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U.S. NAVAL SUPPORT ACTIVITY
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NAVSUPPACT NAPLES INSTRUCTION 5090.7C

From: Commanding Officer, U.S. Naval Support Activity, Naples, Italy

Subj: SPILL PREVENTION AND RESPONSE PLAN (SPRP), VOLUME 1: INCIDENT MANAGEMENT HANDBOOK; AND VOLUME 2: PREVENTION, CONTROL, REPORTING, AND TRAINING; FOR U.S. NAVAL SUPPORT ACTIVITY, NAPLES, ITALY

Ref: (a) Environmental Final Governing Standards for Italy
(b) OPNAV M-5090.1

Encl: (1) NAVSUPPACT Naples SPRP Volumes (1) and (2)

1. Purpose. To promulgate plans and procedures for preventing, controlling, and reporting spills of hazardous substances in the U.S. Naval Support Activity (NAVSUPPACT), Naples, Italy area of responsibility.
2. Cancellation. NAVSUPPACTNAPLESINST 5090.7B
3. Policy. As required by reference (a), enclosure (1) provides plans and procedures to be followed to prevent or minimize the adverse impacts of a hazardous substance spill. Per reference (b), NAVSUPPACT Naples is not responsible for responding to waterborne spills from vessels at the Port of Naples.
4. Records Management. Records created as a result of this instruction, regardless of media and format, must be managed per Secretary of the Navy Manual 5210.1 of January 2012.
5. Review and Effective Date. Per OPNAVINST 5215.17A, NAVSUPPACT Naples will review this instruction annually on the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, Department of Defense, Secretary of the Navy, and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will automatically expire 5 years after effective date unless reissued or canceled prior to the 5-year anniversary date, or an extension has been granted.


T. A. ABRAHAMSON

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FINAL SPILL PREVENTION AND RESPONSE PLAN (SPRP)

VOLUME II OF II – PREVENTION, CONTROL, REPORTING, & TRAINING

for Naval Support Activity Naples, Italy

FEBRUARY 2016



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NAVFAC ATLANTIC
Norfolk, Virginia

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**FINAL SPILL PREVENTION AND RESPONSE PLAN
VOLUME II OF II – PREVENTION, CONTROL, REPORTING, & TRAINING**

NAVAL SUPPORT ACTIVITY NAPLES, ITALY

PREPARED FOR:

**DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC
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**NAVFAC ATLANTIC
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FEBRUARY 2016

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APPENDIX N	CHRIMP INVENTORY

List of Acronyms and Abbreviations

Note: The use of acronyms in this document is limited as much as practicable

ADMIN	Administration/Administrative
ABH	Aviation Boatswain's Mate
Air Ops	Air Operations Department
AMC	Air Mobility Command
AMS	Air Mobility Squadron
AOR	Area of Responsibility
AST	Aboveground Storage Tank
AUL	Authorized Use List
BEQ	Bachelor/Base Enlisted Quarters
Bldg	Building
CBH	Combined Bachelor Housing
CDC	Child Development Center
CDO	Command Duty Officer
CFR	Code of Federal Regulations
CHRIMP	Consolidated Hazardous Material Reutilization and Inventory Management Program
COMUSNAVEUR	Commander United States Naval Forces Europe
CNE	Commander, U.S. Naval Forces, Europe
CNI	Commander Naval Installations
CNO	Chief of Naval Operations
CNRE	Commander, Navy Region Europe
CO	Commanding Officer
COMFAIRMED	Commander Fleet Air Mediterranean (U.S. Navy)
CONUS	Continental United States
CSO	Command Staff Officer
Dept.	Department
DLA	Defense Logistics Agency
DoD	United States Department of Defense
DODDS	United States Department of Defense Dependent Schools
DOT	United States Department of Transportation
EEWS	Emergency Eye Wash and Shower
EPA	United States Environmental Protection Agency

ERAP	Emergency Response Action Plan
EOC	Emergency Operations Center
EODMU-8	Explosive Ordnance Disposal Mobile Unit Eight
EUL	Environmental Unit Leader
FCC	Fleet Command Center
FES	Fire Department
FE	Fire Extinguisher
FGS-I	Final Governing Standards – Italy
FIC	Facility Incident Commander
Flam	Flammable(s)
FRT	Facility Response Team
FSS	Fire Suppression System
GOV	Government Owned Vehicles
HAZCOM	Hazard Communication
HAZMAT	Hazardous Material
HAZMIN	Hazardous Minimization (Center)
HDPE	High Density Polyethylene
HICS	Hazardous Inventory Control System
HM	Hazardous Material(s)
HMC & M	Hazardous Material Control and Management
HS	Hazardous Substance(s)
HSIRM	Hazardous Substance Incident Response Management
HW	Hazardous Waste(s)
HWAP	Hazardous Waste Accumulation Point
HWFOC	Hazardous Waste Facilities Operation Course
HWMP	Hazardous Waste Management Plan
HWSA	Hazardous Waste Storage Area
IC	Incident Commander
ICS	Incident Command System
IMH	Incident Management Handbook
IMT	Incident Management Team
IOSC	Installation On-Scene Coordinator
IRO	Initial Response Organization
IRT	Installation Response Team (also known as OSOT)

JAG	Judge Advocate General
LEC	Lead Environmental Component
MCSF	Marine Corps Security Force
MIOC	Maritime Integrated Operations Center
MWR	Morale Welfare Recreation
NATO	North Atlantic Treaty Organization
NAVOSH	Navy Occupational Safety & Health
NAVSEA	Naval Sea Systems Command
NAVSTA	Naval Station
NCTS	Naval Computer and Telecommunications Station
NEX	Naval Exchange
NMC	Naval Media Center
NMCB 1	Naval Mobile Construction Battalion One (Seabees)
NMETS	Navy Mission Essential Tasks
NSWU-10	Naval Special Warfare Unit Ten
NOSC	Navy On-Scene Coordinator
NSA	Naval Support Activity
OEBGD	Overseas Environmental Baseline Guidance Document
OHS	Oil and/or Hazardous Substances
OPNAVINST	Operational Naval Instruction
OPREP	Operational Reporting
Ops	Operations
OSHA	Occupational Safety & Health Administration
OSC	On-Scene Coordinator
OSOT	On-Scene Operations Team
OWS	Oil Water Separator
PAO	Public Affairs Officer
PCB	Polychlorinated Biphenyls
POL	(Refined) Petroleum, Oils and/or Lubricants
Port Ops	Port Operations Department
PPE	Personal Protective Equipment
ppm	parts per million
PREP	Preparedness for Response Exercise Program
PSD	Personnel Support Detachment

PSTMP	Petroleum Storage Tank Management Plan
PW	Public Works
PWC	Public Works Center
PWD	Public Works Department
PWO	Public Works Officer
QI	Qualified Individual
RHICS	Regional Hazardous Inventory Control System
ROICC	Resident Officer in Charge of Construction
RQ	Reportable Quantity
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheet
SEVD	Southern Europe Veterinary Detachment
SFO	Senior Fire Official
SITREPS	Situation Reports
SMT	Spill Management Team
SRT	Secondary Response Team
SOP	Standard Operating Procedure
SPR(P)	Spill Prevention and Response (Plan)
SS	Support Site
Supply	Supply Department
SUPSALV	United States Navy Supervisor of Salvage (NAVSEA CODE 00C)
SWPPP	Storm Water Pollution Prevention Plan
TWSA	Temporary Waste Storage Area
TYP	Typical
U.S.	United States
USN/MSC	United States Navy/Military Sealift Command
UST	Underground Storage Tank
VIP	Very Important Person(s)
WC	Work Center
XO	Executive Officer

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Record of NSA Naples, Italy Spill Prevention and Response Plan Updates and Changes

Change Number	Page(s) Affected	Abstract	Date	Initials
1	4-1 Volume II	Text update	25 Feb 16	mc
2	2-3 Volume I	Text update	29 Feb 16	mc
3	1-5 Volume I	Text update	09 Mar 16	mc
4	1-8 Volume I	Figure update	26 Sep 16	mc
5	2-9, 2-10 Volume I	Text update	26 Sep 16	mc
6	3-11, 3-12 Volume II	Text update	26 Sep 16	mc
7	5-9, 5-10 Volume II	Text update	26 Sep 16	mc
8	App. B Volume II	Added Ch 34 OPNAV 5090.1	26 Sep 16	mc
9	App. A Volume II	Added conversion key	26 Sep 16	mc
10	D-9 Volume I	Text update	26 Sep 16	mc
11	Annex D Volume I	Added conversion key	26 Sep 16	mc
12	App. N Volume II	Added CHRIMP Inv w/date	26 Sep 16	mc
13	App. L Volume II	Updated Appendix L	26 Sep 16	mc

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Plan Certification

This Spill Prevention and Response Plan for NSA Naples has been prepared in accordance with: good engineering practices; information provided to me by the facilities (which is assumed correct); and with the requirements of Chapter 18 (*Spill Prevention & Response Planning*) of the *Environmental Final Governing Standards (for) Italy*, approved August 2012. This plan is adequate for each facility included. Adherence to the plan is the responsibility of the host installation.

Don P. Joiner
Signature

1- Feb - 2014
Date


Don P. Joiner
Registered Professional Engineer
North Carolina Registration No. 016803



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Statement of Commitment

The Commanding Officer of NSA Naples, Italy fully supports the U.S. Navy and DoD policy to prevent spills of oil and hazardous substances due to agency activities, and to provide for the immediate, direct response to contain and clean-up spills that might occur. NSA Naples will commit the necessary personnel, equipment, and materials required to implement this Spill Prevention and Response Plan as described herein, in accordance with the requirements of Chapter 18 (*Spill Prevention & Response Planning*) of the *Environmental Final Governing Standards* (for) *Italy*, approved August 2012

Signature: Printed Name: D. W. CARPENTER, CAPT, USNTitle: Commanding Officer
Naval Support Activity, Naples, Italy

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1.0 INTRODUCTION

1.1 General Facility Information

For the purposes of this plan Naval Support Activity (NSA) Naples, Italy is comprised of seven separate facilities located throughout the metropolitan city of Naples and surrounding area and also includes the pier facility in Gaeta, Italy which is approximately 100 kilometers north of Naples. A locality map of these facilities is provided in Figure 1-1. NSA Naples provides administrative and logistic support to over 100 tenant commands and activities throughout the Mediterranean region, which includes personnel assigned to North Atlantic Treaty Organization (NATO) and forces of the Sixth Fleet, which is managed at the Capodichino site located at the Naples International Airport. The following locations included in this plan that has petroleum, oils, lubricant (POL) and hazardous substance (HS) and hazardous waste (HW) storage are:

- a. Capodichino provides administrative, maintenance and support services for of the air facility; fleet shore based units and tenants, outgoing/incoming military flights in the European Theater and Continental United States (CONUS).
- b. Carney Park is the NSA Naples recreation center that includes a golf course, swimming pool, ball fields and camping facilities which is approximately 20 kilometers west of Capodichino in a 93 acre volcanic crater.
- c. SATCOM Lago Patria is used for telecommunications purposes and is approximately 31 kilometers north northwest of Capodichino.
- d. Camaldoli Relay Station is used for telecommunication purposes.
- e. Gricignano is known as the Support Site (SS), consisting of housing, schools, Naval hospital, Navy Exchange, commissary and all aspects of community support and is located about 24 kilometers north of Capodichino.
- f. Teverola is the location of the housing offices and a housing warehouse for NSA Naples personnel.
- g. NSA Detachment Gaeta is the port location and support facility for the United States (U.S.) Sixth Fleet flag ship, and has a contingent of active duty and civilian staff located on the Italian Navy Base (ITNB). Another off-site facility is the Gaeta Olde Mill Inn (park).
- h. Nisida Island is an Italian Navy Base, with the U.S. having only the presence of a flag barge (small craft) at the site.

Figure 1-1 NSA Naples Installation Location Map



1.2 Plan Requirement

All U.S. Department of Defense (DoD) installations will prepare, maintain, and implement a Spill Prevention and Response Plan (SPRP) which provides for the prevention, control, and reporting of refined petroleum, oils, and lubricants (POL), hazardous substance (HS) and hazardous waste (HW) spills. The Plan will provide measures to the maximum extent practicable to prevent and contain a *worst case discharge* from the facility. The Plan will be updated at least every 5 years or when there are significant changes to operations. NSA Naples meets the criteria for needing an SPRP because it manages oil (i.e. POL) and/or hazardous substances (OHS, collectively) storage facilities that could possibly produce a *significant spill*. Table 1-1 provides a Final Governing Standards – Italy (FGS-I) Cross Reference. A significant spill is defined in Chapter 18 of the FGS-I as below, and is used for planning purposes to assess a facility’s potential for causing a such a spill, which requires inclusion in this plan:

An uncontained release to the land or water in excess of any of the following quantities:

- For a hazardous waste or hazardous substance identified as a result of inclusion in Appendix A, any quantity in excess of the reportable quantity listed in Appendix A.
- For POL or liquid or semi-liquid hazardous material, hazardous substance, or hazardous waste, in excess of 400 liters (110 gallons).
- For other solid hazardous material, in excess of 225 Kg (500 pounds).
- For combinations of POL and liquid, semi-liquid, and solid hazardous materials, hazardous substances, or hazardous waste in excess of 340 Kg (750 pounds).
- If a spill is contained (inside an impervious berm, or on a nonporous surface, or inside a building), is not volatilized, and is cleaned up, the spill is considered a contained release and is not considered a significant spill.

Note: CNREURAFSWA has additional reporting guidance that exceeds the FGS-I thresholds, but the core FGS-I significant spill criteria are used for site classification and inclusion in this plan. Also note that the terms “shall/will” indicate a requirement, while “should” indicates a suggested practice.

Table 1-1 FGS-I Cross Reference

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.2 Prevention Section. The prevention section of the plan will, at a minimum, contain the following:	Volume II, Section 2.0

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.2.1 Name, title, responsibilities, duties, and telephone number of the designated FIC and an alternate.	Volume I, Section 1.0 & Volume II, Section 3.1
C18.3.2.2 General information on the installation including name, type or function, location and address, charts of drainage patterns, designated water protection areas, maps showing locations of facilities described in subparagraph C18.3.2.3., critical water resources, land uses, and possible migration pathways.	Volume II, Section 2.1, Appendix C & G, Petroleum Storage Tank Management Plan (PSTMP)
C18.3.2.3. An inventory of storage, handling, and transfer sites that could possibly produce a significant spill. For each listing, using maps as appropriate include a prediction of the direction and rate of flow and total quantity of POL or hazardous substance that might be spilled as a result of a major failure.	Volume II, Section 2.2, Appendix G & PSTMP
C18.3.2.4. An inventory of all POL and hazardous substances at storage, handling, and transfer facilities described in subparagraph C18.3.2.3.	Volume I, Section 3.0, Volume II, Sections 2.3 through 2.9 & PSTMP
C18.3.2.5. Procedures for the periodic integrity testing of all aboveground storage containers, including visual inspection and where deemed appropriate, another form of non-destructive testing. The frequency and type of inspection and testing must take into account container size and design (i.e., floating/fixed roof, skid-mounted, elevated, cut and cover, partially buried, vaulted above-ground, etc.) and industry standards.	Volume II, Appendix E & PSTMP
C18.3.2.6. Procedures for periodic inspection for all above ground valves, piping, and appurtenances associated with POL storage containers, in accordance with Chapter 9, "Petroleum, Oil, and Lubricants," subparagraph C9.3.2.5.	Volume II, Appendix E & PSTMP

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.2.7. Arrangements for Emergency Services. The plan will describe arrangements with installation and/or local police departments, fire departments, hospitals, contractors, and emergency response teams to coordinate emergency services.	Volume I, Section 1.0 & Volume II, Table 4-2
C18.3.2.8. Means to Contact Emergency Services. The plan will include a telephone number or other means to contact the appropriate emergency services provider (e.g., installation fire department) on a 24-hour basis.	Volume I, Section 1.0
C18.3.2.9. A detailed description of the facility's prevention, control, and countermeasures, including structures and equipment for diversion and containment of spills, for each site listed in the inventory. Measures should permit, as far as practical, reclamation of spilled substances. Chapters governing hazardous materials, hazardous waste, POL, underground storage tanks, pesticides, and PCBs provide specific criteria for containment structure requirements.	Volume II, Section 2.0 & PSTMP
C18.3.2.10. When secondary containment is not feasible for any container listed in the inventory, the plan shall include a detailed explanation of measures that will be taken to prevent spills (e.g., pre-booming, integrity testing, frequent inspection), as determined by the licensed or certified technical authority.	Volume II, Section 2.0
C18.3.2.11. A list of all emergency equipment (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment) at each site listed in the inventory where this equipment is required. This list will be kept up-to-date. In addition, the plan will include the location and a physical description of each item on the list, and a brief outline of its capabilities.	Volume II, Appendix K & PSTMP

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.2.12. An evacuation plan for each site listed in the inventory, where there is a possibility that evacuation would be necessary. This plan will describe signal(s) to be used to begin evacuation, evacuation routes, alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires), and a designated meeting place.	Site maps with appropriate evacuation plans are maintained at each location. See NSANAPLESINST 3440.17 (series) and 3300.1B. Provide command evacuation policy. The Fire Prevention Officer regularly inspects compliance.
C18.3.2.13. A description of deficiencies in spill prevention and control measures at each site listed in the inventory, to include corrective measures required, procedures to be followed to correct listed deficiencies, and any interim control measures in place. Corrective actions must be implemented within 24 months of the date of plan preparation or revision.	Volume II, Section 2.10 & PSTMP
C18.3.2.14. Written procedures for:	
C18.3.2.14.1. Operations to preclude spills of POLs and hazardous substances;	Volume II, Section 2.0
C18.3.2.14.2. Inspections; and	Volume II, Section 2.0
C18.3.2.14.3. Record-keeping requirements.	Volume II, Section 2.0
C18.3.2.15. Site-specific procedures should be maintained at each site on the facility where significant spills could occur.	Volume II, Section 2.0
C18.3.3. Spill Control Section. The control section of the plan (which may be considered a contingency plan) will identify resources for cleaning up spills at installations and activities, and to provide assistance to other agencies when requested. At a minimum, this section of the plan will contain:	Volume II, Section 3.0
C18.3.3.1. Provisions specifying the responsibilities, duties, procedures, and resources to be used to contain and clean up spills.	Volume II, Section 3.0

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.3.2. A description of immediate response actions that should be taken when a spill is first discovered.	Volume I, Section 1.0
C18.3.3.3. The responsibilities, composition, and training requirements of the FRT.	Volume I, Section 2.0 & Volume II, Section 3.0, 5.0
C18.3.3.4. The command structure that will be established to manage a worst case discharge. Include an organization chart and the responsibilities and composition of the organization.	Volume I, Section 2.0 & Volume II, Section 3.0, 5.0
C18.3.3.5. Procedures for FRT alert and response to include provisions for:	Volume I, Section 2.0 & Volume II, Section 3.0
C18.3.3.5.1. Access to a reliable communications system for timely notification of a POL spill or hazardous substance spill.	Volume II, Section 3.0
C18.3.3.5.2. Public affairs involvement.	Volume II, Section 3.5.3
C18.3.3.6. A current roster of the persons, and alternates, who must receive notice of a POL or hazardous substance spill, including a Defense Logistics Agency (DLA) Energy representative if applicable. The roster will include name, organization mailing address, and work and home telephone numbers. Without compromising security, the plan will include provisions for the notification of the emergency coordinator after normal working hours.	Volume I, Figure 1-1
C18.3.3.7. The plan will provide for notification of the FIC, installation commander, and local authorities in the event of hazard to human health or environment.	Volume I, Section 1.0 & Volume II, Section 3.0
C18.3.3.8. Assignment of responsibilities for making the necessary notifications, including notification to the emergency services providers.	Volume I, Section 2.0 & Volume II, Section 3.1
C18.3.3.9. Surveillance procedures for early detection of POL and hazardous substance spills.	Volume II, Section 2.1
C18.3.3.10. A prioritized list of various critical water and natural resources that will be protected in the event of a spill.	Volume I, Section 3.5

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.3.11. Other resources addressed in prearranged agreements that are available to the installation to clean up or reclaim a large spill due to DoD activities, if such a spill exceeds the response capability of the installation.	Volume II, Section 3.13
C18.3.3.12. Cleanup methods, including procedures and techniques used to identify, contain, disperse, reclaim, and remove POL, and hazardous substances used in bulk quantity on the installation.	Volume I, Section 4.3 & Volume II, Section 3.0
C18.3.3.13. Procedures for the proper reuse and disposal of recovered substances, decontamination wastes, contaminated POL, and absorbent materials, and procedures to be accomplished prior to resumption of operations.	Volume I, Section 2.9 & Volume II, Section 3.0
C18.3.3.14. A description of general health, safety, and fire prevention precautions for spill cleanup actions.	Volume II, Section 3.0, Appendix J
C18.3.3.15. A public affairs section that describes the procedures, responsibilities, and methods for releasing information in the event of a spill.	Volume I, Section 2.5 & Volume II, Section 3.5.3, Appendix L
C18.3.4. Reporting Section. The reporting section of the spill plan will address the following:	Volume II, Section 4.0
C18.3.4.1. Recordkeeping when emergency procedures are invoked.	Volume II, Section 4.0
C18.3.4.2. Any significant spill will be reported to the FIC immediately. Immediate actions will be taken to eliminate the source and contain the spill.	Volume I, Section 1.0 & Volume II, Section 3.0
C18.3.4.3. The FIC will immediately notify the appropriate In-Theater Component Commander and/or Defense Agency and the DoD Lead Environmental Component (LEC) and submit a follow-up written report when:	
C18.3.4.3.1. The spill occurs inside a DoD installation and cannot be contained within any required berm or secondary containment;	Volume II, Section 4.2, Tables 4-1 & 4-2

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.4.3.2. The spill exceeds 400 liters (110 gallons) of POLs;	Volume II, Section 4.2, Tables 4-1 & 4-2
C18.3.4.3.3. A water resource has been polluted by the spill; or	Volume II, Section 4.2, Tables 4-1 & 4-2
C18.3.4.3.4. The FIC has determined that the spill is significant.	Volume II, Section 4.2, Tables 4-1 & 4-2
C18.3.4.4. When a significant spill occurs inside a DoD installation and cannot be contained within the installation boundaries or threatens the local Italian drinking water resource, the appropriate in-theater component commander and/or Defense Agency, DoD LEC, and Italian Base Commander shall be notified immediately	Volume II, Table 4-2
C18.3.4.5. If a significant spill occurs outside of a DoD installation; the person in charge at the scene will immediately notify the authorities listed in subparagraph C18.3.4.4 and additionally will notify the local fire departments and obtain necessary assistance.	Volume II, Table 4-2
C18.3.4.6. In addition, when any spill occurs that results in soil or groundwater contamination exceeding or likely to exceed the concentrations listed in Table 18.1, measures implemented to contain the potential contamination and ensure an adequate level of protection for human health and environment shall be immediately reported to the Italian authorities.	Volume I, Section 1.0, Figure 1-3
C18.3.4.7. Within 48 hours after this initial notification of a spill, or as soon as possible, preliminary investigations shall be carried out to ascertain whether the concentrations listed in Table 18.1 have been exceeded.	Volume I, Section 1.0, Figure 1-3, & Annex D
C18.3.5. Training. Installations will provide necessary training and spill response drills to ensure the effectiveness of personnel and equipment.	Volume II, Section 5.0

Table 1-1 FGS-I Cross Reference (Continued)

FGS-I CHAPTER 18 CROSS REFERENCE	LOCATION IN THIS PLAN*
C18.3.6. Further Actions. After completion of the initial response, any remaining free product and/or obviously contaminated soil will be appropriately removed and managed. Further actions will be governed by DoDI 4715.08, “Environmental Remediation for DoD Activities Overseas” and EUCOM Directive 80-2 “Environmental Executive Agent Remediation Policy.”	Volume I, Section 4.3

*Or other applicable document.

