank integrity inspection, and the pumps to the tanks were secured. The site is presently under consideration for closure. If the decision is made to close

the tanks, a decommissioning report and site assessment will be filed upon completion of the closure action. The fenced, roofed area over the raised grated floor of the sump was also used to store drums of wastes generated as part of the decontamination process (contaminated rags, wipes, PPE, debris). This CAA SWMU was identified in the RFA as S-41 and in FMD as K0820-02, and was removed in November 1995. Three tanks were installed along the east wall of Building 820 to store chromic acid wastewater generated as part of the container refurbishment process. The tanks were 300 gallon, steel cage-enclosed plastic portable 'Tuff' tanks (see appendix D9) that were set on 330-gallon aluminum secondary containments, and were equipped with high level and leak alarms. These tanks were identified in the RFA as S-39 and in FMD as K0820-01, K0820-02, and K0820-03. Chromic acid wastewater collected in the tanks was transported with a forklift to the TSDF for pretreatment (chrome reduction), and subsequent to that to the IWTP for final treatment, testing and disposal to the sanitary sewer. All three tanks were removed in November 1995. One of the tanks has been relocated to Building 82 where it is an active CAA SWMU, identified in FMD as K0082-105, another of the tanks has been relocated to Building 84, where it is an active CAA SWMU, identified in FMD as K0084-105. The third tank has been cleaned and incorporated into the TSDF portable tank inventory. The start date of dangerous waste management operations in Building 820 is December 1976.

Building 824 was used for facilities maintenance support functions (staging, machining, welding, metal forming, etc). A currently active CAA SWMU, identified in the RFA as S-42, and in FMD as K0824-01, is located outside the west end of the building. The SWMU consists of a 6' X 8' X 10' high steel fenced, roofed cage with a curbed, epoxied concrete floor. The start date of dangerous waste management operations in Building 824 is March 1990.

Building 825 is the IWTP, a currently active permit-by-rule facility. The facility is laid out with four separated secondary containment areas. Two 6000 gallon caustic receiving and reactor tanks, identified in the RFA as S-43 and S-44, and in FMD as K0825-101 and K0825-107 respectively, are located in the caustic secondary containment area, identified in the RFA as S-52. Two 40,000 gallon acid receiving and reactor tanks, identified in the RFA as S-45 and S-46, and in FMD as K0825-105 and K0825-108 respectively, are located in the acid secondary containment area identified in the RFA as S-51. A 50,000 gallon intermediate storage tank, identified in the RFA as S-47 and in FMD as K0825-110, a 1500 gallon sludge storage tank, identified in the RFA as S-49 and in FMD as K0825-113, and two 17,000 gallon clearwater storage tanks, identified in the RFA as S-50 and in FMD as K0825-114 are located in the neutral secondary containment area identified in the RFA as S-53. Four 1200 gallon sandfilter tanks, identified in the RFA as S-48 and in FMD as K08252-112 are located inside the building. An active CAA SWMU, identified in the RFA as S-54 and in FMD as K0825-01, is located inside the south-central part of the building and consists of several pallets used to store drums of dewatered sludge. The start date of dangerous waste management operations in Building 825 is December 1982.

Building 893 is used as the Supply Receiving building. A currently active, CAA SWMU, identified in the RFA as S-55, and in FMD as K0893-01, is located inside the east bay of the building. The SWMU consists of a steel fenced cage on a concrete floor. The start date of dangerous waste management operations in Building 893 is December 1989.

Building 894 was used as the Maintenance building. A CAA SWMU, identified in the RFA as S-56 and in FMD as K0894-01, was located outside the northwest corner of the building, within the fenced general storage yard. This SWMU consisted of a 5' X 5' X 8' high prefabricated, roofed, fenced steel cage with grated floor and a secondary containment pan. This site was

removed in September 2002 when the refurbishment process was consolidated into Buildings 489 and 514, and the building was leased by Raytheon to facilitate the refurbishment of components. A new, currently active site was opened up inside the northwest corner of the building by Raytheon upon occupancy. This new site retained the original K0894-01 SWMU number in FMD. Another CAA SWMU, identified in the RFA as S-57, was located north of the building, also in the fenced general storage yard. This unit consisted of a plastic clamshell with built-in secondary containment. This SWMU was removed in September 2002 upon turnover of the building to Raytheon. An underground, steel 55 gallon storage tank in an epoxy-coated concrete secondary containment, identified in the RFA as A-9 and in FMD as K0894-101, was located under a canopy on the north side of the building within the fenced general storage yard. The tank was originally installed to receive halogenated washwater, but was never used because the wastewater was pumped to K0894-102 instead, as discussed below. In September 2002 the steel tank was removed and the secondary containment was filled with CDF. Because the tank was never used, the site was not sampled and a report was not generated. A CAA portable 330 gallon plastic tank in a steel wire frame was placed on a secondary containment pan north of Building 894 in the fenced general storage yard, identified in the RFA as S-58, and in FMD as K0894-102. This tank received the halogenated washwater. In September 2002 this tank was removed and replaced with a double wall 300 gallon plastic tank in the same location as part of the turnover of the facility to Raytheon. This currently active CAA tank retained the same K0894-102 number in FMD. The tank receives wastewater from a circuit board washer. The tank contents are sampled and transported to the IWTP for further treatment and disposal to the sanitary sewer after testing. The start date of dangerous waste management operations in Building 894 is December 1989.

Building 940 was one of the component acceptance test facilities. A CAA SWMU was located east of the building, identified in the RFA as S-59, and in FMD as K0940-02. The SWMU consisted of two 4' X 4' steel pallets placed on a concrete slab. There was no cover, fencing or secondary containment associated with the unit. The SWMU was removed in December 1998 as part of the consolidation of component acceptance test facilities. Current processes in the building do no require a CAA SWMU. The start date of dangerous waste management operations in Building 940 is March 1989.

Building 1013 was the Auto Hobby Shop. A CAA SWMU was located outside the south end of the building, identified in the RFA as S-60, and in FMD as K1013-01. The unit consisted of a locked, fully enclosed steel cabinet with a built-in secondary containment pan. The SWMU was removed in August 2000 when the Keyport Auto Hobby Shop was consolidated with the auto hobby shop located at Bangor Subase. A CAA 125 gallon steel UST was located east of the building, identified in FMD as K1013-101. The tank received used oil. The tank was removed under the UST program in August 1998. A copy of the UST decommissioning report and site assessment was submitted to Ecology Northwest Regional Office. The start date of dangerous waste management operations in Building 1013 is March 1989.

Building 1019 was the precious metals plating plant. The entire Building 72/1019 complex was removed and the site was remediated under the CERCLA program. Site remediation was completed in March 1999.

Building 1058 is the Plating Plant. A CAA SWMU, identified in FMD as K1058-06, was located inside along the east wall of the dark room. The site was a designated storage area inside the building without secondary containment. The site was removed in February 2003. The start date of dangerous waste management operations in Building 1058 is 1998. Currently, the Plating Plant is scheduled to be shut down. The only active SWMU, K1058-05 will be 'clean

closed' as part of this action, and a report submitted to Ecology Northwest Regional Office. All process tanks, wastewater collection tanks and associated piping will be cleaned and triple rinsed prior to disposal.

E1.2 Releases

No known or suspected significant releases of dangerous waste and/or dangerous constituents at or from solid waste management units at the TSD Facility.

Non-TSD Facility documented locations where contamination greater than MTCA method A-allowable levels was left behind as part of a RCRA site 'clean closure' are the Building 84 Paint Stripping wastewater sump, identified in the RFA as S-15 and in FMD as K0084-101 and the Building 134 Photo Lab wastewater sump, identified in the RFA as S-23 and in FMD as K0134-101. See descriptions under E1.1 Solid Waste Management Units above for descriptions of the locations and wastes managed at these locations. Documentation of the contaminants and concentrations have been submitted to Ecology Northwest Regional Office.

Any contamination treated or managed under the CERCLA program is not addressed in this document.

E2. Corrective Actions Implemented

No corrective actions have been required or implemented at the TSD Facility.

Non-TSD Facility corrective actions implemented to date are described under Section E1.1 Solid Waste Management Units, above.

The following actions remain to be implemented:

1. Building 106 (Torpedo Mechanical Test Facility) clean closure of tanks K0106-102, K0106-103, K0106-104, K0106-105 and K0106-108.

2. Building 820 (Decontamination Facility) clean closure of tanks K0820-106 and K0820-107, should NUWC elect to close those tanks.

APPENDIX E1

TOPOGRAPHIC MAP
AND
SWMU LOCATIONS

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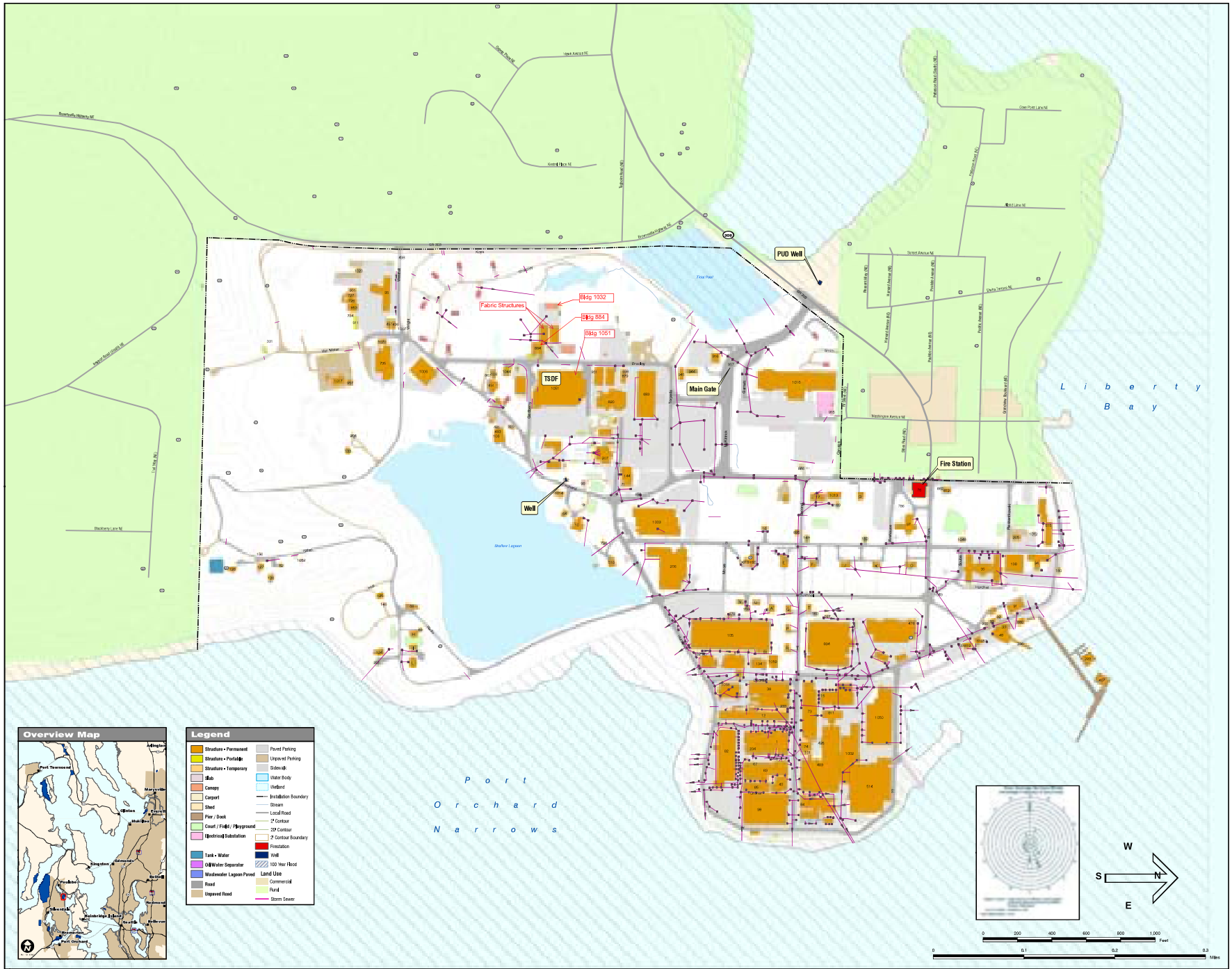

Submit questions, requests, or updates to the RSIMS Center of Excellence: (360) 396-8047 http://www.rsims.navy.mil

SCALE	1 in = 200 ft
SIZE	37 in x 32 in IF SHEET IS LESS THAN 37" X 32" IT IS A REDUCED PRINT AND THE SCALE IS REDUCED ACCORDINGLY

DEPARTMENT OF THE NAVY

NAVY REGION NORTHWEST

TITLE

NBK KEYPORT INSTALLATION TOPOGRAPHIC MAP AND FACILITY SWMU LOCATIONS

RSIMS DOCUMENT NUMBER	09 - KP - xxxxx
PRINT DATE	15 FEB 2017
PROJECTION	STATE PLANE, WA NORTH ZONE, DATUM NAD 83, FEET

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APPENDIX E2

FACILITY SWMU LOCATIONS

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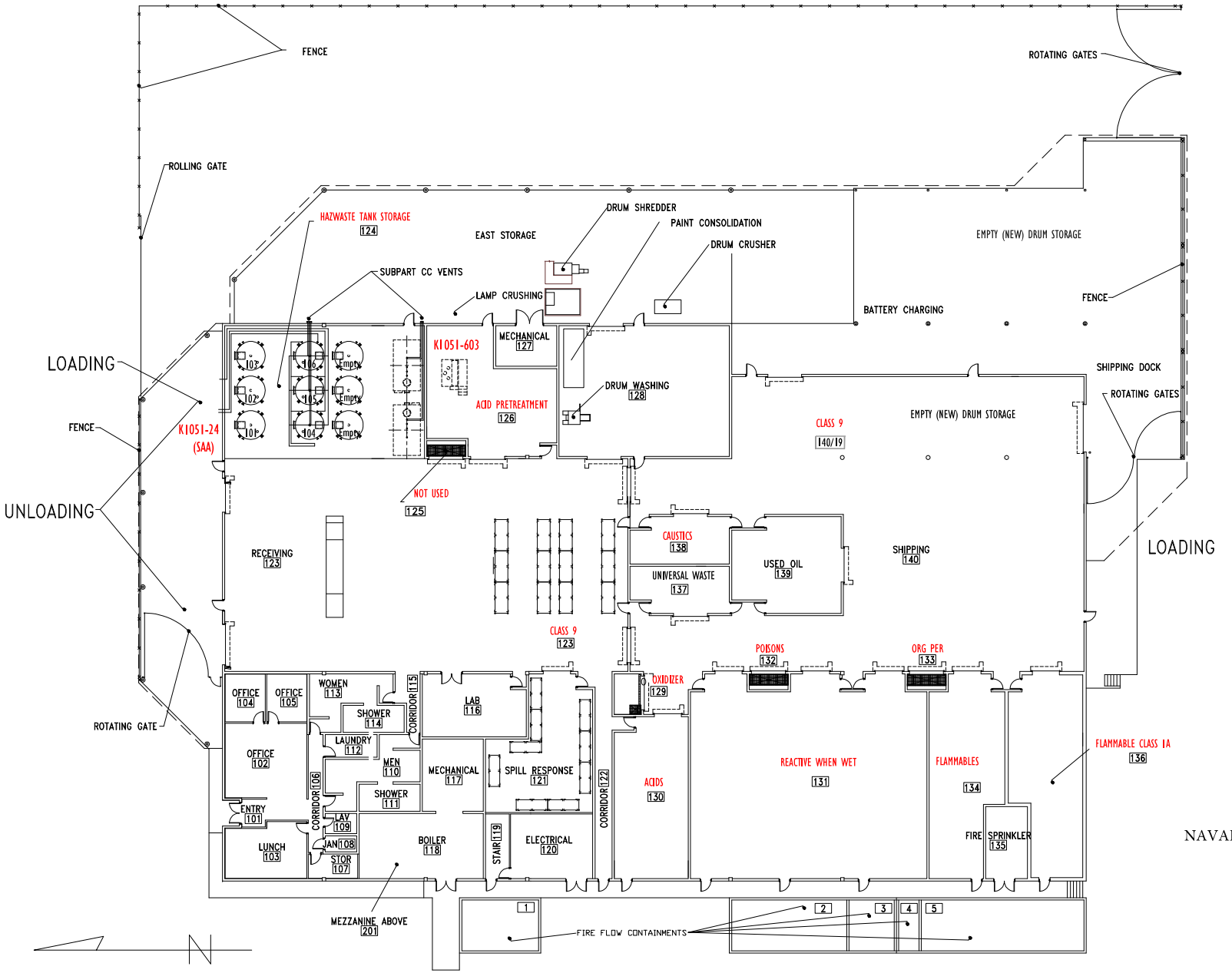

NAVAL UNDERSEA WARFARE CENTER DIVISION
KEYPORT, WA

BUILDING 1051

TSD FACILITY

SWMU LOCATIONS

SECTION F

PROCEDURES TO PREVENT HAZARDS

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TABLE OF CONTENTS

Section **Page**

F1. Security ..... F- 1
F1.1 Security Procedures and Equipment ..... F- 1
F1.1.1 Warning Signs ..... F- 1
F1.1.2 24-Hour Surveillance System ..... F- 1
F1.2 Waiver ..... F- 1

F2. Inspection Plan ..... F- 2
F2.1 General Inspection Requirements ..... F- 2
F2.2 Inspection Log ..... F- 3
F2.3 Schedule for Remedial Action for Problems Reviewed ..... F- 3
F2.4 Specific Process or Waste Type Inspection Requirements ..... F- 3
F2.4.1 Container Inspections and Remedial Actions ..... F- 3
F2.4.1.1 Container - Inspections ..... F- 4
F2.4.1.2 Container - Corrective Actions ..... F- 4
F2.4.2 Tank System Inspections and Corrective Actions ..... F- 4
F2.4.2.1 Tank Systems - Inspections ..... F- 4
F2.4.2.2 Tank Systems - Integrity Assessments ..... F- 5
F2.4.2.3 Tank Systems - Corrective Actions ..... F- 5
F2.5 Storage of Ignitable or Reactive Wastes ..... F- 6
F2.6 Air Emissions Control and Detection - Inspections, Monitoring, and Corrective Actions ..... F- 6
F2.6.1 Process Vents ..... F- 6
F2.6.2 Equipment Leaks ..... F- 7
F2.6.3 Tanks and Containers ..... F- 7

F3. Preparedness and Prevention Requirements ..... F- 7
F3.1 Equipment Requirements ..... F- 7
F3.1.1 Internal Communications ..... F- 7
F3.1.2 External Communications ..... F- 8
F3.1.3 Emergency Equipment ..... F- 8
F3.1.4 Water for Fire Control ..... F- 8
F3.2 Aisle Space Requirements ..... F- 9

F4. Preventative Procedures, Structures, and Equipment F-11
F4.1 Prevention of Hazards & Containment of Spills During Loading/Unloading Operations F-11
F4.2 Run-off Prevention F-11
F4.3 Prevention of Contamination of Water Supplies F-12
F4.4 Mitigation of Equipment Failure and Power Outage F-12

F4.5 Personal Protection Equipment F-12

F5. Prevention of Reaction of Ignitable, Reactive, and/or Incompatible Wastes..... F-13
F5.1 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive wastes..... F-14
F5.2 Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste F-14

LIST OF FIGURES

Figure **Page**

F3-1 NUWC Location Map F-10

APPENDICES

Appendix

F1 Inspection Checklists
F2 Inspection Schedule

F1. SECURITY

WAC 173-303-310; -806(4)(a)(iv)

F1.1 SECURITY PROCEDURES AND EQUIPMENT

WAC 173-303-310(2); -806(4)(a)(iv)

F1.1.1 WARNING SIGNS

'DANGER-UNAUTHORIZED PERSONNEL KEEP OUT" signs are posted where an immediate hazard exists, every 100 feet along the fence, and at all entrances to the TSD Facility. These signs are of sufficient size to be readable at 25 feet. Caution signs are also used to warn against potential hazards. Sign colors are chosen for the particular lighting type.

F1.1.2 24-HOUR SURVEILLANCE SYSTEM

NBK Keyport is a secure military installation, where access is restricted to authorized personnel only. Security is maintained by a military force which patrols the installation 24/7 and routinely inspects the perimeter fence as well as the Treatment and Storage and Disposal Facility (TSD) Facility site. NBK Keyport is surrounded by an eight-foot high chain link fence topped with razor wire. Perimeter lighting surrounds the installation and the TSD Facility site during hours of darkness.

The TSD Facility is located within the NBK Keyport fence line and is not related to any civilian structure or property outside the installation boundary. The TSD Facility itself has an eight-foot high chain link security fence on the east side of the asphalt truck area. From the north end of the parking lot, the fence is extended to the west edge of the truck loading/unloading area. From the south end of the parking lot, the fencing is extended to the truck dock on the south side of the building. Truck gates are provided at the south end of the parking lot and at the north concrete apron. See Part A, Attachment B (TSD Facility General Layout Drawing) for a drawing showing all TSD Facility fences and gates. Doors on the south and west side of the TSD Facility (not within the TSD Facility fence line) that access the waste storage areas remain locked at all times. Additionally, during non-operational hours, the TSD Facility gates and access doors are closed and locked.

All traffic enters NBK Keyport through guarded security gates. No individual is allowed to enter the installation without first obtaining a clearance pass. Color-coded badges are worn by all personnel for quick identification. Upon arrival at the TSD Facility, visitors are required to log in, and log out when departing.

F1.2 WAIVER

WAC-173-303-310(1); -806(4)(a)(iv)

The TSD Facility does not operate under a security waiver.

F2. INSPECTION PLAN

WAC 173-303-320; -340; -806(4)(a)(v)

A qualified Waste Handler or the Dangerous Waste Program Manager will inspect the TSD Facility to ensure that releases do not occur or cause a threat to human health or the environment. This section identifies all monitoring equipment, safety and emergency equipment, security devices, and operating and structural portions of the TSD Facility to be inspected and the periodicity of these inspections. Results of the inspections and associated dates of remedy implementation will be recorded on the inspection checklists and discrepancy logs kept in the operating record at the TSD Facility.

F2.1 GENERAL INSPECTION REQUIREMENTS

WAC 173-303-320(1), (2)(a), (b) and (c); -340(1)(d); -806(4)(a)(v)

Specific items inspected include containers, secondary containment systems, sumps, tanks, pumps, couplings and valves, tank monitoring equipment, level and pressure gauges, pressure relief devices, leak detectors, sampling ports, and overfill alarms or indicators.

All equipment identified in appendix D11 (Subpart BB Equipment Details) will be monitored as set forth in section F2.6.2 Equipment Leaks.

Safety equipment inspected includes personnel protective equipment such as self-contained breathing apparatus, facemasks or shields, gloves, aprons, and decontamination suits.

Emergency response equipment inspected includes spill control and decontamination equipment, fire extinguishers, and the fire alarm system.

Security devices and communications equipment inspected includes locks, perimeter fence and gates, telephones, and intercoms.

Forklifts are checked before and after each use. A Material Handling Equipment (MHE) checklist (see appendix F1, Inspection Checklists) is attached to each forklift with an inspector signoff and date block. Vac-truck pumps, hoses and fittings are also checked for damage, wear and leaks before each use.

Types of problems to be identified during these inspections will include signs of waste releases i.e., wet spots and stains from leaking valves, couplings, fittings or flanges, hose connections, pumps, pump seals, containers, drums, and tanks. In addition, the covered containment sumps are checked to ensure they are free of liquids and debris.

Accessibility, condition, suitability, and quantity of safety equipment and emergency response equipment are verified.

Example inspection checklists in appendix F1 (Inspection Checklists) provide additional details on aspects of the facility that are specifically inspected. Inspections take place on a daily, weekly, monthly, quarterly, annually, five year or fifteen year schedule as outlined in appendix F2 (Inspection Schedule). Frequency of inspection is based upon the area, system, subsystem,

equipment, device, or waste handling procedure requiring inspection. Inspection results are entered on specific Inspection Checklists for each periodicity and are signed and dated by the inspector.

The Inspection Schedule, and blank and completed Inspection Checklists, are kept in the TSD Facility office. The completed checklists are retained at the TSD Facility for a minimum of five years.

TSD Facility inspections are conducted by a qualified Waste Handler or the Dangerous Waste Program Manager trained in accordance with Section H (Personnel Training).

F2.2 INSPECTION LOG
WAC 173-303-320(2)(d)

The Inspection Checklists include the printed name and signature of the inspector, date and time of inspection, and a note field for observations. The date and nature of any repairs or remedial actions taken are entered into a separate Discrepancy Log. An account of spills and discharges is maintained in the Incident Record. Inspection checklists are filed by frequency and the Discrepancy Logs are filed by date. The Incident Record is kept in the Dangerous Waste Program Manager's office. Inspection Checklists and Discrepancy Logs are reviewed and signed by the Dangerous Waste Program Manager or alternate Dangerous Waste Program Manager on the day they are conducted.

F2.3 SCHEDULE FOR REMEDIAL ACTION FOR PROBLEMS REVEALED
WAC 173-303-320(3)

Any malfunction or deterioration observed during these inspections is remedied immediately or as soon as possible, depending on the severity of the conditions or problem. Expedience of remedial actions will be based on possible deterioration of equipment, probability and severity of adverse impact on human health and the environment, and availability of supplies. Actions will be taken to bring problems that could cause harm to human health or the environment under immediate control, or the affected area will be isolated from waste management activities until the problem is resolved.

The Dangerous Waste Program Manager is responsible for taking corrective actions, scheduling repairs, and directing resources to remedial actions.

F2.4 SPECIFIC PROCESS OR WASTE TYPE INSPECTION REQUIREMENTS
WAC 173-303-320(2)(c) & (3); -630(3) & (6); -806(4)(a)(v)

F2.4.1 CONTAINER INSPECTIONS AND REMEDIAL REQUIREMENTS

F2.4.1.1 CONTAINER – INSPECTIONS

Containers or drums in waste staging and storage areas are inspected each operating day (i.e., Monday – Friday, except holidays) in all areas or rooms of the TSD Facility per the checklists in appendix F1 (Inspection Checklists). Containers and drums are checked for leaks, spills, accumulation of liquids in sumps, deterioration caused by corrosion, or other factors. The aisle spacing and maximum capacities of the areas or rooms is also checked to ensure unobstructed movement of personnel, handling equipment, and spill control or fire fighting equipment as required. The labels on the containers and drums are checked to ensure visibility, legibility, compatibility with storage area and other wastes, and storage dates as required by regulation.

All areas or rooms of the TSD Facility are inspected weekly as per the checklists in appendix F1 (Inspection Checklists). These inspections look for deterioration of the secondary containment system, cracks in the chemically-resistant coating of the floor and the foundations, or deterioration of the coating and/or sealants, and for dirt or other materials preventing inspection of protective coatings or foundations.

F2.4.1.2 CONTAINER – CORRECTIVE ACTIONS

If a container is found to be damaged, deteriorated, or leaking, it will immediately be placed in an overpack/salvage drum Any leaked or spilled waste will immediately be cleaned up as set forth in Section G (Contingency Plan). Labeling, aisle spacing and compatibility issues will be corrected immediately. Container dates more than 270 days from login date will be noted in the record to alert the TSD Facility that the 1 year storage limit is approaching.

Problems with secondary containments such as cracks or deteriorated sealers will be submitted for repair within 5 working days from entry on the inspection checklist, and repairs will be completed within 90 days from the date the problem was noted on the Inspection Checklist. Repairs not completed within 90 days will be noted in the Incident Record. However, if a problem poses an immediate threat to human health or the environment, the area will be isolated from waste activity until the repair is made. Examples of this type of problem are structural cracks in the concrete that are greater than 0.01 inches wide and a breach of secondary containment due to seismic activity.

Spilled dangerous wastes collected in blind sumps and grate-covered trenches are removed immediately upon detection.

F2.4.2 TANK SYSTEM INSPECTIONS, ASSESSMENTS, AND CORRECTIVE ACTIONS

WAC 173-303-640(6), (7); -806(4)(a)(v)

F2.4.2.1 TANK SYSTEMS – INSPECTIONS

WAC 173-303-640(6); -806(4)(a)(v)

The tank area, room 124, is inspected daily for leaks from all piping, hoses, and hose connections; and the tank level indicator panel is monitored for proper operating indications. The secondary containment system is inspected daily for evidence of deterioration and/or

releases of dangerous waste. The piping and tank structures are inspected daily for corrosion, and the tank foundations are checked daily for structural integrity. In this case, daily includes weekends and holidays as long as the tank in question contains waste.

F2.4.2.2 TANK SYSTEMS – INTEGRITY ASSESSMENTS
WAC 173-303-640(2), (3); -806(4)(a)(v)

All active tanks and ancillary equipment will undergo an internal and external integrity inspection every five years. The tanks and all equipment will be evaluated for corrosion, erosion, cracks, leaks, pitting, and wall thinning. Results of the integrity assessment are reported for each individual tank and are certified by an independent, qualified, registered Professional Engineer (PE). The inspection will be performed in compliance with OSHA requirements. If the independent assessment indicates that a tank requires modifications or repair, the tank may continue to be operated if the certifying engineer grants a conditional certification until it can be upgraded as required before a full certification is issued. If the conditional certification requires special operating conditions and/or a repair schedule, the tank will be operated and repaired in compliance with the conditions and schedule. If any conditions or the repair schedule cannot be met, Ecology will be notified and the tank will be taken out of service until the conditions and repair schedule can be met. The certified assessment report and accompanying certification is maintained at the TSD Facility, see Appendix D9 for details. Tank Integrity schedule is located in Appendix F2 (Inspection Schedule).

F2.4.2.3 TANK SYSTEMS – CORRECTIVE ACTIONS
WAC 173-303-640(7); -806(4)(a)(v)

Should leakage or spillage from the tank system occur because of substandard conditions as described in WAC 173-303-640 (7), tank system operations will cease immediately and all visible releases to the environment will be contained. Removal of waste from the tank system or secondary containment system will take place within 24 hours. Notification and reporting procedures are discussed in Section G (Contingency Plan).

Problems with secondary containments such as cracks or deteriorated sealers will be submitted for repair within 5 working days from entry on the inspection checklist, and repairs will be completed within 90 days from the date the problem was noted on the Inspection Checklist. Repairs not completed within 90 days will be noted in the Incident Record. However, if a problem poses an immediate threat to human health or the environment, the area will be isolated from waste activity until the repair is made. For major repairs, certification must be submitted to the department within seven days after returning the tank system to use per –640(7). Examples of this type of problem are structural cracks in the concrete that are greater than 0.01 inches wide and a breach of secondary containment due to seismic activity.

Should the independent assessment indicate that the tank requires modifications or repair; the tanks will be upgraded as required before a certification is issued and Ecology notified.

If leakage or spillage from the tank system is due to an error or accident during tank operations such as filling, recirculating/sampling, or draining, the spill will be cleaned up as set forth in

Section G (Contingency Plan), the associated procedure will be reviewed and updated if required, and personnel training will be implemented to prevent recurrence of the incident.

F2.5 STORAGE OF IGNITABLE OR REACTIVE WASTES

WAC 173-303-395(1)(d); -806(4)(a)(v)

The Dangerous Waste Program Manager will inspect all areas where ignitable or reactive wastes are stored at least annually. The Dangerous Waste Program Manager will either be familiar with the International Fire Code or the inspection will be carried out in the presence of a professional individual who is familiar with the International Fire Code.

The TSD Facility Annual Inspection Checklist will contain the date and time of inspection, the name of the inspector and, if present, the name of the individual familiar with the Uniform Fire Code, a notation of the observations made, and any remedial actions which were taken as a result of the inspection.

Problems discovered during this inspection will be submitted for repair within 5 working days from entry on the inspection checklist, and repairs will be completed within 90 days from the date the problem was noted on the inspection checklist. Repairs not completed within 90 days will be noted in the Incident Record. However, if a problem poses an immediate threat to human health or the environment, the area will be isolated from waste activity until the repair is made. Also, repairs will meet schedules required by the inspector familiar with the Uniform Fire Code if those schedules are more aggressive than outlined above.

F2.6 AIR EMISSIONS CONTROL AND DETECTION – INSPECTIONS, MONITORING AND CORRECTIVE ACTIONS

WAC 173-303-690; -691; -692; -806(4)(a)(v)

F2.6.1 PROCESS VENTS

WAC 173-303-690; -806(4)(a)(v)

The intermediate and exhaust sample ports will be sampled for VOC using Method 21-compliant test equipment monthly to ensure the exhaust air VOC levels remain below 500 ppm.

F2.6.2 EQUIPMENT LEAKS

WAC 173-303-691; -806(4)(a)(v)

Section D, appendix D11 (Subpart BB Equipment Details) contains Subpart BB equipment descriptions, locations, details, and pictures of each component in-situ.

The method of compliance with the standards in 40 CFR 264.1052 through 1059 for all equipment at the TSD Facility is met through monthly monitoring using 40 CFR Part 60 Method 21-compliant monitoring equipment, and documented in the operating record pursuant to WAC 173-303-691(2) and 40 CFR 264.1064(b)(1)(vi).

F2.6.3 TANKS AND CONTAINERS
WAC 173-303-692; 806(4)(a)(v)

A qualified Waste Handler or the Dangerous Waste Program Manager will inspect all dangerous waste storage tanks and containers daily.

The TSD Facility Inspection Checklist will contain the date and time of inspection, the name of the inspector and, and a notation of the observations made. Any remedial actions which were taken as a result of the inspection will be entered into the Discrepancy Log.

All tank closure devices including pressure-vacuum relief devices will be inspected annually to ensure each device is free from cracks, gaps, damaged seals and gaskets, broken or missing hatches, or any other defect.

All containers required to meet container level 1 and 2 controls will meet all applicable US Department of Transportation regulations, will be managed as set forth in Section D (Process Information), and will be visually inspected at the time they are accepted at the TSD Facility. The visual inspection will consist of a check of the container and its cover and closure devices for visible cracks, holes, gaps or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position.

F3. PREPAREDNESS AND PREVENTION REQUIREMENTS
WAC 173-303-340: -806(4)(a)(vi)

F3.1 EQUIPMENT REQUIREMENTS
WAC 173-303-340(1) and (2); -806(4)(a)(vi)

Details on emergency equipment locations are provided in Section G, Contingency Plan, appendix G5.

F3.1.1 INTERNAL COMMUNICATIONS

Personnel working within the TSD Facility are in direct communication with on premise supervisors, technician handlers, or leaders. The tank farm area has a leak detection monitoring system, and throughout the TSD Facility there are fire alarm boxes, an automatic sprinkler system, and automatic smoke detection that will summons the Security/Fire Department.

F3.1.2 EXTERNAL COMMUNICATIONS

A phone system is readily available in the office spaces and at key locations throughout the storage and warehouse areas. The phone system has quick access to the Security/Fire Department as well as outside emergency services.

Activation of the alarm boxes at any manual station, automatic sprinkler system, or automatic smoke detector within the TSD Facility causes an activation of the Region Fire Department fire alarm system.

F3.1.3 EMERGENCY EQUIPMENT

A fully equipped spill response storage room is located in the TSD Facility. For a listing of spill response equipment stocked at the TSD Facility, refer to Section G (Contingency Plan).

A fully equipped secondary emergency response van is located within half a mile of the TSD Facility at the Region Fire Department. Refer to Figure F3-1.

F3.1.4 WATER FOR FIRE CONTROL

The existing 10-inch diameter water main pipe along Prichard Street serves as a major water source for Building 1051. A 10-inch ductile iron wet tap was connected to the existing 10-inch main pipe near the intersection of Gadberry and Prichard Street. This maintains the loop system in the area and provides appropriate fire flows into Building 1051.

The fire flow requirement is approximately 2,000 gpm. To meet this requirement, a 10-inch line branches off from the 10-inch main line at Gadberry Street and runs through a water vault to the fire sprinkler riser in room 135 at the southwest corner of the building. A double-check valve backflow prevention assembly is provided in the water vault.

There is a 750-gpm hose allowance in the water main for outside hose streams beyond the capacity of the double-check valve assembly at the vault. The available water for fire sprinklers is 1,388 gpm. A 40-psi fire pump capable of pumping 1,500 gpm is located in room 135 and assists in meeting the sprinkler system demand if a large number of heads are activated.

Both wet and dry sprinkler systems are located throughout the TSD Facility. With the exception of the 'Reactive When Wet' storage area, all interior storage areas are serviced by wet pipe sprinkler systems. All exterior canopied areas are serviced by dry pipe sprinkler systems. The 'Reactive When Wet' storage area (room 131) is not serviced with an automatic sprinkler system. One copper powder extinguisher is located in the Shipping area (room 140) across the entrance to the 'Reactive When Wet' storage area next to the Used Oil area (room 137), and one copper powder fire extinguisher is located in the Receiving area (room 123) near the HW Tank storage srea. Dry chemical 10A-80BC extinguishers are strategically placed throughout the complex and are labeled with appropriate markings. All emergency equipment has easy access. See Section G (Contingency Plan) for the location of fire suppression systems.

Sprinklers are provided in the pallet storage racks in the two flammable and combustible storage rooms 134 and 136. The storage racks have sprinklers installed at each shelf level. In addition to the rack sprinklers, intermediate temperature heads are installed in the ceiling. See Part A, Attachment B (TSD Facility General Layout Drawing) for room number designations.

Fire hydrants are located north, east, and south of the TSD Facility. A fire hydrant is located approximately 90 feet north of the TSD Facility on the east side of Bradley Road between Building 950 and Building 951. A second hydrant is located on the fence line along the east side of the TSD Facility 60 feet north of Gadberry Street. The third hydrant is located on the south side of Gadberry Street, 60 feet east of Bradley Road near the corner of Building 824. All three hydrants are within 100 feet of the TSD Facility.

The fire suppression system standpipe and all valves and gauges are contained in a locked room accessible only by Region Fire Department personnel and maintenance contractor personnel. The alarm system and system pressure are tested monthly, the fire extinguishers are also inspected monthly and the entire fire suppression system is inspected, tested and flushed annually. Fire suppression system and fire extinguisher **inspections** are performed by the Region Fire Department and contractor support personnel. Inspection records are held by Keyport's Safety Department and the Base Operating Support Contractor and are available upon request. Fire system **testing and flushing** is performed by a maintenance contractor. Fire extinguishers are checked weekly by TSD Facility personnel to ensure they are unobscured and that the monthly inspection by a Region Fire Department inspector has taken place as required.

F3.2 AISLE SPACE REQUIREMENTS

WAC 173-303-340(3); -806(4)(a)(vi)

The building is designed to allow unobstructed movement of emergency vehicles, fire control, and spill response equipment with aisles at least 16 feet wide and 12-foot roll-up doors. Clearly marked walkways and forklift paths that are 16 feet wide can accommodate movement of personnel and equipment. All receiving and staging areas are clearly marked to ensure adequate aisle space is maintained throughout. A minimum of 30 inches of separation is maintained between rows of drums with rows not being more than two drums wide. All exits are marked with readily visible lighted signs. No doors are less than 3 feet in width.

Figure F3-1.
NUWC Location Map

F4. PREVENTATIVE PROCEDURES, STRUCTURES, AND EQUIPMENT

WAC 173-303-806(4)(a)(viii)

F4.1 PREVENTION OF HAZARDS & CONTAINMENT OF SPILLS DURING LOADING/UNLOADING OPERATIONS

All container movements and loading/unloading operations at the TSD Facility are accomplished by use of electric, counterbalanced, OSHA-approved forklift trucks. The lift trucks are battery powered and EE rated for use in hazardous locations. Each forklift has a safety cage for operator protection, provides a load capacity of 4,000 pounds, and is counterweighted to help reduce the possibility of spills or accidents during container handling operations.

Two truck-loading docks located at the shipping dock area at the south end of the TSD Facility are equipped with adjustable dock levelers, which allow the ramp to be adjusted to provide safe access to any truck deck height. The dock levelers provide forklifts with smoother access to the trucks, reducing the potential of accidents/spills during loading and unloading operations.

Spill containment is provided in all loading/unloading areas by means of grate-covered trench drains and blind sumps. Surfaces in these areas are sloped to provide drainage into the trenches that drain to blind sumps. The two blind sumps at the truck docks are equipped with level alarms that are activated as waste accumulates in the sump.

Truck loading/unloading areas are inspected daily for evidence of deterioration and/or releases of dangerous waste, and tank truck loading/unloading pumps, piping, manifolds, connections and hoses are checked before use. Truck loading/unloading spill containment trenches and sumps are inspected weekly for cracks or deteriorated sealers. Observations made during these inspections will be noted on the Inspection Checklist, and entered into the Discrepancy Log if needed.

Spilled dangerous wastes discovered on the sealed surface or in spill containment trenches and sumps of the truck loading/unloading area are removed immediately upon detection.

Problems with the loading/unloading areas will be submitted for repair within 5 working days from entry on the inspection checklist, and repairs will be completed within 90 days from the date the problem was noted on the Inspection Checklist. Repairs not completed within 90 days will be noted in the Incident Record. However, if a problem poses an immediate threat to human health or the environment, the area will be isolated from waste activity until the repair is made. Examples of this type of problem are leaking piping or structural cracks in the concrete that are greater than 0.01 inches wide and a breach of spill containment due to seismic activity.

F4.2 RUN-OFF PREVENTION

The prevention of run-off from dangerous waste handling areas to other areas of the TSD Facility or environment is primarily through spill containment consisting of trench drains, blind sumps, and secondary containment. The entire TSD Facility is roofed which eliminates stormwater from entering the interior trench drains. Minimal stormwater entering the drains in

the north and east canopied areas flows to blind sumps that are alarmed and pumped when required. All waste handling and storage areas within the facility are equipped with secondary containment as required by the quantities handled or stored. All exits from the dangerous waste handling areas are constructed with grate-covered trenches to prevent run-off from those areas.

A second type of containment is for fire flow, which consists of five concrete basins, totaling approximately 7,000 cubic feet in volume, located along the west side of the building. Drainage is piped to the containments via area drains. The basins are, in turn, drained by automatic valve. During normal operation, the valves are open and drain stormwater to the storm systems. In the event of a fire, valves close automatically and fire flow is contained. The fire flow containment basins are sized to provide segregated fire flow containment of 20 minutes of fire flow combined with an excess internal spill.

F4.3 PREVENTION OF CONTAMINATION OF WATER SUPPLIES

The TSD Facility is over 500 feet from the nearest well head.

Contamination of ground water is prevented by providing secondary containment throughout the TSD Facility and by operational procedures. All tanks and auxiliary equipment are located above ground.

In addition, the fire flow containment has flexible membrane liners installed beneath the concrete basins. The precast concrete trench drains and sumps below both loading stations at the shipping dock also have such liners. All individual storage area containment surfaces and fire flow containment basins have water stops between concrete slabs, and an appropriate epoxy or polyester coating, or sealer. All area containment surfaces and fire flow containment surfaces are checked daily for cracks or damage.

The liner and epoxy coating add an extra level of protection against any leakage.

F4.4 MITIGATION OF EQUIPMENT FAILURE AND POWER OUTAGE

In order to mitigate the potential for equipment failure, items such as pumps, fire sprinkler and alarm systems, storage and processing equipment, communications equipment, emergency generators, and building systems are inspected and maintained by maintenance personnel on a regular schedule as specified in this inspection plan.

Emergency exit lights are checked weekly for five minutes as described in the weekly inspection log directions. Emergency lighting is tested monthly for thirty minutes as described in the monthly inspection log directions. Emergency lighting is tested monthly as required by OSHA regulations, because weekly load testing would severely shorten equipment life.

F4.5 PERSONAL PROTECTION EQUIPMENT

Employees are formally trained as outlined in Section H (Personnel Training), before they are

permitted to work independently. Contractors and subcontractors attend a building walk-through directed by the Dangerous Waste Program Manager or Alternate Dangerous Waste Program Manager during which they receive site-specific training that outlines the hazards associated with the specific site they will be working in, and general building information such as where particular wastes are stored, how to report any container found leaking, an explanation of building alarms, and evacuation routes and muster points. Upon completion of the walk-through, the person signs a training log maintained at the TSD Facility.

Work practices are instituted, and the Safety Branch maintains a website that identifies PPE requirements for every process performed at the TSD Facility. Selection of the appropriate PPE is a process which must take into consideration a variety of factors. Key factors involved in this process are: identification of the hazards or suspected hazards; their routes of potential hazard to employees (inhalation, skin absorption, ingestion, and eye or skin contact); and the performance of the PPE material (any seams) in providing a barrier to these hazards. The amount of protection provided by PPE is material-hazard specific.

As detailed in Section H, all HazWaste Handlers receive an initial 40 hours of training that includes proper usage of PPE; their skills are updated annually with 8 hours of instruction including PPE utilization.

HazWaste Handlers are assigned their own respirators, coveralls, rubber boots, hard hats, chemical-resistant steel toe and shank boots, and raingear; each HazWaste Handler also has a positive pressure, air-fed hood designated for their use. All PPE is inspected and maintained according to the inspection schedule provided in appendix F2 (Inspection Schedule). In the event of a spill, the Navy On-Scene Coordinator (NOSC) specifies whether Level A, B, C, or D protection is necessary. Gloves, plastic booties, and Tyvek clothing are provided on an incident/operational basis.

On a routine basis, dangerous waste is packaged in containers, lids are tightened/secured, and labeled at the point of generation and transferred to the TSD Facility; proper PPE is worn while transferring these containers. During tank truck operations, rubber gloves, Tyvek suit, face shield, and booties/rubber boots are used.

Emergency eye washes and showers are inspected and flushed weekly, and signed/dated by the inspector on an inspection card attached to the station.

The TSD Facility does not supply first aid kits onsite. First aid kits have been found to be a risk because they encourage untrained personnel to treat their own injuries and not report them as required. By requiring personnel to use the trained emergency medical personnel and equipment available at the NBK Keyport Fire Station within ½ mile (see figure F3-1), the Navy can ensure all injuries are reported and treated properly by trained personnel in a controlled setting.

F5. PREVENTION OF REACTION OF IGNITABLE, REACTIVE, AND/OR INCOMPATIBLE WASTES

WAC 173-303-395(1)(a),(b) & (c); -630(9)(a) and (b); -640(9) & (10); -806(4)(a)(ix), (b)(v) and (c)(x)

F5.1 PRECAUTIONS TO PREVENT IGNITION OR REACTION OF IGNITABLE OR REACTIVE WASTES

WAC 173-303-395(1)(a),(b) & (c); -806(4)(a)(ix)

Dangerous waste is segregated and protected from sources of ignition or reaction. Ignitable wastes are segregated and stored in special flammable storage areas. Flammable storage areas are in compliance with National Fire Protection Association's buffer zone requirements of *The NFPA-30 "Flammable and Combustible Liquids Code" of 1990*. Facility compliance of NFPA-30 requirements are detailed in Section D (Process Information). Reactive wastes are segregated during storage and kept isolated from incompatible materials. Incompatible wastes are segregated as described in Section D (Process Information). Only compatible wastes are consolidated for storage and transportation. Section C (Waste Analysis) further describes waste identification. Section D (Process Information) describes handling, storage, and treatment procedures, and precautions to prevent ignition or reaction of ignitable or reactive waste. Documentation maintained in compliance with requirements in Sections C (Waste Analysis) and D (Process Information) of this application meet the requirements in WAC 173-303-395(1)(c).

No open flames, incineration, or smoking is permitted within the TSD Facility. "No Smoking" signs are conspicuously located at every entrance in the TSD Facility. The "No Smoking" signs are visible at a distance of 50 feet. Hazardous material warning signs identifying hazards associated with a particular material are located conspicuously at both outside and inside entrances to each segregated area. Welding, cutting, and similar spark-producing operations are not permitted within the TSD Facility unless permission is obtained from the Dangerous Waste Program Manager and the DOD Region Fire Department (burn permit). Mechanical room hot surfaces are shielded by thermal insulation. Frictional or radiant heat, if present, may be located in the mechanical room which is isolated from the warehouse area. Sparks are prevented by spark resistant equipment and tools. Forklifts are battery powered, explosive rated, and have special spark resistant features for barrel handling. Facility metallic structures are grounded through an extensive lightning protection system. All electrical equipment installed in the operations areas is rated explosion-proof. All equipment such as tanks, machinery, and piping where an ignitable mixture may be present, are connected to a ground. Precautions to prevent spontaneous ignition are further described in Section B (Facility Description and General Provisions) and Section C (Waste Analysis).

F5.2 PRECAUTIONS FOR HANDLING IGNITABLE OR REACTIVE WASTE AND MIXING OF INCOMPATIBLE WASTE

WAC 173-303-395(1)(a),(b) & (c); -630(9)(a) and (b); -640(9) & (10); -806(4)(a)(ix), (b)(v) and (c)(x)

There will not be any mixture or commingling of incompatible wastes at the TSD Facility. Only compatible wastes are consolidated for storage and transportation. Facility design, waste

inspection and analysis, treatment and storage procedures, personnel training, and inspections all contribute to precautions for handling ignitable or reactive waste and the prevention of accidental mixing of incompatible waste. Some of these measures include:

- All areas of the TSD Facility are segregated by means of fire rated walls and doors.
- A continuous ventilation system for each storage compartment provides six air changes per hour.
- Fume hoods are located in areas of toxic material handling.
- Flammable 1A storage area has explosion resistant doors, blast relief wall panels and vents, in-rack sprinklers, and 4-hour-rated walls.
- All switches, motors, and equipment of the HVAC system are explosion proof.
- All waste storage areas have 4-hour-rated fire walls.
- Annual inspections by the Dangerous Waste Program Manager and/or Federal Fire Marshal is conducted where ignitable or reactive waste is stored. Refer to Section F-2 (Inspection Plan).
- Containers and tanks are labeled per local, state, and Federal regulations and adequately identify major risks associated with the contents for employees, emergency response personnel, and the police.
- Dangerous waste is not placed in an unwashed container that previously held an incompatible waste or material.

SECTION F

APPENDIX F1

INSPECTION CHECKLISTS

Includes:

- Daily
- Weekly
- Monthly
- Annual
- MHE
- Discrepancy Log

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Building 1051
Daily Inspection

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
1. Facility Access	Unobscured access to facility for emergency vehicles.			
2. Security Fence	Fence free of damage. Gates locked or in active use.			
3. Warning Signs	Warning Signs attached to fence and main entrance.			
4. Container Storage Areas	No leaks, spills, sumps dry, containers free of damage or excessive rust, container lids secured.			
5. Container Marking and Labels	Container markers and hazard label positioned for inspection, legible and have start date.			
6. Incompatible Waste	All waste stored in appropriate storage areas.			
7. Container Storage	Containers properly stacked, with 30” of aisle space. Number of containers does not exceed maximum capacity.			

DAILY INSPECTION

1. Ensure that all doors outside the building leading into the facility are clear of obstructions (i.e. vehicles blocking entrance, stored material). Ensure all entryways inside the building are clear of obstructions (nothing blocking entry inside the building at each doorway, i.e. material storage, parked forklifts…etc).

2. Check the fence surrounding the facility to ensure that there is no damage and that all gates are unobstructed on both sides and closed and locked if not in use.

3. Ensure 'Danger – unauthorized personnel keep out' warning signs are attached to the fence from any approach to the fenced yard, on every fence gate, and on any unfenced entry into the building, are readable at 25 ft., and are unobstructed.

4. Check all drum storage areas to ensure there are no leaking containers, all containers are free from excessive rust or damage (i.e. severe dents or cracks) and lids are secured. Check sumps in each drum storage area to ensure they are dry.

5. Check all drums in storage areas to ensure each drum is marked and labeled correctly. Ensure all markings are legible and have a start date. Ensure each drum in storage is positioned so marking and label are easily viewed for inspection.

6. Ensure all drums in storage are stored in the correct storage area.

7. Ensure there is at least a 30" aisle space between all rows of stored drums. Ensure total drum storage in each storage area does not exceed the maximum storage capacity per table D1-1.

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
8. Waste Awaiting Designation	All Waste Awaiting Designation has been logged in and is properly labeled.			
9. Interior Sumps	All sumps and secondary containment areas free of spills, leaks and accumulated liquids.			
10. Tanks	Tank and ancillary equipment free of any signs of leaks or spills, free of any signs of compromise or loss of integrity.			
11. Tank Level Gauges	Operating properly.			
12. Clutter	Area clean of clutter.			
13. Processing Equipment	Fluorescent Bulb Crusher, Paint Consolidation & Can Crusher, Drum Deheader, and Drum Washer.			
14. Monitoring Equipment	Fire Alarm, Trouble Indicator, Lighting & Alarm Panel, Beacon 200 Gas Monitor, Cyanide Alarm, Sulfide Alarm and Exhaust Fan Control Panel.			

Date Inspected: _____/_____/_____ **MM DD YY** **Time of Inspection:**_____	**Inspected by: Print Name**	**Inspected by: Sign Name**	**Supervisor Signature**

8. Check that all Waste Awaiting Designation has been logged in and is properly labeled.

9. Check all sumps and secondary containments inside the building to ensure they are dry.

10. Check all active waste tanks and ancillary equipment (piping, valves, pumps and connections) for any evidence of leaks or spills. Check for liquid on the floor or stains around pump and piping connections. Check integrity of active waste tanks (peeling paint, cracks, corrosion, pitting, tank supports).

11. Ensure all active waste tank gauges are in working order. Check that power is applied to the Tank Farm Level Panel. Verify each active waste tank level indicator is operational. Check each active waste tank tape measure level indicator is operational.

12. Ensure floor space throughout the building is free of clutter that restricts traffic or processes or access to equipment or storage areas.

13. Ensure equipment is free of cracks, leaks, excessive rust, corrosion, damage, or other substandard condition.

14. Ensure power light is ‘on’ to the Fire Alarm and Trouble Indicator. Verify all lights are ‘out’ on the Lighting and Alarm Panel. Ensure the Beacon 200 Gas Monitor is operating (all alarm lights and fail light are off, pilot light is on, readouts on lines 1 and 2 both 0% CH4).

Building 1051
Daily (Before Use) Inspection

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
15. Waste Load/ unload areas	No signs of leaks, spills, or other releases. Exterior north and south sumps only contain stormwater below maximum level line.			
16. Tank Area Pumps, Hoses and Piping	Free of leaks and operational.			
17. Forklifts	MHE inspection passed.			
18. VAC Trucks	Operational.			

Date Inspected: _____/_____/_____ MM DD YY Time of Inspection:_____	Inspected by: Print Name	Inspected by: Sign Name	Supervisor Signature

DAILY (BEFORE USE) INSPECTION

15. Check to ensure that trenches and sumps in the north tank truck shipping/receiving area, and south shipping dock contain only clean stormwater below the black maximum water level line. Check for liquid or stains on the floors, trenches and sumps. From 1 October through 31 March both sumps must be pumped down to the minimum pump suction level every thirty (30) days regardless of actual level.

16. Ensure pumps, hoses, pipes, valves, joints, and caps used to fill, drain and recirculate storage tank contents are free of excessive wear, physical damage or leaks.

17. Ensure Forklift pre-inspection has been completed pursuant to the NAVSUP Publication 538 Second Revision MHE Inspection Form in this appendix.

18. Ensure pumps, hoses, pipes, valves, joints, and caps are free of excessive wear, physical damage or leaks.

Fill in the date and time of inspection, print and sign your name.
Submit inspection sheet to supervisor to review and sign.

Building 1051
Weekly Inspection

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
1. Emergency Response Equipment	Adequate condition and minimum supply.			
2. Emergency Communication Equipment	Working.			
3. EXIT Lights	Functioning.			
4. Emergency Showers & Eye Wash	Check if weekly inspection done.			
5. Fire Extinguishers	Unobscured and monthly inspection done.			
6. Secondary Containment	Tank and Container storage areas: Free of cracks, gaps and deterioration, and of dirt and debris.			
7. Building Systems	Air System, Water pipes and Hose Connections not leaking.			
8. Vehicles	Operational.			
9. Waste load/ unload areas	Free of cracks, gaps and deterioration.			

Date Inspected: _____/_____/_____ **MM DD YY** **Time of Inspection:**_____	**Inspected by: Print Name**	**Inspected by: Sign Name**	**Supervisor Signature**

WEEKLY INSPECTION

1. Check for adequate supply of absorbent pads, absorbent material, protective clothing, air fed hoods, overpack drums and spill kits.

2. Ensure that building Emergency Communications are in working order (phones located in Receiving and Drum Wash Room, Intercom system, Cyanide Sensor and Sulfide Sensor.

3. Check that all EXIT lights are 'on'.

4. Verify that all 6 eye wash stations and showers have been inspected and were flushed within the previous 7 days by checking each inspection card date. Ensure there are no obstructions blocking access to each eye wash station or shower.

5. Verify that all fire extinguishers have been inspected during the previous month by checking each inspection card date. Ensure there are no obstructions blocking access to each fire extinguisher.

6. Check that all secondary containment floor areas and side walls are free of cracks, gaps or deterioration, and that the entire area is free of dirt and debris preventing inspection of the protective coatings. Note any cracks or gaps greater than 0.01 inches in width and any other significant deterioration such as areas of damaged coating on the inspection form. Specifically inspect each sump to ensure it is in good condition.

7. Check all water pipes, air pipes and hose connections for water leaks or escaping air.

8. Verify that all vehicles start.

9. Check to ensure floor areas, trenches and sumps in the north receiving and tank truck load/unload and south shipping dock are free of cracks, gaps, and surface/seal deterioration, and that the entire areas are free of dirt and debris preventing inspection of the protective coatings. Note any cracks or gaps greater than 0.01 inches in width and any other significant deterioration such as areas of damaged coating on the inspection form. Specifically inspect each sump to ensure it is in good condition.

Fill in the date and time of inspection, print your name, sign your name.
Supervisor to review and sign inspection sheet.

Building 1051
Monthly Inspection

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
1. Exit signs and Emergency Lights	Operational.			
2. Loading Docks	Operational.			
3. Exhaust Hoods	Operational.			
4. Roll Up Doors	Emergency Roll Up Operational.			
5. Weigh Scales	Within Calibration.			
6. Breathing Air	Operational.			
7. Forklift Batteries	Battery Water Level.			
8. Tank Equipment Air Emissions	All Equipment meets air emission requirements in Pt B Permit Section F-2d (4) (b).			

Date Inspected: _____/_____/_____ MM DD YY Time of Inspection:_____	Inspected by: Print Name	Inspected by: Sign Name	Supervisor Signature

MONTHLY INSPECTION

1. Turn power off to EXIT lights (Electrical Panel 4LP1, circuit breaker #41) and EMERGENCY lights (same Electrical Panel, circuit breaker #39) and ensure that all EXIT lights and EMERGENCY lights stay on for at least 30 seconds. Turn the power back on.

2. Check that both loading dock ramps are operational.

3. Check that all exhaust hoods are operational by starting exhaust fan and ensuring vacuum is present at intake.

4. Check each power roll up door 'emergency open' is operational.

5. Check each drum weigh scale (2 ea.) by placing the 225 lb. test drum on each scale. The scale should indicate 225 +/- 3 lbs.

6. Turn Breathing Air system on (Electrical Panel 2PP1, circuit breaker #7). Start breathing air compressor. Verify breathing air compressor and alarms are functional. Verify that there are no air leaks throughout the building. Turn Breathing Air system off and bleed all air from the system.

7. Check battery water level of both electric forklifts. Top off water level if needed.

8. Perform VOC Air Emissions check, using Method 21 test equipment and procedure, for active waste storage tanks 101 thru 106 equipment. See Pt B Permit Section D, Appendix D-11 (Subpart BB Equipment Details) for equipment listing and locations.

Fill in the date and time of inspection, print your name, sign your name.
Supervisor to review and sign inspection sheet.

Building 1051
Annual Inspection

Inspect	Description	Satisfactory (Initial)	Not Satisfactory (Initial) Enter on Discrepancy Log	Entered on Discrepancy Log (Date)
1. Exit signs and Emergency Lights	Operational.			
2. Fire Hydrants	Annual service check completed.			
3. Fire Code Building Inspection	Annual Fire Code Inspection completed.			
4. Tanks	Pop-off vents are in good working order.			
5. Tank Integrity Assessment	Tank integrity testing has been completed within the last 5 years. Next due date:_____/_____/_____ MM DD YY			

Date Inspected: _____/_____/_____ **MM DD YY** **Time of Inspection:**_____	**Inspected by: Print Name**	**Inspected by: Sign Name**	**Supervisor Signature**

ANNUAL INSPECTION

1. Turn power off to EXIT lights (Electrical Panel 4LP1, circuit breaker #41) and EMERGENCY lights (same Electrical Panel, circuit breaker #39) and ensure that all EXIT lights and EMERGENCY lights stay on for at least 90 minutes. Turn the power back on.

2. Verify that the annual Fire Hydrant check has been completed by the Fire Department.

3. Verify that the building annual Fire Code inspection has been completed by the Fire Department.

4. Check and verify that roof top pop-off vents are free of any defects (cracks, gaps, damaged seals and gaskets, missing bolts). Perform VOC Air Emissions check, using Method 21 test equipment and procedure, for active waste storage tanks 101 thru 106 vents. See Pt B Permit Section D, Appendix D-13 (Subpart CC Equipment Details) for equipment listing and locations.

5. Verify that all active waste storage tanks have an integrity test completed within that past 5 yrs.

Fill in the date and time of inspection, print your name, sign your name.
Supervisor to review and sign inspection sheet.

NAVSUP PUBLICATION 538 SIXTH REVISION
MHE INSPECTION FORM

DATE	REGISTRATION NO. (USN)	MHE CLASS (see table 4-1)

POWERED MHE TO BE CHECKED DAILY BY OPERATOR

NOTES

1. USE THIS FORM WHEN INSPECTING MHE BEFORE AND AFTER OPERATION. MARK APPROPRIATE COLUNMS TO INDICATE SATISFACTORY OR UNSATISFACTORY CONDITIONS.
2. NOT APPLICABLE INSPECTION PROCEDURES MAY BE OBLITERATED FOR THAT PARTICULAR MHE CLASS.
3. IF DEFECTS ARE FOUND, REMOVE MHE FROM SERVICE, NOTIFY IMMEDIATE SUPERVISOR AND RETAIN FORM UNTIL REPAIRS ARE MADE.
4. IF NO DEFECTS ARE FOUND:
   (A) INITIAL OPERATOR: SIGN AND DATE FORM. ATTACH TO MHE.
   (B) LAST OPERATOR: MAINTAIN FORM IN ACCORDANCE WITH LOCAL PROCEDURES.
5. THIS FORM IS NOT AVAILABLE IN THE SUPPLY SYSTEM. REPRODUCTION OF THIS FORM FROM THIS MANUAL IS AUTHORIZED.

SHIFT HOUR-METER READING	
END	
START	
DIFF.	