1.3 Content

This SPRP has been prepared in accordance with Chapter 18 (*Spill Prevention & Response Planning*) of the *FGS-I*, as well as with Chapters 9 and 19 (*Petroleum, Oil, & Lubricants* and *Underground Storage Tanks [USTs]*, respectively); each is provided in Appendix A of this document.

Section 2.0 shows details of facilities that store or use oil and or/hazardous materials in such quantities that they may have a release in excess of the significant spill thresholds prescribed in the *FGS-I*. Applicable standards from the Navy Environmental Readiness Manual (OPNAVINST) 5090.1 series and OPNAV M-5090.1 (Appendix B) were also used in the preparation of this plan.

The *Incident Management Handbook* (Volume I, *IMH*) of this SPRP is intended to provide the user with necessary information in the *initial* response to an oil and hazardous substances spill incident. The *IMH* is divided into the following sections:

- Section 1.0: Emergency Spill Response Procedures
- Section 2.0: Initial Response Roles and Responsibilities
- Section 3.0: Special Considerations
- Section 4.0: Risks and Sensitive Areas
- Section 5.0: OHS Response Management

The associated SPRP Volume II addresses spill prevention, control, reporting, and training, and also contains a number of appendices that provide additional information. Section 2.0 provides an inventory

of all facilities capable of producing a significant spill, and an inventory of materials stored at these facilities. Section 2.0 also provides a detailed description of oil and hazardous substances spill countermeasures, including structures and equipment for diversion and containment; a description of deficiencies in spill prevention and control measures at each facility; and written procedures for preventative maintenance operations; inspections; and record keeping requirements.

Section 3.0 discusses the spill response organizations, with a discussion of roles and responsibilities for members of the Initial Response Organization (IRO) (also covered in the *IMH*) and the expanded Incident Management Team (IMT), should a spill event last beyond the initial response. This section of the plan also identifies resources and standard operating procedures for spill clean-up and other DoD and Italian agencies that can provide spill response and clean-up assistance.

Section 4.0 identifies record keeping when emergency procedures are invoked, and notifications requirements. The Training section identifies training required to ensure the effectiveness of personnel and equipment. Detailed information on POL storage facilities is provided in the NSA Naples PSTMP, dated July 2006.

Section 5.0 describes the required oil and hazardous substances training and drill/exercise program and assigns responsibilities for personnel under the authority of the Commanding Officer (CO).

SPRP Volume II, Section 3.0 serves as the installation Hazardous Waste (HW) Contingency Plan, consistent with requirements of the FGS-I Chapter 6.0. The NSA Naples Hazardous Waste Management Plan (HWMP), dated September 2013, is incorporated by reference.

1.4 Implementation, Maintenance, & Update Requirements

The FGS-I Chapters 9 and 18 requires the Spill Prevention and Response Plan be certified by a competent technical authority, and updated at least every five years, or whenever there are significant changes in operations. The plan certification is provided on page xviii. By cover letter, the plan is issued as an NSA Naples instruction, with full authority of the CO's direction. The Environmental Division of the Public Works Department is responsible for maintaining plan currency and to ensure that it is updated every five years.

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2.0 PREVENTION & RESPONSE

This section provides a detailed description of countermeasures, including structures and equipment for diversion and containment of spills, a description of deficiencies in spill prevention and control measures at each facility, and written procedures for operations to preclude spills of oil and hazardous substances, inspections, and record keeping requirements. The NSA Naples PSTMP provides a detailed discussion of all POL facilities. Appendix C provides all storage facility site locations and drainage maps. Detailed description of the NSA Naples stormwater collection system is provided in the NSA Naples Storm Water Pollution Prevention Plan (SWPPP) dated 2011, which is incorporated herein by reference. Spill predictions are discussed in Appendix G.

The list of spill response equipment and resources is attached to this plan by reference. The Fire and Emergency Services (FES), Emergency Services Department and PW Environmental keep updated inventories of their spill equipment in the following documents respectively: FES Hazmat Response Master Inventory (Appendix K), Emergency Response Plan, and PW Environmental Spill Equipment Inventory.

2.1 General Prevention Requirements

Facilities will adhere to the storage and handling requirements described in the Safety Data Sheets (SDSs) accompanying the material. To protect human health and the environment, the following operational procedures will be used when handling and storing oil and hazardous substance containers.

2.1.1 Storage Locations

- Hazardous Materials having the potential to do serious harm to human health or the environment if spilled or release in reportable quantity should always be stored, even when only stored temporarily, at locations with secondary containment. Refer to IMH, Volume I, Annex D for reportable quantities.
- Dangers of extreme heat, fire, explosion, and generation of toxic gases must be considered in the decision of a future suitable storage location for POL, Hazardous Substance, and Hazardous Waste.
- A storage container holding a Hazardous Substance/Hazardous Waste that is incompatible with any materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

- Containers used to store ignitable or reactive wastes must be located at least 15 meters (50 feet) inside the boundary of the installation.
- New hazardous substance dispensing areas will be located away from catch basins and storm drain lines. Existing hazardous substance dispensing areas currently located in proximity to catch basins and storm drains such that an accidental release could potentially reach them will be equipped with containment to prevent soil and groundwater contamination.
- Pest management facilities will be located away from waterways and flood areas.
- Toxic or flammable pesticides will not be located in inhabited buildings and will be kept on the ground floor. Elevate packaged pesticides on pallets.
- Toxic and very toxic pesticides will be located in areas with sufficient ventilation and in facilities with adequate Personal Protective Equipment (PPE). As a minimum, the PPE indicated by the manufacturer on the pesticide label must be provided.
- Drums should be elevated from the soil or ground to prevent contact with materials that could promote corrosion. If pallets are used, the pallets should be in a good structural condition and stand flat on a level surface. Horizontal storage racks may be used to prevent rainwater accumulation on top of containers. Containers should be covered to protect from weather and corrosion.
- Outdoor hazardous substance /hazardous waste or POL storage areas should be located in traffic-safe areas or protected with properly marked traffic barriers.
- Water-reactive chemical substances should be stored in watertight containers in closed water-resistant lockers. These lockers should not be stored outdoors.

2.1.2 Materials Compatibility

Hazardous wastes and hazardous materials that can react with each other to cause extreme heat, explosions, and fire or toxic products must not be placed in the same container.

Containers used to store hazardous substances/hazardous wastes, including over pack containers, must be compatible with the materials stored. Appendix D contains a compatibility matrix between chemicals and construction and lining materials used for container and storage devices. This matrix can only be used to identify flagrant incompatibility problems only. Temperature, concentration, humidity and age also affect container suitability.

2.1.3 Container Management

Containers holding hazardous substances/hazardous wastes must be kept in good condition, free from severe rusting, bulging, or structural defects. Hazardous substances/hazardous wastes containers must be kept closed during storage except when necessary to add or remove material. Hazardous

substances/hazardous wastes containers must not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

Mobile hazardous substances/hazardous wastes containers must be equipped with proper means of closure and with features to allow safe loading, unloading, and easy movement.

Hazardous substances/hazardous wastes must not be placed in an unwashed container that previously held an incompatible material. Proper decontamination of hazardous substances/hazardous wastes containers must be performed before containers are reused. All personnel are required to consult with the Environmental Office for proper decontamination procedures. Hazardous substances/hazardous wastes containers and pesticides must be properly labeled in accordance with the FGS-I.

All empty and pressurized gas cylinders should be secured to pallets to prevent them from falling and must have cylinder valve caps in place.

2.1.4 Security

The installation will prevent the unauthorized entry of persons into all facilities responsible for significant quantities of hazardous substances/hazardous wastes or POL. Unauthorized personnel have been able to enter and use areas in the past (i.e. unauthorized loading of hazardous waste tank, pilferage of chemicals, tampering with valves, and pumps). Adequate security reduces the likelihood of spill incidents due to tampering, vandalism, and sabotage. Site-specific and general security and lighting is addressed in this section, and in the PSTMP and HWMP. Site security is the responsibility of each Command and the NSA Naples security department. The following security measures should be followed.

- Protection measures against vandalism, theft, sabotage or other improper and illegal use of the areas should be provided. These measures include fencing, lighting, vehicular traffic control, securing of equipment and buildings, including locks for valves, pumps, control switches, and gates, guards, and routine security patrols.
- Security fencing prevents unauthorized access to petroleum or chemical storage or handling areas.
- Gates in fences are designed using the same design manuals as fences, as specified in DM-22, DM-5.12, MIL-HDBK-1013/10, and MIL-HDBK-1013/1A, or design meeting Mixed Commission approval. Any gates should be securely locked or guarded when the area is unattended or not in operation.
- All buildings, areas, and equipment susceptible to vandalism or unauthorized use, should be provided with appropriate locks to prevent actions, which could result in releases. This equipment includes valves, pumps, controls, and connections.

- Areas should have lighting that is commensurate with the type and location of the area. Lighting serves two purposes: the discovery of spills at night and the prevention of spills occurring through acts of vandalism. Emergency lighting may be required in the event of main power supply outages.
- Including chemical storage and handling areas in routine base security patrols or dedicating security personnel to those areas during non-duty hours adds an extra level of security protection. Security personnel can be instructed to observe leaks from tanks, valves, or pipelines while patrolling the installation. Briefing security personnel on recognizing potential spill situations and chemical hazards, on the location and operation (if safe to do so) of fire protection equipment and alarms, and on procedures to follow when a spill is detected (IMH, Volume I, Section 1.0), are also highly recommended.

2.1.5 Inspections

Inspections must be scheduled at intervals that allow problems to be identified and corrected before they harm human health or the environment. Appendix E provides spill prevention inspection checklists for POL storage tanks and drum storage areas that may be used if activity checklists are not available.

- Hazardous waste container storage areas must be inspected weekly for leaking containers and deterioration of containers and the containment system caused by corrosion or other factors. A written schedule and written records of inspections is to be kept at all Hazardous Waste Accumulation Points (HWAPs). Appendix F provides weekly and monthly inspection sheets for HWAPs and Temporary Waste Storage Areas (TWSAs) as found in the NSA Naples HWMP. It also provides for documentation of deficiencies noted during inspections.
- Routine inspections for malfunctions and deterioration, operational errors, and discharges that may be causing, or may lead to, a release of hazardous waste constituents to the environment or threat to human health must be performed at all HWAPs.
- Such inspections must include all equipment and areas involved in storage and handling of hazardous substances/hazardous wastes.
- Deficiencies detected during routine inspections that are egregious and repetitive are reported to the Environmental Director. Deficiencies should be corrected in a timely manner to reduce the risk of a significant spill occurrence.
- Inspection records and inspection logs will be kept at each facility or on base.

2.1.6 Written Procedures

All facilities handling and storing hazardous substances/hazardous wastes and POL in quantities that can result in a significant release shall follow the procedures identified in FGS-I Chapter 5 (HM) and Chapter 6 (HW). The NSA Naples HWMP covers Standard Operating Procedures (SOPs) for the collection, containerization, labeling, marking, record keeping, transfer and storage of hazardous waste. Standard operating procedures established by NSA Naples departments and tenant commands and those identified

through the various tiers of training are discussed in Section 5.0 of this volume. In addition those facilities and work centers that store and handle large quantities of hazardous substances/hazardous wastes and POL have detailed standard operating procedures.

2.1.7 Oil and Hazardous Substances/Hazardous Waste Minimization

The Consolidated Hazardous Materials Reutilization and Inventory Management Program (CHRIMP, et al HAZMIN Center) encourages money to be saved, inventories reduced, and safety standards enforced. By consolidating like materials and accumulating materials for reuse or recycling, the program eliminates unnecessary inventories of hazardous materials and provides an opportunity to review materials for less hazardous substitutes. NSA Naples has successfully implemented CHRIMP where hazardous substances users are able to maintain only a 30-day supply. Materials not used in that period are returned to CHRIMP. An inventory of HS stored at CHRIMP is provided in Appendix N. Hazardous substance inventories for all end-users may be obtained through the Navy Enterprise Resource Planning (ERP) at the HAZMIN center.

2.2 Inventory of Storage, Handling, & Transfer Sites Capable of Producing a Significant Spill

This section details the facilities at NSA Naples that store oil and hazardous substances in quantities large enough to possibly produce a significant spill (and are therefore considered to be of “high risk” and are required to be inventoried per *FGS-I C18.3.2.4*) as defined by the FGS-I, Chapter 18 (see Appendix A).

A wide variety of oil and hazardous substances are stored in storage lockers and buildings, which for the most part are designed for the safe contained storage and handling of oil and hazardous substances. Spill prevention is achieved through the use of flammable and hazardous storage lockers, over pack drums and containment pallets, curbed or building containment without floor drains. All locations are equipped with spill kits and storage and handling and spill notification procedures are posted in both Italian and English. Authorized use list (AUL) for hazardous material used in the facility is available in plastic pocket marked SDS in each storage locker. Specific information can be retrieved through computerized databases at CHRIMP and the Safety Office. Training is provided by Environmental to all personnel (initially when personnel are assigned duties; and annually as a refresher) on proper storage, handling, and spill clean-up.

Appendix H provides site drawings for POL storage tank locations and photos for POL storage tanks and hazardous substances storage facilities with the potential of causing a significant spill and a photo log of other Hazardous Material storage locations.

The list of those locations for which site specific procedures could be prepared are:

Capodichino:

AST C-412 Air Cargo building 412

AST C-449 BEQ – BLDG 449

USTs C-476 Government Gas Station building 476

Camaldoli:

AST CM-69 repeater site building

SS Gricignano:

AST SS-2075 PW building 2075

AST SS-2077 AFN Studio-building 2077

USTs SS-2081 Government Gas Station

The NSA Naples HWMP, which is incorporated into this plan by reference, contains weekly and quarterly inspection sheets, deficiency notice forms, and a snapshot in time of the types of hazardous waste stored. The Safety department maintains a database of all authorized users and hazardous materials.

2.2.1 Standard Hazardous Material Spill Response Procedures

Standard Hazardous Material spill response procedures are in accordance with the NSA Naples Fire Department (FES) *Hazardous Material (HAZMAT) Standard Instruction and Response Plan*, and are incorporated into this section. Due to the nature of HS, protection of health and safety is the primary initial objective, with particular care to prevent exposure through the aggressive use of site controls, assessment tools, and PPE. Following the stabilization of a spill site, the following standard response phases are to be used:

1. Control the source of the spill;

2. Contain the spill to minimize potential impacts;
3. Protect sensitive areas (storm drains, ditches, flora/fauna, etc.); and
4. Recover spilled materials and collateral waste and reclaim if possible.

2.3 Capodichino

2.3.1 General Drainage Information

The site drainage map provided in Appendix C shows five areas (A-E) of storm water collection. Areas A-E drains to a single storm water outfall at the southeast corner of the facility (Figure 2-1). Stormwater enters an underground pipe which transitions to an aboveground concrete lined drainage swale that runs easterly along the Tangenziale di Napoli (A56) for approximately **0.6 kilometers**. Stormwater continues south via underground piping under the Tangenziale and empties into an open concrete lined collection area located on the south side of the Tangenziale (Figure 2-2). If spills are uncontained there are no controls in place to prevent a spill from leaving the facility via the storm drain system. Figure 2-3 provides an aerial view of the stormwater outfall and the drainage path to the collection area. Storm drainage on the aircraft parking apron discharges into an Oil Water Separator (OWS) and then underground, at 15 meters depth, through a series of 39 cisterns, built and maintained by Italian Airport personnel.

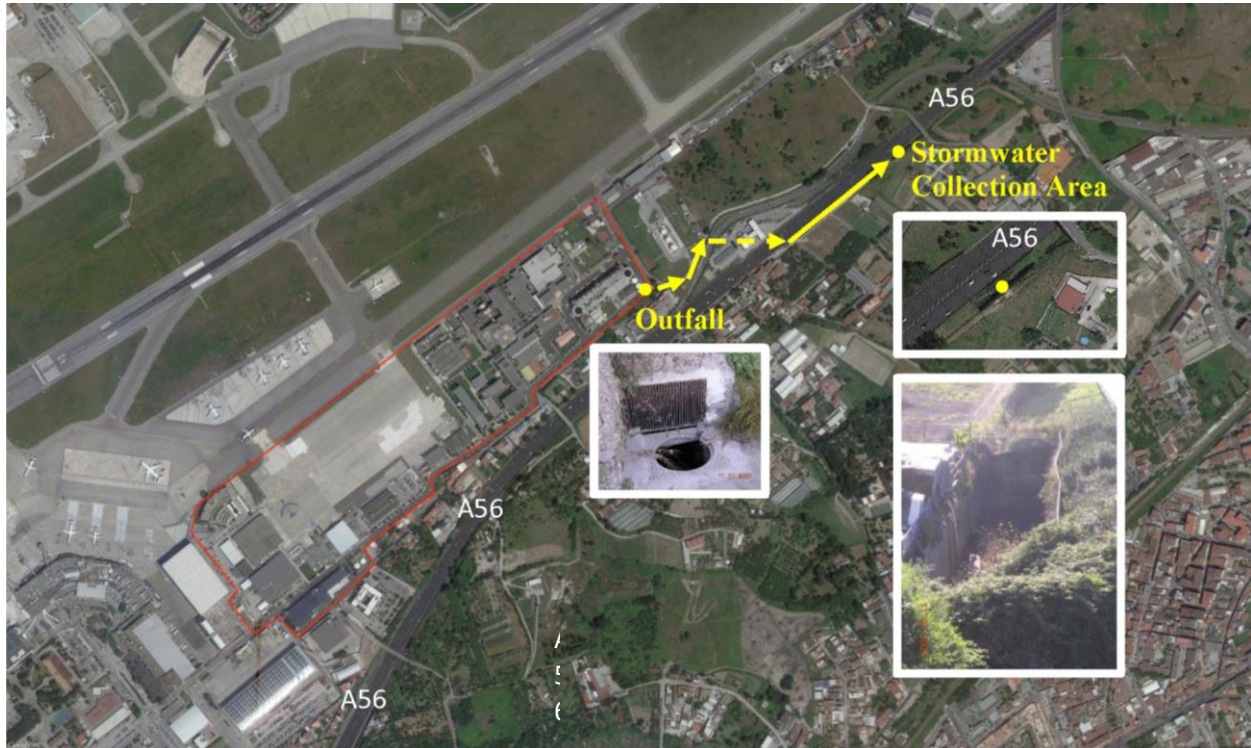
Figure 2-1 Capodichino Stormwater Outfall



Figure 2-2 Capodichino Stormwater Collection Area Adjacent to the Tangenziale



Figure 2-3 Capo Aerial View of Outfall and Drainage Path to Collection Area



2.3.2 Capodichino POL Facilities

The following sections discuss facilities that regularly store, handle, and/or transfer POL that have the potential to cause a significant spill. Photos and site drawings are provided in Appendix H.

2.3.2.1 Aircraft Parking Apron

2.3.2.1.1 *General Information*

Aircraft assigned to NSA Naples and transient aircraft are parked and fueled on the parking apron. There is no POL storage on the parking apron.

2.3.2.1.2 *Spill Risks*

The spill risks on the aircraft parking apron are from overfills or a vehicle collision with a parked aircraft.

2.3.2.1.3 *Transfer*

Aircraft are fueled via commercial aircraft fuel trucks at a rate of 1,135 liters (300 gallons) per minute. All fuel trucks are outfitted with a Scully system and brake interlock system. The Scully system provides overfill protection, as well as grounding verification for the fuel truck. The brake interlock system prevents the fuel truck from being moved until the bottom loading coupler has been disconnected from the fuel truck. All fuel transfers are continuously manned operations.

2.3.2.1.4 *Containment and Safety Equipment*

A spill kit is located on the aircraft parking apron. Fire extinguishers are located on the aircraft parking apron. PPE is not required.

2.3.2.1.5 *Drainage Control*

This facility is located in drainage area D. Storm drains on the aircraft parking apron discharge to an OWS and then underground, at 15 meters depth, through a series of 39 cisterns, built and maintained by Italian Airport personnel.

2.3.2.1.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.2.1.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year, but connected to a Italian commercial and military airport via a normally open access.

2.3.2.2 AST C-412

2.3.2.2.1 General Information

This is an 8,000 liter, horizontal cylinder steel Aboveground Storage Tank (AST) that contains diesel fuel for emergency generators and heating at building 412.

2.3.2.2.2 Spill Risk

Spills from this tank would be from a catastrophic failure of the tank and secondary containment structure or from overfills not captured in the containment.

2.3.2.2.3 Transfer

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge by which fuel level may be monitored during filling operations.

2.3.2.2.4 Containment and Safety Equipment

This AST has adequate secondary containment spill containment. Clean up and safety equipment is not required at this tank location. There is a fire hydrant in close proximity to building 412.

2.3.2.2.5 Drainage Control

This tank is in drainage area D and would ultimately leave the facility at the single outfall.

2.3.2.2.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.2.2.7 Security

The tank is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.3.2.3 AST C-449

2.3.2.3.1 *General Information*

This is an 8,500 liter; rectangular concrete encased steel AST that contains heating oil for building 449.

2.3.2.3.2 *Spill Risk*

Spills from this tank would be from a catastrophic failure of the tank or from overfills.

2.3.2.3.3 *Transfer*

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge and a high level alarm by which fuel level may be monitored during filling operations.

2.3.2.3.4 *Containment and Safety Equipment*

This AST is encased in concrete and has a High Density Polyethylene (HDPE) secondary containment liner. Clean up and safety equipment is not required at this tank location. There is a fire hydrant in close proximity to building 449.

2.3.2.3.5 *Drainage Control*

This tank is in drainage area A and would ultimately leave the facility at the single outfall.

2.3.2.3.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.2.3.7 *Security*

The tank is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.3.2.4 PWD Diesel Fuel Truck

2.3.2.4.1 *General Information*

This is an 8,000 liter diesel fuel truck used for fueling emergency generators.

2.3.2.4.2 *Spill Risk*

Spills from this tank would be from a catastrophic failure of the tank or from the vehicle being involved in an accident. This vehicle is most at risk while it is being filled at the GOV gas station at the East Parking Garage, building 461. This fuel truck is parked with fuel in the Public Works (PW) parking lot in a secondary containment structure with a ball valve for releasing water.

2.3.2.4.3 *Transfer*

This truck is filled at the Government owned vehicles (GOV) gas station using the 10 gallon per minute diesel dispenser used to fill vehicles. Appendix M provides an SOP for inventory control and fuel transfer operations.

2.3.2.4.4 *Containment and Safety Equipment*

Clean up and safety equipment is not required at this tank location. The truck is equipped with a fire extinguisher.

2.3.2.4.5 *Drainage Control*

This tank truck is parked in a dedicated area of the PW parking lot and is located drainage area B. The PW parking lot slopes to trench drains discharging into an OWS. The wastewater leaving the OWS discharges into the sewer system.

2.3.2.4.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.2.4.7 *Security*

This tank truck is parked in a well-lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.3.2.5 Other Capodichino POL Storage Tanks

The following table is a list of POL USTs that pose a spill risk from overfills or if leaking would contaminate subsurface soils, but would not cause a significant spill by definition. Tank locations and

general area spill direction and receptors are indicated on the site map provided in Appendix C. Detailed information on these USTs, including photos and site drawings, is provided in the PSTMP.