		START		FINISH		
		SAT	UNSAT	SAT	UNSAT	
1	Tires and Rims					1
2	Engine Oil, Fluid Levels and Belts					2
3	Radiator Coolant Level (check when cool only)					3
4	Battery					4
5	Access Covers					5
6	Fuel System					6
7	Unusual Engine Noises					7
8	Lights					8
9	Horn					9
10	Hoist					10
11	Tilt and Side Shift					11
12	Transmission/Clutch					12
13	Directional Controls					13
14	Brake System					14
15	Gauges/Meters					15
16	Fire Extinguisher (if applicable)					16
17	Operator Restraint System (e.g., Seat Belts)					17
18	Forks					18
19	Fork Positioning Locks and Stops					19
20	Fork Safety Chains					20
21	Overhead Guard and Load Backrest					21
22	Ground Straps/Static Conductive Tires/Wheels					22
23	Structural Cracks/Broken Weldments					23
24	Mandatory Markings					24

ADDITIONAL OPTIONAL (NON-MANDATORY) INSPECTION REQUIREMENTS MAY BE INCLUDED HERE:

AREA	INITIAL OPERATOR'S SIGNATURE	LAST OPERATOR'S SIGNATURE

SEE REVERSE SIDE FOR INSPECTION CRITERIA PROCEDURES

NAVSUP PUBLICATION 538

MHE Inspection Form - Inspection Criteria

1. Tires and Rims. Inspect tires for excessive wear and damage. Remove foreign material from tire treads. Reject tires for illegible or missing markings or labels. Reject pneumatic tires when the tire tread has worn down to the tread wear mark or if fabric is exposed through the sidewall. Inspect the rims for dents, bends, and cracks. Refer to figure 8-7 for examples of solid rubber tire defects and the probable causes.
2. Engine Oil, Fluid Levels and Belts. Check engine oil, hydraulic, transmission and brake fluid levels. If low, add oil/fluid to raise the level to the full mark. Inspect engine belts for cracks, wear, damage, nicks or cuts, and proper tension. Always inspect floor/deck under MHE for any fluid puddles.
3. Radiator Coolant Levels. CAUTION: Do not check radiator coolant level when engine is hot. Check the radiator coolant level, if low, add coolant to the full mark.
4. Battery. Inspect battery cables for damage, cuts and abrasions. Verify cables are securely fastened to connector lugs and are free of corrosion, verdigris, arcing, pitting, exposed conductor material, and loose connections. Electric trucks have color coded battery indicator power band indicating remaining charge level. Charge battery when indicator drops into yellow zone (when under load; e.g., by tilting mast back against stop and check indicator). WARNING: For internal combustion start batteries, do not jump start battery with an eye cell indicator that appears yellow or clear (low fluid level) which may result in rupture.
5. Access Covers. Inspect all access covers (e.g., battery or engine) for loose, missing, broken, or corroded covers. Ensure latches snugly secure covers when fastened.
6. Fuel System. Visually inspect the entire fuel system assembly for any leaks or any abnormal odors. Where accessible, inspect the fuel tank or gas cylinder for leakage, denting, bulging, corrosion, pitting, gouges not exposed to fire, or evidence of rough usage. Valves are protected from physical damage.
7. Unusual Engine Noises. Start engine. Should any unusual noises be noted with the engine running, turn off MHE, reject and discontinue this check.
8. Lights. Check that the headlights, brake lights, and any other installed lights are working. All lights must operate properly for night work.
9. Horn. Depress the horn push button to verify that the horn is operating properly.
10. Hoist and Lowering Control. Raise and lower the lifting assembly to verify the lifting assembly controls operate smoothly. Inspect all hoses for cracked coverings, wear, bulges or leaks. Verify all fittings are free of cracks or leaks. Inspect for loose or binding (i.e., dry/not lubricated, frozen or rusted) chains. Inspect hose and cable reel guards, as applicable, for breaks, bends or chafing.
11. Tilt and Side Shift. Tilt forward and backward to verify the tilt operates smoothly. Operate side shift to verify the carriage moves immediately and smoothly to the left and the right. Verify all hoses are serviceable and that these fittings are free of cracks or leaks. For any additional accessory controls installed on the MHE; verify proper operation with the manufacturer's recommendations.
12. Transmission/Clutch. Verify that the transmission/clutch operates smoothly with no unusual noises. Where applicable, test the neutral start switch on most fuel-powered MHE. Verify that the parking brake is set and that no one is in front of or behind the MHE. A periodic check can be made by attempting to start the engine with the directional control lever in either the forward or reverse position. If the engine starts, the MHE shall be rejected.
13. Directional Controls. Shift directional controls into forward, neutral and reverse directions to verify the MHE operates properly and smoothly. Figure 8-8 shows a typical example of the directional controls. Ensure steering operation functions smoothly.
14. Brake System Check. With the parking brake engaged, attempt to drive MHE forward by applying a moderate amount of power to the MHE and verify that it does not move. Visually inspect that no fluid is leaking from the brake system. Check the service brakes to verify they stop the MHE smoothly and evenly without pulling or binding. Where applicable, check the dead-man brake or travel control disconnect device for proper operation.
15. Gauges/Meters. Where applicable, inspect the following:
    a. Warning Indicators. With the engine running at normal operating temperature, check the oil pressure gauge (figure 8-9) for normal operating pressure. If any warning indicator lights signal a malfunction, the MHE shall be rejected until repaired.
    b. Coolant Temperature Gauge. With the engine running at normal operating temperature, check that the gauge is indicating within the proper indicating range.
    c. Fuel Gauge. Check the fuel gauge for proper reading. On types LP and CN MHE, the mechanical-type fuel gauge may be mounted directly on the gas tank. Dual-fueled MHE shall not be operated unless the gasoline fuel tank is at least 1/4 full. Electric powered types should be in "green" power range.
    d. Voltmeter/Ammeter. With the engine running, check the voltmeter/ammeter to verify that its in the green range when the engine is running at least 550 rpm.
    e. Hourmeter. Verify that the hourmeter (figure 8-10) is registering while the engine is running.
    f. Weight Scales. With forks elevated, and no load, verify that the weight scales read zero. Adjust accordingly.
16. Fire Extinguisher. When equipped, visually inspect the extinguisher cylinder for dents. Check that the gauge is registering in the green (if so equipped) and check that the wire seal has not been broken. Verify periodic checks are current. Check nozzle and hose for defects. Reject extinguisher if not serviceable. Replace rejected extinguishers.
17. Operator Restraint System. If MHE is equipped with an operator restraint system (e.g., seat belt) it shall be inspected to verify that they fully extend out, can be properly secured, and fully retract back. Additionally, they shall not exhibit any evidence of the following discrepancies: (a) nicks or cuts (figure 8-11, view A), (b) frayed webbing (figure 8-11, view B), (c) holes (figure 8-11, view C), and (d) broken or worn retractor (figure 8-11, view D).
18. Forks. Visually examine the forks for surface cracks, including under the heel of the forks. Verify that blade and shank are straight, properly installed, and fork tips are even. Verify that load ratings of forks match MHE load rating. Surface cracks appearing on the forks shall be cause for rejection until forks are repaired or replaced.
19. Fork Positioning Locks/Stops. Verify the fork positioning locks/stops secure each fork in position. Verify forks are securely engaged to the carriage.
20. Fork Safety Chains. Verify the presence and operation of fork safety chains (equipped on units with folding forks) and associated locking pins.
21. Overhead Guards and Load Backrest. Inspect all welds and hardware. Verify that overhead guard, load backrest and hardware is in place and all structural members are secured.
22. Ground Straps or Static Conductive Tires/Wheels. For EE type MHE, verify the presence of two ground straps and that they touch the floor/deck or two conductive tires/wheels. For EX type MHE, verify the presence of two conductive tires/wheels.
23. Structural Cracks/Broken Weldments. Inspect all external weldments for structural cracks or defects. Reject MHE until repaired or replaced.
24. Mandatory Markings. Verify the following is clearly and properly marked: (a) safe working load (SWL) and vehicle weight (VW) on both sides, and except for pallet trucks, in view of operator, (b) operator controls, (c) manufacturer's nameplate/label, (d) accredited laboratory (UL, FM) certification, (e) for tow tractors, the drawbar pull rating (DBP) on both sides and rear, and coupler height on rear, and (f) for ammunition and explosives handling only, the MHE Safety Certification marking (figure 5-9). Reject if the above markings are missing, illegible, expired or incorrect. All other required markings that are rejected shall be recorded on the MHE Inspection Form, but is not a cause for removal from service.

Building 1051
Discrepancy Log

1. Discrepancy from (Check Appropriate Box)	2. Discrepancy Date	3. Discrepancy	4. Action	5. Correction	6. Correction Date
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:
Daily Inspection /_/ Weekly Inspection /_/ Monthly Inspection /_/ Quarterly Inspection /_/ Annual Inspection /_/	____/____/____ MM DD YY				____/____/____ MM DD YY Signature:

DISCREPANCY LOG

1. Check the appropriate box to indicate from which inspection the discrepancy was found.

2. Enter the date of the discrepancy.

3. Describe the discrepancy (i.e. drum lid not secure, tank 104 recirculation line is leaking at valve R-4, EXIT light not working in drum storage site K1051-06).

4. Describe what immediate action was taken (i.e. secured drum lid, tightened bolt at R-4, requested light to be fixed by facilities).

5. Describe what was done to fix the discrepancy at the time of correction (i.e. placed shipping ring and bolt onto the drum lid, tightened 4 bolts at R-4, EXIT light bulb replaced).

6. Enter the date of the discrepancy correction. Supervisor to sign and date that discrepancy is corrected.

SECTION F

APPENDIX F2

INSPECTION SCHEDULE

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TSDF INSPECTION SCHEDULE			
Periodicity	**Inspection**	**Periodicity**	**Inspection**
Daily		**Monthly**	
	Security Fence		Emergency Lights
	Facility Access		Loading Docks
	Warning Signs		Exhaust Hoods
	Container Storage and Staging Areas (container condition and no releases)		Roll Up Doors
	Container Marking and Labels		Weigh Scales
	Incompatible Waste		Breathing Air
	Container Storage and Staging Areas (proper stacking)		Forklift Batteries
	Sumps		Tank Equipment Air Emissions
	Tanks		
	Tank Level Gauges	**Annual**	
	Clutter		Fire Hydrants
	Processing Equipment		Fire Code Building Inspection
	Monitoring Equipment		Tanks (closure devices)
	Waste Load/Unload Area		
Weekly		**Before/After Use**	
	Emergency Response Equipment		MHE
	Emergency Communication		
	EXIT Lights	**Five Years**	
	Emergency Shower and Eye Wash		Tank Integrity Assessment
	Fire Extinguishers		
	Secondary Containment		
	Hydraulic System		
	Vehicles		
	Waste Load/Unload Area		

SECTION G

CONTINGENCY PLAN

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TABLE OF CONTENTS

Section			Page
G1.	General Facility Information		G-1
	G1.1	Facility Name and Location	G-1
	G1.2	Site Plan	G-1
	G1.3	Overview Description of TSD Facility Operations	G-2
G2.	Emergency Coordinators		G-3
G3.	Circumstances Prompting Implementation		G-5
G4.	Emergency Response Procedures		G-8
	G4.1	Incident Response, Assessment and Identification	G-8
	G4.2	Notification	G-11
	G4.3	Containment and Control of Emergencies	G-13
	G4.4	Identification of Dangerous Materials	G-13
	G4.5	Hazard Assessment and Report	G-14
	G4.6	Prevention of Recurrence, Spread of Fires, Explosions or Releases	G-13
	G4.7	Post-Emergency Actions	G-15
G5.	Emergency Equipment		G-15
G6.	Coordination Agreements		G-17
G7.	Evacuation Plan		G-18
G8.	Required Reports		G-18
	G8.1	General Information	G-18
	G8.2	Requirements for Tank Systems	G-19
G9.	Amendment to Contingency Plan		G-20

LIST OF FIGURES

Figure		Page
G2-1	Oil and Hazardous Substance Release Response Organization.....	G-6

LIST OF TABLES

Table		Page
G2-1	Navy Personnel Spill Response Call Back List (Emergency Coordinators)	G - 5
G4-1	NUWC Keyport Release Notification Procedures	G-12
G5-1	TSD Facility Emergency Equipment	G-15

LIST OF APPENDICIES

Appendix

G1 NUWC Location Map
G2 TSD Facility Truck Access Routes
G3 Facility Exit Routes & Fire Flow Containments
G4 TSD Facility Drainage
G5 Emergency Equipment Location
G6 Hazard Evaluation
G7 Release Containment and Control
G8 Memorandum of Agreement between Navy Region Northwest and Naval Undersea Warfare Center Division, Keyport
G9 Mutual Aid Agreement between Navy Region Northwest and Kitsap County Fire Protection Agencies
G10 NRNW Battalion 2 – HazMat Equipment Inventory

G. CONTINGENCY PLAN

G1. GENERAL FACILITY INFORMATION

G1.1 FACILITY NAME AND LOCATION

The NUWC Division Keyport Dangerous Waste Treatment and Storage Facility (TSD Facility), Building 1051, is located on the corner of Gadbery Street and Bradley Road on the Naval Base Kitsap Keyport (NBK Keyport) Installation. NBK Keyport is located in Kitsap County, approximately 15 miles west of Seattle, see appendix G1 (NUWC Location Map) for details.

G1.2 SITE PLAN

The TSD Facility, shown in Part A, attachment B (Facility Drawing), is a one-story pre-cast concrete structure. The length of the building along Bradley Road is approximately 225 feet and its width along Gadberry Street is 165 feet. A 40-foot-wide strip between the west wall of the building and Bradley Road is used for containment sumps, transformer pads, sidewalk and a drainage ditch.

The TSD Facility site is approximately 1½ acres of flat ground located outside of the industrial area on NBK Keyport. The site is paved and controlled by a perimeter security fence. Site features include storm water control and spill and fire flow containment. See appendix G4 (TSD Facility Drainage) for site drainage patterns and appendix G3 for facility exit routes & fire flow containments. Spill containment meets the requirements of Chapter 173-303 WAC and consists of designed secondary containments within the individual waste management rooms and areas.

The TSD Facility contains 44,000 square feet of enclosed and approximately 18,000 square feet of attached exterior covered area. The enclosed structure consists of three basic functional areas:

1. The warehouse, which consists of the tank area, container handling and storage areas, and waste process/treatment areas.

2. Personnel area, comprised of office spaces, laboratory, lunch room, and toilet/shower facilities.

3. Mechanical/storage areas, comprised of a mezzanine level for heating, ventilation and air conditioning equipment, boiler rooms, electrical room, fire protection, and spill response storage.

The exterior covered area consists of truck loading/unloading areas, new drum storage, asbestos storage, metal shredding, drum compaction, battery charging station, equipment and bulk storage. To the east of the Building 1051 is a roof-covered dewatering area. The area is used to dewater uncontaminated stormwater catch basin sludge. The process is described in detail in Section B (Facility Description and General Provisions), paragraph B1.4.

The TSD Facility is constructed of non-combustible and fire-rated materials, and includes segregated, enclosed waste storage and processing areas. All waste storage and handling

areas are equipped with spill containment. Mechanical systems in the TSD Facility include HVAC, fire suppression, and alarms.

G1.3 OVERVIEW DESCRIPTION OF TSD FACILITY OPERATIONS

Industrial activities and processes on NBK Keyport produce a variety of dangerous wastes which are collected at CAAs located within the NBK Keyport fence line and transferred to the TSD Facility for treatment, consolidation, and storage prior to shipment to a permanent disposal site located off-site. The TSD Facility also has the capability to receive wastes from offsite on an 'as needed' basis in accordance with the Dangerous Waste Management Permit. There is no disposal of wastes at or in the TSD Facility.

Dangerous waste operations include storage and treatment in tanks and containers. A list of accepted waste codes at the TSD Facility is included in Part A. The TSD Facility does not accept radioactive, infectious or explosive wastes. Common waste streams managed at the TSD Facility includes but not limited to the following:

- Corrosives (Acids and Caustics)
- Oil, Oily Debris and Oily Wastewater
- Ignitables
- Reactives
- Solids and Sludge
- Fuel Wastes
- Industrial Wastewaters
- PCB Wastes
- Contaminated Debris
- Toxics
- Universal Waste

The TSD Facility operates Monday through Friday except government holidays and during reduced operations as directed by NUWC Division Keyport. During non-operational hours, gates are kept closed and locked and facility-wide outdoor lighting illuminates the facility during low light conditions. Commander Navy Region Northwest (CNRNW or COMNAVREG NW) and Naval Base Kitsap maintain Command Duty Offices at NBK Bangor, maintaining 24 hour duty. Additionally, NUWC Keyport maintains its own duty office onsite at NBK Keyport, which also provides 24 hour monitoring. COMNAVREG NW Dispatch Center located at NBK Bangor is responsible for dispatching NRNW Fire and Emergency Services and Police when an emergency call is received from Keyport. The Regional Dispatch Center sends a group page to appropriate personnel that includes all the Emergency Coordinators at Keyport. See appendix G1 (NBK Keyport Location Map) for the vicinity/location of NBK Keyport in relation to the

general Puget Sound area and appendix G2 (TSD Facility Truck Access Routes) for access routes and traffic patterns from the NBK Keyport main gate to the TSD Facility.

G2. EMERGENCY COORDINATORS

WAC 173-303-350(3)(d); -360(1); -806(4)(a)(vii)

As set forth in the Commander Navy Region Northwest Oil and Hazardous Substance Integrated Contingency Plan (COMNAVREG NW OHS ICP), Commander Navy Region Northwest Fire and Emergency Services (COMNAVREG NW F&ES), sometimes referred to as FedFire, is the first responder to all emergencies including OHS spills, and shall serve as the initial Incident Commander (IC)/Qualified Individual (QI)/Emergency Coordinator (EC), and remain on-scene until the scene is determined safe and spill response IC duties are assigned to a NUWC Division, Keyport Environmental Branch IC, or another COMNAVREG NW OHS ICP designated IC.

At NBK Keyport, the Facility Incident Commander (FIC) is the NUWC Division Keyport Commanding Officer (CO), who has designated, by letter and instruction, Qualified Individuals (QI) to act on his/her behalf as the Incident Commander/Qualified Individual/Emergency Coordinator (EC) in the event of an emergency. The EC is responsible for coordinating emergency response procedures in the event of any fires, explosions, unplanned releases, spills, or other emergency situations occurring at the TSD Facility. The CO has also designated the Environmental Manager as the person responsible for all NUWC Division Keyport environmental affairs. The Environmental Manager and CO have designated a primary Environmental Branch Emergency Coordinator and backups to respond in the event of an OHS emergency at NBK Keyport. See Table G2-1 for a list of Navy personnel emergency coordinators.

COMNAVREG NW has been designated as the Navy On-Scene Coordinator (NOSC) with overall responsibility for coordinating all Navy regional responses to OHS releases. COMNAVREG Fire and Emergency Services crew maintains emergency response capabilities for OHS emergencies at all Naval Base Kitsap installations (Bremerton, Bangor and Keyport) and serves as the first responder and primary Emergency Coordinator for all emergencies at Keyport, including OHS emergencies. COMNAVREG NW maintains an onsite duty station at NBK Keyport and in the event of an emergency, personnel onsite can quickly reach out to other local COMNAVREG NW duty stations for additional resources if needed. COMNAVREG NW maintains a Memorandum of Agreement for OHS spill response operations at NBK Keyport. See appendix G8 (Memorandum of Agreement Spill Response Areas of Responsibility at Naval Base Kitsap Keyport. COMNAVREG NW maintains a memorandum of agreement for mutual aid emergency response (for the furnishing of rescue, fire protection and suppression, handling of hazardous materials and medical services) with Kitsap County Fire and Rescue. See appendix G9 (Mutual Aid Agreement (MAA) between COMNAVREG NW and Kitsap County Fire Protection Agencies).

The FedFire Chief is the initial designated NUWC Keyport Incident Commander in the event of an OHS emergency and assumes the initial Emergency Coordinator (EC) role during OHS emergencies. In the event of an OHS emergency, Environmental EC personnel are immediately notified and will respond to the IC command post. The IC duties are described below. However, the Environmental Branch EC is responsible for ensuring these steps are accomplished according to the Contingency Plan and the dangerous waste regulations:

- Assure personnel safety.
- Assess the nature, severity, and materials involved in the situation.
- Initiate the Contingency Plan if appropriate and evacuate the TSD Facility if necessary.
- Notify neighboring facilities/personnel as necessary.
- Direct containment and control operations.
- Contact emergency agencies and authorities in Table G4-1.
- Initiate clean-up operations.
- Ensure all wastes and contaminated media are being properly managed and all emergency equipment are being cleaned and made fit for use immediately after the emergency.
- Provide a report to Ecology meeting requirements in WAC 173-303-360(2) (k) within 15 days of the emergency.
- Review and amend the Contingency Plan using a permit modification if the Plan fails in an emergency.

If during the assessment of the situation it is determined that the nature, severity, and materials involved in the situation is beyond the capability of initial responders to adequately assure personnel safety, contain and control operations, then prior arrangements will go into effect and the IC will contact the NOSC, who will coordinate the necessary arrangements with state and local authorities. NUWC Keyport Oil and Hazardous Substance Release Response Organization structure is shown in Figure G2-1. These responses do not replace other actions required by this Contingency Plan and overseen by the EC.

Because the IC/EC is also the duty Fire Chief, that person is onsite 24 hours per day, 7 days per week and therefore the first responder for all emergencies. Environmental Branch EC's will be at the TSD Facility or on call at all times during both operational and non-operational hours. The Environmental Branch Primary EC is typically at the TSD Facility from 6:00 AM to 3:30 PM weekdays. Table G2-1 lists the names, work and alternative phone numbers of all spill response coordinators in the order in which they assume responsibilities.

Table G2-1 Navy Personnel Spill Response Call Back List (Emergency Coordinators)

NAME/ROLE	PHONE #	ALT PHONE #
COMNAVREG NW Fire & Emergency Services (EC/IC/QI) (Primary)	360-396-2244 (24 hours) Use cell phone or **Non-base** phone line	911 Only from base phone line
DW Program Manager Dale Hunt Environmental Branch OHS IC/QI for Hazmat Releases (Primary)	360-396-2320	360-640-5984 (Spill)
Hazardous Material Program Manger Ryan Lewis Environmental Branch OHS IC/QI for Hazmat Releases (Backup)	360-396-5438	N/A
DW Designator Christine Stull Environmental Branch OHS IC/QI for Hazmat Releases (Backup)	360-396-7991	N/A
NUWC Keyport Environmental Manager Terry Hiatt	360-315-0946	N/A
Navy On-Scene Coordinator (NOSC) Heather Parker **Regional Response**	360-396-0222	360-340-5991 (24 hours)

G3. CIRCUMSTANCES PROMPTING IMPLEMENTATION

WAC 173-303-350(1) & (2); -360(2); -806(4)(a)(vii)

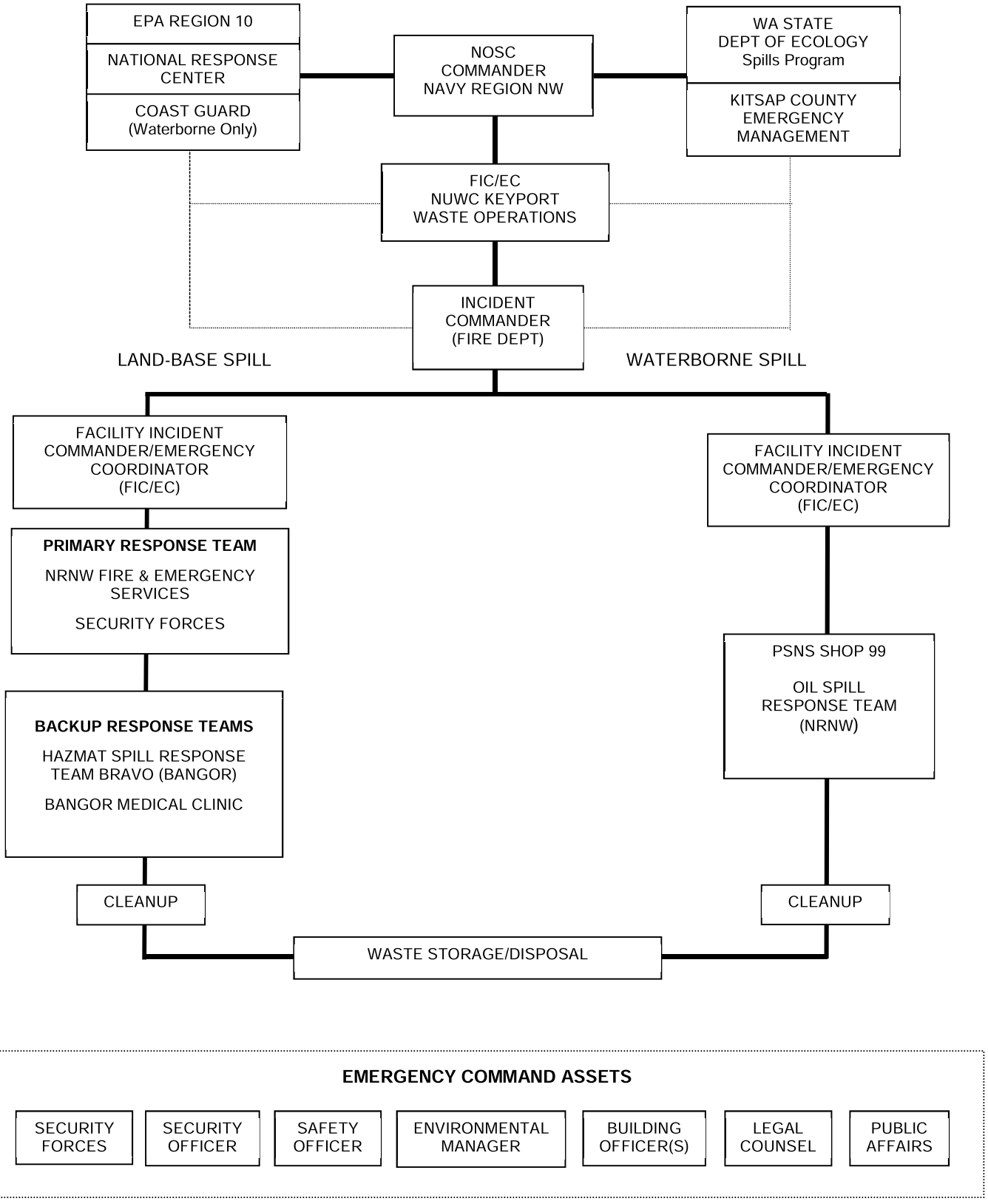
Where human health or the environment is threatened, the following emergencies would call for the implementation of the Contingency Plan:

1. Fire/explosion anywhere on premises.

2. Onsite and offsite (within the base perimeter or off base) releases of dangerous wastes or dangerous waste constituents.

3. The occurrence of natural disasters.

Figure G2-1 Oil and Hazardous Substance Release Response Organization



Examples of the emergency incidents described above:

1. Fire/Explosion
    a. Any fire or explosion in Building 1051.
    b. Any fire or explosion that could spread to or otherwise affect operations in Building 1051.

2. Release of Dangerous Waste or Hazardous Substance
    a. A sudden or non-sudden spill, release, or other discharge of a dangerous waste or hazardous substance, which poses a threat to human health or the environment, regardless of quantity.
    b. A spill, release, or other discharge, which has the potential for contamination of soil, surface water, or groundwater, regardless of size. Examples are spills or releases to soil and releases of organic solvents to asphalt.
    c. An uncontrolled spill, release, or other discharge originating from a damaged shipment, which has arrived at the TSD Facility in such a condition.
    d. A spill, release, or other discharge of a dangerous waste or hazardous substance greater than 100 pounds (12 gallons) or the "reportable quantity" established in 40 CFR Part 302 (whichever is less) when any portion of the release extends beyond secondary containment.
    e. A release of gas to the air originating from an unplanned reaction of materials.
    f. Emissions to the air from a spill, release, or other discharge (including to secondary containment) of a dangerous waste or hazardous substance when:
        i. The spill or release is greater than 100 pounds (12 gallons) or a reportable quality in 40 CFR 302 (whichever is less), and
        ii. Any constituents in the dangerous waste or hazardous substance has a Henry's Law constant of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase at 25 degrees Celsius or is a volatile organic compound detected by SW 846 Method 8260B. Note that appendix VI in 40 CFR 265 has a list of compounds known to have a Henry's law constant value less than the cutoff level.

3. A spill, release, or other discharge or potential for release of dangerous waste or hazardous substance caused by a natural disaster including but not limited to the following:
    a. Earthquake or severe flooding conditions which damage equipment, foundations, structures, or tanks.
    b. Severe storm involving high winds or lightning which damage or overturn tanks, containers or other equipment.
    c. A container(s) of dangerous waste arriving at the facility is damaged so as to present a hazard to public health and the environment.
    d. The shipment cannot be transported because the container(s) are damaged to such an extent, or the waste is in such a condition, as to present a hazard to the public health or the environment in the process of further transportation.

G4. EMERGENCY RESPONSE PROCEDURES

WAC 173-303-350(3)(a), (b); -360(2)(a) – (d); -806(4)(a)(vii)

G4.1 INCIDENT RESPONSE, ASSESSMENT AND IDENTIFICATION

WAC 173-303-350(2)(a) – (d); -806(4)(a)(vii)

NUWC Keyport TSD Facility personnel shall implement the following actions and emergency procedures to lessen the potential impact on human health and the environment in the event of an emergency:

1. Actions for Emergency Circumstances

   A. The TSD Facility has multiple building Emergency Action Plans readily available to all employees that provide standard procedures regarding the Hazardous Substance Release Bill. Individual(s) causing or discovering a release or observing a situation that may lead to a release of oil or a hazardous substance shall immediately take the following actions to lessen the potential impact on human health and the environment. The order of these actions will depend on existing conditions.

      (a) EVACUATE personnel to a safe distance upwind and upgrade from the release. Following standard Evacuation Bill procedures do the following:

         - Assess the scene.
         - Activate fire/evacuation alarms, and pass the word.
         - Provide aid and assistance to people in need, but DO NOT RISK PERSONAL SAFETY or endanger others in doing so.
         - PREVENT any further release by activating emergency shut-offs and/or closing valves, ONLY if such action does not endanger you or others.
         - Close windows, doors, and safes.
         - EXIT BUILDING using approved primary or secondary evacuation routes to muster site.
         - Conduct a full muster with Immediate Supervisor or designated person.
         - Report actions to the EC Command Post or IC.

      (b) REPORT the release immediately to:

REGIONAL DISPATCH CENTER **PHONE: 911**

      (c) WHENEVER POSSIBLE, give the following information, if known, or reasonably determined.

         - Name and telephone number.

- Location of the release (Building No.).
- Number and type of injuries if any.
- Identity or type and estimated amount of released material.
- Source of release (e.g., tank, container).
- Current estimated rate of release.
- Behavior of released material (reactions, leak, release, fire observed).
- Anticipated movement of release and actions taken.
- Time release occurred (best estimate).

(d) RESCUE injured individuals without risking safety. DO NOT ENTER the released area if an injured person appears to have been overcome by fumes.

(e) PREVENT release from entering drainage ONLY if it can be done SAFELY. Use on-site release containment equipment and materials if available

(f) DO NOT allow unauthorized persons to enter release area.

(g) EXTINGUISH OR RESTRICT all sources of ignition such as cigarettes, combustion engines, and open flames. Wait for the EC or the Fire Department to arrive and direct them to the release.

2. Detailed step-by-step actions for emergency response personnel addressing fires, spills, and other releases are provided in Appendix G7.

3. Actions for Damaged Dangerous Wastes Shipment

A. TSD Facility personnel shall immediately take the following actions in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to human health and the environment, arrives at the facility.

B. The dangerous waste shipment can be received if:

(a) It is a damaged container, perform the following actions:

i. Over-pack the container,

ii. Re-mark the container, and

iii. Notify the generator of the situation.

(b) It is leaking, perform the following actions:

i. Conduct all activities under (1)a. above, and

ii. For minor leaks, stop or contain the spill with the approved equipment/material without endangering yourself and others, or

iii. For leaks beyond your control, contact the spill clean up team from Naval Base Kitsap Bangor (Team Bravo). (Response time can vary, but has typically been within 20 minutes).

(c) It is an improperly labeled container(s):

i. Accept the waste and

ii. Contact the generator to resolve the discrepancy in accordance with procedures in subsection C of the manifest.

C. If the dangerous waste shipment is denied receipt but cannot leave the facility because transport would present a hazard to human health or the environment due to the extent of damage to the containers or the condition of the waste, perform the following actions:

(a) Overpack and re-mark the container.

(b) Deny receipt of dangerous waste shipment if it is not acceptable.

i. Send the shipment to the alternate facility designated on the manifest.

ii. If an alternate facility is not listed on the manifest, contact the generator and arrange for the shipment to go to an acceptable TSD Facility in a safe condition.

G4.2 NOTIFICATION

WAC 173-303-145(2); -360(2)(d), (e); -806(4)(a)(vii)

Notification will be in accordance with WAC 173-303-360(2)(a) and this Contingency Plan. The IC will be notified of any emergency. Non-emergency events, such as small spills in containment areas that can be cleaned up as 'housekeeping', will not be reported to the IC (see paragraph 3a (3) in appendix G8 (MOA). The IC will supply specific information as to the type, quantity, and location of released material to the EC. The EC along with the IC will evaluate this information. The on-call EC will immediately notify all facility personnel by activating internal facility alarms whenever there is an imminent or actual emergency situation.

Department of Ecology Northwest Regional Office: (425) 649-7000

The EC will immediately contact Ecology and other appropriate agencies when any one of the following occurs:

a. A fire or explosion in Building 1051, or any fire or explosion that could spread to or otherwise affect operations in Building 1051.
b. An incidence of noncompliance with this Permit or natural disaster at the facility that could threaten human health or the environment.
c. In accordance with WAC 173-303-145(2) and WAC 173-303-360(2) (a), a sudden or non-sudden release of a dangerous waste or hazardous substance which poses a threat to human health or the environment, regardless of quantity.
d. A spill, release, or other discharge of dangerous waste or hazardous substance greater than 10 pounds (1.2 gallons) or the "reportable quantity" established in 40 CFR Part 302 (whichever is less) outside of secondary containment.
e. A spill, release, or other discharge of dangerous waste or hazardous substance greater than 100 pounds (12 gallons) or the "reportable quantity" established in 40 CFR Part 302 (whichever is less) inside secondary containment.
f. Any incident that causes implementation of the contingency plan.

The EC will determine which agencies to notify in a given situation. A quick summary of NUWC Keyport Release Notification Procedures is provided in Table G4-1.

When response requirements exceed the resources of NUWC Keyport, Naval Base Kitsap Bangor, and the NRNW Fire and Emergency Services, the EC will notify the NOSC and coordinate outside assistance as per the MOA (Appendix G8) and MAA (Appendix G9).

Notification to the Department of Ecology will include the following:

- Name and phone number of reporter.
- Name and address of TSD Facility.
- Time and type of incident (fire, release).
- Name and the quantity of material(s) involved to the extent known.
- Extent of injuries, if any.
- Possible hazards to public health or the environment outside the base perimeters.

Pursuant to 40 CFR 355.40(b) (1), and (2), notification to Local and State Emergency Committees will further include, to the extent known:

- An indication of whether the substance is an extremely hazardous substance as defined by Appendices A and B of 40 CFR 355.
- Duration of the release.
- Medium or media into which the release occurred.
- Any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for the exposed individuals.

- Proper precautions to take as a result of the release, including evacuation.
- Names and telephone numbers of person(s) to be contacted for further information.
- Summary of actions taken.

Table G4-1 NUWC Keyport Release Notification Procedures

AGENCY TO CONTACT	TYPE OF RELEASE						PHONE NUMBER
	OIL ON WATER	OIL ON LAND	HAZARDOUS SUBSTANCE (WATER)	HAZARDOUS SUBSTANCE (LAND)	AIR DIS-CHARGES	SEWAGE OVER-FLOWS	
NRNW NOSC	X	X	X	X	X	X	(360) 396-0222
Coast Guard	X		X				(206) 217 6002
National Response Center	X	X	X	X	X		(800) 424-8802
EPA Region 10	X	X	X	X	X		(206) 553-1263
WA State Dept. of Ecology Spills	X	X	X	X	X	X	(425) 649-7000
WA State Dept. of Ecology HWTR			X	X	X		(360) 649-7277
Kitsap County Health Dept.	X		X		X	X	(360) 337-5235
WA State Emergency Management Div	X	X	X	X	X	X	(800) 258-5990
Puget Sound Clean Air Agency					X		(800) 552-3565

G4.3 CONTAINMENT AND CONTROL OF EMERGENCIES

WAC 173-303-145; -350(3)(a),(b); -360(2)(f),(g),(i); -630(2); -640(7); -806(4)(a)(vii)

Specific types of emergencies that could occur at the TSD Facility are identified in appendix G7 (Release Containment and Control).

G4.4 IDENTIFICATION OF DANGEROUS MATERIALS

WAC 173-303-360(2)(b); -806(4)(a)(vii)

Whenever there is a release, fire, or explosion, the EC or the IC will immediately identify the character and source, and determine the amount and extent of any released materials. The specific sets of procedures to assess and handle these events are described in appendix G6 (Hazard Evaluation).

G4.5 HAZARD ASSESSMENT AND REPORT

WAC 173-303-360(2)(c), (d), (e); -806(4)(a)(vii)

The EC and/or IC will assess possible hazards to human health and to the environment that may result from the release, fire, or explosion. The suggested criteria and methods used for these assessments are described in Tables G2-B-1and G2-B-2 of appendix G7 (Release Containment and Control). If an assessment indicates that an evacuation of local areas may be required, the EC or IC will immediately notify appropriate local authorities in Table G4-1, and will be made available to help appropriate officials decide whether local areas will be evacuated. The EC or his designee will immediately notify the Naval Region Northwest (NRNW) NOSC and the National Response Center as applicable.

The assessment report will be in accordance with WAC 173-303-360(e) but as a minimum will include:

- Name and telephone number of reporter;
- Name and address of TSD Facility site;
- Time and type of incident;
- Name and quantity of materials involved to extent known;
- Extent of injuries, if any; and
- The possible hazards to human health or the environment outside the TSD Facility.

G4.6 PREVENTION OF RECURRENCE, SPREAD OF FIRES, EXPLOSIONS, OR RELEASES

WAC 173-303-360(2)(f), (g); -630(2); -640(7); -806(4)(a)(vii)

The EC will take all necessary steps to ensure that secondary release, fire, or explosion does not recur after the initial incident. The EC will ensure that no wastes that may be incompatible with the released material will be treated or stored in the affected area. During any emergency, all normal operations will be discontinued until the emergency is resolved. Emergency measures may include stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

If the TSD Facility stops operations in response to a fire, explosion, or release, the EC will monitor for leaks, pressure build up, rupture, or gas generation in tanks, containers, valves, pipes, or other equipment, before normal operations can resume.

The EC, with the assistance of appropriate specialists, will evaluate the incident to understand why and how the incident occurred and what future modifications can be initiated to prevent a recurrence of the same or similar situation. Evaluations will include equipment design, operational procedures, response tactics, and personnel safety. A review of the Contingency Plan will be conducted to ensure appropriate changes are made if necessary.

G4.7 POST-EMERGENCY ACTIONS

WAC 173-303-360(2)(h), (i), (g), and (k); -640(7); -806(4)(a)(vii)

Immediately after an emergency or spill, recovered waste will be treated, stored, or disposed of in the proper manner. This may include contaminated soil, surface water, or any material that results from a release, spill, or explosion at the site.

Incompatible waste will not be treated or disposed of until all facility and emergency equipment cleanup operations are completed. Proper notification to Ecology and the local authorities that all operations are back to normal will take place prior to the treatment of incompatible waste.

If a tank or container holding a waste is not in good condition or if it begins to leak, the Dangerous Waste Program Manager will order the transfer of the dangerous waste to a tank or container that is in good condition. Upon transfer of the dangerous waste from the leaking or damaged tank or container, the Dangerous Waste Program Manager will take immediate actions to either repair, close, decontaminate, or dispose of the unit consistent with other parts of the permit and in accordance with regulatory requirements.

All emergency equipment used in an emergency will be cleaned, replaced, or returned for use prior to the resumption of operations. All equipment will go through a systematic decontamination before being returned to the emergency response room or locker. Decontamination will be done by steam cleaning and/or triple rinsing with an appropriate cleaner. Fire extinguishers will be recharged, and personnel protective equipment and absorbent materials replenished. An inventory will be conducted to ensure the minimum amount of response equipment is on hand and ready for use.

The EC will commit all necessary resources at NUWC Keyport, other Navy assets and/or may call a contract cleanup service to assist in the control, containment, and cleanup of a release. The IC through the NOSC and the Incident Command System will coordinate the activities of the emergency response agencies. The EC is responsible for ensuring all emergency equipment listed in this Contingency Plan is cleaned and fit for its intended use before operations are resumed.

Within 15 days of detection of a release to the environment, a report in the form of an After Action Report as detailed in Section G8.1 will be submitted to the state and county.

G5. EMERGENCY EQUIPMENT

WAC 173-303-340(1); -350(3)(e); -806(4)(a)(vii)

Most of the emergency equipment maintained at the TSD Facility is kept in room 121, the spill response equipment room. Besides the equipment room, spill kits are maintained at the east end and west end of the facility loading/unloading area, along the east and west walls of the

receiving area, and in the staging area. Fire extinguishers are maintained throughout the facility within 75 feet of each other. There are two communication systems available at the facility to alert or evacuate personnel in the event of an emergency, a telephone and an intercom communication system. Table G5-1 lists the emergency equipment including monitoring equipment such as combustible gas meters, CO_2 meters for tanks, hydrogen cyanide/sulfide meters, oxygen sensor, and alarms located inside and in the immediate vicinity of the TSD Facility. Quantities of emergency equipment listed in Table G5-1 represent a minimum of stock quantities. The location of emergency equipment is shown in appendix G5 (TSD Facility Emergency Equipment Location)

In addition to the equipment listed in Table G5-1, the Navy Regional Northwest Battalion 2 (Keyport) HazMat Equipment Inventory is listed in Appendix G10, and containment booms are staged in the water at the end of the pier for immediate deployment along with additional booms stored under the TSD Facility roof on the southeast corner. See Appendix G2 (TSD Facility Truck Access Routes) for pier location.

Table G5-1 TSD Facility Emergency Equipment

ITEM	MINIMUM QUANTITY
Tyvek coveralls (various sizes)	20
Tyvek coveralls – (Saranex coated for Otto Fuel II) (various sizes)	12
Tyvek lab coats (various sizes)	10
Disposable booties	20
Face Shield	4
Air hoods	10
Vinyl gloves	20 pr
Rubber gloves (Sol-Vex for Otto Fuel II)	20 pr
Leather palm gloves	15 pr
Skilcraft Techwipes (90 large paper towels per box)	10 boxes
Oil absorbent pads (100 ea 17″ X 19″ pads per bale)	10 bales
Oil absorbent pillows (2′ X 2′)	20
Oil absorbent pillows (12″ X 12″)	20
Type 100 oil absorbent rolls (38″ X 144′)	2
Connectable oil absorbent booms (8″ X 8′)	10
Oil absorbent socks (21″ Pigs)	10
Clay absorbent (40 lb bags)	10 bags
Rubber drain covers	3
Sodium bicarbonate	1 bag
Coliwasa (glass)	20
Bailers (plastic)	20
Hand suction pumps (plastic)	6
Dust Pans	4
Push broom	5
Round-point shovel	3
Square-point shovel	2
Mop with bucket	1

ITEM	MINIMUM QUANTITY
Small traffic cones	4
Duct tape	10 rolls
Black plastic sheet (100' X 20')	3 rolls
Pallet bags	25
Drum liners (55 G clear plastic)	20
Nylon woven bags (empty, for sandbags)	20
Amber sample bottle (500 cc)	50
Amber sample bottle (950 cc)	25
Spare stocked spill control kits	4
Decon shower with containment	1
Drum and tank repair kit	1
Stationary eye wash stations	6
Portable eye wash station	1
Portable air-operated diaphragm pump	1
Portable hand-pump sprayer (3 G)	1
Emergency generator	1
Communication systems (Intercom and Phone)	2
Type ABC Fire extinguishers	25
Type D Fire extinguishers	4
Fire hydrant	2
Combustible gas detectors	2
Hydrogen cyanide meter/alarm	1
Hydrogen sulfide meter/alarm	1
Breathing air sensor/alarm	1
Sump level alarm	1

Table G5-1 TSD Facility Emergency Equipment (Continued)

G6. COORDINATION AGREEMENTS

WAC 173-303-340(4); -350(3)(c); -806(4)(a)(vii)

NUWC Keyport has a Memorandum of Agreement (MOA) with the Navy Region Northwest to provide support for all land and water-borne spill response at NUWC Keyport. A copy of the MOA is located in appendix G8.

NUWC Keyport no longer maintains mutual aid agreements with Kitsap County Fire Protection Agencies such as Fire, Police, and Hospitals. These agreements are negotiated at the Regional level, and are covered by the MAA in appendix G9.

The EC or IC are available to help appropriate officials with the layout of the facility, properties of dangerous waste handled at NUWC Keyport, and necessary information to effectively respond to any emergencies.

G7. EVACUATION PLAN

WAC 173-303-350(3) (f); -806(4)(a)(vii)

In the event of a fire or release of a hazardous material that could endanger the lives of persons in and outside the TSD Facility, evacuation of the TSD Facility will occur according to procedures outlined below. Appendix G3 shows exit routes to be used during evacuation. Drawings indicating the exit routes are posted throughout the TSD Facility.

The Dangerous Waste Program Manager coordinates all evacuation procedures in accordance with the Emergency Action Plan for the TSD Facility, which are posted at all exit doors.

All personnel will be notified immediately by verbal or visual instruction or by audible signal of an emergency requiring evacuation to the primary or secondary assembly area.

Neighboring facilities/personnel will be notified, if necessary, by TSD Facility personnel or by emergency personnel (e.g., police and fire).

The primary assembly area is across Bradley Road in the parking lot west of the office spaces in the TSD Facility. The secondary assembly area is across Gadberry Street on the grassy area east of Building 824. Normally the prevailing winds are from the south/southwest which in most cases puts the exit routes up wind from the TSD Facility.

The Dangerous Waste Program Manager will account for all persons by employee head count and visitor logs.

If not already done, call 911 (emergency) from Building 824 or Building 951.

The NRNW Fire and Emergency Services in conjunction with the EC will determine the need to evacuate beyond the immediate area of the TSD Facility.

No one will re-enter the TSD Facility during evacuation conditions without the permission of the EC or IC and without the proper protective clothing and equipment.

Approval of the safe re-occupancy of the TSD Facility will be determined by the EC or IC in consultation with the appropriate responding emergency personnel.

G8. REQUIRED REPORTS

WAC 173-303-360(2)(k); -640 (7)(d)(iii); -640(7)(f); -806(4)(a)(vii)

G8.1 GENERAL REQUIREMENTS

In any incident which requires the implementation of the Contingency Plan, an After Action report will be submitted within 15 days after an incident to the appropriate state and local authorities. As a minimum, the following information will be included:

- Name, address, and telephone number of the facilities operator.
- Name, address, and telephone number of the TSD Facility.
- Date, time, and type of incident.
- Name and quantity of material(s) involved.
- The extent of injuries, if any.
- An assessment of actual or potential hazards to human health or the environment.
- Likely route of migration of the release.
- Results of any monitoring or sampling in connection with a release.
- Proximity to down gradient drinking water, surface water, and populated areas.
- Estimated quantity and disposition of recovered material that resulted from the incident.
- Cause of incident, including a chronology of events for the incident.
- Description of corrective action taken to prevent reoccurrence of the incident.

G8.2 REQUIREMENTS FOR TANK SYSTEMS

Within 24 hours of a release from a tank to the environment, a report of the incident will be submitted to Ecology. At a minimum, this report will include:

- Name, address, and telephone number of the facilities operator.
- Name, address, and telephone number of the TSD Facility.
- Date, time, and type of incident, including a chronology of events for the incident.
- Name and quantity of material(s) involved.
- The extent of injuries, if any.
- An assessment of actual or potential hazards to human health or the environment.
- Likely route of migration of the release.

- Proximity to down gradient drinking water, surface water, and populated areas.

- Estimated quantity and disposition of recovered material that resulted from the incident.

If a release from a tank to the environment requires a major repair to the tank or tank piping system, the tank system will be certified by an independent professional engineer prior to placing the tank system back into service. A report of the repair and certification will be submitted to Ecology prior to placing the tank system back into service.

G9. AMENDMENT TO CONTINGENCY PLAN

WAC 173-303-350(5); -806(4)(a)(vii)

Contingency plan will be reviewed and amended for the following reasons:

- Applicable regulations or the facility permit are revised.
- The plan fails in an emergency.
- The facility changes (either by design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or in a way that changes the response necessary in an emergency.
- The list of emergency coordinators changes.
- The list of emergency equipment changes.

SECTION G

APPENDIX G1

NBK KEYPORT LOCATION MAP

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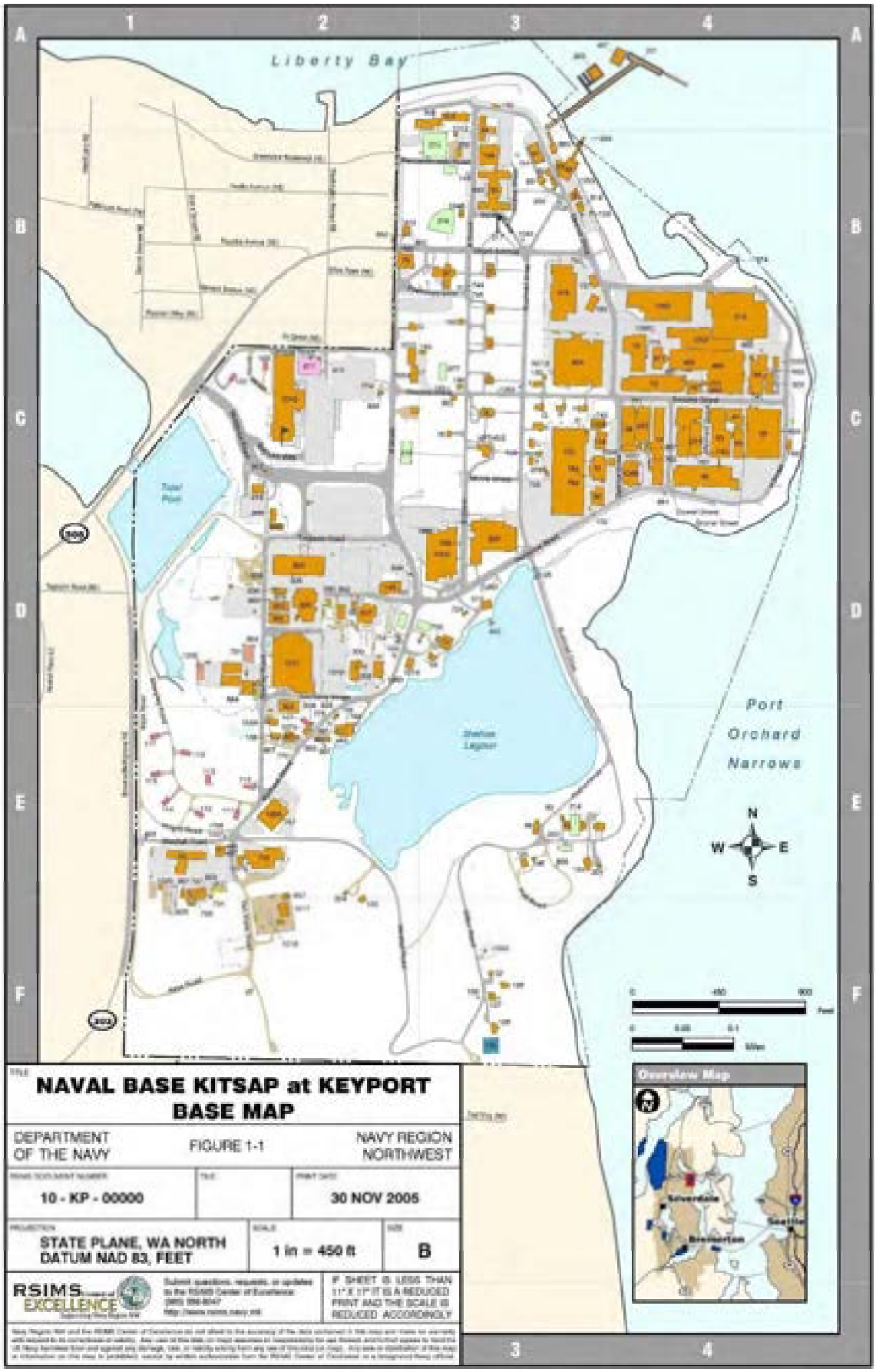

NBK Keyport Base and Vincinity Map

SECTION G

APPENDIX G2

FACILITY TRUCK ACCESS ROUTES

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TSD FACILITY TRUCK ACCESS ROUTES

SECTION G

APPENDIX G3

FACILITY FIRE EXITS

and

FLOW CONTAINMENTS

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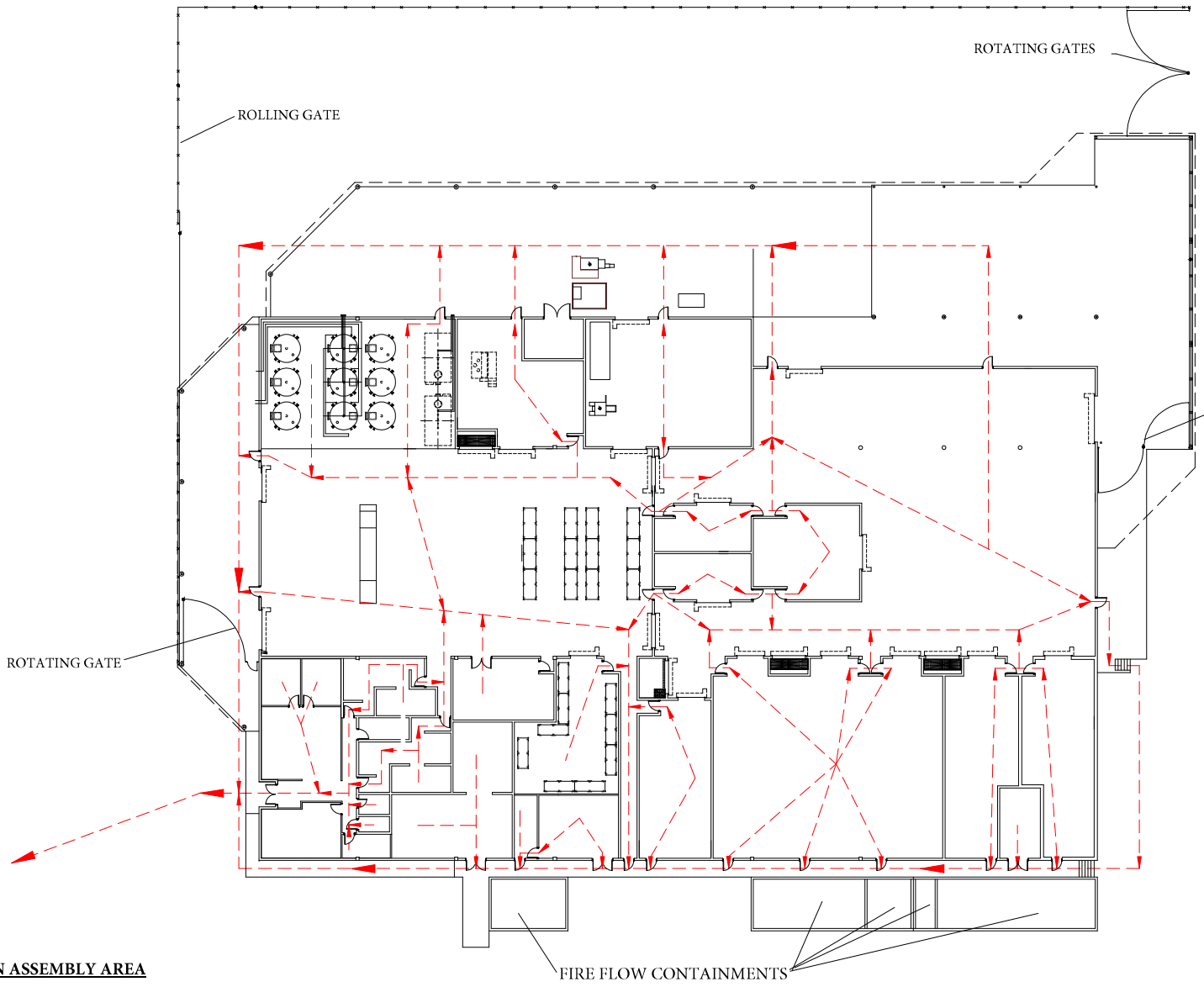

SECONDARY ASSEMBLY AREA

(IF WIND DIRECTION DICTATES)

MAIN ASSEMBLY AREA

NAVAL UNDERSEA WARFARE CENTER DIVISION
KEYPORT, WA

BUILDING 1051

TSD FACILITY
FIRE EXITS & FLOW CONTAINMENTS

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SECTION G

APPENDIX G4

TSD FACILITY DRAINAGE

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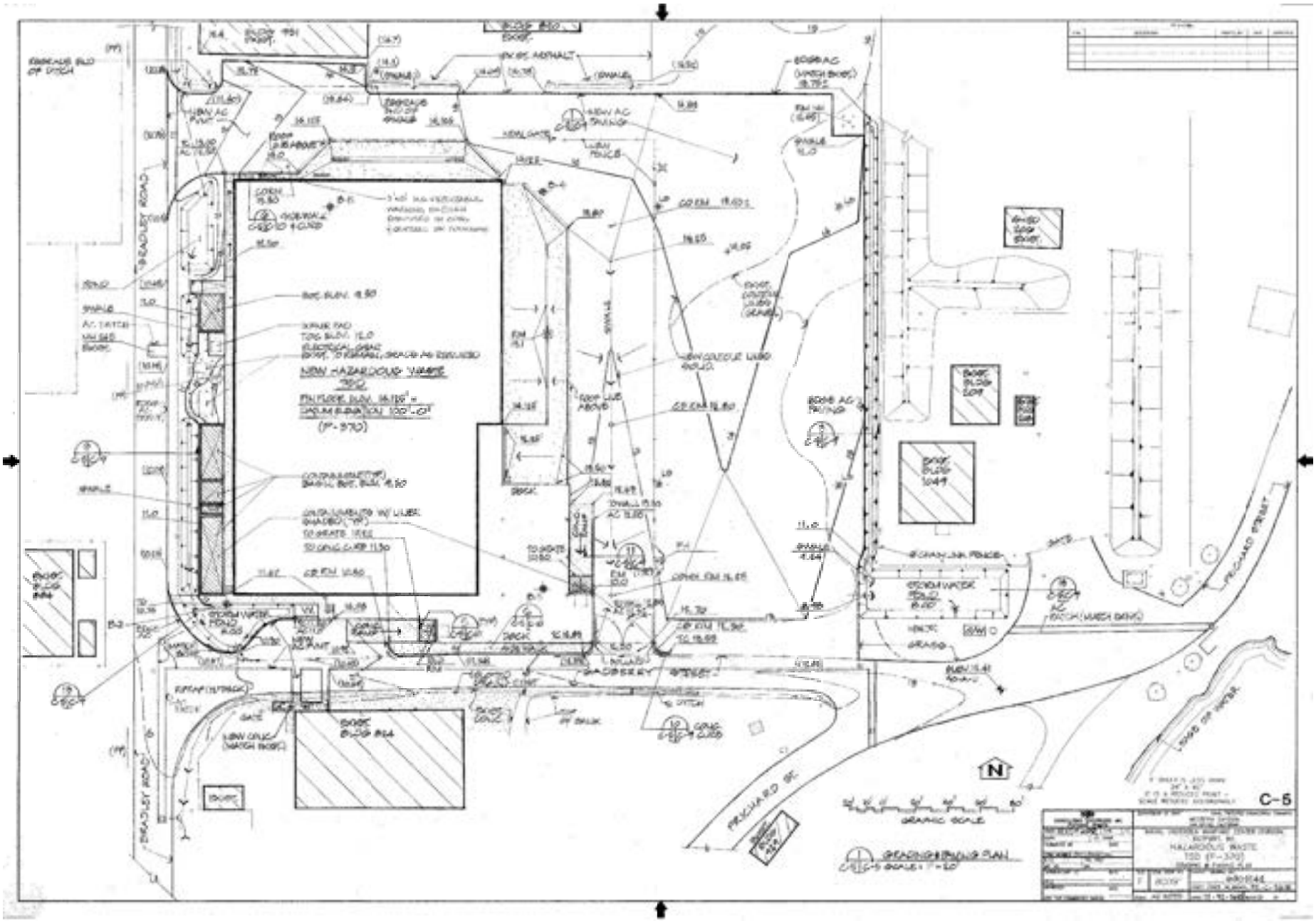
BRADLEY ROAD
PRICHARD ST.
NEW HAZARDOUS WASTE TSD (F-370)
GRADING & PAVING PLAN
GRAPHIC SCALE
N
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SECTION G

APPENDIX G5

EMERGENCY EQUIPMENT LOCATION

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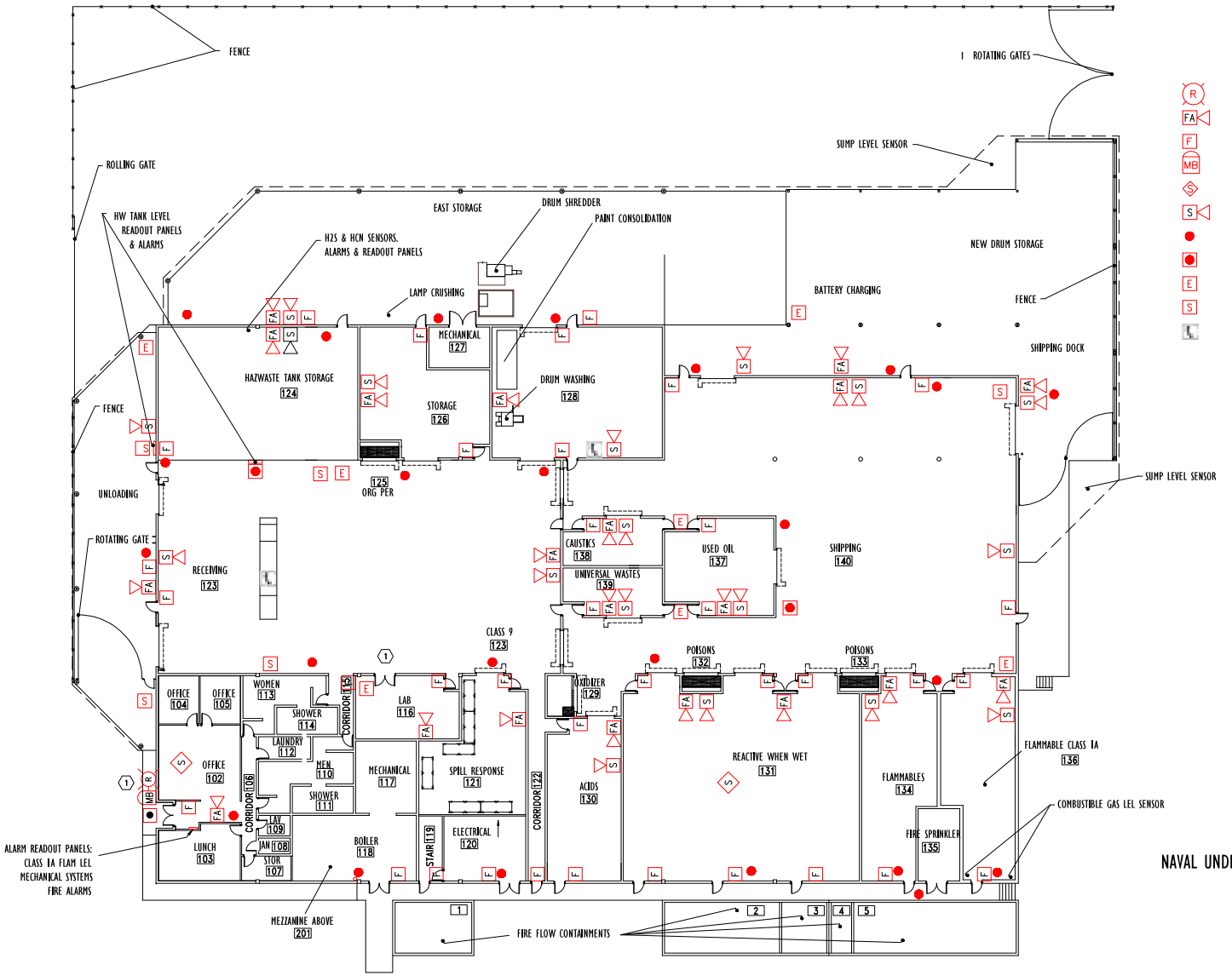

NAVAL UNDERSEA WARFARE CENTER DIVISION
KEYPORT, WA

BUILDING 1051

TSD FACILITY

EMERGENCY EQUIPMENT LOCATION

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SECTION G

APPENDIX G6

HAZARD EVALUATION

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Hazard Evaluation

While securing personnel safety and controlling the site, the EC shall define hazards involved and the severity of the release as quickly, safely, and completely as possible.