Table 2-1 Capodichino POL USTs

Tank Number	Type of Tank	Nominal Capacity (L)	Type of Oil	Current Use	Facility	Nearest Building	Facility Organization
C-403	UST	5000	Diesel	Emergency Generators (2)	Capodichino	403	Fire/Security
C-407	UST	15160	Diesel	Heating	Capodichino	407	Public Works
C-415	UST	8500	Diesel	Heating/Emergency Generator	Capodichino	415	Air Terminal
C-440.1	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-440.2	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-440.3	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-440.4	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-440.5	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-440.6	UST	15000	Diesel	Emergency Generators (4)	Capodichino	440	C4I
C-442.1	UST	15160	Diesel	Emergency Generator	Capodichino	442	Admin
C-442.2	UST	15160	Diesel	Emergency Generator	Capodichino	442	Admin
C-442.3	UST	15160	Diesel	Heating	Capodichino	442	Admin
C-448	UST	8500	Diesel	Heating	Capodichino	448	Ciao Hall
C-451	UST	7500	Diesel	Heating	Capodichino	451	Gym

Table 2-1 Capodichino POL USTs (Continued)

Tank Number	Type of Tank	Nominal Capacity (L)	Type of Oil	Current Use	Facility	Nearest Building	Facility Organization
C-459	UST	1800	Diesel	Emergency Generator	Capodichino	459	Water Plant
C-476.1	UST	15000	Diesel	Vehicle Fuel	Capodichino	461	Capo Filling Station
C-476.2	UST	15000	Diesel	Vehicle Fuel	Capodichino	461	Capo Filling Station
C-476.3	UST	15000	Unleaded	Vehicle Fuel	Capodichino	461	Capo Filling Station
C-476.4	UST	15000	Unleaded	Vehicle Fuel	Capodichino	461	Capo Filling Station

2.3.3 Capodichino Oil and Hazardous Substance and Hazardous Waste Storage Facilities

Capodichino has are one (1) TWSA and four (4) HWAPs, listed in Table 2-2 that are discussed in detail in this section due to the nature and quantity of materials stored and handled. A review of the AULs of all oil and hazardous material storage locations indicates that none store oil and hazardous material in sufficient quantities that would produce a significant spill. These locations are listed in Table 2-3 since oil and hazardous material are frequently being handled both manually and by forklift, which increases the probability of containers being dropped.

Table 2-2 Capodichino Temporary Waste Storage Area and Hazardous Waste Accumulation Points

HW SITE TYPE	FACILITY NUMBER	RESPONSIBLE OFFICE
TWSA	402A	PW - Environmental
HWAP	401	Supply - CHRIMP
HWAP	407	PW - Transportation
HWAP	406	GSE – Air Operation, HSC-28, M7
HWAP	440	Naval Computer and Telecommunications Station (NCTS)

2.3.3.1 PW Environmental (TWSA) Building 402A

2.3.3.1.1 *General Information*

This storage location is used to consolidate waste prior to pick up by Defense Logistics Agency (DLA), Disposition Services.

2.3.3.1.2 *Spill Risk*

Spill risk is from the handling of materials during transfer and consolidation.

2.3.3.1.3 *Transfer*

All transfers are done by hand and forklift.

2.3.3.1.4 *Containment and Safety Equipment*

Materials are stored within containment berms or in overpack drums. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.3.3.1.5 *Drainage Control*

The facility is designed to contain releases within the building. There are trench drains within this storage area that discharge to an underground holding tank.

2.3.3.1.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.3.1.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.3.3.2 CHRIMP (HWAP) Building 401

2.3.3.2.1 *General Information*

CHRIMP stores hazardous substances issued to various authorized users. This facility is located inside of building 401.

2.3.3.2.2 *Spill Risk*

Spill risk is from the handling of materials during issue and consolidation.

2.3.3.2.3 *Transfer*

No transfers are done at this facility.

2.3.3.2.4 *Containment and Safety Equipment*

Materials are stored within HAZMAT lockers with containment. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.3.3.2.5 *Drainage Control*

Per the HWMP there are trench drains within this storage area that discharge to an underground holding tank located outside the building. A release would be contained within this spill containment system.

2.3.3.2.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.3.2.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security provided 24 hours a day for 365 days a year.

2.3.3.3 Public Works Transportation (HWAP) Building 407

2.3.3.3.1 *General Information*

The Public works transportation department uses and store various quantities and types of hazardous material and generates hazardous waste.

2.3.3.3.2 *Spill Risk*

Spill risk is from the handling of materials during use and consolidation.

2.3.3.3.3 *Transfer*

Oil and lubricant transfers are made via pumps and overhead piping from the lubricant and oil storage room to the vehicle maintenance bays. Other transfers are done by hand.

2.3.3.3.4 *Containment and Safety Equipment*

Materials are stored in various rooms on containment pallets within the transportation department maintenance area. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.3.3.3.5 *Drainage Control*

Any release within the transportation maintenance area would be contained within the building.

2.3.3.3.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.3.3.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security provided 24 hours a day for 365 days a year.

2.3.3.4 Ground Support Equipment – Air Operations, HSC-28, M7 (HWAPs) Building 406

2.3.3.4.1 *General Information*

The Air operations department uses and store various quantities and types of hazardous material and generates hazardous waste.

2.3.3.4.2 *Spill Risk*

Spill risk is from the handling of materials during use and consolidation.

2.3.3.4.3 *Transfer*

No transfers are made at this facility.

2.3.3.4.4 Containment and Safety Equipment

Materials are stored in hazardous waste storage lockers with integral secondary containment. The hazardous waste storage lockers are located outside of the hangar, approximately 15 yards east of the hangar door. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.3.3.4.5 Drainage Control

This facility is located in drainage area C. Any release within the hazardous waste storage locker would be contained within the locker. Uncontained spills outside of the lockers could enter the storm drain system.

2.3.3.4.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.3.4.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security provided 24 hours a day for 365 days a year.

2.3.3.5 Naval Computer and Telecommunications Station – Building 440

2.3.3.5.1 General Information

NCTS uses and stores various quantities and types of hazardous material and generates hazardous waste.

2.3.3.5.2 Spill Risk

Spill risk is from the handling of materials during use and consolidation.

2.3.3.5.3 Transfer

Materials are moved by forklift.

2.3.3.5.4 Containment and Safety Equipment

Materials are stored inside and outside of building 440. This accumulation area is not designed with adequate secondary containment. However, wastes and materials are stored on secondary containment

pallets within the accumulation area. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.3.3.5.5 Drainage Control

This facility is located in drainage area E. Spills inside would be contained within the building. Spills in the accumulation area would easily enter the storm drain system and exit the facility via the single outfall.

2.3.3.5.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.3.3.5.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security provided 24 hours a day for 365 days a year.

2.3.3.6 Other Capodichino Oil and Hazardous Substance Storage Location

The following table is a list of other hazardous material storage locations that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by definition. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

Table 2-3 Other Capodichino Oil and Hazardous Substance Storage Locations

Building Number and Tenant
Building 407 – Public Works
Building 403 – Fire and Security
Building 451 – Gym – Swimming Pool
Building 459 – Water Treatment Plant

2.4 SS Gricignano

2.4.1 General Drainage Information

The SS Gricignano drainage map provided in Appendix C shows six areas (A-F) of storm water collection. Areas A-F drains to a single storm water outfall at the southeast of the facility (Figure 2-4 and Figure 2-5). If spills are uncontained there are no controls in place to prevent a spill from leaving the facility via the storm drain system.

Figure 2-4 SS Gricignano Stormwater Outfall



Figure 2-5 SS Gricignano Aerial View of Stormwater Outfall



2.4.2 SS Gricignano POL Facilities

The following sections discuss facilities that regularly store, handle, and/or transfer POL that have the potential to cause a significant spill. Photos and site drawings are provided in Appendix H.

2.4.2.1 AST SS-2075

2.4.2.1.1 *General Information*

This is a 1,300 liter, horizontal cylinder steel AST that contains diesel fuel for the emergency generator at Public Works building 2075.

2.4.2.1.2 Spill Risk

Spills from this tank would be from a catastrophic failure of the tank and secondary containment structure or from overfills not captured in the containment.

2.4.2.1.3 Transfer

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge by which fuel level may be monitored during filling operations.

2.4.2.1.4 Containment and Safety Equipment

The secondary containment for this tank is inadequate. Clean up and safety equipment is not required at this tank location. There is a fire hydrant in close proximity to building 2075.

2.4.2.1.5 Drainage Control

This tank is in drainage area A and would ultimately leave the facility at the single outfall.

2.4.2.1.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.2.1.7 Security

The tank is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.2.2 AST SS-2077

2.4.2.2.1 General Information

This is a 5,000 liter, horizontal cylinder steel AST that contains diesel fuel for the emergency generator at AFN building 2077.

2.4.2.2.2 Spill Risk

Spills from this tank would be from a catastrophic failure of the tank and secondary containment structure or from overfills not captured in the containment.

2.4.2.2.3 *Transfer*

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge by which fuel level may be monitored during filling operations.

2.4.2.2.4 *Containment and Safety Equipment*

The secondary containment for this tank is adequate. Clean up and safety equipment is not required at this tank location. There is a fire hydrant in close proximity to building 2077.

2.4.2.2.5 *Drainage Control*

This tank is in drainage area F and would ultimately leave the facility at the single outfall.

2.4.2.2.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.2.2.7 *Security*

The tank is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.2.3 Other SS Gricignano POL Storage Tanks

The following table is a list of POL USTs that pose a spill risk from overfills or if leaking would contaminate subsurface soils, but would not cause a significant spill by definition. Tank locations and general area spill direction and receptors are indicated on the site map provided in Appendix C. Detailed information on these USTs, including photos and site drawings, is provided in the PSTMP.

Table 2-4 SS Gricignano POL USTs

Tank Number	Type of Tank	Nominal Capacity (L)	Type of Oil	Current Use	Facility	Nearest Building	Facility Organization
SS-2075	AST	1300	Diesel	Emergency Generator	Support Site	2075	Public Works
SS-2077	AST	5000	Diesel	Emergency Generator	Support Site	2077	AFN
SS-2081-B.1	UST	10000	Diesel	Vehicle Fuel	Support Site	2080	Support Site Filling Station
SS-2081-B.2	UST	10000	Mogas	Vehicle Fuel	Support Site	2080	Support Site Filling Station
SS-2081-B.3	UST	10000	Mogas	Vehicle Fuel	Support Site	2080	Support Site Filling Station
SS-2086.1	UST	15000	Diesel	Emergency Generator	Support Site	2086	Naval Hospital
SS-2086.2	UST	15000	Diesel	Emergency Generator	Support Site	2086	Naval Hospital
SS-2086.3	UST	15000	Diesel	Emergency Generator	Support Site	2086	Naval Hospital
SS-2086.4	UST	15000	Diesel	Heating	Support Site	2086	Naval Hospital
SS-2086.5	UST	15000	Diesel	Heating	Support Site	2086	Naval Hospital
SS-2091.1	UST	10000	Diesel	Emergency Generator	Support Site	2091	NEX
SS-2091.2	UST	10000	Diesel	Emergency Generator	Support Site	2091	NEX

2.4.3 SS Gricignano Oil and Hazardous Substance and Hazardous Waste Storage Facilities

SS Gricignano has two (2) TWSA storage locations and two (2) HWAPs, listed in Table 2-5 that are discussed in detail in this section due to the nature and quantity of materials stored and handled. A review of the AULs of all Oil and hazardous material storage locations indicates that none store oil and hazardous material in sufficient quantities that would produce a significant spill. These locations are listed in Table 2-6 since oil and hazardous material are frequently being handled both manually and by forklift, which increases the probability of containers being dropped.

Table 2-5 SS Gricignano Temporary Waste Storage Areas and Hazardous Waste Accumulation Points

HW SITE TYPE	FACILITY NUMBER	RESPONSIBLE OFFICE
TWSA	2075	PW - Environmental
TWSA	2082	Hospital
HWAP	2076	MWR Auto Hobby Shop
HWAP	2092	NEX Autoport

2.4.3.1 PW Environmental (TWSA) Building 2075

2.4.3.1.1 General Information

This storage location is used to store and consolidate waste prior to pick up by DLA Disposition Services or recycling operations.

2.4.3.1.2 Spill Risk

Spill risk is from the handling of materials during transfer and consolidation.

2.4.3.1.3 Transfer

All transfers are done by hand and forklift.

2.4.3.1.4 Containment and Safety Equipment

Materials are stored within containment berms or in overpack drums. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.4.3.1.5 Drainage Control

This facility is located in drainage area F. The facility is designed to contain releases within the building.

2.4.3.1.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.3.1.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.3.2 Hospital (TWSA) Building 2082

2.4.3.2.1 General Information

This storage location is used to consolidate waste prior to pick up by DLA Reutilization Office.

2.4.3.2.2 Spill Risk

Spill risk is from the handling and consolidation of materials.

2.4.3.2.3 Transfer

All transfers are done by hand.

2.4.3.2.4 Containment and Safety Equipment

Materials are stored within hazardous waste lockers with integral secondary containment. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.4.3.2.5 *Drainage Control*

This facility is located in drainage area F. The facility is designed to contain releases within the storage locker. Uncontained spills outside of the lockers could enter the storm drain system.

2.4.3.2.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.3.2.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.3.3 Morale, Welfare and Recreation (MWR) Auto Hobby Shop (HWAP) Building 2076

2.4.3.3.1 *General Information*

The auto hobby shop stores and uses various hazardous materials and generates hazardous waste.

2.4.3.3.2 *Spill Risk*

Spill risk is from the handling and consolidation of materials.

2.4.3.3.3 *Transfer*

All transfers are done by hand.

2.4.3.3.4 *Containment and Safety Equipment*

Materials are stored within the maintenance bays of building 2076 and a fenced area outside of the building. This accumulation area is not designed with adequate secondary containment. However, wastes and materials are stored on secondary containment pallets within the accumulation area. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.4.3.3.5 *Drainage Control*

This facility is located in drainage area A. Spills in the maintenance bays would be contained within the building. Wastes and materials stored in the accumulation area on secondary containment pallets would

be contained within the pallet. Any spills from containers not on secondary containment pallets in the accumulation area would easily enter the storm drain system and exit the facility via the single outfall.

2.4.3.3.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.3.3.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.3.4 Naval Exchange (NEX) Auto Port (HWAP) Building 2092

2.4.3.4.1 General Information

The auto port stores and uses various hazardous materials and generates hazardous waste.

2.4.3.4.2 Spill Risk

Spill risk is from the handling and consolidation of materials.

2.4.3.4.3 Transfer

All transfers are done by hand.

2.4.3.4.4 Containment and Safety Equipment

Materials are stored within the maintenance bays of building 2092 and a fenced area outside of the building. This accumulation area is not designed with adequate secondary containment. However, wastes and materials are stored on secondary containment pallets within the accumulation area. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.4.3.4.5 Drainage Control

This facility is located in drainage area A. Spills in the maintenance bays would be contained within the building. Wastes and materials stored in the accumulation area on secondary containment pallets would be contained within the pallet. Any spills from containers not on secondary containment pallets in the accumulation area would easily enter the storm drain system and exit the facility via the single outfall.

2.4.3.4.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.4.3.4.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.4.3.5 Other SS Gricignano Hazardous Substance Storage Location

The following table is a list of other hazardous material storage locations that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by definition. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

Table 2-6 Other SS Gricignano Hazardous Substance Storage Locations

Building Number and Tenant
Building 2058 – High School
Building 2082 – Hospital Boiler/Generator Building
Building 2089 – Swimming Pool
Building 2091 – Commissary/Exchange Warehouse

2.5 Carney Park

2.5.1 **General Drainage Information**

There is no drainage plan for Carney Park. Drainage at this location consists of sheet flow from areas of higher elevation to a low point trench drain located at playing Field #9 where it percolates into the soil via a leach field collection pit.

Figure 2-6 Carney Park Aerial View



2.5.2 Carney Park POL Facilities

The following sections discuss facilities that regularly store, handle, and/or transfer POL that have the potential to cause a significant spill. Photos and site drawings are provided in Appendix H.

2.5.2.1 AST CP-522

2.5.2.1.1 *General Information*

This is a 3,000 liter, horizontal cylinder steel AST that contains diesel fuel for heating in building 522.

2.5.2.1.2 *Spill Risk*

Spills from this tank would be from a catastrophic failure of the tank and secondary containment structure or from overfills not captured in the containment.

2.5.2.1.3 Transfer

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge by which fuel level may be monitored during filling operations.

2.5.2.1.4 Containment and Safety Equipment

The secondary containment for this tank is adequate. Clean up and safety equipment is not required at this tank location.

2.5.2.1.5 Drainage Control

A spill from this facility would first result in a spill to soil (grass area around the AST). The spill would then drain via sheet flow to the stormwater collection trench at playing Field #9 where it percolates into the soil via a leach field collection pit.

2.5.2.1.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan. The Capodichino Fire Department is closest and would be first to respond.

2.5.2.1.7 Security

The tank is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.5.2.2 Other Carney Park POL Storage Tanks

Table 2-7 provides a description of the POL UST that pose a spill risk from overfills or if leaking would contaminate subsurface soils, but would not cause a significant spill by definition. The tank location and general area spill direction and receptors are indicated on the site map provided in Appendix C. Detailed information on this UST, including photos and site drawings, is provided in the PSTMP.

Table 2-7 Carney Park POL UST

Tank Number	Type of Tank	Nominal Capacity (L)	Type of Oil	Current Use	Facility	Nearest Building	Facility Organization
CP-550	UST	3000	Diesel	Heating	Carney Park	550	Golf Course

2.5.3 Carney Park Oil and Hazardous Substance and Hazardous Waste Storage Facilities

Carney Park has one (1) HWAP that is discussed in detail in this section due to the nature and quantity of materials stored and handled. A review of the AULs of all oil and hazardous material storage locations indicates that none store oil and hazardous material in sufficient quantities that would produce a significant spill. These locations are listed in Table 2-8 since oil and hazardous material are frequently being handled both manually and by forklift, which increases the probability of containers being dropped.

2.5.3.1 MWR (HWAP) Building 516

2.5.3.1.1 *General Information*

MWR stores hazardous waste generated from golf course and recreational area maintenance operations.

2.5.3.1.2 *Spill Risk*

Spill risk is from the handling and consolidation of materials.

2.5.3.1.3 *Transfer*

All transfers are done by hand.

2.5.3.1.4 *Containment and Safety Equipment*

Materials are stored in a covered area with a secondary containment. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.5.3.1.5 *Drainage Control*

A spill from this facility would drain via sheet flow to the stormwater collection trench at playing Field #9 where it percolates into the soil via a leach field collection pit and would primarily result in soil contamination.

2.5.3.1.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.5.3.1.7 *Security*

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.5.3.2 Other Carney Park Hazardous Substance Storage Location

The following table is a list of other hazardous material storage locations that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by definition. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

Table 2-8 Other Carney Park Hazardous Material Storage Locations

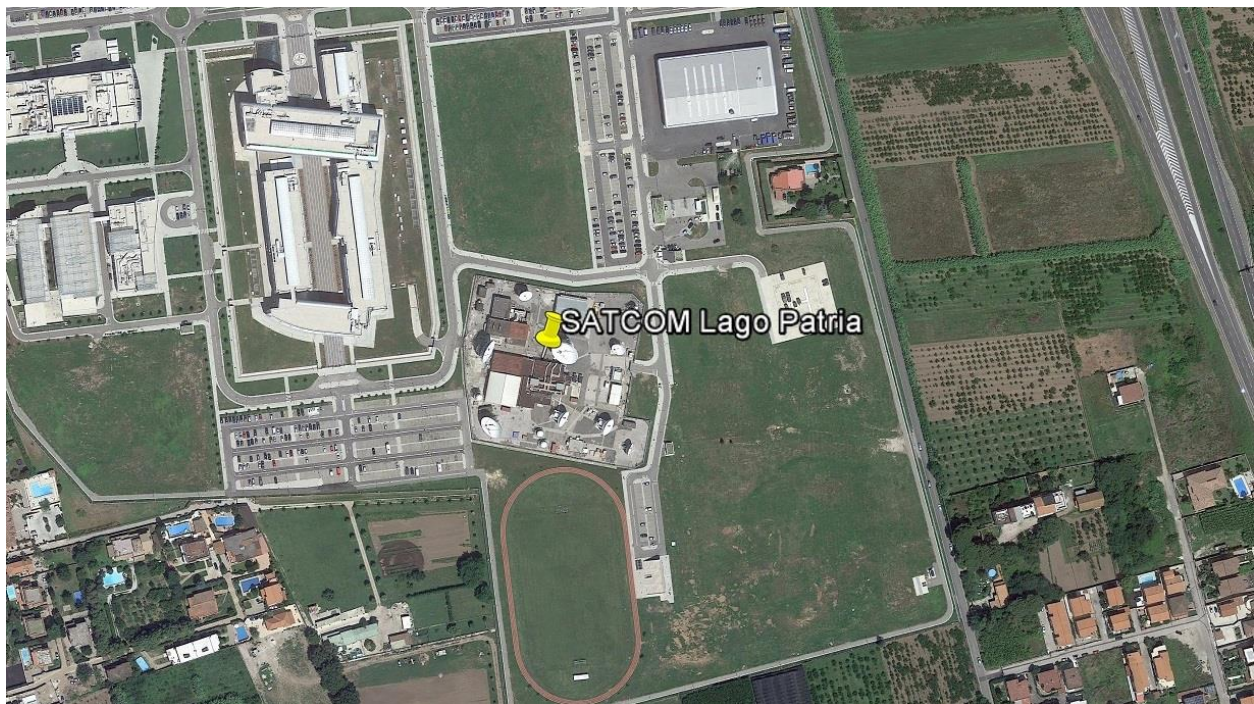
Building Number and Tenant
Building 516 – MWR Maintenance
Golf Course Equipment and Storage Area

2.6 SATCOM Lago Patria

2.6.1 General Drainage Information

There is no drainage plan in the SWPPP for SATCOM Lago Patria. Drainage at this location consists of storm water collection via storm drains which discharge off the facility into Comune di Giugliano drainage system, through the NATO compound drainage system. The ultimate receptor of the storm water is unknown.

Figure 2-7 SATCOM Lago Patria Aerial View



2.6.2 SATCOM Lago Patria POL Facilities

There are no aboveground storage tanks at this facility. However, each of the movable antennas have up to 400 liters (110 gallons) of oil-based products within the structure which if leaking would contaminate subsurface soils, but *would not* cause a significant spill by definition. There are also two 15,000 liter diesel USTs (LP-10.1 and LP-10.2) that provide fuel for emergency generators located in building 10. These tanks pose a spill risk from overfills or if leaking would contaminate subsurface soils, but *would not* cause a significant spill by definition. Tank locations and general area spill direction and receptors are indicated on the site map provided in Appendix C. Detailed information on these USTs, including photos and site drawings, is provided in the PSTMP.

2.6.3 SATCOM Lago Patria Oil and Hazardous Substance and Hazardous Waste Storage Facilities

SATCOM Lago Patria has three hazardous material storage locations that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by definition. There are two storage areas located in building 10 and several hazardous substance and hazardous waste storage lockers located in the compound. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

2.7 Camaldoli

2.7.1 General Drainage Information

There is no drainage plan in the SWPPP for Camaldoli. Drainage at this location consists of stormwater collection via storm drains which discharge off the facility into drainage ditches off site. The ultimate receptor from these ditches is unknown.

Figure 2-8 Aerial View of Mt. Camaldoli Relay Site



2.7.2 Camaldoli POL Facilities

The following sections discuss facilities that regularly store, handle, and/or transfer POL that have the potential to cause a significant spill. Photos and site drawings are provided in Appendix H.

2.7.2.1 AST CM-69

2.7.2.1.1 *General Information*

This is a 3,785 liter, rectangular concrete encased double-walled AST that contains diesel fuel for the emergency generators in building 69.

2.7.2.1.2 *Spill Risk*

Spills from this tank would be from a catastrophic failure of the tank and secondary containment structure or from overfills not captured in the containment.

2.7.2.1.3 *Transfer*

This tank is filled from a fuel truck and all filling operations are constantly monitored. This tank does have a level gauge by which fuel level may be monitored during filling operations.

2.7.2.1.4 *Containment and Safety Equipment*

The secondary containment for this tank is adequate. Clean up and safety equipment is not required at this tank location.

2.7.2.1.5 *Drainage Control*

A spill from this facility would most likely collect on the ground adjacent to the tanks. There are no storm drains at this location.

2.7.2.1.6 *Spill Response Strategies*

The spill response strategy is discussed in the IMH, Volume I, Sections 1.0 and 4.0 of this plan.

2.7.2.1.7 *Security*

The tank is well lighted and is located within a locked gate.