1. IDENTIFY hazardous substances involved. Be familiar with the NBK Keyport Quick Response Guide and hazards associated at the site. Look for labels, markings, and shipping papers on containers. Ask site personnel (supervisor, persons involved, and knowledgeable personnel on scene) and assess any physical symptoms being experienced by individuals who were at the location when the hazard first emerged to help identify substance(s) involved.

   Unknown Substance – If substance(s) cannot be identified, call the NBK Bangor Hazmat Spill Response Team Bravo and initiate unknown substance analysis through our DLA contract or our local Keyport Lab.

2. IDENTIFY the safety hazards associated with the substance(s) involved. Use appropriate Emergency Response Guides. However, if, after assessing the situation it is determined that the nature, severity, and materials involved in the situation is beyond the capability of initial responders to adequately assure personnel safety, contain and control operations, then call the NBK Bangor Hazmat Spill Response Team Bravo to assist.

3. INSTRUCT response personnel on proper safety procedures and the protective equipment appropriate to use in and around the release area.

4. DETERMINE relative seriousness of the situation. What is the condition of the release? Is it contained? Is it stopped? If not contained, is it safe for response personnel to control/contain release?

5. IF NECESSARY, direct the entry team to carefully evaluate conditions near the immediate release area and its surroundings, to determine actual/potential dangers:

   - Possibility of fire/explosion.
   - Oxygen deficiency – particularly in confined spaces.
   - Presence of toxic gases or vapors.
   - Presence of incompatible materials.
   - Possibility of dangerous vapors affecting surrounding area.

   WARNING: EVERY ATTEMPT shall be made to assess the situation from a safe distance. Response personnel shall wear proper breathing apparatus and protective gear to approach the release. A backup team shall stand by to provide support. The entry team shall approach a release from upwind and upgrade, assuming worst-case ambient concentration of the substance.

6. Consider the following factors that can drastically influence precautionary measures, release control methods, and necessary resources (i.e., personnel and equipment) for stabilization of an incident:

    - Substance characteristics.
    - Quantity released and physical state.
    - Actual/potential hazards.
    - Weather conditions.
    - Release movement.
    - Existing containment barriers – natural or man-made.
    - Existing drainage.
    - Distance to environmentally sensitive or highly populated areas.

SECTION G

APPENDIX G7

RELEASE CONTAINMENT AND CONTROL

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Release Containment and Control

The On-Scene Coordinator or EC shall direct actions toward controlling and containing a release by ensuring that all appropriate safety precautions are taken, the best control methods are selected, and proper release response equipment is available. Control of immediate hazards, such as fire, explosion, or toxic gas release, shall have top priority. Depending on the type and condition of a release, some or all of the following procedures may be employed.

1. If a release is burning, take the following actions:

    - DECIDE whether to extinguish the fire or to let it burn. WEIGH hazards of fighting the fire and post-fire cleanup against the benefit of possible salvage. Suggested criteria for “burn/no-burn” decisions are given in Table G7-1.

    - If a decision is made to extinguish the fire, FIGHT THE FIRE, being careful to use firefighting methods compatible with the substance(s) involved. Know exact locations, reactions to water or other chemicals, and safe distance to fight the fire. Consult the Emergency Response Guides in the DOT Emergency Response Guidebook or the NFPA HM Fire Protection Guide when necessary.

    - STAY UPWIND of the smoke. It may be TOXIC.

    - REMAIN AT A SAFE DISTANCE from burning bottles, drums, and cans. These are not vented and may rupture violently, spreading toxic chemicals.

    - COOL nearby containers and buildings to prevent fire from spreading. Use as little water as possible to minimize spreading of contaminants. Control runoff water in the smallest areas possible, away from the fire fighting activity.

    - SEEK MUTUAL AID ASSISTANCE from the local Fire Department if necessary to control fire.

    - After extinguishing the fire, institute any action required to further control the release, following the procedures described in the "Release Not on Fire" subsection. If appropriate, reevaluate the situation and take necessary precautionary measures (e.g., readjust control perimeters).

Table G7-1
Suggested Criteria for "Burn/No Burn" Decisions

CRITERIA	ALLOW TO BURN WHEN:	EXTINGUISH FIRE WHEN:
Location of release/fire/ explosion	Fire is isolated away from public and buildings	Fire is close to public and buildings
Availability of safety equipment	Equipment is limited	Protective clothing and self-contained breathing apparatus are available
Population density	People are few or have been evacuated	People are many and have not been evacuated
Presence of other combustible materials	No other combustible materials are present	Hazardous materials are present. Also petroleum or natural gas pipes or storage containers, wooded areas, or combustible structures
Substance released	Substance has a high vapor pressure High toxic vapors are detected Combustion produces non-toxic materials	Substance has a low vapor pressure Low toxic vapors and fumes are detected Combustion produces hazardous by-product(s)
Containment Status	Containment is complete	Fire/release is uncontrolled
Release from source	Release continues to be emitted	Release has been stopped
Availability of foams, dry chemicals, or powders	Availability is limited	Availability is sufficient
Wind conditions	Calm	Strong, gusty winds

Note: The OSOT library contains valuable reference materials for control of fire situations and flammable substances during releases, including the following:

a. The EPA Standard Operating Safety Guides.

b. The NFPA HM Fire Protection Guide.

c. The Bureau of Explosives: Emergency Handling of HM in Surface Transportation.

2. <u>If a release is not burning and has not entered a waterway</u>, the methods selected for containing or controlling the spread of material will depend on the materials involved, material state (liquid, vapor, etc.) and incident location. General response actions

are described below. Table G7-2 describes various techniques applicable to different scenarios and identifies the type and location of equipment required.

a. STOP SOURCE of release if it is still occurring.

- Close valves.
- Plug leaks in containers.
- Put container in an upright position.
- Replace leaking containers.
- Empty leaking container(s) into non-leaking container(s).
- Encapsulate leaking container(s) into larger recovery container(s).

b. STOP SOURCE of release if it is still occurring.

- Ventilate indoor areas. Use blow-out ventilation or portable EXPLOSION-PROOF fans only. Open doors and windows.
- Be cautious of water-reactive chemicals. Consult the DOT Emergency Response Guides or accessible technical references as necessary.
- Flush corrosives to reduce vapors. Control runoff.
- Use fog-streams to absorb vapors.

c. CONTAIN release or PREVENT release runoff from entering sewer or drainage systems, or reaching surface or ground waters.

- Construct dams or dikes to contain the release as close to the source as possible. Use sand, dirt, or any available inert absorbent material, foams, or gels suitable to dam the flow.
- Excavate temporary ditch, trench, or channel to direct release runoff to containment.
- Use plastic cover for floor and storm drains.

d. DO NOT DILUTE the release unless absolutely necessary to prevent imminent danger to life. Obtain authorization from Commander, NUWC Keyport and notify NOSC.

e. MINIMIZE spreading of dust or powder releases. Cover with tarp to protect from wind and rain.

3. If a release has entered, or is in danger of entering a waterway, procedures applicable for controlling the spread of contamination will depend most strongly on how the material behaves in water (i.e., floats or sinks). Refer to Table G7-2 for containment measures. Proposed booming and collection strategies for oily releases into contingent waters can also be found in the Central Puget Sound Geographic Response Plan (GRP) published by the Washington State Department of Ecology (Publication 94-205).

    a. ANTICIPATE the movement of the release.

    b. INSTRUCT Response Personnel to take all necessary and possible action (close storm drains, construct dam, deploy temporary interception devices, etc.) to prevent the release runoff from exiting NUWC property.

    c. DETERMINE the facts of the release.

    d. VERBALLY NOTIFY the NOSC of the incident within 10 minutes after the NRC and State have been notified and PROVIDE the following information:

        - Hazardous substance(s) involved and quantity released
        -
        - Magnitude and severity of the threat to people, property, and the environment
        - Affected areas
        - Responsible party – Navy, non-Navy
        - Anticipated containment and cleanup actions
        - Type of ASSISTANCE required
        - Any other RELEVANT information

    e. COORDINATE activation of appropriate Government/private response organizations with the NOSC, as necessary, to control and remedy the situation.

    f. DIRECT on-base resource to take all possible action to minimize the impact and spreading of the release until additional assistance arrives at the scene.

    g. NOTIFY the Staff Public Affairs Officer of the release incident. Direct him/her to keep informed of the size and nature of the release and the response actions, and coordinate news releases with the NOSC Public Affairs Officer through the ARC.

    h. NOTIFY the Legal Counsel. Direct him/her to coordinate all legal aspects associated with the release.

i. If the party responsible for the release is other than the Navy:

- INFORM the responsible party of the release.
- If the responsible party is a contractor, NOTIFY the contracting office.

j. COOPERATE with and SUPPORT all off-base organizations directed by the NOSC to assist in the response effort.

k. MAINTAIN on-scene command until relieved by the NOSC, if necessary.

l. When the release is contained and the situation is under control, DECLARE "End of Emergency" and DEACTIVATE emergency units. Direct them to be on alert in case conditions change.

m. SUBMIT the appropriate hazardous substance release report message.

Table G7-2
Methods for Hazardous Substance Release
Control and Containment

TECHNIQUE	USE/SCENARIO	EQUIPMENT REQUIREMENTS	EQUIPMENT CHARACTERISTICS	EQUIPMENT LOCATION
Source Control • Patching • Plugging • Valve shutoff • Set upright and/or drain container	Stop release from leaking container or valve	Leak control kit Hand tools	• Spark-resistant tools, (nonferrous) • Release Site	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle
Gas Vapor Reduction	Control/mitigate immediate hazard from flammable, explosive, and toxic gases/vapor	• Portable fans, blowers • Fire-fighting foams • Water sprays/mists • Absorbent pads and sheets	• Explosion-proof electrical equipment • No power tools • Inert, non-reactive absorbent (special for vapor control)	• Building 1051 • CNRNW Fire and Emergency Services
Drain Covering	Avoid liquid release runoff into floor/storm drains	Cover sheets (Plastic, Rubber)	Chemical resistant	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle
Dust Covering	Prevent dispersion of powder chemical release	Cover sheets	Chemical resistant	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle
Herding	Prevent expansion of liquid releases on land or insoluble, floating spills in water	Cover sheets	Chemical resistant	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle
Diking or Damming	Contain liquid runoff or water stream contaminated by soluble or miscible release	• Earth-moving equipment and tools • Foams (polyurethane) • Absorbent barriers (sealed booms, pillows, sandbags)	• Inert, non-reactive absorbent material • Spark-resistant tools, (non-ferrous)	• Naval Base Kitsap Bangor HAZMAT response vehicle • Outside contractor
Ditch/Trench Excavation, Culverts	Divert liquid releases on land or water stream to containment	Earth-moving equipment and tools Prefabricated culvert	Spark-resistant tools, (non-ferrous)	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle
Floating Barriers	Contain insoluble floating releases	Booms & device to deploy booms	Chemical resistant	• Port Services Piers • Oil OSOT
Absorption	Contain, collect, and remove liquid releases on land or insoluble floating releases in water	Sorbents: sheets, mops, pillows, booms, granular	• Inert, non-reactive materials • Specific absorbent for specific release substance	• Building 1051 • Naval Base Kitsap Bangor HAZMAT response vehicle

SECTION G

APPENDIX G8

MEMORANDUM OF AGREEMENT BETWEEN

COMMANDER, NAVY REGION NORTHWEST

AND

PUGET SOUND NAVAL SHIPYARD & INTERMEDIATE

MAINTENANCE FACILITY

AND

NAVAL UNDESEA WARFARE CENTER DIVISION, KEYPORT

AND

UNMANNED UNDERSEA VEHICLE SQUADRON ONE

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N68742-20180803-2747

DEPARTMENT OF THE NAVY
COMMANDER, NAVY REGION NORTHWEST
1100 HUNLEY RD., SILVERDALE, WA 98315-1100

UUVRON-1	NUWCDIVKPT	PSNS & IMF	COMNAVREG NW
7050	7050	7050	7050
Ser / 21 JUN 2019	Ser 102/014 24 JUN 2019	Ser 106/033 28 JUN 2019	Ser N8/0244 12 JUL 2019

MEMORANDUM OF AGREEMENT
BETWEEN
COMMANDER, NAVY REGION NORTHWEST
AND
PUGET SOUND NAVAL SHIPYARD & INTERMEDIATE MAINTENANCE FACILITY
AND
NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT
AND
UNMANNED UNDERSEA VEHICLE SQUADRON ONE

Subj: SPILL RESPONSE AREAS OF RESPONSIBILITY AT NAVAL BASE KITSAP, KEYPORT

Ref: (a) DoD Instruction 4000.19
(b) CNICINST 4000.1C
(c) COMNAVREG NW, et. al., MOA of 15 September 2009, Ser 17/169-09, Spill Response Areas of Responsibility at Naval Base Kitsap Keyport; SA# N68742-20090731-0126
(d) 31 U.S.C 1535
(e) 31 U.S.C 1341 and 1517
(f) NAVSO P-1000
(g) COMNAVREGNWINST 5090.1D
(h) COMNAVREGNWINST 5450.1E

1. Purpose. To establish a Memorandum of Agreement (MOA) between Commander, Navy Region Northwest (COMNAVREG NW); Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF); Naval Undersea Warfare Center (NUWC) Division, Keyport; and Unmanned Undersea Vehicles Squadron ONE (UUVRON-1) per references (a) through (h), which define all parties' obligations and responsibilities in managing the environmental spill response program at Naval Base (NAVBASE) Kitsap, Keyport. This MOA revises and supersedes reference (c).

2. Background

a. COMNAVREG NW provides region-level management of the Oil and Hazardous Substance (OHS) spill response program per reference (g). NAVBASE Kitsap is assigned Real Property management responsibilities at NAVBASE Kitsap, Keyport per reference (h). NAVBASE Kitsap does not maintain an onsite port operations or environmental presence at NAVBASE Kitsap, Keyport. NUWC Division, Keyport maintains an environmental department presence at NAVBASE Kitsap, Keyport and provides installation level on-site environmental department support for the OHS spill response program at NAVBASE Kitsap, Keyport.

b. NUWC Division, Keyport does not have land or water-based OHS spill cleanup response capabilities at NAVBASE Kitsap, Keyport. PSNS & IMF is the Navy's waterborne spill response organization with the shortest response time to respond to in-water OHS spill events at NAVBASE Kitsap, Keyport. UUVRON-1 is a major new homeport command at NAVBASE Kitsap, Keyport, and requires over-water fueling services in support of its Unmanned Undersea Vehicles (UUVs) and support boats.

3. Scope. This MOA defines the working agreement, services, and responsibilities of each activity required to manage and operate spill response at NAVBASE Kitsap, Keyport.

4. Period of Performance. This MOA shall be in effect for nine (9) years from date of last signature, at which time the MOA shall lapse or be renewed per paragraph 8.

5. Responsibilities

a. COMNAVREG NW will:

(1) Maintain overall responsibility and technical authority for the OHS Spill Prevention and Response Program at all COMNAVREG NW locations, including NAVBASE Kitsap, Keyport, through the COMNAVREG NW OHS Integrated Contingency Plan (ICP).

(2) Provide Navy On-Scene Coordinator (NOSC) support for spills which exceed the response capabilities of the installation.

(3) Provide COMNAVREG NW Fire and Emergency Services (F&ES) support for spills at NAVBASE Kitsap, Keyport which includes:

(a) Upon report from the Regional Dispatch Center (RDC) or other appropriate authority, provide emergency response support for hazardous substance and oil spills.

(b) Assume initial Incident Commander (IC) duties and provide command and control response to OHS spills. For all releases, F&ES will coordinate with NUWC Division, Keyport and spill responders until the emergency phase is over. If necessary, command will be assumed by another designated IC, but not before the emergency phase is over.

(4) Upon request from the IC, the COMNAVREG NW designated NOSC will provide response and clean-up technical support units (i.e., spill responders and equipment) to operate under direction of the IC for land-based and waterborne spills. Availability of technical support units will be subject to real world incidents and emergency needs of COMNAVREG NW.

(5) Upon request of the IC, will support cleanup and response operations and if necessary, mobilize the extended Spill Management Team.

(6) Participate in periodic exercises and/or equipment deployment drills at NAVBASE Kitsap, Keyport.

(7) Provide reimbursement to NUWC Division, Keyport and/or PSNS & IMF for environmental response or cleanup costs directly attributable to COMNAVREG NW activities.

(a) Any required reimbursement will be funded by use of NAVCOMPT Form 2275, Request for Work or Services; DD Form 448, Interdepartmental Purchase Request; or other acceptable form. A signed Department of Treasury FS Form 7600A (GT&C) will be required between trading partners prior to transfer of funds.

(b) Reimbursement shall be submitted to NUWC Division, Keyport (Code 01), 610 Dowell St., Keyport, WA 98345-7610 or PSNS & IMF (Code 600), 1400 Farragut Ave., Bremerton, WA 98314-5001.

b. <u>NUWC Division, Keyport will</u>:

(1) Through the direction of emergency response representatives, provide the planning, direction, and execution of the OHS spill prevention and response program at NAVBASE Kitsap, Keyport including but not limited to:

(a) Perform initial response actions, including notifications to the RDC, regulatory reporting, containing source if possible, and notifying and requesting services from COMNAVREG NW or PSNS & IMF as required.

(b) Coordinate and document investigation of root causes and corrective actions for reportable spills.

(c) Provide technical oversight of spill response operations at NAVBASE Kitsap, Keyport to include Otto Fuel spill response.

(d) Coordinate, plan and conduct periodic exercises and equipment deployment drills at NAVBASE Kitsap, Keyport, in coordination with UUVRON-1, COMNAVREG NW, and PSNS & IMF. Coordinate and document required training of NUWC Division, Keyport environmental responders as appropriate.

(e) Maintain adequate space to store designated spill equipment and associated supplies assigned to Keyport, and allow PSNS & IMF, UUVRON-1, or COMNAVREG NW access for drills and response.

(f) Program for and submit oil spill response equipment requirements for equipment under the maintenance responsibility of NUWC Division, Keyport through the Annual Allowance and Requirements Review (A2R2) program.

(2) Upon request, provide COMNAVREG NW with a copy of all pertinent NUWC Division, Keyport instructions and all related spill prevention records such as tank and pipeline testing.

(3) Provide reimbursement for spill related services provided by PSNS & IMF or COMNAVREG NW on the basis of actual costs incurred. Reimbursement will be provided on an "as-required" basis including but not limited to overtime pay, non-labor costs, and civilian labor when employed for waterborne response services (typically on major oil spills only).

(a) Any required reimbursement will be funded by use of NAVCOMPT Form 2275, Request of Work or Services; DD Form 448, Interdepartmental Purchase Request; or other acceptable form. A signed Department of Treasury FS Form 7600A (GT&C) will be required between trading partners prior to transfer of funds.

(b) Reimbursement shall be submitted to COMNAVREG NW (N8), 1100 Hunley Rd., Silverdale, WA 98315-1100; or PSNS & IMF (Code 600), 1400 Farragut Ave., Bremerton, WA 98314-5001.

c. PSNS & IMF will: upon request, provide on-water spill response support at NAVBASE Kitsap, Keyport in coordination with COMNAVREG NW, NUWC Division, Keyport, and/or UUVRON-1. Response to any spills, spill drills, or exercises will be on a reimbursable basis.

(1) Participate in any spill drills or exercises planned under paragraph 5b(1)(d) based on constraints of available resources.

(2) Ensure waterborne response equipment assigned to PSNS & IMF is maintained as required.

d. UUVRON-1 will:

(1) Conduct over-water fuel transfers per federal, state, and local laws and regulations, and local Navy instructions.

(2) Participate in training, drills, and exercise scenarios as required.

(3) Provide reimbursement to COMNAVREG NW, NUWC Division, Keyport, and/or PSNS & IMF for OHS program requirements and environmental response or cleanup costs attributable to UUVRON-1 activities per reference (f).

(a) Any required reimbursement will be funded by use of NAVCOMPT Form 2275, Request for Work or Services; DD Form 448, Interdepartmental Purchase Request; or other acceptable form. A signed Department of Treasury FS Form 7600A (GT&C) will be required between trading partners prior to transfer of funds. Reimbursement to PSNS & IMF will require a budget transfer because UUVRON ONE and PSNS & IMF are both commands within the same budget submitting office, COMPACFLT.

(b) Reimbursement shall be submitted to COMNAVREG NW (N8), 1100 Hunley Rd., Silverdale, WA 98315-1100; or PSNS & IMF (Code 600), 1400 Farragut Ave., Bremerton, WA 98314-5001; or NUWC Division Keyport (Code 01), 610 Dowell St., Keyport, WA 98345-7610.

6. Other Provisions

a. The parties agree that nothing herein will be construed as obligating any party to violate existing laws or regulations including reference (e).

b. The parties agree that all corrective actions and associated costs for violations of environmental laws or regulations are a responsibility of the attributable party.

c. All services provided by the parties are subject to the constraints of available resources (personnel, funds, and equipment).

d. All support shall be provided per federal law and in compliance with the references (d) and (e).

7. Points of Contact

a. COMNAVREG NW Port Operations:
(360) 476-3467 (Port Operations Watch Tower)

b. RDC:
9-1-1 (Emergency from installation phones)
(360) 396-4444 (Emergency from non-installation phones)
(360) 315-4065 (Non-emergency)

c. COMNAVREG NW NOSC:
(360) 396-0222 (office)
(360) 340-5991 (cell)

d. NUWC Division, Keyport Environmental:
(360) 396-5682 (office)
(360) 620-5792 (cell)

e. UUVRON-1 Material Officer:
(360) 315-5663

f. PSNS & IMF:
(360) 476-3333

8. Review, Modification, or Cancellation

a. This MOA is effective upon the affixation of all signatures and shall remain in force for nine (9) years unless modified or terminated by mutual consent of the parties concerned.

b. This MOA may be amended upon reasonable request from any party to this agreement; however, the amendment must be formally (in writing) approved by the authorized representatives from each party.

c. All parties shall conduct a triennial review of this agreement to evaluate its effectiveness and determine the need for continuation or modification per reference (a).

d. Requests for modification or termination by either party shall be provided in writing at least 120 days in advance of the proposed effective date per reference (a).

9. Approving Officials. The activities entering into this MOA, by their representatives' signatures below, agree to the responsibilities and procedures herein.

R. T. PATCHIN, CDR
Commanding Officer
Unmanned Undersea Vehicle Squadron ONE

21 Jun 19
Date

J. H. MORETTY, CAPT
Commanding Officer
Naval Undersea Warfare Center Division,
Keyport

24 JUN 2019
Date

D. WOLFSON, CAPT
Commander
Puget Sound Naval Shipyard &
Intermediate Maintenance Facility

6/28/19
Date

A. P. VERMOFSTADT, P.E.
Executive Director
Commander, Navy Region Northwest

10 Jun 2019
Date

SECTION G

APPENDIX G9

MUTUAL AID AGREEMENT BETWEEN

COMMANDER, NAVY REGION NORTHWEST

AND

KITSAP COUNTY FIRE PROTECTION

AGENCIES

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MUTUAL AID AGREEMENT
BETWEEN
COMMANDER, NAVY REGION NORTHWEST
1100 Hunley Road, Silverdale, WA 98315
AND
CITY OF BREMERTON FIRE DEPARTMENT
NORTH KITSAP FIRE AND RESCUE
CENTRAL KITSAP FIRE AND RESCUE
SOUTH KITSAP FIRE AND RESCUE
BAINBRIDGE ISLAND FIRE DEPARTMENT
POULSBO FIRE, DISTRICT 18
KITSAP COUNTY, OFFICE OF THE FIRE MARSHAL
FOR
THE PROVISION OF FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

COMNAVREG NW
7050
Ser N8/

This agreement, entered into this 2nd day of March 2018, by and between Commander, Navy Region Northwest (COMNAVREG NW), on behalf of Commanding Officer, Naval Base Kitsap (NBK), Bremerton Fire Department, North Kitsap Fire and Rescue, Central Kitsap Fire and Rescue, South Kitsap Fire and Rescue, Bainbridge Island Fire Department, Poulsbo Fire District 18, and Kitsap County Office Of The Fire Marshal, (hereinafter, "Kitsap County Fire Protection Agencies") acting pursuant to the authority of 42 U.S.C. § 1856a, DoDI 6055.06, and OPNAVINST 11320.23G, is for the purpose of providing the benefits of mutual aid to the other entity, for the protection of life and property from wild land fires, as well as firefighting and fire suppression support. The anticipated support includes; but is not limited to; emergency services of basic medical support, basic and advanced life support, hazardous material containment and confinement, and special rescue events involving vehicular and water mishaps, and trench, building and confined space extractions.

It is the policy of the Department of the Navy and COMNAVREG NW to enter into Mutual Aid Agreements (MAA) with non-federal fire departments located in the vicinity of naval installations whenever practicable. The parties have mutually concluded that it is desirable, practicable, and beneficial for the parties to enter into this MAA to document their willingness and ability to render assistance to one another in order to enhance the safety and security of the civilian community and naval facilities.

Hereinafter, the term "COMNAVREG NW Fire and Emergency Services (F&ES)" refers specifically to the F&ES organization located on and servicing NBK.

It is agreed that:

1. Upon request from Kitsap County Fire Protection Agencies, firefighting equipment and personnel of COMNAVREG NW F&ES will be dispatched; subject to operational requirements and resource availability; to any location within the area for which the Kitsap County Fire Protection Agencies are responsible to provide fire protection and emergency medical services.

2. Upon request from the COMNAVREG NW F&ES, firefighting equipment and personnel of the Kitsap County Fire Protection Agencies will be dispatched; subject to operational requirements and resource availability; to any location within the area for which COMNAVREG NW F&ES is responsible to provide fire protection and emergency medical services.

3. The party receiving a request for assistance shall endeavor to immediately inform the requesting party if assistance can or cannot be provided, and the type and quantity of resources available for dispatch.

4. Neither party shall hold the other party liable or at fault for being unable to respond to a request for assistance nor being able to respond in a timely manner, or responding with less than optimum equipment/personnel, as the parties understand that each is primarily and ultimately responsible for providing fire suppression and hazardous material incident response within their own jurisdictions.

5. The requesting and rendering of assistance under the terms of this MAA shall be per detailed operational plans and procedures developed by the individual parties. All parties shall work together to implement such plans and procedures in a manner compatible with their respective operational authorities. It is understood that the rendering of assistance under the terms of this MAA is not mandatory.

6. Under the authority of 15 U.S.C. § 2210 and 44 C.F.R § 151, Kitsap County Fire Protection Agencies are permitted to seek reimbursement for direct expenses and losses (defined as additional firefighting costs over normal operational costs) incurred in fighting fires on property under the jurisdiction of the United States Government.

7. Under the authority of 42 U.S.C. § 1856a, either party may seek reimbursement from the other for the costs incurred by it in providing services to the other party in response to a request for assistance. Further, all parties agree to waive all claims against every other party for compensation for any loss, damage, personal injury, or death occurring in consequence of the performance of this agreement.

8. All equipment used by any party in carrying out this agreement will; at the time of action; be owned by it. All personnel acting under this agreement will; at the time of such action; be an employee or volunteer member of the party.

9. Any dispatch of equipment and personnel pursuant to this agreement is subject to the following conditions:

a. Any request for aid shall include the amount and type of equipment and personnel requested and specify the location where the equipment and personnel are to be dispatched.

b. Upon receipt of a request for assistance, equipment and personnel will be immediately dispatched along with instructions as to their mission, use, and deployment in quantities and amounts that can be provided without jeopardizing the mission of the fire department providing the resources, per the judgment of the senior officer of the responding party.

c. The senior officer of the requesting fire department shall normally assume full charge of the operations at the scene of the fire or other emergency. However, under procedures agreed to by the heads of the fire departments involved, a senior officer of a fire department furnishing assistance may assume responsibility for the coordination of the overall operations at the scene of the fire or emergency.

d. A responding fire department shall be released by the requesting party when the services are no longer required or when the responding fire department is needed in its own jurisdiction.

10. Training:

a. Whenever either party hosts fire protection training for its own personnel (host department) it may; to the maximum extent practicable and subject to its sole discretion; offer the training to personnel of the other party (guest department). Training will be provided on a space available basis only.

b. The host department will not charge the guest department for training coursework provided pursuant to this MAA unless there is a cost that cannot be covered by the host department, such as an individual student fee/tuition or cost of a certificate.

c. The guest department or its personnel will be responsible for the payment of any and all logistic costs necessary to attend training provided by the host department, including; but not limited to; lodging, meals, and travel expenses.

d. This MAA is entered into voluntarily by the parties with no obligation on their part to either provide training or to participate in any offered training.

e. The guest department is responsible for ensuring that its personnel observe all rules, regulations, and guidelines for training provided by the host department. Neither party shall hold another party liable or at fault for damage or injury incurred during joint training activities.

f. The host department reserves the right to deny training to any guest department personnel who do not meet the prerequisites necessary to attend the offered training.

11. Execution of this Agreement:

a. This MAA shall become effective upon the date annotated above, and shall remain in full force and effect for a period not to exceed five (5) years, or until cancelled by mutual agreement of the parties, or upon the provision of at least sixty (60) days advance written notice from the party desiring to terminate this agreement to the other.

b. Following the 5 years, the agreement will either automatically terminate or be renegotiated.

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

12. Signatures:

North Kitsap Fire & Rescue:

6-12-17
GILLIAN GREGORY Date
Board Chair

6-12-2017
FERNANDO ESPINOSA Date
Commissioner

6/12/17
STEPHEN NEUPERT Date
Commissioner

6-12-17
WILSON STEWART Date
Commissioner

6/12/17
PATRICK PEARSON Date
Commissioner

6-12-17
CINDY MORAN Date
District Secretary

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

Central Kitsap Fire & Rescue:

R E West 6/26/17
DICK WEST Date
Board Chair

6.26.17
BOB MUHLEMAN Date
Commissioner

6-26-17
NATE ANDREWS Date
Commissioner

Ken Erickson 6-26-17
KEN ERICKSON Date
Commissioner

6/26/17
GUY EARLE Date
Commissioner

KENNETH BAGWELL Date
District Secretary

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

South Kitsap Fire & Rescue:

07/13/17
DAVE GEISLEICHTER Date
Board Chair

NOT PRESENT:
MIKE ESLAVA Date
Commissioner

7-13-17
PAUL GOLNIK Date
Commissioner

7-13-17
GERALD PREUSS Date
Commissioner

7-13-17
DUSTY WILEY Date
Commissioner

7-13-17
KENNETH BAGWELL Date
District Secretary

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

Bainbridge Island Fire Department:

SCOTT ISENMAN — Date 4-27-17
Board Chair

YONGSUK CHO — Date 4/29/17
Commissioner

BRUCE ALWARD — Date 4/27/17
Commissioner

FRITZ VON IBSCH — Date 4/27/17
Commissioner

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

Poulsbo Fire Department:

NA
MARTIN SULLIVAN Date
Commissioner

6-14-17
DAVID ELLINGSON Date
Commissioner

6/14/17
DARRYL MILTON Date
Commissioner

6/14/17
CONRAD GREEN Date
Commissioner

NA
JAMES INGALLS Date
Commissioner

6/14/17
LISE ALKIRE Date
District Secretary

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

City Of Bremerton:

PATTY LENT Mayor	07-05-17 Date	SHANNON L. CORIN City Clerk	Date

ROGER A. LUBOVICH — JULY 5, 2017
City Attorney — Date

Kitsap County:

BOARD OF COUNTY COMMISSIONERS

KITSAP COUNTY, WASHINGTON

ATTEST:

2-12-18

ROBERT GELDER, Chair

EDWARD E. WOLFE, Commissioner

CHARLOTTE GARRIDO, Commissioner

Dana Daniels, Clerk of the Board

BOARD OF COMMISSIONERS STATE OF WASHINGTON KITSAP COUNTY

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

Commander, Navy Region Northwest

6/1/2017

EDWARD SCHRADER, CAPT, USN Date
Commanding Officer
Naval Base Kitsap

09 MAR 2018

A. P. VERHOFSTADT, P.E. Date
Executive Director
Commander, Navy Region
Northwest

FOR THE PROVISION OF FIRE PROTECTION AND EMERGENCY SERVICES

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Poulsbo Fire District 18:

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b. Deputy Chief Bruce Peterson
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Kitsap County Office of the Fire Marshall:

a. Fire Marshall David Lyman
(360) 337-5777, DLynam@co.kitsap.wa.us

SECTION G

APPENDIX G10

NRNW Battalion 2 - HazMat Equipment Inventory

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NRNW Battalion 2 - HazMat Equipment Inventory

	DESCRIPTION	Quantity
PPE	Kappler Zytron 500 Level A Suit	20
PPE	Kappler Zytron Frontline 500 Level A Flash Suit	6
PPE	Kappler Zyton 300 Level B Suit	18
PPE	HazMax Boots	44
PPE	Butyl Rubber Gloves	5
HAZMAT	Monitoring, pH paper, etc	10
HAZMAT	Weather Pak 400	1
HAZMAT	Incident Command Vest System	1
HAZMAT	ConSpace Voice Amplifier	8
Detection	Multi RAE PRO Chemical Monitor	3
Detection	Draeger XAct5000	1
Detection	BADD Kit (Biological Field Analysis)	1
Detection	LEICA GEOVID Laser Binoculars	1
Detection	6 Foot Liguid Sampler	2
Detection	JCAD	4
Detection	Thermo Scientific First Defender RM	1
Detection	GR-135 Radioactive Isotope Identification Device	1
Detection	Inspector EXP + Radiation Meter 3 per case	1
Detection	QSA-102 Chem/Bio Sampling Kit	1
Detection	Cannon Power Shot S-500 Digital Camera	1
Detection	Water Tight Gigital Camera Case	1
Detection	Various Sample Bottles	20
Detection	Inficon Natural gas Detector	6
Detection	Trident One Decon Nozzel	1
Detection	Handheld Infrared Thermometer	1
Detection	M34A Sampling Kit	1
Decon	Stacker Cones	12
Decon	Decontamination Pools	4
Decon	USAR Decon Shelter	1
Decon	TVI 3-Line Decon Shelter System	1
Decon	Waste Water Bladder Kit	3
Decon	HMD Sked Rescue System	1
Decon	Herculite Decon Tarp 22'x44'	1
Decon	FSI Inflatable Decon Shower	2
Decon	Decon Manifold	1
Decon	EconoFlo Hose	4
Decon	Decon Brushes	4
Decon	Folding Dolly	1
Decon	IRT Decon Tent	1
Decon	Folding Chairs	16
Containment	Chlorine "A" Kit	1
Containment	Chlorine "B" Kit	1
Containment	Chlorine "C" Kit	1

NRNW Battalion 2 - HazMat Equipment Inventory (C(continued))

	DESCRIPTION	Quantity
Containmnent	Drum and Tank Repair Kit	1
Containment	Plug and Wedge Kit	1
Containment	55 gallon Overpak Drum	3
Containment	20 gallon Overpak Drum	2
Containment	Non-Sparking Polypropylene Shovels	3
Containment	Non-Sparking Polypropylene Brushes	5
Reference	GOBOOK III	1
Reference	Haz/Mat Reference, Geniums Handbook	3
Reference	Haz/Mat Reference, SAX's Dangerous Prop.	3
Reference	Haz/Mat Reference, CHRIS Manual	3
Reference	Haz/Mat Reference, Hawley's Cond. Chem. Dict.	3
Reference	Haz/Mat Reference, NIOSH Pocket Guide	3
Reference	Haz/Mat Reference, Emergency Response Guide	25
Reference	Haz/Mat Reference, HazMat Guide for Emerg. Res	3
Reference	Haz/mat Ref., Emerg. Handling in Surface Trans.	3
Reference	Haz/Mat Reference, Janes Chem-Bio Handbook	3
Reference	Haz/Mat Reference, Handbook of Chem-Bio WF	3

SECTION H

PERSONNEL TRAINING

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TABLE OF CONTENTS

Section			Page
H	Personnel Training		H-1
H1	Introduction		H-1
H2	Initial Training		H-3
H3	Job Specific Training		H-3
H4	Continuing Training		H-4
H5	Training Program Administration		H-4
	H5.1	Training Format	H-5
	H5.2	Training Effectiveness Evaluation	H-5
H6	Job Title/Job Description		H-5
	H6.1	Environmental Director	H-5
	H6.2	Dangerous Waste Program Manager	H-5
	H6.3	DW Designator	H-6
	H6.4	DW Handlers	H-7
	H6.5	DW Collectors	H-7
	H6.6	Organizational Structure	H-8
	H6.7	Training Personnel Qualifications	H-9
H7	Documentation and Record Retention		H-9

LIST OF TABLES

Tables		Page
H1-1	Training Matrix	H-2

LIST OF FIGURES

Figures		Page
H6-1	NUWC Division Keyport Organizational Chart	H-8

LIST OF APPENDICES

Appendix	
H1	Position Descriptions

H. PERSONNEL TRAINING

WAC 173-303-330; 806(4)(a)(xii)

H1. INTRODUCTION

WAC 173-303-330; -860(4)(a)(xii)

The training program managed by the TSD Facility prepares personnel to maintain and operate the TSD Facility in a safe manner and in compliance with regulatory requirements. The program also prepares personnel to respond effectively to emergency situations. All personnel at the TSD Facility undergo training according to this program. A copy of this program is kept in the TSD Facility operating record.

The TSD Facility Training Program addresses the following types of training:

- Initial Training, H2.
- Job-specific Training, H3.
- Continuing Training, H4.

Every employee directly supporting operations involving dangerous waste treatment or storage receives Initial Training (see Section H2) and Job Specific Training (see Section H3) essential for their assigned specific task prior to being allowed to work in the dangerous waste processing and storage areas unsupervised. Initial Training includes courses 101 through 116 in Table H1-1. All training is tracked and documented in the TSD Facility operating record.

Job-specific training is related to the specific duties of each job function and is uniquely tailored for the position based on the new employee's education, experience, and other qualifications. Job-specific training has been developed for the DW Handler, DW Collector, DW Designator, Dangerous Waste Program Manager, and the Environmental Manager. A matrix of which training courses apply to what positions is shown in Table H1-1.

Regional Fire Department personnel, the first responder in case of a spill or accident, attend a 24-hour spill responder training course by a certified provider. Spill cleanup is performed by Base Operation Services Contractor personnel who are required to attend 40-hour HAZWOPER training prior to performing any cleanup duties. Security personnel do not receive any training because they do not have access to the site. Their duties consist of reporting alarms visible or audible at the perimeter of the site to the Command Monitoring and Dispatch Center (CMDC). The CMDC contacts the Regional Fire Department and Emergency Coordinator in response to reported alarms.

The Primary and Secondary Emergency Coordinators (ECs) will take training for course numbers 101, 102, 103, 105 through 115, 117, 303, 304, 305, and 316 prior to being assigned to this position. The Secondary EC does not work at the TSD Facility but functions as the Base EC and had TSD Facility experience prior to being detailed as the Hazardous Material Program Manager. Both Emergency Coordinators will respond to any emergencies that occur during the training period to provide field experience for the trainee.

In addition, every employee involved in the operations of the TSD Facility will participate in continuing training on the refresher schedule shown in Table H1-1 for courses assigned to their

Table H1-1. Training Matrix

Class Title	Course Number	Initial Schedule (days)	Refresher Schedule (days)	Environmental Manager	DW Program Manager (Primary EC)	HM Program Manager (Secondary EC)	DW Designator	DW Collector	DW Handler
Initial General Orientation Training									
Facility walk-through	101	3	NA	X	X	X	X	X	X
40hr HAZWOPER	102	180	NA	X	X	X	X	X	X
Part B Permit	103	180	365	X	X	X	X		X
Housekeeping	104	180	365		X		X		X
Incident Reporting	105	180	365	X	X	X	X	X	X
Emergency Response	106	180	365	X	X	X	X	X	X
Hazard Communication	107	180	365	X	X	X	X	X	X
Accumulation Site Inspection	108	180	365		X	X		X	X
PPE	109	180	365		X	X		X	X
Respiratory Protection	110	180	365		X	X			X
CPR – First Aid	111	180	730		X	X		X	X
Confined Space Entry	112	180	365		X	X			X
Lockout-Tagout	113	180	365		X	X			X
Emergency Equipment	114	180	365		X	X		X	X
Fire Training/Fire Extinguishers	115	180	365		X	X		X	X
DOT Training & Refresher	116	180	1095		X		X		X
8-Hour HAZWOPER Refresher	117	N/A	365		X	X	X	X	X
8-Hour DOT Refresher	118	N/A	1095		X		X		X
Job Specific Training									
Waste Identification and Required Record Keeping									
Record Keeping	201	90	365		X		X		X
Incoming Manifest/Waste Tracking	202	90	365		X		X		X
Container Labeling Marking	203	90	365		X		X		X
Check In Procedures with Discrepancies	204	90	365		X		X		X
Problem Manifest Procedure	205	90	365		X		X		X
Waste Analysis Plan	206	90	365		X		X		
Waste Designation	207	90	365		X		X		
Dangerous Waste Management/Facility Operations									
Forklift Operation/Certification	300	90	1095		X			X	X
Drum Management	301	90	365		X			X	X
Portable Tank Management	302	90	365		X			X	X
PCB Recognition	303	365	365		X	X	X		X
Hazard Recognition (Reactive wastes)	304	90	365		X	X	X		X
Waste Characteristics and Compatibility	305	90	365		X	X	X		X
Chemical Segregation and Storage	306	90	365		X		X		X
Storing Product Chemical Drums	307	90	365		X		X		X
Labpacking	308	90	365		X		X		X
Sampling	309	90	365		X		X		X
Vacuum Truck Operations	310	90	365		X			X	X
Tanker Truck Loading Operations	311	90	365		X				X
Tank Operations Procedures	312	90	365		X			X	X
Paint Consolidation Procedure	313	90	365		X				X
Pressure Washer Operations	315	90	365		X				X
Required Inspections	316	90	365		X	X			X

"class title". Employees receive continuing training to maintain proficiency, learn new techniques and procedures, and reinforce safety, quality, and compliance consciousness. The Training Program Administration is described in Section H5, and Documentation and Record Retention is described in Section H7. Job descriptions and personnel duties are provided in appendix H1 (Position Descriptions).

H2. INITIAL TRAINING

WAC 173-303-330(1)(c), 1(d), (2)(b); -806(4)(a)(xii)

All new TSD Facility employees will attend a 3-hour Facility Walk-through including a description of the TSD Facility and general operations and management organization structure presented by the TSD Facility Supervisor. In addition, all TSD Facility employees will attend Initial Training consisting of courses 101 through 116 in Table H1-1 within 180 days of assignment to the TSD Facility and before they are allowed to work in the dangerous waste processing or storage areas without direct supervision.

Emergency response training is part of the Initial Training provided to all employees at the time they are assigned to the TSD Facility, and is repeated annually (see course #106 in Figure H6-1).

As part of job-specific training all employees involved in TSD Facility operations are instructed in their specific duties and responsibilities related to emergency response. Job-specific emergency response training includes:

- Procedures for using, inspecting, verifying repairs and/or replacement of faulty emergency and monitoring equipment.
- Communications and alarm systems.
- Response to spill or groundwater contamination incidents.
- Shutdown of operations.

H3. JOB SPECIFIC TRAINING

WAC 173-303-330(1)(a) & (d), (2)(b); 806(4)(a)(xii)

After completing Initial Training, employees receive job-specific training.

The content of job specific training for DW Handler, DW Collector, and the DW Designator are outlined in Table H1-1. When a new DW Program Manager is assigned to the TSD Facility, the incoming DW Program Manager will either be a fully trained and experienced DW Program Manager or the outgoing DW Program Manager will provide the incoming Manager with all the training set forth in Table H1-1 during a two-week turnover period. The Environmental Manager receives training as set forth in Table H1-1 when these courses are offered to TSD Facility employees.

The level and quantity of training for each employee is geared to the duties and responsibilities of that employee's position and the employee's education, experience, and other qualifications. For example, facility management-level personnel need broad training in all aspects of dangerous waste management. This provides the necessary background and perspective for

decision-making activities which can impact both the operation and condition of the TSD Facility and the health and welfare of the surrounding community. TSD Facility operations personnel need site-specific training appropriate to their individual job activities. New TSD Facility employees and current employees with new assigned job duties will receive Job Specific Training essential for a specific task before they are allowed to do that task without direct supervision.

H4. CONTINUING TRAINING

WAC 173-303-330(1)(b) & (2)(b); 805(4)(a)(xii)

Continuing training is designed to maintain proficiency in job skills, increase safety, quality, and compliance consciousness, and teach new skills. Continuing training consists of, but is not limited to, the following.

- Safety meetings with operational reviews and regulatory news (As Necessary).
- Annual refresher training – HAZWOPR (8 hrs/yr).
- Annual fire response training, including drills (~.5 hrs/yr).
- Annual emergency response and spill training, including drills (~.5 hrs/yr).
- Annual PPE – respirator reviews (~4 hrs/yr).
- Triennial DOT – labeling, manifesting, and placarding training. (8 hrs or more/3 years)
- Biennial CPR – first aid training (~8 hrs/yr).
- Periodic training to inform employees of new or revised regulatory requirements.
- Other courses identified in Figure H6-1.

At a minimum, every employee involved in operations associated with dangerous waste treatment or storage at the TSD Facility receives eight hours of annual refresher training in compliance with 29 CFR 1910.120 (p). This training updates all previous training, and includes a review of site operations and the types and characteristics of wastestreams handled at the TSD Facility. The Contingency Plan performance in emergency response is also reviewed. Changes in pertinent regulations are identified and current compliance status is reviewed.

H5. TRAINING PROGRAM ADMINISTRATION

WAC 173-303-330(1)(a), 1(c); -806(4)(a)(xii)

The Environmental Manager has overall responsibility for the development of the training program and oversees its implementation. Development and implementation of the training program has been assigned to the Dangerous Waste Program Manager, who is knowledgeable in dangerous waste management procedures, and who designates qualified instructors, approves the training program content and format, requests the necessary resources be provided, and ensures training records are maintained.

H5.1 TRAINING FORMAT

Training is conducted in meetings, small discussion groups, classroom settings, or at the employee's work site. Lectures, plant walk-throughs, and field demonstrations are also used as training methods. Much of the training is on-the-job training performed at the site, using actual equipment under actual job conditions with close supervision. Programmed instruction, i.e., videotapes, interactive video, or printed materials are available and sometimes used. For some training, courses and teaching materials developed by experts in the field are used. In addition, much of the regulation–required training is accomplished by attending seminars, and licensed, approved commercial or college courses.

H5.2 TRAINING EFFECTIVENESS EVALUATION

Qualitative evaluation techniques are used to measure a trainee's proficiency level. Examples of the evaluation techniques used include performance on written and oral exams and careful observation of on-the-job performance. The HW Program Manager determines whether the trainee has mastered the skills necessary to perform the tasks described in the job description. The HW Program Manager evaluates the training requirements and curriculum on an annual basis and incorporates new and useful instructional material to improve the quality and effectiveness of the training program.

H6. JOB TITLE/JOB DESCRIPTION

WAC 173-303-330(2)(a); -806(4)(a)(xii)

H6.1 Environmental Manager

Responsible for overall management of the Environmental Branch. The Environmental Manager provides all the required resources and is responsible for all personnel management in the Environmental Branch, including the TSD Facility.

H6.2 Dangerous Waste Program Manager

Responsible for ensuring that TSD Facility personnel have adequate facilities and training to perform their duties. Under direction of the Environmental Manager, the DW Program Manager:

1) Serves as the single point of contact for all waste issues that may require federal/state agency involvement.

2) Is responsible for keeping up with new regulatory requirements as they occur and integrating them into TSD Facility operations.

3) Provides training for all personnel involved in waste management and operations.

4) Maintains a current listing of Waste Site managers and alternates.

5) Reviews Waste Storage Site registration forms and formally authorizes the sites.

6) Is responsible for review and approval of all WGRs and profiles.

7) Is responsible for inspections/audits of all CAA and satellite waste storage sites.

8) Is responsible for all inspections at the TSD Facility as set forth in Section F (Procedures to Prevent Hazards).

9) Is part of the Hazardous Material Review Panel to ensure that waste resulting from material purchases can be handled at the TSD Facility.

10) Is part of the Change of Operations Review Panel to ensure waste stream sampling and analysis is considered for new processes.

11) Monitors and approves treatment protocols.

12) Monitors and approves selection of final disposal option.

13) Acts as the QA/QC Coordinator for the TSD Facility, which includes:

    a. Providing initial and annual training on QA/QC requirements
    b. Providing oversight to ensure documentation (both paper and electronic copies) is properly filed, secured, and available upon request,
    c. Ensuring that desk procedures or SOPs are available and up to date for each position at the TSD Facility, and
    d. Reviewing and/or auditing laboratories employed by the TSD Facility to ensure that waste analyses comply with state and federal requirements.

H6.3 DW Designator

Under direction of the Dangerous Waste Program Manager, and following desk procedures or SOPs of 13c above, the waste designator:

1) Provides initial review of MSDSs for Hazardous Material Review Panel.

2) Provides initial review of WGRs for completeness.

3) Provides research per WAC 173-303-300(2).

4) Requests and reviews results of analytical testing.

5) Designates and profiles wastes.

6) Makes initial determination of acceptability of new waste streams based on permit conditions, treatability and applicable disposal regulations.

7) Ascertains the compatibility group of new wastes for storage.

8) Maintains TSD Facility waste inventory in the on-line environmental management database.

9) Reviews and verifies test data.

10) Generates waste manifests.

11) Participates in biannual review and updating of all current WGRs and profiles.

12) Enters all data necessary to document task completion in the on-line environmental management system database.

H6.4 DW Handlers

Under direction of the Dangerous Waste Program Manager, and following desk procedures or SOPs of 13c above, the DW Handlers:

1) Sample waste streams for analytical testing.

2) Perform field screening and process testing.

3) Perform verification testing per TSD Facility Operating Manual.

4) Pick-up and log in waste from approved sites.

5) Maintain TSD Facility waste inventory in the on-line environmental management database

6) Treat waste per TSD Facility Operating Manual.

7) Package and label waste.

8) Perform waste site and TSD Facility required inspections.

H6.5 DW Collectors

Under the direction of the Dangerous Waste Program Manager, and following desk procedures or SOPs, the DW Collectors:

1) Pick up waste from approved on-station sites, verify that the waste container matches the waste description on the Hazardous Waste Pick-up Request and the Waste Disposal Request.

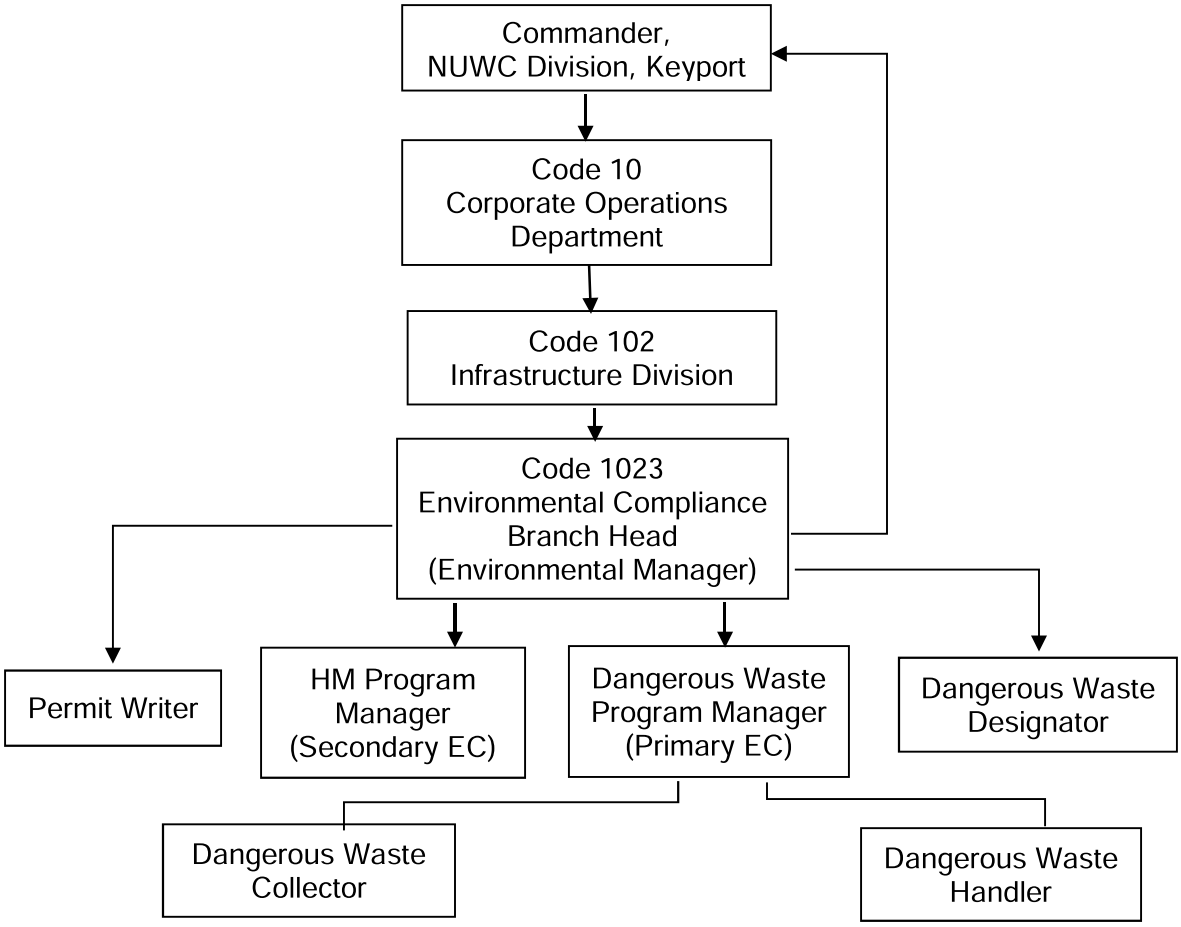
2) Deliver waste to the TSD Facility receiving area.

The position descriptions for these positions are provided in appendix H1 (Position Descriptions). These position descriptions further detail the responsibilities, duties, and requisite qualification of current positions at the TSD Facility. An Excel spreadsheet with names documenting the training is kept at the TSD Facility.

H6.6 ORGANIZATIONAL STRUCTURE

The TSD Facility organization chart shown in Figure H6-1 depicts job positions at the TSD Facility. If the organization and positions depicted in this training program change due to funding and availability of personnel, the Naval Undersea Warfare Center, Division, Keyport (NUWC) will submit a permit modification. Only the Commander of NUWC has the authority to sign the Part A form and the certification statement that accompanies the Pt B Permit Application (Section K).

Figure H6-1. NUWC Division Keyport Organizational Chart



H6.7 TRAINING PERSONNEL QUALIFICATIONS

WAC 173-303-330(1)(a)

Initial training is conducted by the Dangerous Waste Program Manager or a designated representative. Instructors for some job-specific training are experts in the specific field and have the required training and broad experience. The instructor for on-the-job training is a supervisor or operator who has the qualifications and experience necessary to demonstrate a good command of the subject matter of the courses and competent instructional skills. Training sessions related specifically to dangerous waste management are directed by a person trained in dangerous waste management procedures. In some cases, training is performed by off-site experts. The 40-hour initial and 8-hour refresher OSHA Hazardous Waste operations and Emergency Response courses that satisfy the requirements 29 CFR 1910.120 (p) (7) (i) are taught by an offsite certified provider. In addition to HAZWOPER, DOT and CPR/First Aid training are also taught by an offsite certified provider.

H7. DOCUMENTATION AND RECORD RETENTION

WAC 173-303-330(2)(c) & (3); -806(4)(a)(xii)

Training records of employees working at the TSD Facility are maintained by the DW Program Manager of the TSD Facility. Training records of support personnel from the Regional Fire Protection Branch are maintained in the training files at the Regional Fire Station. Training records of former employees are kept at least three years from the date the employee last worked at the TSD Facility. Training records of current personnel are kept at the site until closure of the TSD Facility. For at least three years after closure of the TSD Facility, personnel records will be kept by the NUWC Division, Keyport Training Division. A personal training log for each TSD Facility employee is kept at the TSD Facility. All initial, job specific, and continuing on-the-job training is maintained in the TSD Facility operating record. In addition to the personal training log, training records include copies of tests taken or certificates of attendance of all regulatory required training, documenting that the required training for each employee has been satisfactorily completed.

SECTION H

APPENDIX H1

POSITION DESCRIPTIONS

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ENVIRONMENTAL MANAGER

I. MAJOR DUTIES AND RESPONSIBILITIES

The incumbent is the Branch Head of the Environmental Compliance Branch and oversees Program Managers for the Air Quality, Cultural Resources, Drinking Water, Emergency Response, Environmental Quality Assessment, Environmental Training, Hazardous Material, Dangerous Waste (TSD Facility), Installation Restoration, ISO 14000, Natural Resources, NEPA, Pesticide, Pollution Prevention, Storage Tanks and Storm Water programs.

II QUALIFICATIONS

A. GENERAL. Ability to communicate effectively orally and in writing. Ability to plan, organize, and delegate work. Ability to lead teams of personnel with varying disciplines and grade levels. Knowledge of oral and writing techniques required to originate correspondence, write directives, instructions, reports, and inspection documents, and prepare training and briefing materials for presentation to a variety of audiences. Knowledge of related fields of environmental protection and science (e.g. biology, chemistry). Knowledge of Federal, State and County laws, statutes, regulations, rules, Presidential Executive Orders, and Chief of Navy Operations (CNO) Directives related to environmental issues.

B. TECHNICAL. Knowledge of project management principles and methods, including problem definition, solution identification, and cost/benefit analysis techniques. Knowledge of organizational techniques to manage multiple level tasks, establish time lines, and meet deadlines. Professional knowledge of environmental and natural resources concepts, principles, and practices applicable to the most complex problems associated with advanced and/or major water pollution discharge, air pollution, and dangerous waste disposal problems encountered by industry, including state-of-the-art technology and equipment development. Ability to develop plans, budgets, and strategies to ensure activity compliance with all environmental regulations. Knowledge and skill to assess discharges as they affect the environment, public safety, and attendant interests, translate technical analyses into legal, regulatory parameters, and communicate with a technical and lay community, which may be either supportive or antagonistic.

C. SPECIALTY TECHNICAL. Mastery of advanced concepts, principles, and practices of environmental protection to serve as the technical authority in industrial dangerous and toxic waste treatment and management resulting from undersea weapons industrial operations, testing and development. Knowledge and skill to apply the latest developments in environmental controls to resolve problems for which accepted methods are not applicable and to review plans, designs, and specifications (prepared by others) for the improvement or alteration of existing or the eventual construction of new facilities.

D. PHYSICAL. The work is sedentary. Typically, the employee may sit comfortably to do the work. However, there may be some physical demands to include the following: walking, standing, bending and crawling.

DANGEROUS WASTE PROGRAM MANAGER

I. MAJOR DUTIES AND RESPONSIBILITIES

The incumbent manages NUWC Division, Keyport's dangerous waste management program including direct responsibility for compliance with Federal, State, and local regulations, and the Dangerous Waste Management Permit throughout NUWC Division, Keyport.

(20%) A. Provides technical direction to the Treatment, Storage and Disposal Facility (TSD Facility) staff and NUWC Division, Keyport Waste Site Managers/Alternates in the following disciplines: dangerous waste collection, designation, tracking, storage, management, manifesting and disposal, inspections, waste sampling for analysis and testing for verification, waste consolidation, and dangerous substance spill response and cleanup.

(20%) B. Develops, implements and manages proper procedures for receiving, handling, storing, packaging, inspecting, labeling, and transporting of dangerous waste. Determines the proper waste codes and shipping names by interpreting regulations. Determines the testing requirements needed for identifying the constituents of unknown waste. Prepares dangerous waste manifests for shipping. Assists in the development of dangerous waste plans including permit requirements for treatment, storage, and disposal as applicable. Determines minimum facilities and staffing requirements for Dangerous Waste Generator activities and the TSD Facility. Evaluates the need for additional or improved facilities pursuant to applicable regulatory requirements.

(20%) C. Develops, maintains and conducts training for all TSD Facility and Site Manager/Alternate personnel. Maintains training requirements and records of TSD Facility personnel. Keeps training records updated pursuant to Navy instructions, Dangerous Waste Management Permit requirements, and other mandates.

(15%) D. Performs random, unscheduled inspections of station dangerous waste storage sites (CAA and satellite sites), and daily, weekly, monthly and annual inspections of the TSD Facility to ensure compliance with the Dangerous Waste Management Permit all other Federal, State, and local requirements. Audits disposal contractors' waste storage and disposal facilities for compliance with these requirements. Performs inspection of the waste programs of NUWC Division, Keyport tenant facilities to assure compliance with these requirements. Makes recommended changes to control or eliminate potential of existing hazards or violations.

(10%) E. Acts as Navy Emergency Coordinator for oil spills and hazardous substances spills. Determines safe evacuation distances, material hazards, proper clean-up team protection, clean up supplies needed, spill cleanup, and decontamination procedures. Makes all verbal contacts with federal, state, Navy, and local authorities when needed. Prepares and maintains spill documentation and assists in sending completed documentation to all appropriate Naval and regulatory facilities. Performs follow up investigation and recommends actions for spill prevention. Critiques spill operations with all parties. Evaluates and recommends improvements for spill response and clean-up procedures.

(3%) F. Provides interpretation of local, state, and federal regulations to NUWC Division, Keyport management, as well as implementation of Navy environmental policies and programs.

Participates in coordinating activities with municipal, state, regional, and federal environmental regulatory agencies. Provides advice, recommendations, and assistance regarding adequate environmental protection plans and their implementation. Attends meetings and joint field inspections to determine whether existing facilities comply with applicable environmental standards and, in the case of non-complying facilities, determines requirements and methods for compliance. Reviews, analyzes, and recommends modifications to existing environmental programs and practices. Determines whether such practices comply with applicable standards and determines requirements needed to meet continuously changing regulations.

(2%) G. Assists in specialized studies, surveys and designs to resolve deficiencies in dangerous waste disposal, dangerous waste minimization and dangerous materials control. Work includes: assist TSD Facility staff in identification and resolution of potential hazards to ensure compliance with regulations for dangerous waste treatment, storage, and disposal; and hazardous substance spill response and cleanup; monitoring sources for violations and providing necessary corrective actions, instructions, and guidelines to ensure compliance; providing technical environmental support related to oil, dangerous waste and solid waste disposal, and oil spill recovery programs.

(2%) H. Assists the Environmental Manager, NUWC Division, Keyport Commanding Officer, civilian management, tenant, and support activities at NUWC Division, Keyport and detachments in resolving difficult and unusual environmental, and dangerous material/waste control issues. Visits detachment facilities to determine environmental compliance and to assess operation and maintenance of equipment and facilities relating to dangerous material/waste control such as dangerous waste accumulation sites and pollution prevention equipment. The incumbent and staff provide solutions in overcoming deficiencies or potential hazards by evaluating new technology and determining the most economical and efficient procedures, methods, equipment, and facilities. Represents the command at conferences and meetings at NUWC Division, Keyport and NAVSEA level, and regulatory agencies.

(2%) I. Provides technical direction and guidance in the review and administration of assigned contracts and maintains day-to-day coordination with project contractors.

(2%) J. Determines proper procedures for conducting PCB inventories and requirements for record keeping, inspections, storage facilities, handling, marking, packaging use, transportation and disposal of PCB's, PCB items, PCB waste, and PCB contaminated items. Obtains samples for analysis as required. Evaluates need for additional or improved facilities, record keeping, personnel training, and management policies.