2.7.3 Camaldoli Oil and Hazardous Substance and Hazardous Waste Storage Facilities

There are several hazardous material storage lockers located at Camaldoli that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by

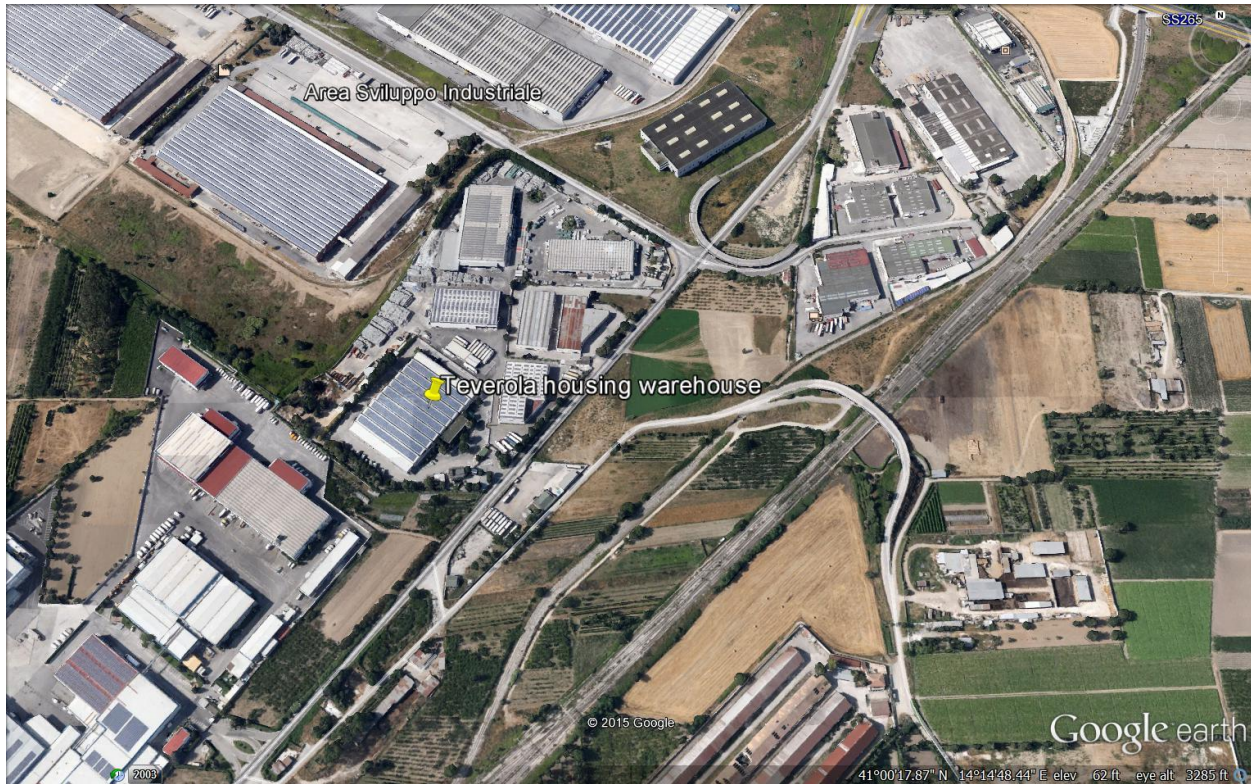
definition. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

2.8 Teverola

2.8.1 General Drainage Information

The site drainage map, Appendix C for Teverola indicates two stormwater drainage outfalls that enter the public stormwater drain system outside of the compound. There is no government owned POL storage tanks at this location.

Figure 2-9 Teverola Aerial View



2.8.2 Teverola Oil and Hazardous Substance and Hazardous Waste Storage Facilities

There are several hazardous material storage lockers located at Teverola that pose a spill risk from leaking containers or from spills during container handling, but *would not* cause a significant spill by definition. Hazardous material storage locations and general area spill direction and receptors are indicated on the site map provided in Appendix C.

2.9 NSA Detachment Gaeta Pier Area

2.9.1 General Drainage Information

There is no drainage plan in the SWPPP for this location. Stormwater will drain via sheet flow directly into Gaeta Bay.

2.9.2 NSA Detachment Gaeta Pier POL Facilities

2.9.2.1 General Information

There are two bulk field constructed underground storage tanks (Tank #4 and Tank#5) being leased by Defense Logistics Agency (DLA) Energy from the Italian Navy (10). These 3,785,400 liter tanks contain diesel fuel marine, used to transfer fuel via approximately 748 meters of pipeline to ships berthed at the pier. The tanks and pipeline are operated and maintained by the Italian Navy.

Figure 2-10 NSA Detachment Gaeta Aerial View



2.9.2.2 Spill Risk

Spills from these tanks would be from a catastrophic failure of the tank or from overfills. A release from the transfer pipeline would be due to a rupture or from leaking valves.

2.9.2.3 Transfer

These tanks are filled by tanker ship using the pier pipeline. These tanks have a level gauge by which fuel level may be monitored during filling operations. Fueling operations are continually manned.

2.9.2.4 Containment and Safety Equipment

The tanks, which are cut and cover tanks, are located within a concrete berm. Clean up and safety equipment is located in the pier complex.

2.9.2.5 Drainage Control

A spill from the tanks or pipeline would flow directly into the Bay of Gaeta.

2.9.2.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Annex A of this plan.

2.9.2.7 Security

The tank and pier area are well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.9.3 NSA Detachment Gaeta Pier Area Oil and Hazardous Substance and Hazardous Waste Storage Facilities

2.9.3.1 General Information

There is several hazardous storage lockers located on the pier wharf. These are to be relocated inside a building currently being refurbished.

2.9.3.2 Spill Risk

Spill risk is from the handling of materials during transfer and consolidation.

2.9.3.3 Transfer

All transfers are done by hand and forklift.

2.9.3.4 Containment and Safety Equipment

Materials are stored within containment berms or in overpack drums. Spill kits, PPE, fire extinguishers, and clean up equipment are located at this facility.

2.9.3.5 Drainage Control

The facility is designed to contain releases within the building.

2.9.3.6 Spill Response Strategies

The spill response strategy is discussed in the IMH, Volume I, Annex A of this plan.

2.9.3.7 Security

This area is well lighted and the entire facility is located on a secured, fenced-in military base with security 24 hours a day for 365 days a year.

2.10 Deficiencies and Corrective Actions

The following table lists deficiencies noted and corrective actions required.

Table 2-9 Deficiencies and Corrective Actions

Facility Deficiency	Corrective Action
CAPODICHINO	
There is no mechanism in place to stop a large POL release from leaving the facility via the stormwater drainage system and the single outfall.	Consideration should be given to installing control valve at the stormwater outfall and/or using weighted storm drain covers during UST filling operations.
SUPPORT SITE	
AST SS-2075 has inadequate secondary containment.	Provide adequate secondary containment. Cost \$500.
There is no mechanism in place to stop a large POL release from leaving the facility via the stormwater drainage system and the single outfall.	Consideration should be given to installing control valve at the stormwater outfall and/or using weighted storm drain covers during UST filling operations.
The oil drums stored in the fenced area behind building 2091 are not stored on secondary containment pallets provided.	Ensure that containment pallets are utilized for oil drums stored outside in this location.

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3.0 SPILL CONTROL & RESPONSE MANAGEMENT

This section details OHS spill control policies, procedures, and responsibilities. This section discusses both position responsibilities as well as response management considerations (by position), and is intended to serve as a technical reference in case of a significant OHS spill or release. These procedures include public affairs guidance for releasing public information in the event of a spill as required by section 18.3.3 of the FGS-I.



These procedures and roles/responsibilities are provided as reference to allow staff assigned to gain a better understanding of the OHS response process and standards.

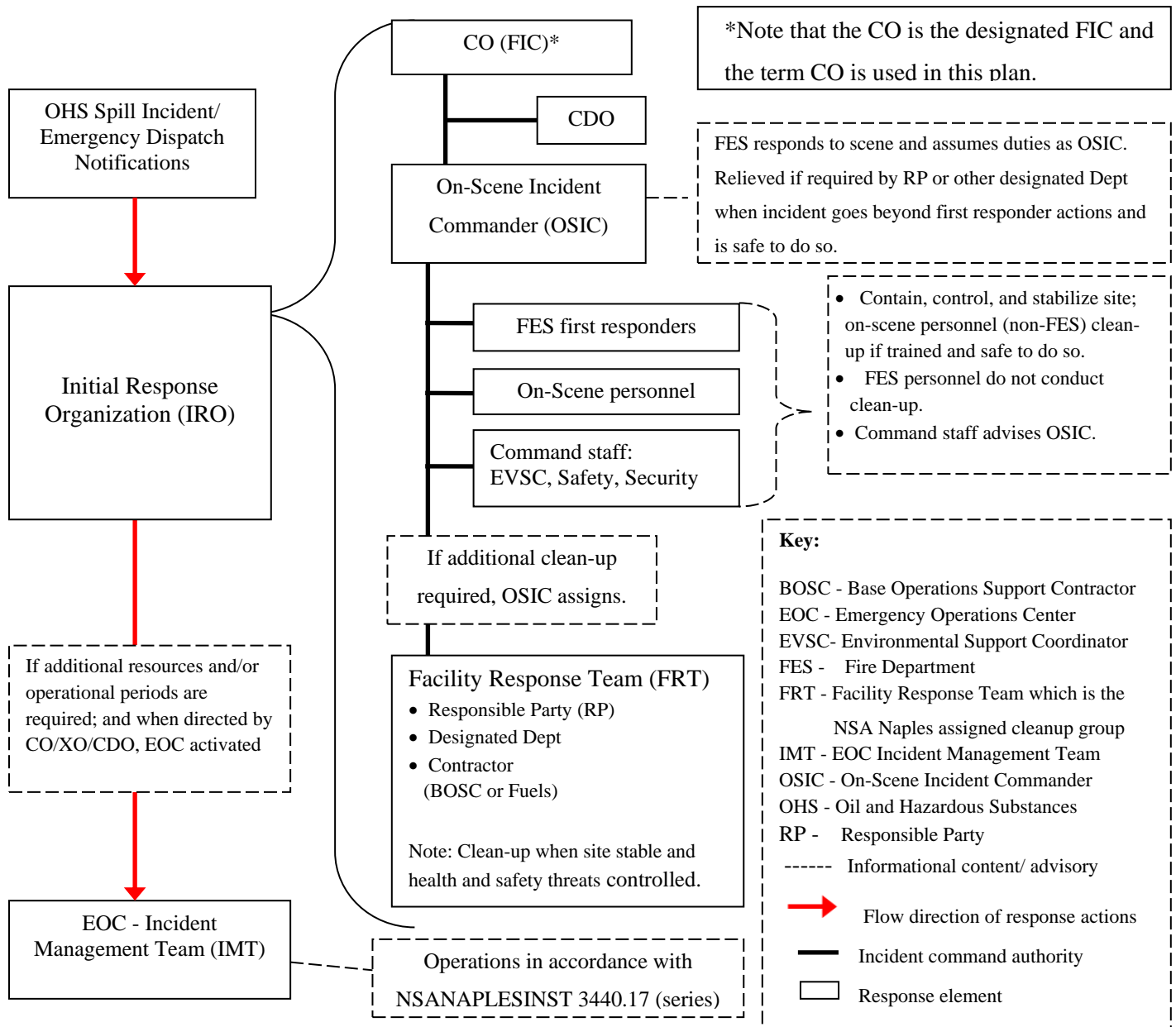
3.1 NSA Naples OHS Spill Response Organization and Responsibilities.

The Commanding Officer (CO) of NSA Naples is designated as the FIC, and heads the NSA Naples OHS spill response organization. By this instruction, the CO has designated the NSA Naples Fire Chief (FC) to act as FIC when required. In case of an OHS pollution incident, On-Scene Incident Commanders (OSICs) are designated to manage response operations at the field-level. On-Scene Incident Commanders are designated on the basis of the nature of the spill, and subject matter requirements. For the NSA Naples AOR designated On-Scene Incident Commanders are:

- | | |
|---|----------------|
| ➤ NSA Naples: Initial response and general OHS land spills: | NSA Naples FES |
| ➤ NSA Detachment Gaeta: OHS spills: | OIC/Port Ops |
| ➤ Off-base: OHS spills: | NSA Naples FES |

See Figure 3-1 and Figure 3-2, for an overview of the NSA Naples incident management process and organization; and Volume I, Annex D for the NSA Naples response organization recall list.

Figure 3-1 Basic NSA Naples OHS Spill Response Organization

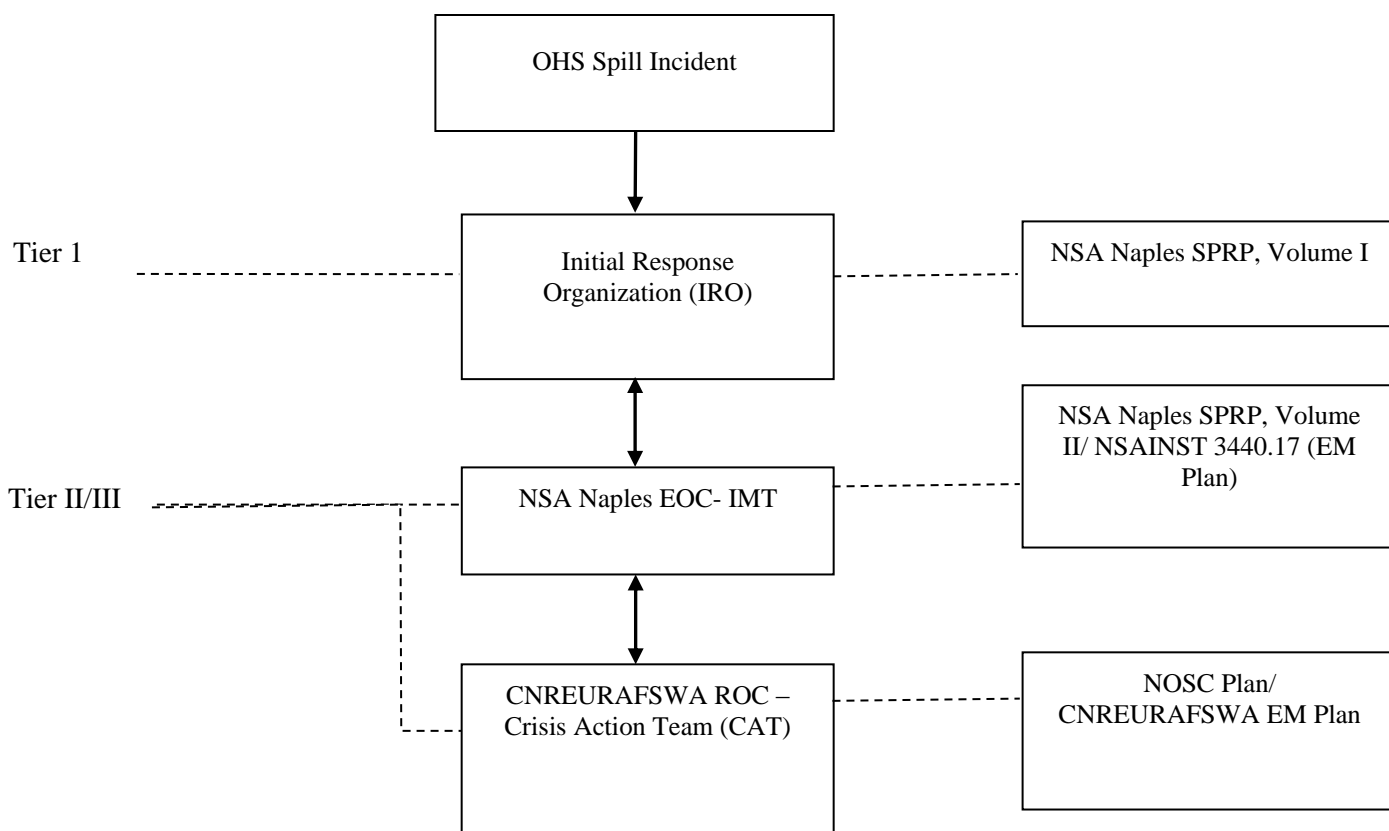


Procedures and responsibilities for initial OHS emergency response operations under the NSA Naples Initial Response Organization are detailed in NSA Naples Incident Management Handbook (IMH) Spill Prevention and Response Plan, Volume I. The IMH also shows a detail of the responsibilities, composition, alert and response, including roster and telephone number, of the First Responders also referred to as Facility Response Team (FRT) and other responsible parties such as the CO (FIC) and local

authorities, emergency services providers; training requirements can be found in Section 5.0 of this document.

NSA Naples OHS incident response will be managed at the IMT and field-levels, with the capability to manage large-scale events utilizing most efficient command post facilities, trained response teams, other installation assets, and outside resources. Large-scale incidents will result in an appropriate level of EOC activation and IMT build-out.

Figure 3-2 NSA Naples OHS Incident Management Structure



In the event of an OHS pollution incident onboard NSA Naples, the NSA Naples FES is notified and immediately responds to the scene. FES initiates life safety, fire **suppression**, spill **control**, initial **containment**, and site **stabilization** measures, and acts as the initial On-Scene Incident Commander. If required, the senior fire official (SFO), as the initial On-Scene Incident Commander, is relieved by one of the designated subject matter On-Scene Incident Commanders, but only after the situation is stabilized, and there are no further acute threats to human health and safety. For spills in NSA Detachment Gaeta, including piers and waters of Naples, the Installation Commander is the designated incident commander.

If required to be relieved, the relieving On-Scene Incident Commander assesses the situation, assumes incident command, updates the incident action plan (IAP), and conducts response operations until successfully completed or relieved by proper authority. For OHS incidents due to DOD operations off-base, The Fire Department will maintain incident command of Navy assets. It is understood that U.S. Navy authorities have no authority off of its own property.

3.1.1 IMT (Tier 2) Activation

In the event that an OHS spill incident requires additional support beyond initial response due to scope and duration, the next level of response management, the NSA Naples EOC and IMT will be activated, and used to conduct requisite operations. Detailed IMT guidance and supporting checklists are found in Volume II, Appendix I. IMT operations must be effectively coordinated with the all hazards requirements found in the NSA Naples Emergency Management Plan (NSA Naples INST 3440.17 series). This will ensure that response operations are most efficiently managed, while ensuring that NSA Naples can respond to a complex, multi-hazard emergency incident.



For most small to medium size spills that can be handled at the installation level, the NSA Naples Initial Response Organization is used to conduct response and incident management activities. The NSA Naples CO and OSIC will oversee and keep the NOSC informed of operations through the normal reporting system.

For larger spill response operations the activation of the NSA Naples IMT may be directed. Reasons for activating include:

- Increasing scope of the incident
- Necessity of a Unified command with non-U.S. Navy entities
- Extended response required

3.1.2 NOSC Support (Tiers 2 & 3)

If the spill cannot be handled by NSA Naples resources, the CO may request assistance from CNREURAFSWA, as the Navy On-Scene Coordinator (NOSC). If necessary, the NOSC may activate/request other Navy, Italian, and/or commercial response resources, and activate the ROC, including technical specialists from within the Command, e.g., medical, supply and public affairs. That

support may be in the form of particular resource elements up to full assumption of incident management. The most likely NOSC support will be at the resource element level, i.e. additional boom, personnel, disposal support, funding, public affairs, etc., as it is NOSC and Navy policy to manage incidents at the local level when at all possible.

3.2 Incident Command System Information

Complete Incident Command System guidance, description, and forms for the spill management response will be in accordance with NSA Naples EM Plan. For OHS-centric ICS forms go to:

<http://www.uscg.mil/forms/ics.asp>

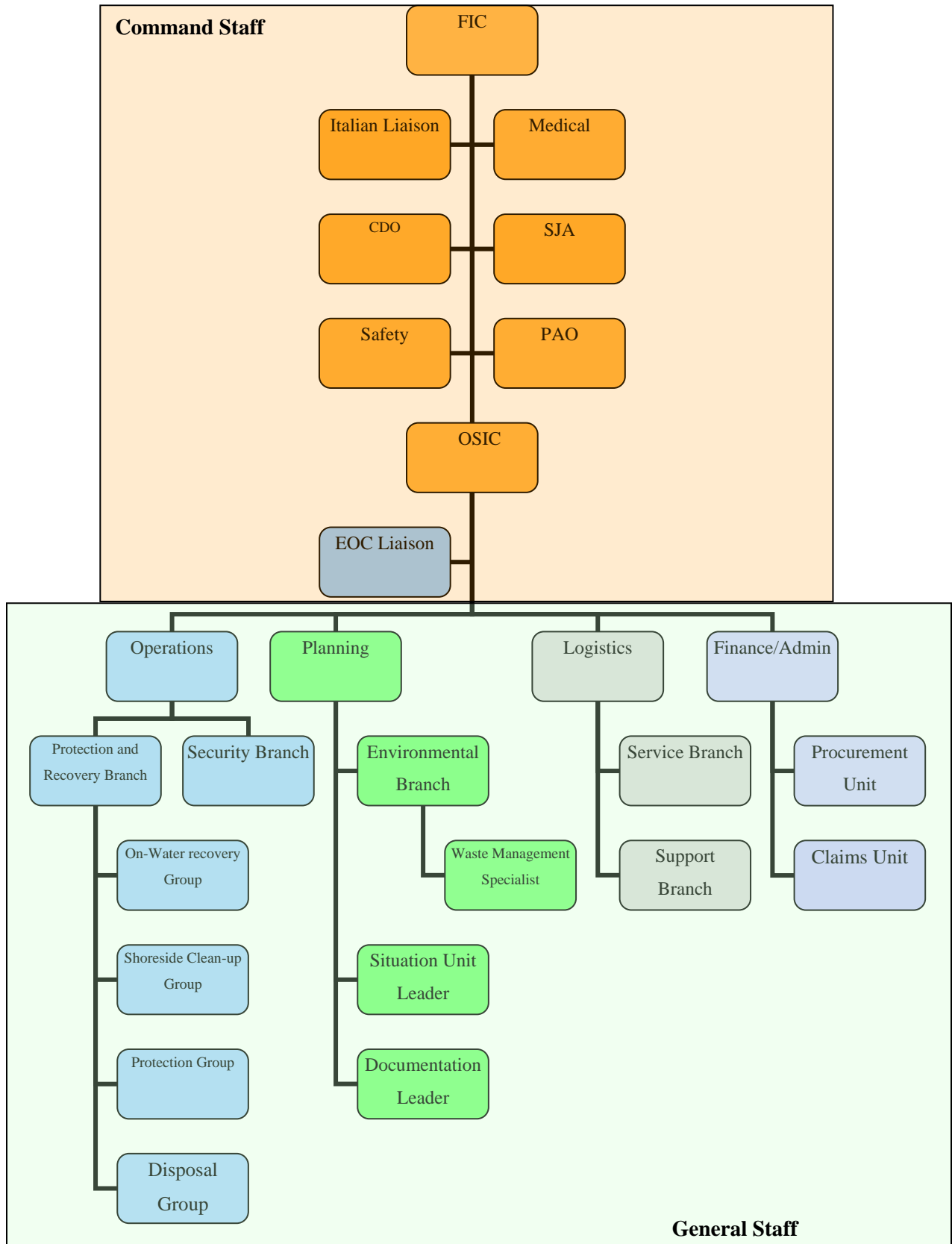
3.3 IMT Structure & Staffing



Based on the spill risk present at NSA Naples and the command organizational structure, the following organization reflects potential positions that may be filled to support required functions. NOTE: Once the NSA Naples EOC is activated, the EMO or incident manager will determine the structure and make-up of the IMT.

The following positions may form the basic IMT, but based on the nature of the incident, the assigned positions will have to determine if additional subordinate staff members are required. In keeping with the ICS concept only those positions that are required should be activated and personnel assigned. Individuals may fill more than one position, but positions cannot be combined. Job aids for each position contained below are found in Appendix I.

Figure 3-3 NSA Naples Spill Incident Management Team Organization-Example





Each primary IMT member assigned shall maintain a current contact or recall list for those personnel required to fulfill their responsibilities, including staffing their Section/Branch/Unit and relief coverage.

3.4 IMT Operations

It is U.S. Navy policy to use an ICS organization consistent with the National Incident Management System (NIMS) when responding to emergencies, including OHS spills. This command structure is designed to be compatible with the facility's standard command organization and allows for improved communications and integration with Italian authorities, and other potential response support organizations. It also facilitates seamless integration with multi-hazard incident management when the NSA Naples EOC is activated, and the OHS incident is a consequence of another hazard-type incident, such as aircraft mishap, earthquake, etc.

ICS is functionally similar to standard Navy emergency organizations, providing a consistent, effective framework for conducting contingency operations by managing functions, tasks, and resources. Individuals assigned assume incident roles and identities rather than billet descriptions.

The ICS organization is designed to expand or contract readily, as required, to effectively manage the spill response. This flexibility provides for the most efficient use of resources through effective management of functions and tasks, at an appropriate level. The ICS allows the response organization to quickly adapt to all types of emergencies, expanding and contracting as conditions warrant. Spills of a large magnitude may mandate that a more complex ICS organization be mobilized, while minor discharges may be effectively supported by a few select functions. For example, for small spills, the On-Scene Incident Commander will manage all section functions, while for large incidents; key sections such as Operations, Planning and Logistics may need to be fully staffed.

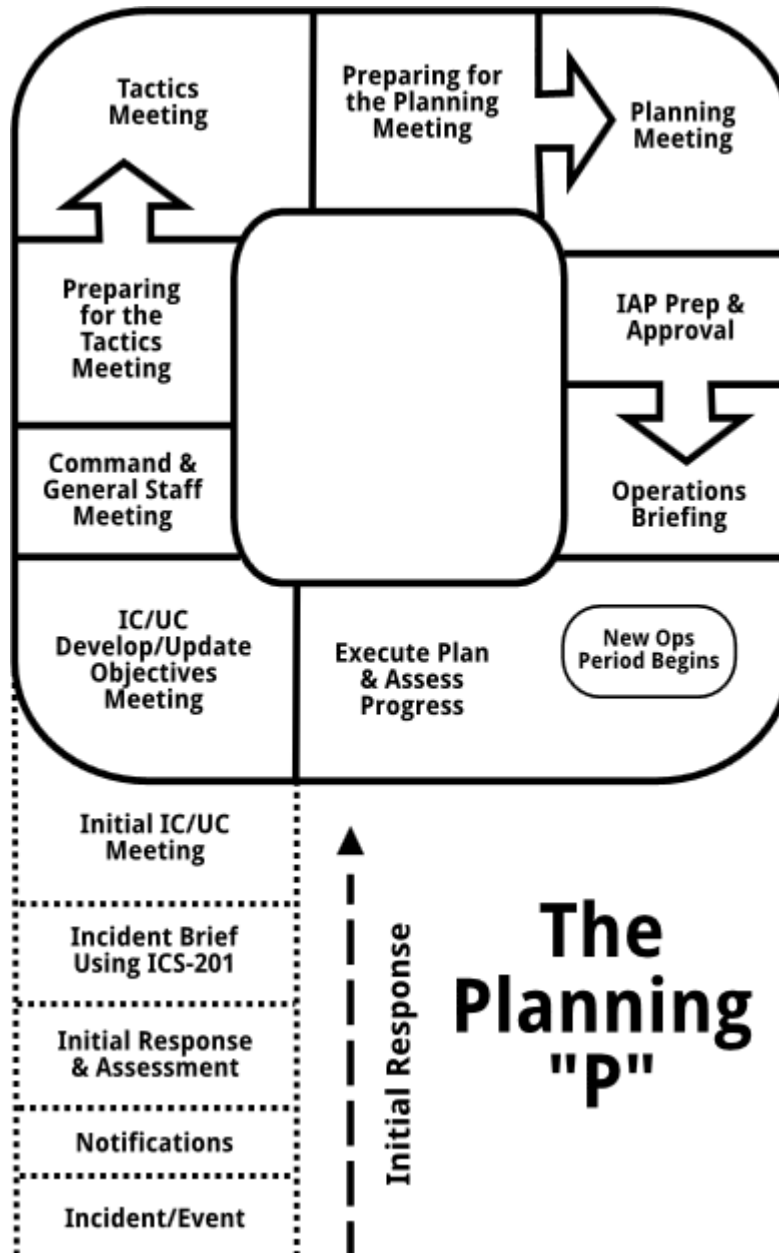
Use of the basic ICS Form 201 will be utilized as the initial incident action plan (IAP) and incident briefing tool for activating, and transitioning to IMT operations. <http://www.uscg.mil/forms/ics.asp>

OHS incident response management requirements, strategies, and procedures are detailed in the IMH Volume I.

3.4.1 Management Process- Planning and Meetings

Due to the multi-operational period nature of IMT operations, the NSA Naples process will follow, as appropriate, the general flow of the “Planning P” as contained in ICS guidance and pictured below. Use of the “P” cycle requires familiarity and prior preparation, which should be developed and exercised during periodic training. Figure 3-4 illustrates the Planning P.

Figure 3-4 NSA Naples Planning “P”



3.4.2 Incident Management Team Organization & Responsibilities

The IMT is inter-disciplinary, composed of personnel from various departments with the expertise required to fill key response organization positions.

3.4.2.1 General

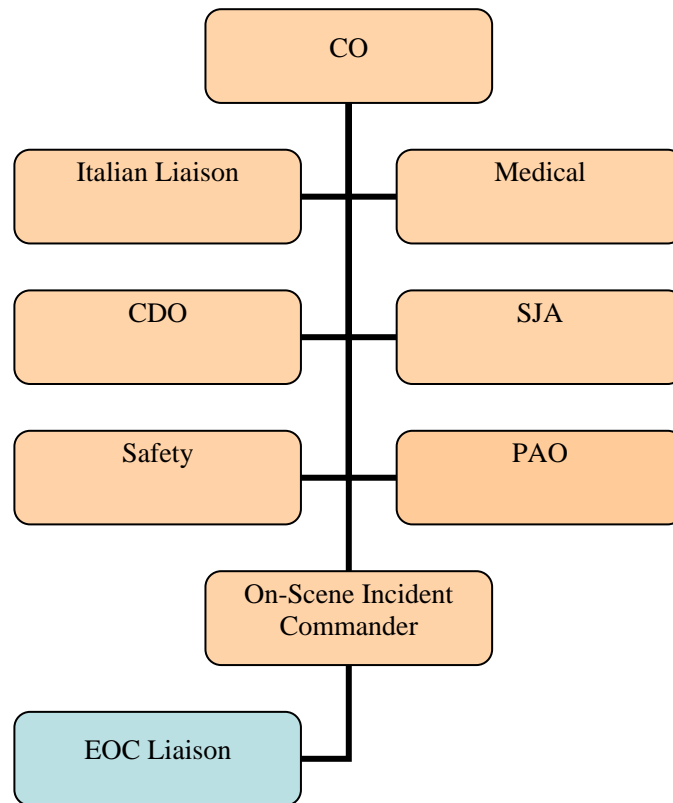


Specific IMT position responsibilities are contained in the corresponding job aids and response checklists contained in Appendix I, which shall be used to conduct spill IMT operations. All personnel assigned responsibilities shall:

- Familiarize themselves with their responsibilities, and predetermine what forms, plans, references, and support they will need to carry out their duties. These are known as “Tools of the Trade”, and must be assembled in advance and easily transported to a spill management site, i.e. a “Fly-away Kit”.
- Will respond as soon as practicable.
- Staff the IMT as, required, including 24/7/365 coverage, if necessary. Response team members will have qualified designated backups.
- Maintain current contact phone number information for the Quarterdeck/Command Duty Officer.
- Document their actions to support response operations and incident documentation.
- Participate in periodic training sessions, including:
 - Spill Prevention and Response Plan Training
 - Annual Tabletop exercise (TTX)
 - Annual ICS Training
 - Position-specific Training (As announced)

3.5 Command Staff

The Command Staff reports directly to the CO. Members of the Command Staff are also available as advisors in their specialties to the CO and functional section chiefs. The duties of the staff are listed in the following subsections, and are shown in Figure 3-5.

Figure 3-5 NSA Naples Command Staff Organization

3.5.1 Safety Officer

The Safety Officer is responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. The Safety Officer will correct unsafe acts or conditions through the regular line of authority, although he may exercise emergency authority to stop or prevent unsafe acts when immediate action is required. The Safety Officer maintains awareness of active and developing situations, ensures the preparation and implementation of the Site Safety Plan, and includes safety messages in each Incident Action Plan. The Safety Officer is responsible for preparing an effective site safety plan (Appendix J), and maintaining it in a current state.

3.5.2 Staff Judge Advocate (Legal Officer)

The Staff Judge Advocate (SJA) provides legal advice to the CO on all aspects of response operations. The potential for extensive liability and claim damages requires that the SJA be prepared to advise on claims filing procedures, documentation requirements, and permitting regulations. The Staff Judge Advocate provides liaison with the Office of the Judge Advocate and other Navy legal resources.

3.5.3 Public Affairs Officer (PAO)

The Public Affairs Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations. The coordination of information release is vital to avoid public confusion and adverse impact on response/recovery operations, particularly in a foreign nation. The PAO will plan and coordinate VIP arrangements establishing a protocol office when required. The activity's emergency public affairs plan is located in Appendix L.

3.5.4 Italian (HN) Liaison Officer

OHS pollution incidents and potential negative impacts may be very sensitive issues to local and national foreign authorities. It is essential that appropriate information is shared in a timely manner, and that the host nation is fully involved throughout the response and remediation. There are many Italian government agencies that may have an interest in and capabilities to assist response operations that are not otherwise included in the Incident Command System. The Italian Liaison Officer, through the appropriate Italian Base Commander, will provide liaison with those agencies and convey information, requests, and legally constituted directives to the Incident Commander and Section Chiefs.

3.5.5 Medical Officer

The Medical Officer is primarily responsible for ensuring that a Medical Emergency Plan is developed, medical aid and transportation for injured and ill incident personnel is provided, and appropriate reports and records are prepared. Naval Hospital, Naples will ensure an appropriate representative fills this position. In the case of a large-scale incident with significant casualties, the clinic will work within the NSA Naples emergency management plan, and the EOC Medical Officer will provide coordination with IMT operations. The Medical Unit may also assist Operations in supplying medical care and assistance to civilian casualties at the incident, but is not intended to provide medical services to the public.

3.5.6 Command Duty Officer (CDO)

The NSA Naples CDO will serve as command liaison and crisis monitor in the event of a significant OHS spill incident, as detailed in the NSA Naples Emergency Management Plan. The CDO will assist in coordinating participation of various NSA Naples Departments and activities. The CDO will also be responsible for external reporting through the CO/XO.

3.5.7 EOC Liaison

In the event of a large-scale or multi-hazard incident response where the NSA Naples EOC is activated, but the IMT continues operations, a liaison from the IMT will be assigned to the EOC. The responsibilities of this position will be to ensure effective communications are established and maintained, coordinate information exchange between the EOC and IMT, and serve as a technical advisor to the EOC. Normally, the liaison will be provided by the Emergency Management Officer or Operations Section to facilitate efficient and technically accurate updates on on-going operations.

3.6 General Staff - Functional Sections

The duties and responsibilities of the functional sections are introduced below.

The **Operations Section** directs and coordinates all tactical operations within the response area.

It assists the **Planning Section** in defining response goals and objectives (detailed in the incident action plan), assesses potential impacts, develops mission assignments and schedules to accomplish objectives, identifies resource requirements, and as appropriate, recommends release of resources. The **Planning Section** evaluates and documents the results of response operations, disseminating technical and environmental information to concerned parties.

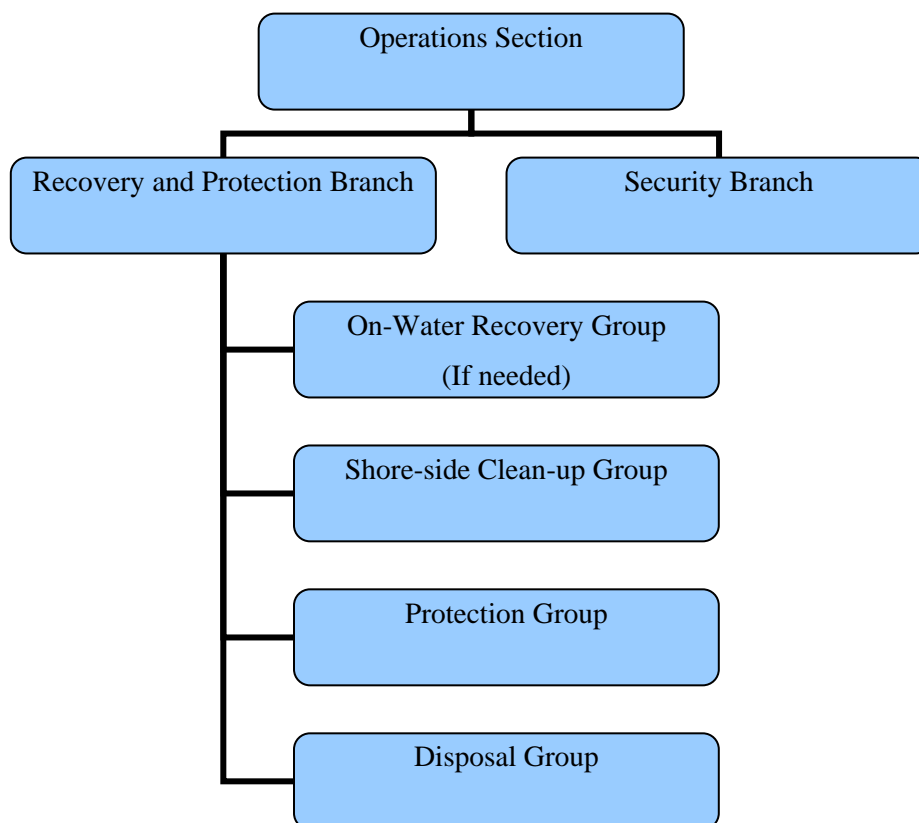
The **Logistics Section** is responsible for supplying all resources required to carry out the response and to support continuing operations.

The **Finance/Admin Section** is responsible for handling all accounting services and personnel administrative matters.

3.7 Operations Section

The Operations Section carries out the direct spill response activities. It may be composed of multiple units, depending on the size and potential impact of the incident as shown in Figure 3-6. The Operations Section Chief plans, directs and coordinates all tactical operations within the response area.

Figure 3-6 NSA Naples Operations Section Organization



The Operations Section develops mission assignments and schedules to accomplish them. The Operations Section Chief identifies resource requirements, and evaluates and reports the results of response operations. Information provided by over-flights, site surveys, and spill impact and risk assessments is used by the Operations Section Chief to establish priorities in utilizing spill response assets on a day-to-day basis. Due to the unique nature and potential impacts of large oil spill pollution incidents, and the extensive existing HS emergency management spill expertise, the discussion on response operations under Operations focuses primarily on oil spill response methodology.

Spill Cleanup duties are performed by the appropriate Facility Response Team, coupled with other installation assets and contractor support as required and available. Containment methods are used to

limit the spread of the spill, and to concentrate the spill, improving the effectiveness of the mechanical cleanup equipment. Containment methods generally include the use of boom or sorbents to surround and collect the spilled substance and the use of diversionary booms or trenches to direct the spill to more favorable or natural collection points.

3.7.1 Operations Section Chief

The Operations Section Chief, a member of the General Staff, is responsible for managing all operations directly applicable to the primary mission. The Operations Section Chief activates and supervises elements in accordance with the Incident Action Plan and directs its execution; activates and executes the Site Safety and Health Plan; directs the preparation of unit operational plans; requests or releases resources; makes expedient changes to Incident Action Plans as necessary; and reports regularly to the Incident Commander.

3.7.1.1 Recovery & Protection Branch Director

The Recovery and Protection Branch Director is responsible to oversee and implement the protection, containment, and cleanup activities established in the Incident Action Plan, and as directed by the Operations Section Chief.

3.7.1.2 On-Water Recovery Group Supervisor (NSA Detachment Gaeta)

The On-Water Recovery Group Supervisor is responsible for managing on-water recovery operations in compliance with the Incident Action Plan, and as directed by the Recovery and Branch Director. The Group may be further divided into Strike Teams, Task Forces, and single resources.

3.7.1.3 Shore-side Clean-up Group Supervisor (NSA Detachment Gaeta)

The Shore-side Recovery Group Supervisor is responsible for managing shore-side cleanup operations in compliance with the Incident Action Plan, and as directed by the Recovery and Protection Branch Director. The group may be further divided into Strike Teams, Task Forces, and single resources.

3.7.1.4 Protection Group Supervisor

The Protection Group Supervisor is responsible for deploying containment, diversion, and absorbent boom in designated locations, in accordance with the Incident Action Plan and as directed by the

Recovery and Protection Branch Director. Depending on the size of the incident, the Protection Group may be further divided into Strike Teams, Task Forces, and single resources.

3.7.1.5 Disposal Group Supervisor

Under the Recovery and Protection Branch Director, the Disposal Group Supervisor is responsible for coordinating the on-site activities of personnel engaged in collecting, storing, transporting, or disposing of waste materials. Depending on the size and location of the spill, the disposal groups may be further divided into Strike Teams, Task Forces, and single resources.

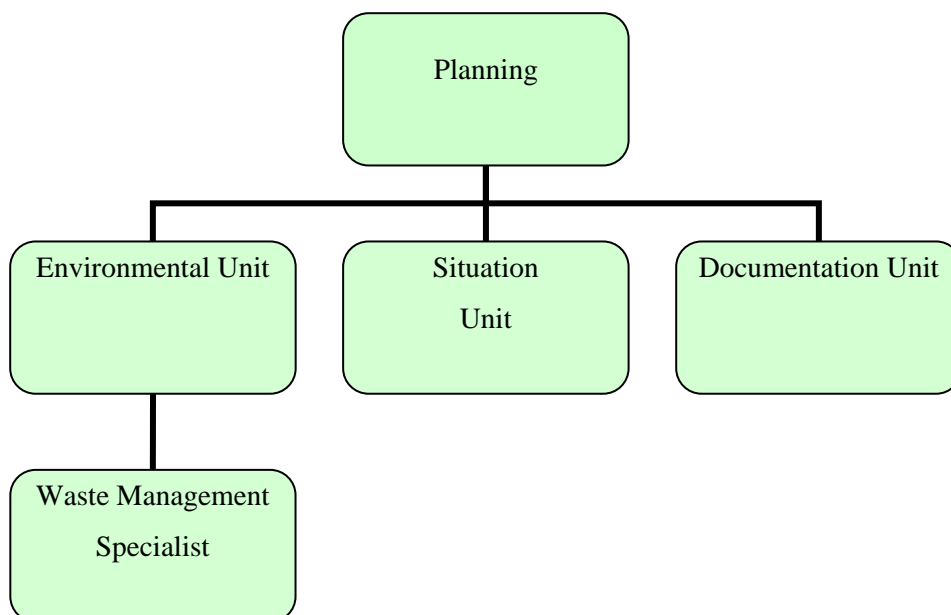
3.7.2 **Security Branch Director**

The Security Branch Director is responsible for coordinating and directing all law enforcement activities related to the incident, including but not limited to, isolating the incident, crowd control, traffic control, evacuation coordination, beach closures, and/or perimeter security. Under current threat conditions, this may be a complex function that will require coordination between land and water security assets. The Director will ensure the Operations Section Chief is kept informed of activities; and may update the Security Officer in the Command Staff directly, as appropriate.

3.8 **Planning Section**

The Planning Section is responsible for developing an Incident Action Plan defining response and operational goals and objectives. With the assistance of the Operations Section, the Planning Section assesses potential impacts; and develops mission assignments and schedules and identifies resource requirements to accomplish the defined goals. Alternative response strategies are evaluated by the Planning Section and incorporated into the Incident Action Plan on a case-by-case basis. The Planning Section is also responsible for documenting and disseminating all technical and environmental information to concerned parties, including updates on response actions and changes to the Incident Action Plan.

Finally, the Planning Section is responsible for recording all events and actions taken during the spill incident for future reference. The composition of the planning section is shown in Figure 3-7.

Figure 3-7 Planning Section

3.8.1 Planning Section Chief

The Planning Section Chief, a member of the General Staff, is responsible for collecting, evaluating, disseminating, and using information about the incident and status of resources. Information is needed to: 1) understand the current situation, 2) predict probable course of incident events, and 3) prepare alternative strategies for the incident.

3.8.1.1 Environmental Unit Leader

The Environmental Unit Leader (EUL) is responsible for environmental matters associated with the response, including strategic assessment, modeling, surveillance, and environmental monitoring and permitting. The Environmental Unit prepares environmental data for dissemination. Technical Specialists may be assigned to the Environmental Unit include the Scientific Support Coordinator and Specialists for Sampling, Response Technologies, Trajectory Analysis, Weather Forecast, Resources at Risk, Shoreline Cleanup Assessment, Historical/Cultural Resources, and Waste Management. If uncertain as to the proper place to assign a technical specialist, put them in the Environmental Unit. The EUL will ensure that each significant incident has waste management and impact assessment plans developed. The EUL will provide the following technical support as a minimum (Figure 3-8):

Figure 3-8 EUL Responsibilities

	Environmental Unit Leader EOC Support	Required	Done
A	Fate, Transport, and Impact Assessment		
B	Meteorological		
C	Resources at Risk - Sensitive Area Protection		
D	Wildlife Rescue and Rehab		
E	Response Strategies: Impacts and Recommended Technologies		
F	Land/Shoreline Clean-up Assessment		
G	Reporting, Permits, and Approvals		
H	Waste Management Plan		
I	Sampling Plan		

3.8.1.2 Situation Unit Leader

The Situation Unit Leader is responsible for collecting and evaluating information about the current and possible future, status of the spill and the spill response operations. This responsibility includes compiling information regarding the type and amount of oil spilled, the amount of oil recovered, the oil's current location, and anticipated trajectory, and impacts on natural resources. This also includes providing information to the GIS Specialist(s) for mapping the current and possible future situation, and preparing reports for the Planning Section Chief. The Situation Unit Leader shall ensure that a clear, user friendly display of incident information is developed and accessible.

3.8.1.3 Documentation Unit Leader

The Documentation Unit Leader is responsible for maintaining accurate, up-to-date incident files such as: Incident Action Plan, incident reports, communication logs, injury claims, situation status reports, etc. Thorough documentation is critical to post-incident analysis. Some of these documents may originate in other sections. This unit will ensure each section is maintaining and providing appropriate documents. Incident files will be stored for legal, analytical, and historical purposes. The Documentation Unit coordinates duplication and copying services.

3.8.1.4 Waste Management Specialist

The Disposal (Waste Management) Specialist is responsible for providing the Planning Section Chief (coordinated with Operations and Logistics) with a Disposal Plan that details the collection, sampling,

monitoring, temporary storage, transportation, recycling, and disposal of all anticipated response wastes.

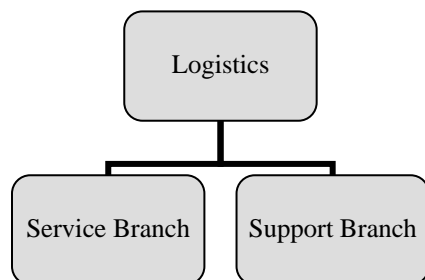
The Waste Management Specialist coordinates waste collection, characterization, and disposal activities. However, large or controversial disposal operations should be discussed with the relevant Italian Authorities.

DLA generally assumes responsibility for disposal of hazardous wastes. The Environmental Unit coordinates actions with the Operations and Logistics Sections.

3.9 Logistics Section

The Logistics Section exists primarily to support the Operations and Planning Sections. Establishing an effective OHS response process requires that operations and logistics work as a unified team and combine their complimentary and mutually dependent functions into a single effort. Logistics support, particularly for a large pollution response operation, includes response personnel support for food services and berthing and all facets of equipment and material support including staging and general supply support. The magnitude of the effort will vary with the type of incident and the extent of Navy involvement in the cleanup. Pollution incidents on or near Navy activities may require little logistics support beyond the capabilities of the local activity. On the other hand, in remote areas, the Navy may have to seek extensive support from commercial contractors, and SUPSALV. The makeup of the Logistics Section is shown in Figure 3-9.