(2%) K. Maintains current files of local, state, and federal dangerous waste regulations and serves as the technical authority on the requirements of various regulations. Maintains liaison with professional and technical personnel at the various regulatory agencies to ensure proper interpretation of requirements.

(2%) L. Reviews plans and specifications for pollution control features to ensure compliance with established standards. Advises management of any equipment or process changes needed to comply with federal, state, or local administrative requirements.

II. QUALIFICATIONS

A. KNOWLEDGE REQUIRED

1. Mastery of advanced professional environmental concepts, principles, and practices to serve as the technical authority for the full range of dangerous waste control programs and facilities and the implementation and administration of related programs at NUWC Division, Keyport.

2. Knowledge and skills sufficient to apply the latest developments in environmental protection to resolve issues for which accepted methods are not directly applicable and to review plans, designs, and specifications prepared by others for the improvement or alteration of existing or for the construction of new facilities.

3. Knowledge and skill to assess and advise on the impact of the installation's activities on public safety, ecology, and environment involving matters directly or closely related to dangerous waste operations control.

4. Knowledge and skill to store and dispose of ordnance waste, wastewater, dangerous waste and establish and implement procedures and policies in support of NUWC Division, Keyport industrial operations.

5. Knowledge and skill to establish spill prevention, control, and countermeasure methods, equipment, and procedures.

6. Knowledge of Navy and DOD environmental policies and guidelines, and local, state, and federal environmental laws and regulations.

7. Familiarity with related fields such as safety and occupational health, industrial hygiene, and operation of treatment, storage, and disposal facilities.

8. Knowledge of the organization, function, and operations to the activity-serviced, higher echelon commands and their relationship to other federal activities and private industry.

9. Knowledge and skill in applying a wide range of methods used to gather, analyze, and evaluate information concerning environmental protection/improvement management processes, draw conclusions and recommend appropriate action.

10. Knowledge of statutes, regulations, permitting requirements and precedent decisions governing environmental operations sufficient to use in planning, implementing, or monitoring environmental programs and services.

11. Ability to analyze extensive program data/interrelationships and coordinate the preparation of accurate and reasonable program plans and proposals.

12. Skill in applying complex fact finding, analytical and problem solving methods and techniques.

13. Skill in written and oral communication sufficient to prepare and present findings and recommendations, carry out specific actions regarding controversial issues and/or selling or implementing new ideas and concepts.

14. Knowledge of management information systems and office automation applications, principles, and practices.

15. Knowledge of acquisition process/procedures in order to develop statements of work, evaluate proposals, recommend awards, develop most efficient organization statements, and evaluate contractor performance.

DANGEROUS WASTE DESIGNATOR

I. MAJOR DUTIES AND RESPONSIBILIES.

(15%) A. For dangerous waste shipments, enter the Uniform Hazardous Waste Manifest (UHWM) data into the NUWC Environmental Management System (NEMS) database, assemble the UHWM packet (UHWM, Waste Disposal Requests (WDRs), DD1348, and delivery order (DO)) and file. Enter the UHWM return copy data into the NEMS database, add the return copy to the UHWM packet, and move the packet to the manifest file. Notify the Dangerous Waste Program Manager if the return copy is not received in 25 days from the receiving facility.

(15%) B. Perform designation for all new Material Identification Tracking (MIT)/Waste Identification Tracking (WIT) forms in the dangerous waste inventory, and attach the appropriate profile(s). Create a new profile for the MIT/WIT if no existing profile matches the MIT/WIT. Send a copy to the Defense Reutilization and Marketing Office (DRMO) - designated disposal company and file the Profile, the Waste Profile Questionnaire (WPQ), lab analysis, and any associated documentation.

(10%) C. Conduct a review of all active shipping profiles at least annually. Update all active profiles as required by regulatory changes, cost changes, and/or changes provided by the DRMO or other disposal companies. Create new profiles as required to support new disposal contractors. Send a copy to the DRMO - designated disposal companies and file the Profile, the WPQ, lab analysis, and any associated documentation.

(10%) D. Enter Waste Disposal Request (WDR) data for waste pick-ups into the NEMS database and file the WDRs.

(10%) E. Review waste chemical composition and physical characteristics from each Waste Generation Record (WGR) and assign an existing WIT number to that WGR. Return the WGR to the generator if incorrectly or incompletely prepared. Identify chemicals from WGRs that are not designated as a waste listed in the Dangerous Waste Management Permit and refer those chemicals to the Dangerous Waste Program Manager. If no existing WIT matches the waste, create a new WIT in the NEMS database and assign that WIT number to the WGR. When required to identify the waste, submit a waste sampling request to the Dangerous Waste Program Manager listing appropriate analytical tests to be performed, sampling method and samples to be taken to identify the waste for designation.

(10%) F. Review information on the product chemical composition and physical characteristics contained in the Safety Data Sheets (SDSs). In the NEMS database, assign a MIT number to that SDS record. Identify the correct WIT number for that product to be wasted as pure product and assign it to the SDS record in the NEMS database. Identify chemicals from SDSs that are not designated as a waste listed in the Dangerous Waste Management Permit and refer those chemicals to the Dangerous Waste Program Manager. If no existing WIT matches the SDS, create a new WIT in the NEMS database and assign that WIT to the SDS record in the NEMS database.

(5%) G. Update the NEMS database (DD1348) dangerous waste records so all containers on a DD1348 form with the same WIT have the most recent profile. Create and print DD1348s (as

PDF files) for submittal to DRMO. Update these NEMS DD1348 records with a temporary DO number and run the NEMS database 'Staging Report'.

(5%) H. Prepare shipping papers (bills of lading) for non-DRMO shipments. Review all UHWMs for shipments of dangerous waste.

(5%) I. Review results of random sampling of dangerous waste pick-ups against the associated WGR. Update the WGR to show it has been reviewed. Void the WGR and request a new WGR from the generator if the sample results are outside the WGR/WIT ranges. Report the voided WGR to the Dangerous Waste Program Manager.

(3%) J. Upon receipt of a WGR, designate and enter the WGR data into the NEMS database and save a copy to the TSD operating record. Notify the generator of the WGR number assigned to their waste for printing of the WDR by the generator.

(3%) K. Enter or update dangerous waste sites in the NEMS database on receipt of Dangerous Waste Program Manager-approved Site Registration form or notification from the Dangerous Waste Program Manager.

(3%) L. Update the dangerous waste inventory data in the NEMS database upon receipt of Dangerous Waste Inventory Update sheet from the Dangerous Waste Program Manager.

(3%) M. Enter newly identified chemicals and chemical synonyms from SDSs or WGRs into the NEMS database Chemical Library.

II. **QUALIFICATIONS**.

A. KNOWLEDGE REQUIRED.

1. Mastery of advanced chemistry concepts, principles, and practices to serve as the technical authority for the designation of all hazardous materials and dangerous wastes encountered at NUWC Division, Keyport.

2. Mastery of DOT dangerous waste transportation regulations and associated manifests and other required forms and documentation.

3. Ability to research manufacturer's information submitted, and review product chemical composition and physical characteristics to determine waste designation or specify sampling method and testing required to properly designate all new and existing dangerous wastes encountered at NUWC Division, Keyport.

4. Familiarity with related fields such as safety and occupational health, industrial hygiene, and operation of treatment, storage, and disposal facilities.

5. Knowledge of the NUWC Dangerous Waste Management Permit, and statutes, regulations, permitting requirements and precedent decisions governing environmental operations sufficient to use in planning, implementing, or monitoring the hazardous material and dangerous waste treatment, storage and disposal programs and services.

6. Skill in applying complex fact finding, analytical and problem solving methods and techniques.

7. Skill in written and oral communication sufficient to prepare and present findings and recommendations, carry out specific actions regarding controversial issues or implementing new ideas and concepts.

8. Knowledge of management information systems and office automation applications, principles, and practices, including interrelational databases.

DANGEROUS WASTE HANDLER

I. MAJOR DUTIES AND RESPONSIBILITES

A. GENERAL: The incumbent performs dangerous waste management operations, including: pre-receipt inspections, storage site inspections, and identification, collection, packaging, labeling, transportation, tracking, consolidation, storage and manifesting operations of dangerous wastes. Performs waste sampling for analysis and testing for verification. Performs fluid pumping operations, transferring dangerous liquids for proper disposal.

B. SPECIFIC: The duties and responsibilities identified below are specific in work type, but are not limited to the "line item" description provided. As new dangerous waste requirements are established, the functions listed below will be adjusted to maintain compliance within the broad framework outlined under federal laws and regulations.

(35%) 1. OPERATION OF FACILITIES

a. Inspects all waste material received from dangerous waste generators and accepts or rejects the material in accordance with NUWC procedures. Inspects for proper labeling, container type, segregation, proper use of pallets, drum identification number, material nomenclature, and verifies that material is properly secured. Performs verification sampling and testing of all wastes. Loads and transports all material that meets the accepted criteria to designated storage facilities. When rejection occurs, the incumbent provides the generator written instructions on the specific deficiency to be corrected.

b. Performs daily, weekly, monthly and annual inspections of dangerous waste storage areas as assigned to assure that waste material is accurately accounted for, identified, and stored, and that any necessary measures (e.g. over-packing) are performed to compensate for deteriorated containers.

c. Performs daily, weekly, monthly and annual inspections of dangerous waste storage equipment as assigned.

d. Makes arrangements and moves portable tanks and pumping equipment to production shops for pumping various chemicals used in metal preparation and treatment.

e. Performs routine maintenance and repair of pumps, tanks, and other waste handling equipment.

f. Operates specialized equipment: paint consolidation, drum washer, compactor and shredder.

g. Stages waste for pre-inspection and load-outs of both solid and liquid wastes.

h. Interfaces with private contractors to manifest and ship dangerous waste.

i. Operates pumps, mixing tanks, and sampling devices used in the storage of wastes.

j. When in-house treatment is not available, incumbent re-packs, consolidates, and/or blends wastes into proper containers for shipping.

k. When materials are lab packed, the incumbent places, arranges, and cushions individual containers inside shipping drums, seals and labels drums for shipment.

(20%) 2. INSPECTION AND IDENTIFICATION

a. Performs on site pre-receipt inspections of dangerous waste at the generation point and assures that the receipt documentation is in order, that containers are not leaking and are safe to handle, and that appropriate labels, placards, or other markings are affixed to the containers for transportation to the Treatment, Storage and Disposal Facility (TSD Facility).

b. Reviews/determines whether containers are Department of Transportation (DOT) approved and rejects items not meeting this requirement.

c. Determines the nature (e.g. flammable, toxic, acid) and the degree (e.g. repercussions of long term storage) of the particular hazard involved. May receive technical input from other environmental engineering and technical staff.

d. Collects test samples of unknown hazardous substances for laboratory analysis to identify materials.

(20%) 3. PACKAGING, LABELING, AND TRANSPORTING

a. Properly segregates, packages, and labels wastes such as heavy metals, asbestos, PCBs, waste oils, paints, etc., for shipment.

b. Provides (DOT) dangerous waste identification and labeling for shipment.

c. Ensures that all wastes removed from CAAs are properly containerized, labeled, and documented in compliance with all federal, state, and local regulations.

d. Operates trucks, vans, tanker trucks and flatbeds (up to 5-ton capacity) for transporting dangerous waste to the handling facility. Operates forklift trucks for loading, unloading, staging, and storing material.

(20%) 4. RECORDS AND DOCUMENTATION

a. Completes inventory and inspection forms and logs for stored dangerous waste.

b. Prepares documentation (i.e. Waste Generation Record (WGR)) required to evaluate and classify the type of waste.

c. Provides assistance to the other environmental engineering and technical staff in assuring that all records, reports, and documentation required for the processing of dangerous waste are complete, accurate, and available for review, including those necessary for Resource Conservation and Recovery Act (RCRA) record keeping and reporting.

e. Cleans and decontaminates transportation and handling equipment used to move hazardous materials and dangerous wastes.

(5%) 5. INDEFINITE REQUIREMENTS

The laws by which dangerous waste regulatory programs are established are under constant review and can change quickly and frequently. In some cases, past practices, which were within the framework of existing laws, may be superseded and can even be considered a violation of current law, for which NUWC could be held liable. The incumbent will likely be assigned a number of tasks in the future, which are as yet unknown. Workers will, however, be adequately trained in the proper execution of these new requirements.

II. **QUALIFICATIONS**

A. KNOWLEDGE REQUIRED: The incumbent must be able to read and interpret a wide variety of Federal, State, and local statutes as well as applicable regulatory requirements in order to carry out the duties and responsibilities outlined herein. The incumbent must possess specific knowledge of the NUWC Division, Keyport Dangerous Waste Management Permit, Navy directives and policy statements; NUWC instructions; local, state, and federal regulations; standard operation procedures; manufacturer's catalogs and handbooks; files of previous projects; contract specifications, and such guidelines as: the Clean Water Act, the Toxic Substance and Control Act, the Code of Federal Regulations (CFR); Department of Transportation (DOT) Regulations; Resource Conservation and Recovery Act (RCRA); National Fire Protection Association (NFPA) Label Guide; the Washington Administrative Code (WAC 173-303). Additionally, the incumbent must possess the following knowledge, skills, and abilities:

1. Knowledge of and documented training in proper dangerous waste identification procedures.

2. Ability to identify a broad variety of dangerous waste materials by visual observation, and/or consulting applicable supply lists, catalogs, manuals, and technical publications.

3. Must have a basic knowledge of a variety of chemicals and be knowledgeable with the nomenclature and properties of various hazardous properties (incompatibility, reactivity, use in production processes, etc.).

4. Must be able to collect samples for basic test procedures on wastes for pH, heavy metals, sulfates, nitrates, nitrites, phosphates, cyanide, ammonia, chloride, phenols, and sodium hydroxide.

5. Must have working knowledge with pertinent governing directives issued by Navy, Environmental Protection Agency (EPA), Department of Transportation (DOT), Resource Conservation and Recovery Act (RCRA), and state and local agencies.

6. Must have a thorough knowledge of and documented training in proper handling, consolidating, manifesting, placarding, labeling, and emergency spill procedures.

7. Must have the ability to interpret and follow technical reference manuals.

8. Must be licensed to operate trucks, vans, or flatbeds with a capacity up to five tons and ten-ton forklift, with various attachments. Must have HAZMAT commercial endorsement.

9. Must have ability to successfully complete a variety of training classes in dangerous waste compliance as well as on-the-job training.

10. Must have effective verbal and written communication skills.

11. Must be able to properly fill out DOT manifests and other required forms and documentation.

12. Must have knowledge of NUWC environmental instructions.

13. Must have knowledge of NUWC organization, facilities, and production operations.

14. Must have knowledge of basic mathematics to compute weights, volumes, mass, and percentages.

15. The incumbent is required to be certified to wear respiratory protection such as: self-contained breathing apparatus and full-face cartridge respirators. Fully encapsulated suits are to be worn in some emergency spill response situations. A variety of chemical protective suits are used for daily operations and some spill containment and cleanup. Incumbent must have a basic knowledge of chemical and toxicological hazards of chemical substances. Incumbent must be able to determine hazards and select appropriate Personal Protective Equipment (PPE).

B. RESPONSIBILITY:

1. The dangerous waste management facilities for which the incumbent has substantial responsibility comprise a large and complex operation.

    a. The incumbent is responsible for the physical and documentary control of more than 7,000 types of dangerous wastes that have been identified at Naval Undersea Warfare Center.

    b. There are numerous different locations in NUWC that require frequent (several times a week) removal, treatment, storage, and disposal services on a continuing basis.

    c. A significant amount of the dangerous waste consists of mixed or unidentified hazardous substances or liquids in the same container. These must be sampled for technical laboratory analysis.

    d. A significant portion of the waste that is received must be removed from the containers and consolidated with other like waste using special handling procedures.

2. The incumbent makes independent technical decisions to determine the proper identification, treatment, packaging, storage, labeling, and shipment of waste materials. Critical technical decisions are typically subject to review by supervision or environmental engineering personnel.

3. The handling and treatment of the majority of the dangerous wastes are subject to and controlled by compliance with a wide variety of laws and regulations, some of which are conflicting or contradictory.

4. The incumbent performs under general supervision. A high degree of resourcefulness, initiative, and sound judgment is required to apply training and work experience to a variety of dangerous waste management problems, devise new or improved techniques for complying with environmental protection regulations, and overcome difficult or unique problems where guidelines and precedents may be lacking. Critical or highly unusual situations may be referred by the incumbent to his or her supervisor or to the environmental engineering and technical staff.

5. Incumbent must be able to select proper sampling equipment for the type of waste to be identified as determined by the Waste Analysis Plan. He/she assures proper usage and care of associated equipment and materials. The incumbent will insure that the samples are collected and preserved in accordance with prescribed EPA test methods outlined in the Waste Analysis Plan.

DANGEROUS WASTE COLLECTOR

I. MAJOR DUTIES AND RESPONSIBILITIES

A. GENERAL: The incumbent performs dangerous waste management operations, including: on-station storage site inspections; and identification, collection, inspection of packaging and labeling, and transportation of dangerous wastes. Performs fluid pumping operations to transfer dangerous liquids at waste storage sites and the TSD Facility for proper storage.

B. SPECIFIC: The duties and responsibilities identified below are specific in work type, but are not limited to the "line item" description provided. As new dangerous waste requirements are established, the functions listed below will be adjusted to maintain compliance within the broad framework outlined under federal laws and regulations.

(60%) 1. INSPECTION AND IDENTIFICATION

a. Performs a documentation inspection of dangerous waste at the generation point or nearby storage site and ensures that the waste matches the waste documentation (Hazardous Waste Pickup Request, Waste Disposal Request), that containers are the correct type, are not leaking and are safe to handle, and that appropriate labels, placards, or other markings are affixed to the containers. When rejection occurs, the incumbent notifies the Dangerous Waste Program Manager with the specific deficiency to be corrected.

(40%) 2. TRANSPORTATION OPERATIONS

a. Upon inspecting and ensuring dangerous wastes are safe to transport, loads and transports all dangerous wastes to the TSD Facility receiving area.

b. Moves portable tanks and pumping equipment to production shops for pumping various chemicals used in metal preparation and treatment.

c. Operates trucks, vans, tanker trucks and flatbeds (up to 5-ton capacity) for transporting dangerous waste to the handling facility. Operates forklift trucks for loading, unloading, staging, and storing material.

II. QUALIFICATIONS

A. KNOWLEDGE REQUIRED: The incumbent must be able to read and interpret Federal, State, and local statutes as well as applicable regulatory requirements in order to carry out the duties and responsibilities outlined herein. Additionally, the incumbent must possess the following knowledge, skills, and abilities:

1. Ability to identify a broad variety of dangerous wastes by visual observation, and/or consulting applicable documentation.

2. Must have a thorough knowledge of and documented training in proper handling, and emergency spill procedures.

3. Must have the ability to interpret and follow technical reference manuals.

4. Must be licensed to operate trucks, vans, vacuum trucks, and flatbeds (up to 5-ton capacity), and forklift with various attachments.

5. Must have ability to successfully complete a variety of training classes in dangerous waste compliance as well as on-the-job training.

6. Must have effective verbal and written communication skills.

7. Must have knowledge of NUWC environmental instructions.

8. Must have knowledge of NUWC organization, facilities, and production operations.

B. RESPONSIBILITY:

1. The incumbent is responsible for the physical and documentary control of more than 7,000 types of dangerous wastes that have been identified at Naval Undersea Warfare Center.

2. The handling of the majority of the dangerous wastes are subject to and controlled by compliance with a wide variety of laws and regulations, some of which are conflicting or contradictory.

3. The incumbent performs under general supervision. A high degree of resourcefulness, initiative, and sound judgment is required to apply training and work experience to a variety of dangerous waste transport problems, devise new or improved techniques for complying with environmental protection regulations, and overcome difficult or unique problems where guidelines and precedents may be lacking. Critical or highly unusual situations may be referred by the incumbent to his or her supervisor or to the environmental engineering and technical staff.

SECTION I

CLOSURE AND FINANCIAL ASSURANCE

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TABLE OF CONTENTS

Section		Page
I	Closure and Financial Assurance	I-1
I1.	Closure Plan	I-1
I1.1	Introduction and Facility Description	I-1
I1.1.1	Maximum Waste Inventory	I-1
I1.1.2	Maximum Extent of Operation	I-1
I1.2	Closure Performance standards	I-2
I1.3	Closure Activities	I-2
I1.3.1	Removing Dangerous Waste	I-4
I1.3.2	Decontaminating Structures, Equipment, and soil	I-6
I1.3.2.1	Procedures for Identifying and Repairing Cracks in Containment Structures	I-8
I1.3.2.2	Procedures for Identifying Stains in Containment Structures	I-8
I1.3.2.3	Tank System and Equipment Decontamination	I-8
I1.3.2.4	Decontamination of Containment and Structure Surfaces	I-8
I1.3.2.5	Disposal of Asphalt Wastes	I-9
I1.3.2.6	Disposal of Contaminated Demolition Wastes	I-9
I1.3.2.7	Disposal of Decontamination Rinsate	I-9
I1.3.3	Sampling and Analysis to Identify Extent of Decontamination/ Removal and to Verify Achievement of Closure Standard	I-9
I1.3.3.1	Sampling to Determine Extent of Contamination	I-10
I1.3.3.2	Sampling to Confirm Decontamination of Soils	I-11
I1.4	Schedule for Closure	I-11
I1.4.1	Extension of Closure Time	I-13
I2.	Closure Cost Estimate	I-13
I2.1	Financial Assurance Mechanism for Closure	I-13
I3.	Notice in Deed of Already Closed Disposal Units	I-13
I4.	Post-Closure Plan	I-13
I5.	Liability Requirements	I-14

LIST OF TABLES

Table		Page
I1-1	Container Storage Area Designations and Storage Capacity	I-5
I1-2	Tank Storage Waste Types and Tank Identification	I-6

LIST OF FIGURES

Figure		Page
I1-1	Facility Final Closure Schedule	I-12

I CLOSURE AND FINANCIAL ASSURANCE

WAC 173-303-610; -620; -630(10); - 640(8); -806(4)(a)(xiii) – (xviii)

I1. CLOSURE PLAN

WAC 173-303-610(2) – (6); -806(4)(a)(xiii)

I1.1 INTRODUCTION AND FACILITY DESCRIPTION

WAC 173-303-610(3)

The TSD Facility, Building 1051, is a 44,000 square foot one-story enclosed structure with approximately 18,000 square feet of attached exterior covered area. A diagram of the TSD Facility floor plan is shown in Part A, Attachment B (TSD Facility General Layout). The enclosed structure consists of three basic functional areas: (1) the warehouse which consists of the tank area, container handling and storage areas, and waste process/treatment areas; (2) personnel areas comprised of office spaces, laboratory, lunch room, and toilet/shower facilities; and (3) mechanical/storage areas comprised of a mezzanine level for heating, ventilation and air conditioning equipment, boiler rooms, electrical room, fire protection, and spill response storage. The exterior covered area consists of the truck loading/unloading dock, the new drum storage, the drum shredder, the fluorescent lamp crusher, the asbestos storage bin, the battery charging station, and the soil dewatering areas.

TSD Facility location is detailed in Section B (Facility Description and General Provisions) along with container and tank storage capacities which can also be found in Section I1.3.1.

Section I describes the details of clean closure which can be summarized by the following actions:

- Notification of Closure
- Receive Last Known Volume of Waste
- Begin Closure
- Monitoring by PE
- Inventory Elimination
- Tank/Equipment Decontamination
- Containment Decontamination
- Soil Sampling and Analysis

I1.1.1 MAXIMUM WASTE INVENTORY

The maximum waste inventory is shown be Tables I1-1 and I1-2 in subsections I1.3.1.

I1.1.2 MAXIMUM EXTENT OF OPERATION

For the purpose of closure, the extent of operation is defined as the area encompassed by Bradley Road to the west, Gadberry Street to the south, and the 8′ high chain-link fences east and north of the TSD Facility (see Part A, Attachment B, TSD Facility Layout).

I1.2 CLOSURE PERFORMANCE STANDARDS

WAC 173-303-610(2)

NUWC Division, Keyport will meet Washington Department of Ecology (Ecology) clean closure performance standards for dangerous waste closure in WAC 173-303-610(2)(a) as follows:

a. Minimize the need for further maintenance.

b. Control, minimize, or eliminate, to the extent necessary to protect human health and the environment from post-closure escape of dangerous waste, dangerous waste constituents, leachate, contaminated runoff, or dangerous waste decomposition products to the ground, surface water, ground water, or the atmosphere.

c. Return the land to the appearance and use of surrounding land areas to the degree possible given the nature of the previous dangerous waste activity.

Where clean closure requires the removal and decontamination of all dangerous waste, waste residues, equipment and bases, liners, soils and subsoils, or other material containing or contaminated with dangerous waste or waste residue, the removal or decontamination must ensure that the levels of dangerous waste or dangerous waste residuals do not exceed:

(1) For soils, groundwater, surface water, and air in the area of the closing unit or affected by releases, the numeric cleanup levels calculated using unrestricted site use exposure assumptions according to the Model Toxics Control Act (MTCA) Cleanup Regulation, WAC 173-340. Primarily, these will be numeric cleanup levels calculated according to MTCA Method B, although MTCA Method A may be used as appropriate.

(2) For structures, equipment, bases, liners, and other materials containing or contaminated with dangerous wastes, constituents, or residues, clean closure standards will be by removal or decontamination to a "clean debris surface" using an appropriate treatment method in 40 CFR 268.45 Table 1 (Alternative Treatment Standards for Hazardous Debris, Section A, Extraction technologies, subsection 1, Physical extraction), or other methods specifically described in subsection I-1b(3) (Decontaminating Structures, Equipment, and Soil).

I1.3 CLOSURE ACTIVITIES

WAC 173-303-610(3)(a)(i) – (vi), (5); -620(3); -630(10); 640(8)

The following procedures will be implemented during closure:

a. Provide notification to Ecology of partial or final closure pursuant to WAC 173-303-610(3)(c).

b. All daily, weekly, and monthly inspections will be performed and checklists maintained as stated in the Inspection Schedule in Section F (Procedures to Prevent Hazards) until the final closure certification is submitted and accepted by Ecology.

c. At all times during closure activities, the TSD Facility will be secured and the prevention procedures, structures, and equipment identified in Section F (Procedures to Prevent Hazards) will be followed.

d. At all times during closure activities, the required and applicable Standard Operating Procedures (SOP) for proper waste management and worker health and safety will be followed. The precautions outlined in Section F (Procedures to Prevent Hazards) and the standards in the Site Safety and Health Plan, Building 1051 (SSHP) will be observed.

e. During closure, dangerous wastes and process residues will continue to be segregated and stored according to their compatibility in the storage tanks and the containers as stated in Section D (Process Information).

f. All wastes within the TSD Facility and waste management units will be processed in the same manner, as they would be under normal operating circumstances as presented in Section D (Process Information).

g. The requirements of the Department of Transportation (DOT) 49 CFR will be followed for transporting any wastes or other equipment or materials off site.

h. Sequential closure of the dangerous waste management units will follow for closing the entire TSD Facility. Refer to Section I-1b(2), Removing Dangerous Waste, for a description of the closure procedures for individual waste management units and Section I-1f, Schedule for Closure, for the timing of these activities.

i. All dangerous waste storage and treatment tanks and associated equipment, piping and instrumentation will be decontaminated and either salvaged, dismantled or if necessary, disposed of off-site at an authorized TSD Facility.

j. All mobile or fixed equipment that has been used to process or handle dangerous wastes will be cleaned, decontaminated, and re-used, salvaged, or, if necessary, disposed of off-site at an authorized TSD Facility.

k. Decontamination residues and contaminated soil generated from closure activities will be handled as required by WAC 173-303-170 through 230.

l. An independent, registered, Professional Engineer will monitor all closure activities to ensure they are conducted in accordance with the approved Closure Plan. In particular, the engineer's documentation will include, but not be limited to, field observation and review of records of the following:

    1. Sampling procedures;

    2. Locations of soil, concrete, and asphalt sampling to ensure locations were as specified in the sampling and analysis plan;

    3. Sample labeling and handling including chain of custody procedures;

    4. Tank, equipment and concrete decontamination procedures to ensure that closure plan requirements for decontamination and rinsate management were followed and that structures and equipment were adequately cleaned.

m. Pursuant to WAC 173-303-610(b), NUWC Division, Keyport will submit a written notification of, or request for, a permit modification to authorize a change in operating plans, facility design, or the approved Closure Plan in accordance with the applicable procedures in WAC

173-303-800 through 173-303-840. The written notification or request will include a copy of the amended closure plan

n. NUWC Division, Keyport will submit a written notification or request to Ecology for a permit modification to amend the Closure Plan at any time prior to the notification of partial or final closure of the TSD Facility.

o. NUWC Division, Keyport will submit a written notification of or request for a permit modification to authorize a change in the approved Closure Plan whenever the following occurs:

    1. Changes in operating plans or TSD Facility design that affect the Closure Plan, or

    2. There is a change in the expected year of closure, or

    3. In conducting partial or final closure activities, unexpected events require a modification of the approved Closure Plan.

p. Within 60 days of completion of final closure NUWC Division, Keyport will submit to Ecology a certification statement that the final closure of the facility was conducted in accordance with this closure plan. The certification will be signed by Keyport personnel and by the independent, registered, Professional Engineer who will monitor closure activities.

I1.3.1 REMOVING DANGEROUS WASTE

WAC 173-303-610(3)(a)(iii) - (iv); 620(3)

The inventory elimination activities involve removal of all dangerous waste inventory at the TSD Facility at the start of closure. Dangerous wastes processed during closure will be processed in the same manner as they would be processed under normal TSD Facility operations. Wastes will be removed from each segregated storage area and staged in the shipping area in preparation for shipping. Only compatible wastes will be staged in the shipping area. Staging will take place as set forth in Section D (Process Information). Upon clearing of each individual storage area, all racks and equipment located therein will be decontaminated, sampled and tested to ensure decontamination was successful, and moved to offsite storage. After ensuring all floors, walls and secondary containment have not been compromised (or repaired as required), the storage area will be decontaminated, and sampled and tested to ensure the decontamination was successful. Decontamination wastes will be moved to the staging area and shipped out with the compatible wastes staged there. The shipping area will be decontaminated last.

The maximum waste inventory includes the maximum capacity of the TSD Facility to store dangerous waste in tanks and containers at the NUWC Division, Keyport TSD Facility. The total inside container capacity is 67,925 gallons and the total tank capacity is 45,000 gallons.

Container storage information is included in Table I1-1. The waste type, storage location, and drum and liquid capacities for each container storage area are presented in this table.

Table I1-1. Inside Container Storage Area Designations and Storage Capacity

Waste Type Designation	Room Number	Container Size (Gal)	Drum Quantity*	Total Liquid Capacity (Gal)
Receiving	123N	Up to 550	62	3,410
DOT Class 9 (Other Regulated Materials)	123S	Up to 550	192	10,560
WAD	123M	Up to 550	40	2,200
Organic Peroxides DOT Class 5.2	125	Up to 55	6	330
Oxidizers DOT Class 5.1	129	Up to 55	9	495
Acids DOT Class 8 (a)	130	Up to 550	36	1,980
Reactive when wet and compatible materials DOT Class 4.3	131	Up to 55	340	18,700
Toxic DOT Class 6.1 (or by subsidiary hazard class)	132	Up to 55	6	330
Toxic DOT Class 6.1 (or by subsidiary hazard class)	133	Up to 55	4	220
Flammable/Combustibles DOT Classes 3 and 4.1	134	Up to 550	144	7,920
Flammables 1A DOT Class 2/Compressed Gases (all hazard classes)	136	Up to 55	60	3,300
Universal Waste	137	150	12	660
Caustics, DOT Class 8 (b)	138	Up to 150	24	1,320
Used Oil Class 3 (a)	139	Up to 55	54	1,650
DOT Class 9 (Other Regulated Materials)	140/19	Up to 55	120	5,500
Shipping	140S	Up to 55	220	9,350
Total Gallons Storage				**67,925**

* "Container Size" and "Drum Quantity" are provided to derive equivalency. Different container sizes and quantity may be placed in these container management areas, but the "Total Liquid Capacity" for the area will not be exceeded.