Figure 3-9 Logistics Section Organization



3.9.1 **Logistics Section Chief**

The NSA Naples Logistics Section Chief is responsible for coordinating all logistics support for any response effort. The Logistics Section Chief communicates with responders to identify their needs and develops a strategic and comprehensive logistics plan. Procuring resources and positioning them based

upon anticipated need will ensure cleanup. Merely reacting after the incident to requests from the operators may result in failure, or at the very least unnecessary expense. At a minimum, the Logistics Section Chief will be prepared to implement and periodically update a strategic plan to support the logistics functions highlighted in this chapter.

3.9.1.1 Service Branch Director.

The Service Branch Director, when activated, is under the supervision of the Logistics Section Chief, and is responsible for managing all service activities at the incident. The Branch Director supervises the operations of the Communications, Medical, and Food Units.

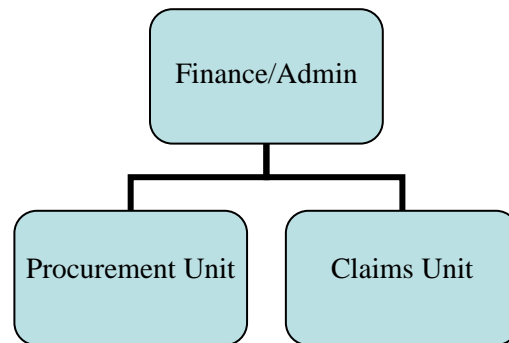
It is essential that coordinated communication management procedures are established. If additional communications systems are required, the Logistics Section shall coordinate procurement and distribution of additional equipment. While contractors are normally responsible for their own communications plans, the remote location of some OHS response incidents may require a single coordinated communications effort organized by NSA Naples.

3.9.1.2 Support Branch Director.

The Support Branch Director, when activated, is under the direction of the Logistics Section Chief, and is responsible for developing and implementing logistics plans in support of the Incident Action Plan, including providing personnel, equipment, facilities, and supplies to support incident operations. The Support Branch Director supervises the operation of the Supply, Facilities, Ground Support, and Vessel Support Units.

3.10 Finance/Admin Section

The Finance/Admin Section, as shown in Figure 3-10, is responsible for handling all accounting services and personnel administrative matters. The Finance Section works closely with the Logistics Section to track all expenditures of the response operations. The Finance/Admin Section is led by the Finance Section Chief and is assisted by the Procurement Unit Leader, Claims Unit Leader, and a Contract Coordinator, when assigned.

Figure 3-10 Finance/Admin Section Organization**3.10.1 Finance/Admin Section Chief**

The Finance/Admin Section Chief is a member of the General Staff, and is responsible for all financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

3.10.2 Procurement Unit Leader

The Procurement Unit Leader is responsible for administering all financial matters pertaining to vendor contracts.

3.10.3 Claims Unit Leader

The Claims Unit Leader is responsible for the overall management and direction of all administrative matters pertaining to compensation-for-injury and claims-related activity for an incident.

3.11 Typical IMT Actions by Position

The IMT and staff shall ensure that overall NSA Naples command response objectives are addressed throughout a response and supporting action planning, in addition to specific CO's incident objectives. Command objectives include:

- a. Ensure the Safety of Citizens and Response Personnel
- b. Minimize Impacts of the Spill

- c. Control the Source of the Spill
- d. Protect Sensitive Areas-Environmental, Cultural, and Economic
- e. Contain and Remove Spilled Material from the Environment
- f. Manage Information and Intelligence
- g. Maintain Mission Capability



The following items discuss typical IMT management functions and actions, but are not all-inclusive. The discussions are designed to provide an overview of the type of actions that are commonly required during a significant OHS pollution response to guide IMT members to better understanding their roles.

3.11.1 Operations Section

3.11.1.1 Initial Assessment

An initial assessment of the spill site is performed by the spill cleanup response team and is part of the turnover brief from whichever team is being relieved or enhanced. This assessment shall be provided to the CO, and at the appropriate IMT meetings. This analysis determines the size and location of the incident, the nature and status of source control operations, and the status and adequacy of response operations. Initial impacts of the spill may also be known at this time, and should be taken into consideration. The Operations and Planning Section Chiefs may also provide additional information on the initial status of the spill.

3.11.1.2 Response Methods

Once the trajectory and time of potential impacts of the spill are predicted, response actions are considered and prioritized in order to prevent these impacts from occurring. Prioritization of these response actions should take into account recommended actions from the applicable Italian authorities. The Operations and Planning Sections assist the CO in developing this prioritized list of actions, giving updates of response actions performed during the emergency phase. A schedule is then developed to complete the prioritized list of response actions.

For POL spills, the primary method of spill cleanup used by the Navy is mechanical recovery that includes the use of skimmers, sorbents, pumps, and temporary storage devices. However, other response methods are available which may be more productive under certain circumstances. These alternative response methods include bioremediation and dispersant use. The EUL must consult with the applicable Italian authorities before using any alternative response methods.

Shore-side cleanup activities produce the largest volumes of contaminated waste materials. To reduce the volume of waste, the removal of debris from beaches and areas likely to be affected by the spill before the spill reaches these areas, should be considered. These actions considerably reduce the waste stream, and simplify the beach cleanup operation. These issues should be addressed in the Disposal Plan prepared by the Operations and Planning Sections.

Volatile fuels such as MOGAS should never be contained in a location where there is a risk of fire or ignition, and the use of a protective blanket of AFFF or other foam should be given early consideration. One response alternative for a spill of this type may be to permit the natural evaporation and dispersion of the fuel.

Periodically during the cleanup, and again at the end of operations, all personnel and equipment must be decontaminated, i.e., all oil and hazardous substances must be removed from all personnel and equipment. Decontamination agents (chemical) and methods (cold/hot pressure wash, chemicals, etc.) must be selected with care to ensure compliance with local, state, and federal regulations that address the use and final disposal of approved cleaning agents. Decontamination activities should be carried out in a large, open or well-ventilated area where materials handling equipment can easily move about and the necessary cleaning equipment and cleaning pools can be set up. Ideal sites include large parking areas, oily waste/OWS working areas, hangars, or runway areas.

3.11.1.3 Incident Action Plan (Operations)

After the initial incident briefing meeting, the Environmental Unit, in close coordination with the CO and the Operations Section begins to update and enhance the Incident Action Plan. This plan is organized to present information on manpower, equipment and support resources needed to meet specific response and operational goals based on the information from the initial incident briefing meeting. During the first few days of the spill event, the Operations and Planning Sections provides updates on response actions performed during the emergency phase and input for developing the plan. Once this plan is developed, implementation of the plan can begin, moving response operations into the project phase. Once the

Incident Action Plan is put into place, it continues to develop and expand, becoming more specific as response operations proceed. Any changes to the Incident Action Plan are documented and disseminated to the appropriate individuals by the Environmental Planning Branch.

3.11.2 Planning Section

3.11.2.1 Potential Impacts

Based on the initial analysis, the potential impacts of the spill can be determined. The CO or Italian authorities should be referred to for listed sensitive areas and protection priorities. In general, the following should be taken into consideration in order to determine the potential impacts of the spill:

- Proximity of spill to populated areas and potential impacts on human health and safety
- Potential impact area of the spill, due to its size and trajectory
- Sensitive areas (and types) within the spill footprint and trajectory
- Shoreline types within impact area and trajectory
- Wildlife concentrations in impact area and trajectory.

Once the locations of potential impacts are established, the amount of time for each area to be impacted should also be predicted. Technical assistance for predicting the fate of the spill may be necessary. Assistance may be necessary to model the spill to determine the potential to impact areas. Additional information is provided by over flights, site surveys, and spill impact and risk assessments from the Operations and Planning Sections. The local Italian authorities may also be helpful in determining the wildlife areas at risk.

3.11.2.2 Response Resource Availability

Once the response actions are prioritized and alternative response methods have been considered, the availability of response resources to implement response actions needs to be established, for both short and long-term use. These resources include both equipment and manpower required for implementation of the Incident Action Plan. The Operations Section Chief assists the Planning Section Chief in updating the availability of response resources for recovery and cleanup of the spill and the level of response resources needed based on operations in the emergency phase.

Additional manpower may also be necessary to implement response actions. The Logistics, Operations, and Planning Section chiefs should be consulted to determine the manpower needed to meet each section's operational goals throughout the spill event.

3.11.2.3 Reports and Status Updates

Once the Initial Action Plan is complete and implemented, the Planning Section must document all response activities. This task is essential in keeping the command up to date on the use of resources, response accomplishments, and activities of personnel. The Planning Section Chief supervises the documentation efforts and is assisted by the Documentation Unit Leader.

The section chiefs and the command staff generally require daily situation status reports. These reports vary depending on the responsibilities of the party receiving the report. The status reports are coordinated by the Situation Unit Leader and should include the status of the following:

- Spilled materials
- Equipment resources currently assigned, available, or out-of-service
- Personnel resources
- Sensitive area impacts
- Shoreline impacts
- Wildlife impacts
- Waste management operations.

This information should also be posted in the Command Center for reference throughout the spill event and should include maps showing the location of the spill, spill trajectories, response operations, and staging areas.

3.11.2.4 Environmental Issues

Another responsibility of the Planning Section is to ensure that systems are in place during operations to collect, evaluate, analyze, and disseminate information on environmental, cultural, and social aspects of the spill event. The Planning Section is assisted mainly by the Operations in obtaining information in these areas.

3.11.2.5 Sampling and Monitoring

A sampling and monitoring program should be established during response operations to obtain data for determining the spill's overall impact on the environment and to determine shoreline measures for response and cleanup options. This program can also provide input for real time modeling of the spill. Results from the sampling and monitoring program are also used by the Operations and Planning Sections to determine if various response operations are effective.

The type of program established depends on its objective, which may range from determining the effectiveness of a bioremediation product on the spill to determining if shoreline contamination is a result of the spilled oil. For the environmentally sensitive areas within the impact zone, the monitoring program should have a specific objective, an adequate sampling method for gathering data (e.g., control groups, significant number of random samples, specific habitats, specific rate of sampling), and a definitive method for comparing results.

3.11.2.6 Wildlife Considerations

The Environmental Unit Leader is responsible for providing updates on the impact of the spill on wildlife. Status on the number of species captured, cleaned, released, or found dead should be recorded and reported to the Operations and Planning Section Chiefs.

3.11.2.7 Formal Approvals or Permits

When responding to a spill, many response activities may require Italian authorities' authorization or permits. These operations may include the following: road access, air logistic support, beach cleaning, boom deployment, buoy mooring, dispersant use, fish harvesting, hazardous material transport, in-situ burning, mobile camp establishment, oil skimming operations, oily waste disposal/incineration, and performance of scientific studies. All required permits would be coordinated with the appropriate Italian authorities' military liaison.

3.11.2.8 Health and Safety Issues

During all response operations, a safe working environment must be provided for all response personnel. Safety concerns can range from physical hazards (slips, trips, and falls) to risks from exposure to hazardous materials. A site-safety plan must be developed for all response operations.

The Safety Officer is responsible for ensuring that a Site-Safety Plan is developed and implemented (see Appendix J). The Operations and Planning Section Chiefs are the liaison for the Safety Officer, reporting on all site safety incidents and actions taken by the Operations and Planning Sections.

The Planning Section documents all updates and changes to the Site-Safety Plan. The EUL informs the Operations and Planning Section Chiefs of any permits needed with regard to worker health and safety and ensures that all workers are HAZWOPER (or other appropriate training) certified. The Planning

Section should obtain copies of HAZWOPER (or other appropriate training) certification for filing purposes.

3.11.2.9 Site Characterization

An initial site characterization of the spill area and region should be performed to determine its possible effects on worker health and safety. These characterizations should relate to specific operations and should include the following information:

- Description and location of general response activity
- Operational goals (as listed in Incident Action Plan)
- Location of specific activities within spill zone
- Maps and sketches of specific sites
- Description of terrain and/or working conditions of site
- Associated site hazards
- Local weather conditions

The EUL coordinates efforts with Operations and Logistics section chiefs to obtain this information.

3.11.2.10 Sampling & Monitoring

A monitoring program should be conducted as directed by the Safety Officer. This program monitors exposure levels of chemicals and vapors during response operations. Components of the monitoring program are presented in Appendix J.

3.11.2.11 Site-Safety Planning

As operations change to meet response needs, updates may be required to the Site-Safety Plan. For example, if the spill has impacted the shoreline, or a spill has migrated through the storm water system, an additional site might be added to the plan, requiring site characterization and additional monitoring. As the Incident Action Plan changes to meet operational goals, corresponding updates on safety or health issues is essential. A generic Site Safety Plan is provided in Appendix J.

3.11.2.12 Waste Management and Disposal

The Planning Section is also responsible for reporting to Section Chiefs and the Command Staff on the status of waste management operations. The IAP should address response actions that would eliminate or reduce the amount of waste generated. The Hazardous Waste Management Specialist and the EUL work together to develop an effective waste management plan, coordinate with the Operations Section Disposal

Group, and ensure all necessary clearances or permits are obtained for storing and removing wastes generated during operations

Various categories of waste may be generated at various phases of response operations, including:

- Solid wastes (e.g., oily sorbents, shore debris)
- Liquid wastes (e.g., recovered product, oil/water mixtures, oily sludge)
- Refuse
- Sewage
- Hazardous waste

3.11.2.13 Temporary Storage

Prior to disposal, most of the wastes generated during response operations have to be temporarily stored. In case of a significant oil spill in the water, a large quantity of oily waste (OW) may be generated. With no designated NSA Naples OW storage capacity, early determination of temporary storage requirements and support providers is essential to effective operations. Mechanical removal equipment (Vacuum Trucks, Skimmers) will fill quickly and will need to be off-loaded in a timely manner to ensure continuity of recovery actions. Operators should be prompted to make their Recovery and Protection Branch Director aware of their progress in filling the available containment, so that advance arrangements can be made for offload.

When determining where wastes should be stored, efforts should be made to reduce the amount of waste that could be classified as hazardous waste. This can be achieved by separating liquid and solid wastes at all phases of response operations, including at sea, on board recovery vessels, and on shore.

3.11.2.14 Disposal Plan

The Planning Section (Hazardous Waste Management Specialist) should develop the Disposal Plan with assistance from the Operations and the Logistics Sections. This plan should include several different phases of the waste process such as collection, storage, and treatment of spill-generated waste prior to transport and disposal.

This plan should include information on a survey of wastes (obtain from Hazardous Waste Management Specialist), disposal alternatives for hazardous and non-hazardous wastes, and permit requirements for these alternatives. The field survey of the wastes generated should determine the origin of the waste, the type of waste, the location of the waste, its volume or weight, method of containment, and means of transferring the waste. Most wastes generated are handled through DLA Disposition Services.

3.12 Logistics Section

3.12.1 Equipment and Materials

3.12.1.1 Staging Area

The staging area is a location where equipment and personnel from all response organizations are assembled, maintained, and deployed to the OHS response site. A sound staging area infrastructure expands operational opportunities and maximizes the potential for overall success. With the stringent security measures in place at both NSA Naples and NSA Detachment Gaeta, it's essential to have accessible staging areas. For any staging area, the following characteristics are required:

- An accurate shipping address and local point of contact. In some cases, the optimal staging area may only be referenced as a local landmark.
- A smooth surface area large enough for the storage of all equipment and for safe maneuvering of the material handling equipment.
- A location relatively close to the pollution site to minimize transit time for equipment and personnel. The type of OHS incident will sometimes influence the proximity of the staging area. Strong prevailing winds should be considered in the selection process.
- Ready access to piers capable of accommodating the support vessels (for waterborne pollution incidents). The safe loading capacity of the pier may come into play, if portable crane services are anticipated.
- Material handling equipment (MHE) for unloading supply trucks or vessels on short notice.
- Security against theft and vandalism. Security measures may include fencing, portable lighting, and temporary guard services.
- Sanitary and other personnel support facilities.
- Communication links or the capability to establish such links rapidly. Nearby phone lines should also be available to accommodate the potential need for long-term hard-wired communications. New integrated communications system should alleviate the challenge of multiple networks.

3.12.1.2 Stores and Supplies

The Logistics Section Chief also must develop general supply management procedures that will enhance operational flexibility and ensure that all personnel associated with the response organization have the proper tools and equipment necessary to perform their duties. While contractors are normally responsible for their own personnel and general supplies, the remote location of some OHS response incidents may require a single coordinated general supply effort organized by NSA Naples.

The Logistics Section Chief determines the method of providing supply support to best fit each probable OHS response incident. The Logistics Section Chief works with the CO and OSIC to identify the

requirements and potential sources with which to meet requirements for administrative supplies, portable equipment, repair parts, fuel, consumables, etc. The Logistics Section Chief must be able to anticipate the number of personnel to operate temporary issue and storage facilities as well as any special equipment requirements due to the type and location of the OHS incident.

The Logistics Section Chief develops a support plan that identifies the different levels of response needed to cope with the magnitude and location of potential incidents. The Logistics Section Chief must interact closely with the Operations and Planning Sections to determine forecasted consumable requirements. Specific supply support plans will address:

- Fuel procurement
- Consumables procurement
- Food procurement
- Potable water procurement
- Equipment rentals
- Receiving operations
- Temporary storage operations
- Issuing operations
- Demobilization requirements

3.12.1.3 Medical

Medical support will be initially managed by the Medical Officer assigned to the Command Staff, and utilize the Hospital's SOPs for casualty assistance and personnel monitoring.

In the event of a large-scale OHS incident, however, the Logistics Section Chief also plans for providing emergency medical care for all personnel associated with the OHS response organization.

The level of emergency medical assistance that is required to support a response effort is difficult to predict and may vary considerably between pollution incidents. Due to the reactivity, volatility, and unpredictable nature of many OHS response incidents, response personnel, even when properly trained and equipped, may require first aid. In a worst case scenario, fire, explosion, and/or the release of a toxic gas could cause initial widespread injury as well as threaten many other personnel located beyond the immediate vicinity of the release.

For high risk or remotely located responses, arrangements must be made to evacuate injured personnel rapidly, in which case a Medical Unit Leader may be assigned to identify the various means of evacuation

(e.g., ambulance, helicopter, small craft) as well as the civilian and military medical facilities that can provide the emergency medical services. Should an OHS response incident require that response personnel be evacuated, the evacuation plan and procedures set forth in the NSA Naples Emergency Management Plan shall be followed.

The Medical Unit Leader (if assigned) is also responsible for ensuring that all press release information concerning personnel injuries or potential danger to the local communities is properly disseminated through Public Affairs.

3.12.1.4 Communications

For a large, extended response, the Service Branch Supervisor must develop communication management procedures that facilitate rapid exchange of information throughout all parts of the response organization. To assist, the Logistics Section Chief may assume the responsibilities of the Communications Unit Leader or assign one. Communications for Tier II and above incidents will be in accordance with the NSA Naples EM Plan and NSA Detachment Gaeta on-water response procedures.

Additionally, the Communications Unit Leader will develop a system of information display boards that will clearly indicate key telephone numbers and radio frequencies. These boards should be developed in advance to reduce effort otherwise required by command center personnel during the emergency phase of an incident when time and personnel are in short supply. Keeping an up-to-date master display of telephone, pager, and fax numbers is an important task at the command center, and care must be exercised to maintain the security of many of these numbers.

Communications planning should also include consideration and preparation for establishing hard-wired telephone/fax lines during those OHS response incidents requiring the extended support of a long-term unified command center. For offshore ship-related incidents, satellite communication systems such as the Maritime Communication System are invaluable for sending voice, data, or telex messages. SUPSALV can provide information and guidance on utilizing this equipment.

3.13 Finance/Admin Section

3.13.1 Funding

3.13.1.1 Pollution Response

In those situations where the NOSC or CO must initiate response actions without advance funds from the spiller, the cost verification procedures described in Section 3.14 are critical.

3.13.1.2 Initial Emergency

When a pollution incident occurs, the responsible party must identify and allocate funds for cleanup expenses quickly. When appropriate, initial funding can be provided by a responding local Navy shore activity for later reimbursement. If funds greater than those initially available from the spiller or local shore activity are required, the major claimant should be requested to provide additional funds. An estimate of funds required, and a schedule of when those funds must be available, should be developed by the IMT, particularly Operations, as soon as possible during the early phases of the response.

3.13.1.3 Limitations

The amount of funding immediately available should not limit the extent of the initial response effort. When necessary, contracts for outside sources may be written with limited periods of performance and cost ceilings to the extent of available funds. Follow-on negotiations and contract modifications can be implemented as additional funds are received. The availability of follow-on funding should be directly related to the severity of the oil pollution incident.

3.13.2 Estimating Cleanup Costs

During the initial pollution assessment, the Environmental Support Coordinator (EVSC) / EUL of the IMT should evaluate the magnitude of the incident and estimate cleanup costs. Exact cost estimating is not necessary. However, failure to properly estimate costs could delay final funding of the cleanup effort as repetitive funding transactions are briefed and executed through the spiller's chain of command. Assistance in estimating cleanup costs for large or complex operations can be obtained from SUPSALV or NAVFAC.

3.13.3 Contracting

3.13.3.1 Authority

Large pollution cleanups may require contracting authority beyond the authorized limits of the responsible party or local Navy responder. Significant contracting actions for emergency services shall be coordinated through the NSA Naples IMT, the CO, and the appropriate contract specialist. The level of authority and contracting expertise necessary to assist the NSA Naples IMT can be acquired through NRCC, Naples. The NSA Naples Environmental and Region NOSC staff shall involve the NRCC contracting personnel in training exercises to ensure that the contract specialist has a clear understanding of the spill response process. Follow-on construction contracts for restoration and similar work will normally be handled through the Naval Facilities Engineering Command.

SUPSALV maintains contracts for worldwide emergency salvage and pollution response. These contracts can be used by the CO, through the NOSC, or the responding activity to obtain equipment or services needed for a Navy OHS spill if funding is channeled through SUPSALV. Note, however, that NAVSEA fiscal and accounting procedures prohibit SUPSALV from mobilizing either equipment or the SUPSALV contractor without an initial line of accounting data. SUPSALV is mission-funded to respond for a minimal assessment response to fleet units and shore activities when they call for assistance. However, SUPSALV is not mission funded to actually perform cleanup operations.

3.13.3.2 Staff Support

The NSA Naples Business and Finance Director must ensure that support personnel are available to provide accounting information, cost estimates, purchasing authority, vendor interface, and verification of expenditures throughout the response. Additional contracting support personnel may be required for complex operations since all reimbursable expenditures must be approved and a daily summary of costs must be maintained throughout the cleanup effort.

3.14 Funding of OHS Spill Response and Reimbursement of Funds

3.14.1 Funding Responsibilities

The responsibility for funding and/or reimbursing the costs of OHS spill response efforts rests with the responsible party. **Navy vessels, aircraft, shore facilities, units, or commands that have OHS spill events shall be responsible for payment and/or the securing of funding, through their immediate**

chain of command, for OHS spill response and removal costs. The NOSC, or responding activity, shall seek a formal line of accounting data, funding citation, or reimbursement from the responsible party or immediate chain of command as soon as possible. However, lack of an immediate funding transfer from the responsible party or his immediate chain of command to the responder must not delay unified Navy action.

3.14.2 Navy Reimbursement

The following are examples of reimbursable costs attendant to Navy OHS spill response actions:

- Travel and *per diem* costs of personnel who were requested to directly support the response effort;
- Local or state government costs in direct support of the response effort;
- Requested and approved overtime for Navy civilian personnel;
- Fuel expended by Navy or government vessels, vehicles, and aircraft which were requested by the CO to support the response;
- Supplies, materials, or minor equipment procured specifically for the response;
- Rental or lease of equipment obtained specifically for the response;
- Transportation of equipment not otherwise funded;
- Cost of civilian cleanup or disposal companies who were directly contracted by the CO;
- Contracted scientific/technical support;
- Repair, maintenance, and refurbishment of equipment used in the response;
- Return transport of equipment not otherwise funded;
- Final disposal of recovered oil, HS, and debris.

3.14.3 DLA Reimbursement Procedures

The recovery of Navy costs in support of pollution incidents associated with “capitalized” Defense Logistics Agency (DLA) petroleum products is described in the DoD instruction 4140.25M, DoD Management of Bulk Petroleum Products. DLA will only fund the response/cleanup efforts associated with DLA-owned petroleum products if the spill did not result from gross operator negligence. After DLA products have been delivered to the end-user (e.g., aircraft, ship, heating tank, etc.) they are no longer the responsibility of DLA.

3.14.4 Funding Documentation

All requests for equipment or services must be documented. A verbal request must be confirmed by an appropriate funding document or other acceptable record containing the full line of accounting data with cost ceilings from the spiller, or major claimant.

3.14.5 Cost Verification

When services or equipment are contracted, the NOSC is responsible for verifying that the contractor performs as required by contract, and that costs submitted for payment are factual. The assignment of additional on-site personnel may be required for proper cost verification. On-scene personnel must ensure adequate commercial contracts issued for pollution cleanup contains provisions for daily cost summaries and specifies the method for verification of performance.

4.0 REPORTING

4.1 Authority & Responsibility

All OHS pollution incidents meeting or exceeding the Reportable Quantity (RQ) occurring on or attendant to operations on or from NSA Naples and satellite facilities will be reported!

Primary reference directives are:

- OPNAV M-5090.1
- C6FINST 5090.2/CNREINST 5090.2 (series)
- FGS-I

4.2 Spill Reporting Procedures

4.2.1 Spill Notification

There are three levels of oil and hazardous substance spill reporting:

1. Internal voice reports
2. External voice reports
3. Naval message reports

4.2.2 Reportable Quantities (RQ)

Reporting of oil and hazardous substance spill incidents will be in accordance with the procedures detailed in the IMH (Volume I).

- The FGS-I requirements for spill reporting are provided below for information and to facilitate compliance with all appropriate reporting requirements.
- A spill is considered “significant” and a “reportable quantity (RQ)” if it meets the following criteria (Table 4-1), and must be reported as detailed in Table 4-2.

Table 4-1 “Significant” Spill Thresholds

Reportable Quantities (RQ)-FGS-I/Navy
<p><u>POL:</u></p> <ul style="list-style-type: none"> • <u>Water:</u> Creates sheen or discoloration • <u>Land:</u> > 110 gallons (400 liters), <u>including</u> into berms and containment (CNREURAFSWAINST 5090.4 – NOSC Plan)
<p><u>HS:</u> Exceeds RQ totals in Appendix A FGS-I (see SPRP Volume I, Annex D; Volume II, Appendix A)</p>
<ul style="list-style-type: none"> • Solid hazardous materials > 225 kg (500 pounds);
<ul style="list-style-type: none"> • Liquid or semi-liquid HS >110 gallons (400 liters)
<ul style="list-style-type: none"> • Combinations of POL and liquid, semi-liquid, and solid HS in excess of 340 kg (750 pounds)

4.2.3 Reporting

When an oil and hazardous substance spill incident meets the external notification thresholds (Table 4-1), reporting will be conducted as follows.

The CNREURAFSWA Region Operations Center (ROC) serves as a single point of contact for notifying the NOSC of OHS spill incidents. The ROC Regional Battle Watch Team (BWT) will build situational awareness and ensure the appropriate NOSC staff members are notified, up to and including the Regional Commander.

Table 4-2 External OHS Spill Reporting

External OHS Spill Reporting Reportable Quantities (RQ) – “Significant” <i>FGS-I and NOSC Plan</i> *Meeting any threshold makes spill an RQ*	Required Reporting		
To NOSC and Navy Chain of Command	Voice	Follow-up	Message
<p>POL:</p> <ul style="list-style-type: none"> • Water: Creates sheen or discoloration (<i>FGS-I/NOSC Plan</i>) • Land: > 110 gallons (400 liters), <u>including</u> into berms and containment (<i>NOSC Plan</i>) • Requires follow-on cleanup (<i>NOSC Plan</i>) • Host Nation involved (<i>NOSC Plan</i>) • CO considers significant (<i>FGS-I/NOSC Plan</i>) 	To ROC	<p>To ROC:</p> <p>Update via chat/ email; report completion.</p>	<p>OPNAV 5090 OHS Spill Report required (24 hours);</p> <p>OPREP @ CO discretion</p>
<p>HS: (Same Water and Land)</p> <ul style="list-style-type: none"> • Exceeds RQ totals in FGS-I for Italy (2012) (see IMH Annex A) • Requires follow-on cleanup (<i>NOSC Plan</i>) • Host Nation involved (<i>NOSC Plan</i>) • CO considers significant (<i>FGS-I/NOSC Plan</i>) • Solid hazardous materials > 225 kg (500 pounds) (<i>FGS-I/NOSC Plan</i>); • Liquid or semi-liquid HS >110 gallons (400 liters) (<i>FGS-I/NOSC Plan</i>); • Combinations of POL and liquid, semi-liquid, and solid HS in excess of 340 kg (750 pounds) (<i>FGS-I/NOSC Plan</i>) 	To ROC	<p>To ROC:</p> <p>Update via chat/ email; report completion.</p>	<p>OPNAV 5090 OHS Spill Report required (24 hours);</p> <p>OPREP @ CO discretion</p>
<p>Note: () denotes reporting requirement source. SITREP or other OPREP message does not satisfy or replace OPNAV 5090 OHS message reporting requirements (OPNAVINST 5090.1D/NOSC Plan)</p>			
Plus: Host Nation and Theater Component Commander	Voice	Follow-up	Message
<p>Above, plus:</p> <ul style="list-style-type: none"> • Cannot be contained within installation boundaries; and/or • Results in negative public affairs/media coverage; and/or • Threatens drinking water resources; and/or • Potential soil or groundwater impact > FGS-I Table 18.1; and/or • CO discretion 	ROC; IBC	<p>HN notification in accordance with FGS-I.</p> <p>EVSC will draft written correspondence to ITAF for CO signature in accordance with FGS-I 18.3.4.6/7.</p>	<p>Ensure CNE included on messages</p>

4.2.4 Liaison

In accordance with the FGS-I requirements, NSA Naples will notify the Italian Base Commander through the CO, Executive Officer (XO), or Executive Assistant of any incident requiring host nation notification; or as a courtesy “heads-up” for any situation that has the potential to become significant.

4.2.5 Lead Environmental Component Notification

When an oil and hazardous substance incident meets the threshold levels for notification of the DoD LEC, as listed in Table 4-2, contacting the FCC will satisfy that requirement.

4.2.6 Reports and Messages

As required by OPNAV M-5090.1 and CNREURAFSWAINST 5090.4, the NOSC must be notified by message when a significant spill occurs within the CO’s Area of Responsibility (AOR). Specific reporting requirements and sample message formats are found in the IMH (Volume I), Annex D, Section D-6. All significant spills will immediately be reported by voice communication, followed by a confirming notification in accordance with the notification requirements and report forms provided in the IMH (Volume I), Annex D, Section D-6.

The CDO and EVSC will be responsible for determining appropriate external reporting; and draft requisite message traffic in accordance with the formats contained in the IMH (Volume I), Annex D, Section D-6.

For spills at the NSA Detachment Gaeta Pier:

- If a United States Navy/ Military Sealift Command (USN/MSC) vessel is the responsible party, they shall send the OPNAV 5090/2 Oil Spill Report (Volume I, Annex D, Section D-6).
- If source is unknown, or USN/MSC RP unable/ unwilling to send the message, coordinate details with Command Duty Officer (CDO)/PW-Environmental to send message from NSA Naples as required in references A and B.
- If spill is non-U.S., do not send OPNAV 5090 Oil Spill Report; send Unit SITREP as appropriate.

Operational Reporting (OPREP). Oil and hazardous substance pollution incidents will be reported via the OPREP system in accordance with the Chief of Naval Operations (CNO) guidance whenever the CO,

NSA Naples determines that conditions meet the criteria. The CDO will act as the command POC for OPREP reporting and will draft, in coordination with the EVSC, all required message traffic.

4.3 Post Discharge Internal Reporting

Any activity responsible for a reportable oil and hazardous substance spill will follow-up with a report to Environmental detailing the cause, impacts, lessons-learned, and preventive measures taken to preclude a recurrence. Environmental will forward copies to the CO/XO, Public Works Officer (PWO), and impacted parties.

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5.0 TRAINING

5.1 General Requirements

A comprehensive, coordinated training program is essential to providing the foundation and long term continuity required for an effective oil and hazardous substance contingency planning and response program. Oil and hazardous substance contingency planning and response program elements are complex, and require full coverage of regulatory, operational, and scientific subjects and skills. The diverse elements must be integrated into a focused planning and response effort that fully supports the protection of human health and safety, protection of the environment, operational mission requirements and host nation compliance requirements.

5.2 Training, Drills, & Exercises

The following describes the NSA Naples oil and hazardous substance training and drill/exercise program. This section identifies training requirements and assigns responsibilities for personnel under the authority of the Commanding Officer. This includes training requirements for tenant commands, contractors, and organizations operating under an inter-service support agreement, and visitors who use oil and/or HM or generate HW at the NSA Naples facilities. Training on the implementation of this response plan, including notification procedures and emergency response actions, shall be conducted annually for all personnel with responsibilities under this plan. The NSA Naples Environmental Division and applicable Department Heads shall maintain all training logs, certifications, and schedules for response personnel.

5.2.1 Training Standards

Although NSA Naples is an oversea installation and comes under the requirements of the FGS-I, Navy policy has adopted key U.S. regulations and guidelines as best management practices and, as detailed in OPNAV Manual as training standards. As such, the standards are the baseline training requirements for Navy installations. The following regulations define training requirements for persons involved in the management, supervision, handling, storage, packaging, transporting, treating, and disposal of oil, hazardous materials, or hazardous wastes, and parts of which are from the nucleus of the Navy training requirements.

- OPNAV M-5090.1 Environmental Readiness Manual
- CNREURAFSWA 5090.4 Region NOSC Plan
- OPNAVINST 3440.17 Commander Naval Installations (CNI Emergency Management Directive)
- Environmental Final Governing Standards for Italy (FGS-I)
- 29 Code of Federal Regulations (CFR) 1910.120; Occupational Safety and Health (OSHA) Regulations on Hazardous Waste and Emergency Response
- 29 CFR 1920.1200; OSHA Hazard Communication (HAZCOM) Standard
- 40 CFR 260-268; Environmental Protection Agency (EPA) Regulations on Hazardous Waste
- 49 CFR 100-199; Department of Transportation (DOT) Hazardous Material Regulations
- 40 CFR 311; Worker Protection Standards for Hazardous Waste Operations and Emergency Response
- OPNAVINST 4110.2; Hazardous Material Control and Management (HMC&M)
- OPNAVINST 5100.23D; Navy Occupational Safety and Health (NAVOSH) Manual

Note: Underlined are primary reference requirements.

5.2.2 Policy

The NSA Naples policy is to comply with all applicable training regulations pertaining to emergency response and effective safety requirements for oil and hazardous substance storage and handling. Proper training in oil and hazardous substance management is critical to the safety and health of personnel and the community, protection of the environment, and responsible, cost-effective management of resources.

5.3 Personnel Training Requirements

Required oil and hazardous substance training levels and courses are based on assigned responsibilities and exposure to risk. Department heads and affected media program managers will ensure that a comprehensive training plan is developed for each individual with the potential for oil and hazardous substance exposure as a result of their duties. Training will generally be covered under 3 categories: General; oil and hazardous substance Worker; and Response Team member. The level of training for each will be determined within those categories.

5.3.1 General-Core Training Courses

5.3.1.1 HAZCOM & HAZWOPER

All personnel shall receive annual HAZCOM training per 29 CFR 1920.1200 and 29 CFR 1910.120. NSA Naples Safety Department coordinates delivery of HAZCOM training either directly or on-line. Training completion is documented on ESAMs.

5.3.1.2 HW Management

All employees need to be familiar with HW definitions and basic procedures. Even substances commonly used at home, such as cleaners and insect sprays, may be strictly regulated HW when disposed of at NSA Naples. Employees, contractors and visitors need to know how to dispose of these wastes without violating or causing environmental damage.

5.3.2 Oil and Hazardous Substance Worker

Training requirements for personnel assigned to oil and hazardous substance worker positions are in accordance with the NSA Naples HWMP.

5.3.2.1 Emergency Response

All personnel who use, handle, or store HM/HS must annually receive awareness training for oil and hazardous substance emergency response. Any employee at a facility using HS may be involved in a HS spill. "Involvement" includes sighting unknown spilled material or calling the Fire Department when a spill occurs. For this reason, all employees are required to be familiar with their facility's basic layout, functions, substances stored/handled, and spill response procedures. Personnel assigned as an actual responder during an Oil and Hazardous Substances spill must receive specialized training.

5.3.2.2 SPR Plan

At a minimum, oil handling personnel should be trained in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPR Plan. Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management. Schedule and conduct discharge prevention briefings for oil-handling personnel at least once a year to assure adequate understanding of the SPR Plan for that facility. Such briefings must

highlight and describe known discharges or failures, malfunctioning components, and any recently developed precautionary measures.

5.3.2.3 PSTMP

OPNAV M-5090.1 states that all personnel involved in design, construction, installation, management and operation of storage tanks shall receive appropriate storage tank training. The following topics should be covered in the training: corrosion protection measures, compliance records, release detection, reporting investigation and confirmation, corrective action plans, closure, site assessment, applicable HN regulations pertaining to storage tanks, monitoring, removal, repair, retrofit, replacement, remediation, leak detection and product inventory requirements, record keeping, and operation of monitoring systems.

5.3.2.4 FGS-I Requirements

The FGS-I require that specific training be conducted in support of the installation's spill prevention and response program. These topics are incorporated in NSA Naples's comprehensive training program in appropriate classes and delineated in Table 5-2.

5.3.3 Response Team Members

5.3.3.1 IRO/IMT

For personnel assigned duties and responsibilities to NASSIG OHS IMT and IRO, including FRT, minimum training requirements are detailed in Table 5-1.

Table 5-1 IRO/IMT Training Requirements

Position	ICS Courses	HAZWOPER/ HSIRM	Annual SPRP/TTX	Job Specific
IRO				
First Responders	100/200/700	24 Hour	Supervisors/Team leaders	X
FRT	100/200	24 hour	FRT leaders/SMEs	X
IMT				
IMT Members	100/200/300/700	Awareness	X	X

5.3.3.2 ICS

Under the requirements of OPNAVINST 3440.17 (CNI EM Instruction) and personnel assigned to incident response positions, from first responder to EOC Team must complete the appropriate level of ICS training. All personnel assigned to a potential response team must complete ICS-100 and 700 courses.

5.3.3.3 IMT & Tabletop Exercise

The training is conducted over two days, tailored to the NSA Naples SPRP. The objective of the exercise is to test the SPRP for a significant POL spill. The exercise includes an overview of the SPRP and a training session on spill response and the ICS. The tabletop exercise is designed to address PREP requirements as stipulated in the CNREURAFSWA NOSC Plan.

5.3.4 Other Training

There is a significant amount of additional training at the Departmental and Divisional level that supports NSA Naples oil and hazardous substance prevention and response goals. In order to maximize efficiency and the use of support resources, every effort shall be made to combine and coordinate training and exercise requirements when possible.

5.3.4.1 Fire Department

The Fire Chief at NSA Naples maintains a periodic training schedule for various OHS response management training.

5.3.4.2 Fuels Division

Fuels Division conducts periodic oil spill prevention and control training including emergency procedures, source control, and system table-top exercises.

5.3.4.3 Environmental Division

There are a number of Navy-sponsored courses, coordinated by Environmental division, which are conducted on an annual basis. This training crosses category lines and a summary is provided in Table 5-2.

Table 5-2 Environmental Division-Sponsored Training Courses

Course Title	Training Frequency A=Annual Q=Quarterly M=Monthly
ADR Awareness Training: Transportation of Dangerous Goods by Road Training	A
HW Facility Operations Course (HWFACOPS)	A
HW Generators (in English and Italian languages)	A
Hazardous Substance Incidence Response Management (HSIRM)	A
HSIRM Refresher	A
SPRP Training	A
OHS (Spill Management Team (SMT)) IMT Table Top Exercise	A
ICS for OHS response (300/300 Refresher)	A
POL Tank Training	A
DLA Disposition Services utilization Training	A
Oily Rags Recycling Traing	A
TWSA Training	A
HW Awareness Training	A
Environmental Awareness	Q
Spill Prevention	Q
HW Management	Q

5.3.5 Program Management

The following describes the process currently utilized at NSA Naples to develop personalized training plans and to ensure appropriate records are maintained.

1. The Environmental Director and media program managers develop training program(s) required at each relevant function and level in order to meet the training requirements of the FGS-I.
2. The Environmental Director annually reviews the training program and makes changes as appropriate.

3. The Environmental Director conducts and/or coordinates training in accordance with the training schedule and training programs. All training activities are recorded.
4. Environmental or others (as part of individual training record) maintains all environmental training records.

Note: Environmental Division promulgates an annual schedule of the above with course convening dates.

5.3.6 Record Keeping

5.3.6.1 Location

Training records are maintained with individual personnel training plans or centrally by others.

5.3.6.2 Individual Schedules

The employee's record shall show the dates of initial and refresher training.

5.3.6.3 Course Content

The employee's record must include written documentation of the subject matter taught for each course and the length of the training. Documentation for formal courses taught by instructors from outside of the organization should include copies of the course synopsis and schedule attached to the training certification or be available from the outside organization. In-house training courses must retain each course's training materials on file for five years.

5.3.6.4 Retention

The HW generator must retain training records of current and former personnel for five years. Training for an employee assigned as a HAZMAT worker must be maintained while assigned and for 90 days thereafter. Training records for oil spill response personnel will also be maintained for a period of three years following completion of the training.

5.3.7 Training Courses

Training courses generally correspond to a training level, but in some cases an advanced course will teach several regulatory levels. For example, Emergency Response, Level 5 training of 40 hours may include HAZCOM and HAZMAT specific functions. Supervisors must carefully screen courses to ensure they

satisfy the employee's requirements. The CNRE Environmental Office centrally coordinates environmental training for the European theater. The courses delineated in Table 5-2 reflect the training provided.

5.3.8 Drills & Exercises

In accordance with Navy policy, NSA Naples conducts facility oil and hazardous substance drills and exercises based the guidelines of the Preparedness for Response Exercise Program (PREP). Annually, there are a series of required response exercises as shown in Table 5-3, with exercise specific exercise guides and log sheets contained in Table 5-7 through Table 5-14. Also, in accordance with PREP guidelines, all components of the response plan must be exercised every three years to ensure that all components of the plan function adequately for response to an oil or hazardous substance spill. The fifteen core components of a response plan are shown in Table 5-4.

Table 5-3 Annual Oil and Hazardous Substances Response Drill and Exercise Requirements

Drill Type	Annual Periodicity
Equipment Deployment	2
CO (FIC) Notification	4
SMT Tabletop Exercise	1
Unannounced-Emergency Procedures	1

Note: Item number corresponds to the PREP numerical designator.

Table 5-4 Core Test Components of a Response Plan

Organizational Design	Operational Response	Response Support
1. Notifications	4. Discharge Control	10. Communications
2. Staff Mobilization	5. Assessment of Discharge	11. Transportation
3. Ability to operate within the response management system described in the plan	6. Containment of Discharge	12. Personnel Support
	7. Recovery of Spilled Material(s)	13. Equipment Maintenance & Support
	8. Protection of Resources (Economic, Fish & Wildlife, & Sensitive Environments)	14. Procurement
	9. Disposal of Recovered Material(s)	15. Documentation

5.3.9 Navy Mission Essential Tasks

In order to facilitate accomplishment of Region and CNIC training and exercise requirements, and to provide for the efficient use of training resources, annual OHS-related exercises will be planned to address appropriate Navy Mission Essential Tasks (NMETS). Typical NMETS exercised in an annual event include:

Assess C3 NMETS:

OP 2.5 Gain and Maintain Situational Understanding (SU)

OP 5.1.1 Communicate Operational Information

OP 5.1.3 Determine Commander's Critical Information Requirements

OP 5.2 Assess Operational Situation

OP 5.8 Provide Public Affairs Service

Also:

NTA 4.8.6 Administer Host Nation Support Agreements

NTA 4.9.1 Conduct Mission Area Training

Specific NMETS for each exercise will be coordinated by the ITO.

5.3.10 Schedules

An example calendar for documenting the NSA Naples drills is included below (Table 5-5). It is NSA Naples policy to perform the drills in accordance with PREP guidelines to ensure that it accomplishes the triennial cycle of exercising the entire response plan. The PREP-based Triennial cycle documentation form is also included as an example and planning tool. Port Operations at Gaeta falls under the Officer in Charge at Gaeta for meeting training requirements.

Table 5-5 NSA Naples Drill Schedule (example)

Drill Type/ Periodicity	Month											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Equipment Deployment/ <i>Semi-annually</i>			X						X			
CO Notification/ <i>Quarterly</i>		X		X				X				X
SMT Tabletop/ <i>Annually</i>					X							
Unannounced							X					

Table 5-6 Triennial Cycle Documentation Form (Example Template)

Triennial CYLCLE Documentation FORM

	Year												Core Components														
	CY				CY				CY				Notification	Staff Mobilization	Operate in RMS	Discharge Contained	Assessment	Containment	Recovery	Protection	Disposal	Communications	Transportation	Personnel Support	Equipment Maint.	Procurement	Documentation
	Quarters			4	Quarters			4	Quarters			4															
1	2	3	4	5	6	7	8	9	10	11	12																
QI Notification																											
Emergency Procedures																											
SMT Tabletop																											
Equipment Deployment																											
OSRO/HSRO Equipment Deployment																											
Gov't-initiated Unannounced																											
Area Exercise																											

For each quarter in which an exercise was completed, mark that with an "X" then mark each core component tested during an exercise.

5.3.11 Procedures & Logs

Table 5-7 through Table 5-14 describe NSA Naples drill and exercise program procedures and the logs required to record drills and exercises. A record must be maintained for each internal drill and exercise and area exercise.