Containers that are stored outside in the bulk storage area under the roofline within the East Storage location will be a new storage location that will add to our overall storage capacity. This area will be able to store construction debris in 40 yd roll-offs and/or portable containers with secondary containment with a maximum storage capacity of 17,035 gallons. In addition, there is a WAD isolated accumulation area used for contingency purposes with a storage capacity of 220 gallons. Therefore, the total container storage capacity for the facility has increased to 85,180 gallons (17,255 outside + 67,925 inside). This value increases our storage capacity to less than 25% of the original capacity.

Room 124 is the only permitted tank storage area. There are 11 dangerous waste storage tanks in that location. Table I1-2 provides information on waste type, storage container number, function, and capacity of each tank. Each pair of tanks containing the same waste streams will be pumped out using existing equipment and shipped out in tank trucks as set forth in Section D (Process Information). Waste streams stored in the tanks and generated during decontamination will not be mixed for shipment. Decontamination wastes will be shipped out with the waste from each pair of pair of tanks.

Table I1-2. Tank Storage Waste Types and Tank Identification

Tank Number	Waste Type	Function	Total Capacity (Gal)
K1051-101	Oily Wastewater	Storage	5,000
K1051-102	Oily Wastewater	Storage	5,000
K1051-103	Water, Otto Fuel, Cyanide, Oil	Storage	5,000
K1051-104	Water, Alcohol, Mineral Spirits, Otto Fuel	Storage	5,000
K1051-105	Water, Alcohol, Mineral Spirits, Otto Fuel	Storage	5,000
K1051-106	Water, Otto Fuel, Cyanide, Oil	Storage	5,000
K1051-107	Empty	Storage	5,000
K1051-108	Empty	Storage	5,000
K1051-109	Empty	Storage	5,000

I1.3.2 DECONTAMINATING STRUCTURES, EQUIPMENT, AND SOIL

WAC 173-303-610(3)(a)(v) and (vi); -620(3)

The decontamination procedures described in this section apply to the closure of the dangerous waste tanks, ancillary equipment, process equipment, containments, and any additional dangerous waste equipment, or other equipment, used during the closure activities.

High pressure steam and water spray is an acceptable alternative treatment standard for dangerous debris metal, glass and plastic surfaces. Previous experience with the cleanup and closure of buildings 884 and 1032 (previous TSD Facility at NUWC Division, Keyport) indicates that cleaning and decontamination of all soiled facility and equipment surfaces can be accomplished by routine mechanical and aqueous power spray methods utilizing a safe alkaline detergent, followed by triple aqueous power spray rinsing. This method will be used to decontaminate all tanks and its ancillary equipment, and the surfaces of equipment used in the management of dangerous wastes (e.g., pumps, valves, piping, storage racks, forklifts, and waste consolidation and treatment equipment) in the TSD Facility. After the power spray rinsing, external and internal surfaces of the tanks and equipment will be inspected to determine whether they meet the standard for a "clean debris surface", as that term is defined in 40 CFR 268.45 Table 1, footnote #3. If a "clean debris surface" has been achieved, Keyport will consider the tank or equipment to be clean closed subject to certification. If that standard is not achieved, either:

- The tank or equipment will undergo additional cleaning until a "clean debris surface" is achieved,

  or

- The tank or equipment or the portion of the tank or equipment that does not meet the standard for a "clean debris surface" will be sampled to determine whether it meets "universal treatment standards" (UTS) in 40 CFR 268.48. If so, it will be disposed of in a permitted subtitle C landfill. If not, it will be further treated until it either meets the standards for a "clean debris surface" or the UTS.

Concrete structure surfaces will also be cleaned by routine mechanical and aqueous power spray methods utilizing a safe alkaline detergent, followed by triple aqueous power spray rinsing. To ensure effective decontamination, the final rinsate sample of all concrete surfaces will be analyzed for the constituents of concern. In addition, chip samples will be collected at bias and random locations to verify clean closure. Results from the chip samples will be compared to the numeric cleanup levels calculated using unrestricted site use exposure assumptions according to the Model Toxics Control Act (MTCA) Cleanup Regulation, WAC 173-340. See below for additional detail.

All wastewater generated during decontamination and cleaning processes will be analyzed, designated, treated, and/or disposed of per all Federal and State regulatory guidelines. It should be noted that the applicability of the standard and the cleaning methods are based on the fact that all substrates are in good condition based on continuing inspections, that there will be no loose and discrete debris in the building, and that loose debris located outside the building will be removed prior to final closure.

General decontamination procedures used during closure activities are listed as follows:

a. Decontamination of structures and equipment will be by routine mechanical and aqueous power spray methods utilizing a safe alkaline detergent, followed by a triple aqueous power spray rinse. The final rinsate will be sampled and tested to help ensure decontamination has been effective.

b. Equipment used in closure activities will not be removed from the site until the equipment has been decontaminated.

c. All equipment, including mobile equipment and earth moving equipment, which has come in contact with dangerous waste constituents during closure activities, will be decontaminated as outlined under "a." above before use outside the contaminated area.

d. Residues generated during the decontamination activities will be contained and managed in accordance with applicable requirements of WAC 173-303-170 through 173-303-230. Decontamination rinsate will be treated at the NUWC Division, Keyport Industrial Wastewater Treatment Plant whenever possible.

e. Other residues which cannot be processed at the NUWC Division, Keyport Industrial Wastewater Treatment Plant will be contained, collected, analyzed for waste characteristics, and transported to an off-site TSD Facility.

f. All installed equipment such as consolidation equipment and storage racks will be decontaminated as outlined under "a." above and disposed of as scrap metal through the Defense Reutilization Marketing Office (DRMO).

g. All mobile equipment such as lifting and moving devices will be decontaminated as outlined under "a." above and made available other Navy facilities through the DRMO.

h. Any tank or equipment that is not decontaminated to a "clean debris surface" will be recleaned or disposed of as described above in this subsection.

I1.3.2.1 Procedures for Identifying and Repairing Cracks in Containment Structures

After all wastes and residues have been removed, all TSD Facility floors including containment structures will be inspected for cracks as set forth in Section F-2 (Inspection Plan). Cracks will be recorded in the operating record. Prior to cleaning any equipment or structure, all cracks will be repaired by enlarging crack surface area and filling with an elastomeric grout and epoxy coating compatible with the wastes stored in the area.

I1.3.2.2 Procedures for Identifying Stains in Containment Structures

All TSD Facility floors including containment structures will be inspected for stains as set forth in Section F-2 (Inspection Plan). Stained areas will be recorded in the operating record.

I1.3.2.3 Tank System and Equipment Decontamination

Dangerous waste tanks and ancillary equipment such as pipes, valves, and pumps will be decontaminated at the TSD Facility, and either reused if the tank is in adequate condition or disposed of through the DRMO.

Tanks and ancillary equipment to be reused or scrapped for reclamation will be decontaminated by routine mechanical and aqueous power spray methods utilizing a safe alkaline detergent and triple aqueous power spray rinse to achieve a "clean debris surface" as described subsection 1-1a (Closure Performance Standards) of this closure plan. This method applies to all metal, plastic and glass surfaces throughout the TSD Facility. Decontamination wastewater and residues will be collected and disposed of as per I-1b(3)(g) (Disposal of Decontamination Rinsate).

I1.3.2.4 Decontamination of Containment and Structure Surfaces

Concrete surfaces throughout the TSD Facility will be decontaminated using routine mechanical and aqueous power spray methods utilizing a safe alkaline detergent, followed by triple aqueous power spray rinsing. Decontamination wastewater and residues will be collected and disposed of as per I-1b(3)(g) (Disposal of Decontamination Rinsate). The decontamination procedure applies to all TSD Facility interior areas, and all canopy-covered receiving and storage areas east and north of the building. These procedures also apply to the dangerous waste sumps used for containment in storage areas.

Concrete chip samples will be taken and analyzed to confirm clean closure as discussed in subsection 1-1a (Closure Performance Standards). Sampling procedures are discussed in subsection 1-1b(4)(a) (Sampling to Determine Extent of Contamination).

I1.3.2.5 DISPOSAL OF ASPHALT WASTES

Ten random samples will be taken from the asphalt pavement surface east of the TSD Facility to determine extent of contamination. The samples will be tested as set forth in subsection 1-1b(4)(a) (Sampling to Determine Extent of Contamination). If the asphalt is determined to be clean as defined by the numeric cleanup levels calculated using unrestricted site use exposure assumptions according to MTCA, it will be recycled at a local asphalt recycler.

I1.3.2.6 DISPOSAL OF CONTAMINATED DEMOLITION WASTES

All concrete and asphalt demolition wastes that cannot be decontaminated to the stated standards may be transported to a Subtitle C landfill. If this option is used, the material will be tested to ensure it meets LDR requirements.

Soils, groundwater, surface water, or sediments that are determined to be contaminated will be either treated onsite or offsite prior to disposal, or will be disposed of at a Subtitle C landfill, based on available technology and economics at the time of closure.

I1.3.2.7 DISPOSAL OF DECONTAMINATION RINSATE

All decontamination wastewaters or residues generated will be contained and processed as dangerous waste. Characterization of the rinsate and/or residue will be based on the wastes managed within the area undergoing decontamination. All rinsate will be collected in secondarily contained plastic tanks. Rinsate and residues from incompatible containment areas will be separated. The final rinsate(s) will be sampled and tested to ensure effective decontamination. If feasible, the rinsate may be treated at the NUWC Division, Keyport Industrial Wastewater Treatment Plant, or the rinsate and residues will be sent off-site for treatment and/or disposal at a RCRA permitted TSD Facility through the DRMO.

I1.3.3 SAMPLING AND ANALYSIS TO IDENTIFY EXTENT OF DECONTAMINATION/ REMOVAL AND TO VERIFY ACHIEVEMENT OF CLOSURE STANDARD

A Sampling and Analysis Plan will be submitted to Ecology prior to the notification for beginning final closure. At a minimum, the plan will include the number and type of samples listed in 1-1b (4) (a). This plan will include:

- Statement of purpose and objectives
- Organization and responsibility for sampling and analysis activities
- Project schedule
- Detailed procedures for sample collection and handling
- Identity of chemical constituents that will be analyzed
- Analytical techniques and procedures consistent with this closure plan and Chapter 173-303 WAC to be conducted at an Ecology accredited laboratory, modified, if necessary, to meet data quality objectives
- Specific sampling location and a unique identification number for all random and bias concrete, asphalt and soil samples that were selected in accordance with this closure plan

- Procedures for decontamination of sampling equipment
- Procedures for management of waste materials generated by sampling activities
- Protocols for sample labeling and chain of custody
- Practical quantification limits (PQLs) sufficiently low to determine compliance with clean closure standards
- Description and number of quality assurance and quality control samples including blanks, matrix spikes, surrogate samples, laboratory control samples, and duplicates, as appropriate
- Provisions for splitting samples with Ecology, when appropriate
- Procedures for reporting results

I1.3.3.1 SAMPLING TO DETERMINE EXTENT OF CONTAMINATION

Confirmation sampling and analysis will be conducted on soil, concrete secondary containment, and asphalt at the time of closure. Each sample will be analyzed separately for volatile organic constituents, semivolatile organic constituents, total petroleum hydrocarbons, total metals, PCBs and cyanide. Keyport will use approved analytical methods capable of achieving quantification limits low enough to demonstrate whether the sample is in compliance with clean closure standards as defined by this closure plan. For example, the following methods or approved methods that replace them will be used:

- SW-846 Method 8260 for volatile organic constituents
- SW-846 Method 8270 for semivolatile organic constituents
- SW-846 Method 6000 for metal constituents
- SW-846 Method 8082 for PCB constituents

The closure plan will be reviewed and modified if different waste chemicals not presently identified in the permit are managed at the facility.

If results are above clean closure standards, the area represented by the sample does not meet clean closure standards. Samples will be taken at random and bias locations as outlined below.

Following the decontamination of the containment, the underlying soil will be sampled and analyzed to confirm that no residual contamination is present. Soil samples will be taken at biased and random sampling locations. A random sampling procedure consistent with EPA document SW-846 will be used to select a minimum of 10 random sampling locations. Bias samples will be taken in areas of repaired cracks and major spills identified in the record of operations as outlined below.
Samples will be collected at the interface between the concrete and the soil, and at a depth of two feet below the first sample through holes bored in the overlying concrete containment. Samples will be collected, documented, and handled in accordance with the standard procedures described in SW-846. Sample locations will be identified in a sampling plan prepared by NUWC Division, Keyport at the time of TSD Facility or unit closure.

Random samples will be located using a grid pattern superimposed over all dangerous waste containment including the loading and unloading areas. Random sampling locations in close proximity to biased sampling locations will be excluded.

Locations for biased samples include areas below sumps, cracks in the containment, visual stains in concrete, and spill areas. Repair records maintained as part of the TSD Facility operating record will be used to determine selective locations for soil sampling.

A minimum of 10 concrete chip samples will be taken at bias and random locations within the container and tank secondary containment areas. A minimum of five of these will be at randomly selected locations. In addition, bias samples will be taken in areas of major stains and spills identified in the record of operations. At least three bias samples will be below different sumps.

A minimum of 10 random samples will be taken from the asphalt pavement surface east of the TSD Facility to determine extent of any potential contamination.

I1.3.3.2 SAMPLING TO CONFIRM DECONTAMINATION SOILS

Areas where contamination is found will be over-excavated to remove contaminated soils. Samples will be collected from the exposed surface of each of the four walls, and one sample will be collected from the bottom of the resulting excavation. These samples will be tested for the contaminants found in the first round of sampling to ensure all contamination was removed with the over excavation.

Results of concrete, asphalt, and soils sample analysis will be compared to numeric cleanup levels calculated using unrestricted site use exposure assumptions according to MTCA. If results are at or below these levels, clean closure standards will be satisfied for the materials. For concrete and asphalt, clean closure standards for individual constituents may be adjusted to background concentrations in the construction material. This is only relevant when background for that constituent can be demonstrated to be above the clean closure standards and when the concentration of that constituent in the sample is not above the established background level.

I1.4 SCHEDULE FOR CLOSURE

WAC 173-303-610(3)(a)(vii), (4)

Dangerous waste treatment and storage operations at NUWC Division, Keyport will be closed when proofing, engineering, support, and services for Undersea Warfare projects are finished. The Navy does not have any foreseeable plans for ending current operations, and consequently, cannot now determine an exact date for closure of any presently permitted storage site. If the operation would close at some point in the future, the building would be utilized as a non-hazardous storage facility. When operations cease or the use of any presently permitted site or portion thereof is not required, closure will be instituted following procedures as outlined below.

The NUWC Division, Keyport TSD Facility is not expected to close prior to the expiration date of the permit. Therefore, an expected year of closure is not given. The closure of individual dangerous waste units will be phased out on a progressive schedule to allow for use of units during waste inventory elimination.

The proposed schedule for closure of the facility is presented in Figure I1-1, Facility Final Closure Schedule. Section I-1b (4) (Sampling and Analysis to Identify Extent of

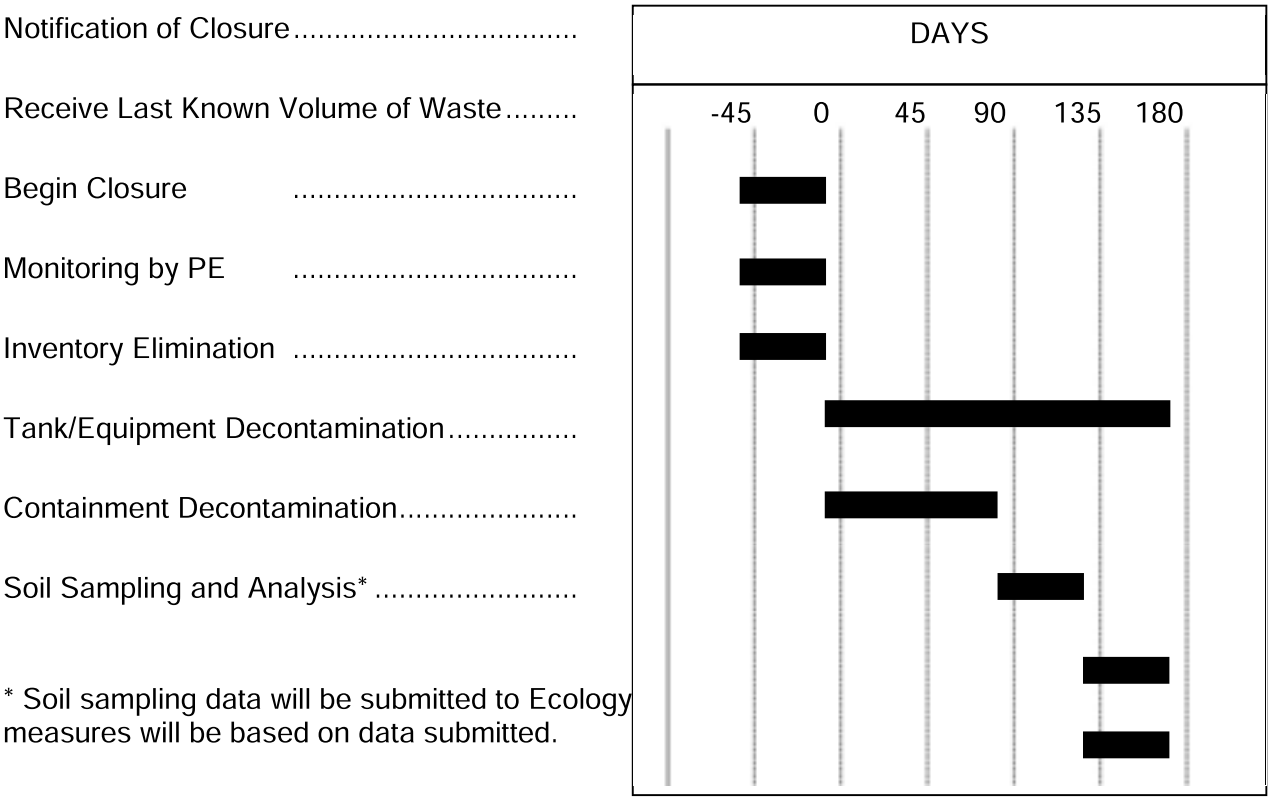
Decontamination/Removal and to Verify Achievement of Closure Standard) describes methods for evaluating whether soil underneath the containment is contaminated. NUWC Division, Keyport will notify Ecology in writing at least 45 days prior to the date final closure is expected to begin.

The proposed schedule for inventory elimination and tank and containment decontamination is as follows:

Inventory Elimination	90 days
Tank and Equipment Decontamination	45 days
Containment Decontamination	45 days
Total	180 days

Note: If sampling and analysis indicate that containment or soil removal or treatment is required, the closure schedule will require a permit modification conducted in accordance with WAC 173-303-610(3)(b)(ii).

Figure I1-1. Facility Final Closure Schedule



I1.4.1 EXTENSION OF CLOSURE TIME

The planned closure is not expected to exceed 90 days for treatment, removal or disposal of wastes, and all closure activities are expected to be complete within 180 days. Therefore an application for a longer closure schedule is not required.

I2. CLOSURE COST ESTIMATE

WAC 173-303-620(3); -806(4)(a)(xv)

The NUWC Division, Keyport TSD Facility is owned and operated by the Federal government and is exempt from the Financial Requirements of WAC 173-303-620 as per WAC 173-303-620(1)(c).

I2.1 FINANCIAL ASSURANCE MECHANISM FOR CLOSURE

WAC 173-303-620(4) and (10); -806(4)(a)(xv)

The NUWC Division, Keyport TSD Facility is owned and operated by the Federal government and is exempt from the Financial Requirements of WAC 173-303-620 as per WAC 173-303-620(1)(c).

I3. NOTICE IN DEED OF ALREADY CLOSED DISPOSAL UNITS

WAC 173-303-610(10); 806(4)(a)(xiii)

NUWC Division, Keyport has closed one dangerous waste disposal unit under the CERCLA program. Details of the history, steps taken to close the unit, and institutional controls implemented as a result of the cleanup action are recorded in the 'Record of Decision for Operable Unit 1, Naval Undersea Warfare Center Division Keyport, Washington' dated September 1998, prepared by URS Greiner, Inc of Seattle, WA and Science Applications International Corp of Bothell, WA for Engineering Field Activity, Northwest, Southwest Division, Naval Facilities Engineering Command, Poulsbo, WA.

I4. POST-CLOSURE PLAN

WAC 173-303-610(8); -806(4)(a)(xiii)

A Post-Closure Plan has not been provided for the NUWC Division, Keyport TSD Facility since no dangerous waste, dangerous waste residues, or contaminated materials is expected to remain after closure. Additionally, all tank systems are provided with secondary containment, which meets the requirements of WAC 173-303-640(4)(b) through (f). Although soil and groundwater contamination may be identified at the facility during closure activities, this contamination could be addressed under RCRA Corrective Action. Should corrective action measures not fully address soil or groundwater contamination, a post-closure permit could be required.

I5. LIABILITY REQUIREMENTS

WAC 173-303-620(8), (10); -806(4)(a)(xvii)

The NUWC Division, Keyport TSD Facility is owned and operated by the Federal government and is exempt from the Financial Requirements of WAC 173-303-620 as per WAC 173-303-620(1)(c).

SECTION J

OTHER FEDERAL AND STATE LAWS

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A. BACKGROUND

1. Name of proposed project, if applicable:

   Naval Undersea Warfare Center (NUWC) Division, Keyport – Dangerous Waste Treatment and Storage Facility.

2. Name of applicant:

   Naval Undersea Warfare Center (NUWC) Division, Keyport.

3. Address and phone number of applicant and contact person:

   NUWC Division, Keyport
   Attn: Dangerous Waste Manager
   Building 1051, Code 1023
   610 Dowell Street
   Keyport, WA 98345
   Phone: 360-396-2320

4. Date checklist prepared:

   April 2020.

5. Agency requesting checklist:

   Washington State Department of Ecology.

6. Proposed timing or schedule (including phasing, if applicable):

   Construction is complete; the facility has been operational since 1995.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   No.

8. List any environmental information you know that has been prepared, or will be prepared, directly related to this proposal.

   Environmental Assessment for MILCON P-370, April 1991
   Revised Pt A Permit application for relocation of the Hazardous Waste TSDF, April 1994
   Draft RCRA Pt B Permit application submitted June 1995
   Draft RCRA Pt B Permit application submitted September 2001
   Draft RCRA Pt B Permit application submitted April 2005
   Revised Pt A Permit application for treatment process modification, July 2005
   Part B Permit Application, July 2007
   Permit for the Storage and Treatment of Dangerous Waste, March 2008
   Permit Modification NUWC-01-08-1, June 2008
   Permit Modification NUWC-10-10-2, October 2010
   Permit Modification NUWC-10-13-3, October 2013

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

   None.

10. List any government approvals or permits that will be needed for your proposal, if known.

    None.

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

    The proposal is to renew the dangerous waste management permit for an existing operation. NUWC Division Keyport is currently operating the dangerous waste treatment and storage (TSD) Facility under a permit dated March 2008. There will be no significant changes to physical structures or the scope of waste management operations under the renew permit. The TSD Facility site is approximately 1.5 acres of flat ground. The facility includes 43,971 ft^2 of enclosed interior space and 17,576 ft^2 of awning area.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide the legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps submitted with any permit applications related to the checklist.

    NUWC Division, Keyport is located on the NBK Keyport Base on the Kitsap Peninsula approximately 15 miles west of Seattle. The proposed TSD Facility is located on the northeast corner of the intersection of Bradley Road and Gadberry Street, in the southwestern portion of NBK Keyport.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other . . . . . .

    Flat.

b. What is the steepest slope on the site (approximate percent slope)?

    1 percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

    Glacial till, clay, silt, sand, and gravel.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

    The site is adjacent to a closed landfill, which is managed under Navy's Environmental Restoration Program.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No backfill. Site development is complete.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

95 percent.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

None. Site development is complete.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

No construction emissions because site development is complete. Emissions associated with facility operation include facility ventilation system for all waste handling and storage areas and vehicle exhausts associated with normal operations.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Air emissions originating from operations are controlled and permitted pursuant to PSCAA and RCRA requirements.

3. Water

a. Surface:

1). Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

NUWC Division Keyport is located on an arm of Puget Sound that extends from Port Orchard Reach to Liberty Bay. There is a shallow lagoon, tidal flats, seasonal stream and four delineated wetlands on the NBK Keyport property.

2). Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, a seasonal marsh/wetland is within 200 feet of the site. The wetland is southwest of the site, across from Bradley Road.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

All waste management activities will be conducted under roofed structures. Roof runoff is generated from roof drainage and paved areas. Storm drainage for the site generates a total flow of 7 cfs based on rainfall intensity of 2.0 inches per hour, 10-minute duration for a 10-year design period. The roof drains on the east side of the facility are connected to a storm drain pipe at the new parking lot, and the westerly drains are connected to a drainage swale along Bradley Road. All paved areas have a minimum slope of 1 percent to facilitate adequate discharge. To effectively handle increased roof runoff rates, three small retention ponds are incorporated with an oil/water separator installed at the point of discharge.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

All site runoff will be directed to storm drains which will discharge to stormwater retention ponds equipped with oil/water separators.

4. Plants

a. Check or circle types of vegetation found on the site:
Deciduous tree: Alder, maple, aspen, other
Evergreen tree: Fir, cedar, pine, other
Shrubs
Grass
Pasture
Crop or grain
Wet soil plants: Cattail, buttercup, bulrush, skunk cabbage, other
Water plants: Water lily, eelgrass, milfoil, other
Other types of vegetation

Except for stormwater conveyances and retention ponds the site is capped with concrete-asphalt.

b. What kind and amount of vegetation will be removed or altered?

None. Site development is complete.

c. List threatened or endangered species known to be on or near the site.

None.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Landscaping to facilitate stormwater collection and retention has been established around the perimeter of the site.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: Hawk, heron, eagle, songbirds, other: . . . . . .

Swallows, seagulls, ducks, eagles, geese

Mammals: Deer, bear, elk, beaver, other: . . . . . .

Deer, foxes

Fish: Bass, salmon, trout, herring, shellfish, other: . . . . . .

Saltwater fish and invertebrates

b. List any threatened or endangered species known to be on or near the site.

Eagles.

c. Is the site part of a migration route? If so, explain.

No.

d. Proposed measures to preserve or enhance wildlife, if any:

None.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Natural gas is the primary fuel for the boiler heating system and water heater. Diesel oil is used as a secondary backup fuel. Diesel oil is used for an emergency generator used in the event of electrical power outages. All other facility energy needs are met with electricity supplied through a 500 kVA transformer located west of the facility.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Natural gas was used for all heating applications to reduce air pollution and conserve electricity. All hot water pipes and heat ducts are insulated to reduce heat loss. High pressure sodium and fluorescent light fixtures have been replaced by LED fixtures on all interior and exterior lighting. Two-inch thick expanded polystyrene foam insulation board is used in the composite roof structure resulting in a total roof insulating factor of R-11.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or dangerous waste that could occur as a result of this proposal? If so, describe.

The purpose of the TSD Facility is to treat, consolidate, and store temporarily all dangerous wastes generated at NUWC Division Keyport. Separate storage areas are provided for sulfuric acid, caustics, lithium, acids, poisons, oxy-acids, oxidizers, 1-A flammables, organic peroxides, and flammables/combustibles.

The facility is designed in compliance with all State, Federal and Navy regulations for dangerous waste management facilities and construction requirements of the NFPA. Numerous design and safety features have been incorporated into the facility to ensure the safety and protection of personnel and the environment.

1) Describe special emergency services that might be required.

The Navy Region Northwest Fire Department stationed at NBK Keyport is trained and equipped to respond to all fires, explosions, or chemical spills. The response team has been specifically trained to fight lithium fires. Emergency medical services are available at the Bangor Navy Clinic.

2) Proposed measures to reduce or control environmental health hazards, if any:

Protective design features of the TSD Facility include:

- Spill containment features in all waste handling, storage, and loading areas.
- All waste management activities will be conducted under roofed structures.
- Smoke detectors, fire alarms, and spill alarms are located in each separate area of the building.
- Automatic fire sprinkler systems for all building areas except for the lithium storage area.
- Fire flow containment vaults to prevent contaminated fire flow water from entering storm or sanitary sewers.
- Emergency showers and eye wash stations throughout the facility.
- Negative pressure exhaust and ventilation systems for all waste handling and warehouse areas.
- Respirators and breathing air apparatus for use by all personnel during operations if required or in the event of a toxic material spill.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Normal facility operations produce noise from truck and forklift operation. All waste treatment and processing equipment operation will occur inside the enclosed, roofed facility, which will minimize noise impacts to the surrounding area. Noise levels from facility operation will be consistent with other existing industrial activities in the area.

3) Proposed measures to reduce or control noise impacts, if any:

Noise levels are not significant or incompatible with activities in the industrial area, and noise reduction will not be necessary.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

The TSD Facility is located in the Industrial/Public Works support area at NBK Keyport. Adjacent properties to NBK Keyport are primarily rural, residential and light industrial.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

Site development is complete. Facility construction was completed in 1994.

d. Will any structures be demolished? If so, what?

Site development is complete.

e. What is the current zoning classification of the site?

The Kitsap County Development Plan lists NBK Keyport as a Federal Facility, and the surrounding area is zoned rural residential.

f. What is the current comprehensive plan designation of the site?

The site is designated Military Industrial Support.

g. If applicable, what is the current shoreline master program designation of the site?

Federal Facility.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

The TSD Facility is staffed by three waste handlers and three administrative support personnel.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project is compatible with the NUWC Division Keyport Master Plan.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

c. Proposed measures to reduce or control housing impacts, if any:

None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The TSD Facility is a one story pre-cast concrete structure. The greatest height of any point on the structure occurs on the south side at the truck dock where the height from grade to the top of the parapet wall is 32 feet. Other building heights are approximately 28 feet. Primary building materials consist of concrete walls and floors with a steel/concrete roof structure, painted metal roofing, and EPDM elastomeric roofing.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

None.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

A small County park is located on Dogfish Bay west of the NBK Keyport Main Gate approximately 1500 feet from the TSD Facility.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None.

13. Historic and cultural preservation

a. Are there any places or objects located on, or proposed for, National, State or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.

None.

c. Proposed measures to reduce or control impacts, if any:

None.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

State highway 308 provides access to NBK Keyport. However, NBK Keyport is not open to the public. The facility is located at the intersection of Bradley Road and Gadberry Street within the fenced, controlled boundaries of NBK Keyport.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No. The nearest Kitsap County Transit bus stop is at the intersection of Highway 308 and Silverdale Way/Viking Way, three miles from NBK Keyport.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Nine paved visitor parking stalls are provided at the north end of the site adjacent to Bradley Road.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

No change – same number of vehicles as prior operations.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public services

a. Would the project result in an increased need for public services (for example: Fire protection, police protection, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

No.

16. Utilities

a. Circle utilities currently available at the site: Electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

Electricity, natural gas, water, refuse service, telephone and sanitary sewer are available in Bradley Road and Gadberry Street.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Potable water is provided from a new 10" water pipe in Gadberry Street. Potable water at NBK Keyport comes from a deep aquifer well owned by NBK Keyport and is distributed throughout the Base via the potable water distribution network.

Natural gas is supplied through a 3" pipe coming off an existing 3" pipe running along Bradley Road west of the facility. Natural gas service is provided by the Cascade Natural Gas Company.

Electrical power is fed from manhole MH 24E near the northwest corner of the building. The 15 kV circuit from MH 24E feeds a new 500 kVA transformer that supplies power to the facility. Electrical power is provided by Puget Power Company.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Prepared by: Gary D. Simmons
Environmental Engineer

Approved by: _____ _____
Terry Hiatt Date
Environmental Branch Manager

SECTION K

PART B CERTIFICATION

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TABLE OF CONTENTS

Section		Page
K-1	Part B Certification	K-1

K-1 PART B CERTIFICATION

(WAC 173-303-806(4)(a), -810(12) and (13)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Facility/Property Owner Name and Official Title (Type or print)	**Signature**	**Date**
Captain C. P. Hoskins Commanding Officer, Naval Undersea Warfare Center Division, Keyport		