Table 5-7 CO (FIC) and NOSC Notification Drills

APPLICABILITY	Facility
FREQUENCY	Quarterly, or routine communication if it occurs on at least a quarterly basis
INITIATING AUTHORITY	Facility IC
PERSON RESPONSIBLE FOR CONDUCTING THIS DRILL	Facility IC
PARTICIPATING ELEMENTS	Facility response personnel, Facility IC, and NOSC
SCOPE	Exercise communication between the facility personnel and the Facility and Regional Qualified Individuals
OBJECTIVES	Contact must be made with the Facility IC and the NOSC as designated in the response plan
CERTIFICATION	Self-Certification
VERIFICATION	Verification to be accomplished by cognizant installation and Regional staff members.
RECORD RETENTION	5 years
LOCATION	Records must be kept at the facility
EVALUATION	Self-Evaluation
CREDIT	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

Table 5-8 CO (FIC) and NOSC Notification Log

Topic		Information
DATE		
TYPE DRILL/EMERGENCY SCENARIO		
ANNOUNCED OR UNANNOUNCED		
FACILITY INCIDENT COMMANDER DRILL	CONTACT METHOD	
	TIME OF CONTACT	
	TIME OF CONFIRMATION	
REGION NOSC NOTIFICATION DRILL	CONTACT METHOD	
	TIME OF CONTACT	
	TIME OF CONFIRMATION	
EVALUATION:		
CHANGES TO BE IMPLEMENTED:		
TIMETABLE FOR IMPLEMENTATION:		
SIGNATURE OF RESPONSIBLE OFFICIAL:		

Table 5-9 SMT (IMT) Tabletop Exercise

APPLICABILITY	Facility
FREQUENCY	Annually
INITIATING AUTHORITY	Facility IC
PERSON RESPONSIBLE FOR CONDUCTING THIS DRILL	Facility IC
PARTICIPATING ELEMENTS	IMT including at a minimum the Facility IC, Command and General staffs.
SCOPE	Exercise the IMT's organization, communication, and decision-making skills in managing a spill response.
OBJECTIVES	<p>At least one IMT Tabletop Exercise in a triennial cycle will involve simulation of a worst-case discharge scenario.</p> <p>Exercise the IMT in a review of:</p> <ul style="list-style-type: none"> • Knowledge of the response plan • Proper notification • Communications system • Ability to access the Oil Spill Response Organizations (NOSC and any BOA Contractors) • Coordination of organization/agency personnel with responsibility for spill response • Ability to effectively coordinate spill response activity with National Response System infrastructure • Ability to access information in Regional Contingency Plan for location of sensitive areas, resources available within the Region, unique conditions of the Region, etc.
CERTIFICATION	Self-Certification
VERIFICATION	Verification to be accomplished by cognizant installation and Regional staff members.
RECORD RETENTION	5 years
LOCATION	Records must be kept at the facility.
EVALUATION	Self-Evaluation
CREDIT	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

Table 5-10 SMT Tabletop Drill & Exercise Log

Topic	Information
DATE	
TYPE DRILL/ EMERGENCY SCENARIO	
ANNOUNCED OR UNANNOUNCED	
PERSONNEL INVOLVED (Including Name of Qualified Individual)	
EVALUATION:	
CHANGES TO BE IMPLEMENTED:	
TIMETABLE FOR IMPLEMENTATION:	
SIGNATURE OF RESPONSIBLE INDIVIDUAL:	

Table 5-11 Spill Response Equipment Deployment Drills (also known as Facility Response Training)

APPLICABILITY	Facility with facility-owned (Navy) response equipment
FREQUENCY	Semiannually
INITIATING AUTHORITY	Facility IC
PERSON RESPONSIBLE FOR CONDUCTING THIS DRILL	Facility IC
PARTICIPATING ELEMENTS	Facility response personnel responsible for logistics and equipment deployment.
SCOPE	<p>Deploy and operate facility-owned response equipment identified in the response plan. Only a representative sample of each type of equipment or that equipment that is necessary to respond to an average most probable discharge, whichever is less, needs to be deployed.</p> <p>The remainder of the equipment which is not deployed must be included in a comprehensive training and maintenance program. Credit will be given for deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. All inspection and maintenance must be documented by the owner.</p>
OBJECTIVES	<p>Demonstrate ability of facility personnel to deploy and operate equipment.</p> <p>Ensure response equipment is in proper working order. Dysfunctional response equipment is to be repaired or replaced within 30 days.</p>
CERTIFICATION	Self-Certification
VERIFICATION	Verification to be accomplished by cognizant installation and Regional staff members.
RECORD RETENTION	5 years
LOCATION	Records must be kept at the facility.
EVALUATION	Self-Evaluation
CREDIT	The plan holder may take credit for this exercise in the course of conducting routine business or other drills, provided that the objectives of the drill are met, and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

Table 5-12 Response Equipment Deployment Drill and Exercise Log

TOPIC	INFORMATION
DATE	
TYPE DRILL/EMERGENCY SCENARIO	
ANNOUNCED OR UNANNOUNCED	
ON-SITE OR CONTRACTOR	
EQUIPMENT ACTUALLY DEPLOYED	
RESPONSE TIME:	
EVALUATION:	
CHANGES TO BE IMPLEMENTED:	
TIMETABLE FOR IMPLEMENTATION:	
SIGNATURE OF RESPONSIBLE OFFICIAL:	

Table 5-13 Unannounced Emergency Procedures Drills

APPLICABILITY:	SPR Plan Holders
FREQUENCY:	Annually
INITIATING AUTHORITY:	Facility IC, NOSC
PERSONS RESPONSIBLE FOR CONDUCTING THIS DRILL:	Facility IC and NOSC
PARTICIPATING ELEMENTS:	Response Plan Holders
SCOPE:	<p><u>Self-initiated:</u></p> <ul style="list-style-type: none"> • May be any required drill except Notification Drill. • Must conduct proper notifications for the scenario. • Must involve equipment once every 3 years
OBJECTIVE:	<p>Conduct proper notifications to respond to the unannounced scenario of an average most probable discharge and demonstrate that equipment deployment is:</p> <ul style="list-style-type: none"> • Timely • Conducted with adequate amount of equipment for scenario • Properly deployed.
CERTIFICATION:	Initiating Agency (including Facility IC and NOSC)
VERIFICATION:	Initiating Agency (including Facility IC and NOSC)
RECORD RETENTION:	5 years
LOCATION:	Records must be kept at the facility
EVALUATION:	Evaluation to be conducted by initiating agency (including Facility IC and NOSC)
CREDIT:	The plan holder may take credit for this exercise in the course of conducting an actual spill response, provided that the plan is used for response to the spill, the objectives of the drill are met and properly evaluated and documented, and the event is properly recorded.

Table 5-14 Unannounced-Emergency Procedures Drill and Exercise Log

Topic	Information
DATE	
TYPE DRILL/ EMERGENCY SCENARIO	
PERSONNEL INVOLVED (Including Name of Incident Commander)	
OBJECTIVES OF DRILL:	
EVALUATION:	
CHANGES TO BE IMPLEMENTED:	
TIMETABLE FOR IMPLEMENTATION:	
SIGNATURE OF RESPONSIBLE INDIVIDUAL:	

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APPENDIX A
***FGS* for ITALY**
(Chapters 5, 6, 9, 11, 18, & 19 & Appendices A, B, & C)

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ENVIRONMENTAL FINAL GOVERNING STANDARDS

ITALY

SEPTEMBER 7, 2012

**Revision 2
(June 2015)**



CNREURAFSWA Environmental
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DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGION EUROPE, AFRICA, SOUTHWEST ASIA
PSC 817 BOX 108
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4000
Ser N00/283
17 Jun 15

From: Commander, Navy Region Europe, Africa, Southwest Asia
To: U.S. Embassy Rome, Italy

Subj: REVISION OF FINAL GOVERNING STANDARDS FOR ITALY

Ref: (a) DoDI 4715.05
(b) DASN (EI&E) memo of 4 Jun 14

Encl: (1) Environmental Final Governing Standards, Italy,
2012 revision 2, Chapters 3 and 6

1. In reference (a), the Under Secretary of Defense, Acquisitions, Technology and Logistics designated the Secretary of the Navy as the Leading Environmental Component (LEC) with the authority and tasking to establish Final Governing Standards (FGS) to protect human health and the environment in certain foreign countries where the military services operate, to include Italy. In reference (b), the Deputy Assistant Secretary of the Navy Energy, Installations and Environment delegated Commander, Navy Region Europe, Africa, Southwest Asia as the LEC in Italy.

2. This letter provides notice to the U.S. diplomatic mission in Italy of the updated FGS for Italy, as required in reference (a) and enclosure (1). All Department of Defense (DoD) Components on DoD installations in Italy are required to comply with the FGS requirements. This FGS update includes Chapter Three: Drinking Water, and Chapter Six: Hazardous Waste. The development of this important document was accomplished in conjunction with DOD components and EUCOM ECJ4-EN throughout.

3. My point of contact is Ms. Kathryn Ostapuk at DSN 314-626-2921, COMM 081-568-2921, or e-mail at kathryn.ostapuk@eu.navy.mil.


J. C. SCORBY, JR.

Copy to:
EUCOM/ECJ4
Legal Advisor, Office of Defense Cooperation
NSA Naples (SJA/OGC/Environmental Program Director)
NAS Sigonella (SJA/OGC/Environmental Program Director)

Revalidations and Updates <i>IAW DODI 4715.5, paragraph 6.3.6.</i>		
Action	Date	Posted By
Full Revision	September 2012	CNREURAFSWA
Corrected References	September 2013	CNREURAFSWA
Full Revision – Chapters 3 and 6	June 2015	CNREURAFSWA
Administrative Changes – Chapters 1,2,4,5, 7 through 19	June 2015	CNREURAFSWA

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Appendices

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Appendix B.1	Characteristics of Hazardous Waste
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Addendums

Addendum 1	EU List of Hazardous Materials
Addendum 2	European List of Wastes

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C5. CHAPTER 5

HAZARDOUS MATERIALC5.1. SCOPE

This Chapter contains standards for the storage, handling, and disposition of hazardous materials. It does not cover solid or hazardous waste, underground storage tanks, petroleum storage, and related spill contingency and emergency response requirements, which are covered under other Chapters. This FGS does not cover munitions, radioactive material, or the transportation of hazardous material.

C5.2. DEFINITIONS

C5.2.1. Compound. A pure chemical consisting of two or more elements that can be separated into simpler substances by chemical reaction.

C5.2.2. Element. A pure chemical consisting of one type of atom.

C5.2.3. EU List of Hazardous Materials. Official list of hazardous materials registered for use in Europe. A copy of the list is provided as Addendum 1.

C5.2.4. Hazardous Chemical Warning Label. A label, tag, or marking on a container that provides the following information:

C5.2.4.1. Identification/name of hazardous chemicals;

C5.2.4.2. Appropriate hazard warnings; and

C5.2.4.3. The name and address of the manufacturer, importer, or other responsible party; and that is prepared in accordance with DoDI 6050.05.

C5.2.5. Hazardous Material. Any substance, compound, mixture or material that is capable of posing an unreasonable risk to health, safety, or the environment if improperly handled, stored, issued, transported, labeled, or disposed because it displays a characteristic listed in Table 5.1., "Typical Hazardous Materials Characteristics," or the material is listed in Addendum 1, "EU List of Hazardous Materials" or Appendix A, "List of Hazardous Waste Substances & Materials." Munitions are excluded.

C5.2.6. Hazardous Material Information Resource System (HMIRS). The computer-based information system developed to accumulate, maintain and disseminate important information on hazardous material used by the Department of Defense in accordance with DoDI 6050.05.

C5.2.7. Hazardous Material Shipment. Any movement of hazardous material in a DoD land vehicle, either from an installation to a final destination off the installation, or from a point of origin off the installation to a final destination on the installation, in which certification of the shipment is involved.

C5.2.8. Safety Data Sheet (SDS). A form prepared by manufacturers or importers of chemical products to communicate to users the chemical and physical properties and the hazardous effects of a particular product.

C5.2.9. Mixture. A solution of two or more substances.

C5.2.10. Substances. Chemical elements and their compounds in their natural state or obtained by intermediaries, procedures, or production, comprised of additives necessary to maintain the stability of products and the impurities derived from the procedures utilized, but exclusive of solvents that can be eliminated without affecting the stability of the substance and without modifying their composition.

C5.3. CRITERIA

C5.3.1. Storage and handling of hazardous materials will adhere to the DoD Component policies, including Joint Service Publication on Storage and Handling of Hazardous Materials, Defense Logistics Agency Instruction (DLAI) 4145.11, Army Technical Manual (TM) 38-410, Naval Supply Publication (NAVSUP PUB) 573, Air Force Joint Manual (AFJMAN) 23-209, and Marine Corps Order (MCO) 4450.12A, "Storage and Handling of Hazardous Materials" provide additional guidance on the storage and handling of hazardous materials.

C5.3.2. Hazardous material dispensing areas will be properly maintained. Drums/containers must not be leaking. Drip pans/absorbent materials will be placed under containers as necessary to collect drips or spills. Container contents will be clearly marked. Dispensing areas will be located away from catch basins and floor/storm drains.

C5.3.3. Installations will ensure that for each hazardous material shipment:

C5.3.3.1. The shipment is accompanied throughout by shipping papers that clearly describe the quantity and identity of the material and include an SDS;

C5.3.3.2. All drivers are trained on the hazardous material included in the shipment, including health risks of exposure and the physical hazards of the material, including potential for fire, explosion, and reactivity;

C5.3.3.3. Drivers will be trained on spill control and emergency notification procedures;

C5.3.3.4. For any hazardous material categorized on the basis of paragraph C.5.2.5. and Table 5.1, the shipping papers and briefing for the driver include identification of the material in terms of the nine United Nations (UN) Hazard Classes;

C5.3.3.5. The transport vehicles are subjected to a walk-around inspection by the driver before and after the hazardous material is loaded; and

C5.3.3.6. Packages are labeled in accordance with paragraph C5.3.7.

C5.3.3.7. Drivers will hold a specific driving license for transport of hazardous materials in accordance with the Joint Transportation and Traffic Management within the EUCOM AOR.

C5.3.4. Each installation will maintain a master listing of all storage locations for hazardous material as well as an inventory of all hazardous materials contained therein. (See paragraph C18.3.2.)

C5.3.5. Each SDS shall be in English or the predominant language in the work place. If local national workers are present in the workplace, the SDS shall also be in Italian. Until an Italian SDS is available, bilingual training will be provided on the contents of the English SDS. Each SDS shall contain at least the following information.

C5.3.5.1. The identity used on the label.

C5.3.5.1.1. If the hazardous chemical is a single substance, its chemical and common name, and its Chemical Abstract Service (CAS) Number.

C5.3.5.1.2. If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common name(s) of the ingredients which contribute to these known hazards, and the common name(s) of the mixture itself; or

C5.3.5.1.3. If the hazardous chemical is a mixture which has not been tested as a whole:

C5.3.5.1.3.1. The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise $\geq 1\%$ of the composition, except that chemicals identified as carcinogens shall be listed if the concentrations are $\geq 0.1\%$;

C5.3.5.1.3.2. The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise $< 1\%$ (0.1% for carcinogens) of the mixture, if there is evidence that the ingredient(s) could be released from the mixture in concentrations which would exceed an established OSHA permissible exposure limit, or could present a health hazard to employees; and

C5.3.5.1.3.3. The chemical and common name(s) of all ingredients which have been determined to present a physical hazard when present in the mixture.

C5.3.5.2. Physical and chemical characteristics of the hazardous chemical (such as vapor pressure, flash point);

C5.3.5.3. The physical hazards of the hazardous chemical, including the potential for fire, explosion, and reactivity;

C5.3.5.4. The health hazards of the hazardous chemical, including signs and symptoms of exposure, and any medical conditions which are generally recognized as being aggravated by exposure to the chemical;

C5.3.5.5. The primary route(s) of entry (inhalation, skin absorption, ingestion, etc.);

C5.3.5.6. The appropriate occupational exposure limit recommended by the chemical manufacturer, importer, or employer preparing the SDS, where available;

C5.3.5.7. Whether the hazardous chemical has been found to be a potential carcinogen;

C5.3.5.8. Any generally applicable precautions for safe handling and use which are known to the chemical manufacturer, importer, or employer preparing the SDS, including appropriate hygienic practices, protective measures during repair and maintenance of contaminated equipment, and procedures for clean-up of spills and leaks;

C5.3.5.9. Any generally applicable control measures which are known to the chemical manufacturer, importer, or employer preparing the SDS, such as appropriate engineering controls, work practices, or personal protective equipment;

C5.3.5.10. Emergency and first aid procedures;

C5.3.5.11. The date of preparation of the SDS or the last change to it; and

C5.3.5.12. The name, address, and telephone number of the chemical manufacturer, importer, employer, or other responsible party preparing or distributing the SDS, who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

C5.3.6. Each work center will maintain a file of SDSs for each hazardous material procured, stored, or used at the work center. SDSs that are not contained in the HMIRS and those SDSs prepared for locally purchased items should be incorporated into the HMIRS. A file of SDS information not contained in the HMIRS should be maintained on site.

C5.3.7. All hazardous material on DoD installations will have a Hazardous Chemical Warning Label in accordance with DoDI 6050.05 (or Italian equivalent) and have SDS information either available or in the HMIRS in accordance with DoDI 6050.05 and other DoD Component instructions. These requirements apply throughout the life-cycle of these materials. All hazardous materials packaging and labels shall be provided in Italian, if Italian workers are present in the workplace.

C5.3.8. DoD installations will reduce the use of hazardous materials where practical through resource recovery, recycling, source reduction, acquisition, or other minimization strategies in accordance with Service guidance on improved hazardous material management processes and techniques.

C5.3.9. All excess hazardous material will be processed through the Defense Logistics Agency (DLA) Disposition Services in accordance with the procedures in DoD 4160.21-M,

“Defense Materiel Disposition Manual.” DLA Disposition Services will only donate, transfer, or sell hazardous material to environmentally responsible parties. This paragraph is not intended to prohibit the transfer of usable hazardous material between DoD activities participating in a regional or local pharmacy or exchange program.

C5.3.10. All personnel who use, handle, or store hazardous materials will be trained in accordance with DoDI 6050.05, “DoD Hazard Communication (HAZCOM) Program” and other DoD Component instructions.

C5.3.10.1. Italian employees who use, handle, or store hazardous materials shall also receive training in accordance with Italian requirements. Consult with the Safety and/or Occupational Health Department.

C5.3.11. The installation must prevent the unauthorized entry of persons or livestock into the hazardous materials storage area.

C5.3.12. Use of particular substances:

C5.3.12.1. Use of arsenic compounds, and solutions of copper, chromium, arsenic (CCA) type C:

C5.3.12.1.1. The use of arsenic compounds in the preservation of wood is prohibited.

C5.3.12.1.2. With regard to existing uses, wood treated with arsenic compounds that was in use in Italy before 30 September 2007 may remain in place and continue to be used until it reaches the end of its service life.

C5.3.12.1.3. Wood treated with solutions of copper, chromium, arsenic (CCA) type C that was in use in Italy before 30 September 2007 may be used or reused and/or may be placed on the second-hand market subject to certain restrictions.

C5.3.12.2. Use of perfluorooctane sulfonates (PFOS):

C5.3.12.2.1. Use of PFOS-based Fire-fighting foams (e.g., some aqueous film forming foams (AFFF)) that were commercially available in the European Union before 27 December 2006 is prohibited.

C5.3.12.3. Use of nonylphenol, nonylphenol ethoxylate, and cement (with Chromium VI content > 0.0002%):

C5.3.12.3.1. The use of nonylphenol and nonylphenol ethoxylate is prohibited in concentration > 0.1 % in mass for:

C5.3.12.3.1.1. Industrial and civil cleaning activities except for:

C5.3.12.3.1.1.1 Close-loop and controlled dry systems where the washing liquid is recycled or burnt; and

C5.3.12.3.1.1.2 Domestic cleaning.

C5.3.12.3.1.2. Textile and skin treatment;

C5.3.12.3.1.3. Emulsifying agent in agricultural solutions;

C5.3.12.3.1.4. Metal treatment;

C5.3.12.3.1.5. Paper industry;

C5.3.12.3.1.6. Cosmetics;

C5.3.12.3.1.7. Other health care products; and

C5.3.12.3.1.8. Production of pesticides and biocide.

C5.3.12.3.2. The use of cement (once mixed with water) with Chromium VI content > 0.0002% is prohibited.

Table 5.1. Typical Hazardous Materials Characteristics

1. The item is a health or physical hazard. Health hazards include carcinogens, corrosive materials, irritants, mutagens, noxious materials, sensitizers, toxic materials, very toxic materials, materials that are toxic for reproductive activities, materials that damage the skin, eyes, or internal organs, and materials that are hazardous to the environment. Physical hazards include combustible liquids, comburent materials (oxidizing agents), compressed gases, explosives, flammable materials, easily flammable materials, extremely flammable materials, organic peroxides, oxidizers, pyrophoric materials, unstable (reactive) materials and water-reactive materials.

The above-mentioned hazard characteristics are defined as follows:

- a) Explosive substances and mixtures: solid, liquid, pasty or gelatinous substances and mixtures which may also react exothermically without atmospheric oxygen thereby quickly evolving gases, and which, under defined test conditions, detonate, quickly deflagrate or upon heating explode when partially confined;
- b) Oxidizing substances and mixtures: substances and mixtures which give rise to a highly exothermic reaction in contact with other substances, particularly flammable substances;
- c) Extremely flammable substances and mixtures: liquid substances and mixtures having an extremely low flash-point and a low boiling-point and gaseous substances and mixtures which are flammable in contact with air at ambient temperature and pressure (liquids that have a flashpoint $< 0^{\circ}\text{C}$ (32°F) and a boiling point $\leq 35^{\circ}\text{C}$ (95°F); or gases that are flammable in contact with ambient air, excluding liquefied petroleum gases and natural gas; or flammable liquids maintained at a temperature above their boiling point);
- d) Highly flammable substances and mixtures:
 - substances and mixtures which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or
 - solid substances and mixtures which may readily catch fire after brief contact with a source of ignition and which continue to burn or to be consumed after removal of the source of ignition, or
 - liquid substances and mixtures having a very low flash-point, or
 - substances and mixtures which, in contact with water or damp air, evolve highly flammable gases in dangerous quantities
 (may catch fire in contact with air at ambient temperature without any input of energy; or flashpoint $< 21^{\circ}\text{C}$ (70°F) where not classed as extremely flammable);
- e) Flammable substances and mixtures: liquid substances and mixtures having a low flash-point (flashpoint $\geq 21^{\circ}\text{C}$ (70°F) and $\leq 55^{\circ}\text{C}$ (131°F));
- f) Very toxic substances and mixtures: substances and mixtures which in very low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;
- g) Toxic substances and mixtures: substances and mixtures which in low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;
- h) Harmful substances and mixtures: substances and mixtures which may cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;
- i) Corrosive substances and mixtures: substances and mixtures which may, on contact with living tissues, destroy them;
- j) Irritant substances and mixtures: non-corrosive substances and mixtures which, through immediate, prolonged or repeated contact with the skin or mucous membrane, may cause inflammation;
- k) Sensitizing substances and mixtures: substances and mixtures which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction of hypersensitization such that on further exposure to the substance or mixtures, characteristic adverse effects are produced;
- l) Carcinogenic substances and mixtures: substances or mixtures which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence;
- m) Mutagenic substances and mixtures: substances and mixtures which, if they are inhaled or ingested or if they penetrate the skin, may induce heritable genetic defects or increase their incidence;
- n) Substances and mixtures which are toxic for reproduction: substances and mixtures which, if they are inhaled or ingested or if they penetrate the skin, may produce, or increase the incidence of, non-heritable

adverse effects in the progeny and/or an impairment of male or female reproductive functions or capacity; o) Substances and mixtures which are dangerous for the environment: substances and mixtures which, were they to enter the environment, would present or may present an immediate or delayed danger for one or more components of the environment.
2. The item and/or its disposal is regulated by the host nation because of its hazardous nature.
3. The item contains asbestos, mercury, or polychlorinated biphenyls.
4. The item has a flashpoint < 93° C (200° F) closed cup, or is subject to spontaneous heating or is subject to polymerization with release of large amounts of energy when handled, stored, and shipped without adequate control.
5. The item is a flammable solid or is an oxidizer or is a strong oxidizing or reducing agent with a standard reduction potential of > 1.0 volt or < -1.0 volt.
6. The course of normal operations, accidents, leaks, or spills, the item may produce dusts, gases, fumes, vapors, mists, or smokes with one or more of the above characteristics.
7. The item has special characteristics that, in the opinion of the manufacturer or the DoD Components, could cause harm to personnel if used or stored improperly.

C6. CHAPTER 6**HAZARDOUS WASTE****C6.1. SCOPE**

C6.1.1. This Chapter contains criteria for a comprehensive management program to ensure that hazardous waste is identified, stored, transported, treated, disposed, and recycled in an environmentally sound manner.

C6.1.2. Overview of Waste Classification System

C6.1.2.1. The waste classification system assigns a unique six-digit code to each type of waste (see European List of Wastes provided as Addendum 2). This number identifies a type of waste and must be used in all the documents related to the management of that waste (e.g., shipping, transportation, record-keeping, etc.). This allows installation personnel to identify the type of waste and whether the waste is classified as hazardous.

C6.1.2.2. Waste is classified into two main categories based on its origin: urban or special waste. These two main categories are further subdivided (depending on their degree of hazard) into hazardous and non-hazardous waste. The assignment of waste into its category depends on the origin of the waste. Urban waste is typically generated from household activities or residential areas and street-cleaning activities. Special wastes are generated by any other activity different from household or residential areas (e.g., commercial, handicrafts, industrial, agricultural, etc.). Certain types of special waste that are similar or comparable in nature to urban waste may be disposed of as urban waste if so established by the local Municipality.

C6.1.2.3. Hazardous urban and hazardous special wastes (which includes construction and demolition waste) are addressed in this Chapter. Non-hazardous urban and non-hazardous special wastes are addressed in Chapter 7, "Solid Waste."

C6.1.2.4. Most wastes are classified as hazardous or non-hazardous as indicated in the European List of Wastes (Addendum 2). In general, the generator of a known waste is not required to evaluate the hazardous characteristics to verify if it is hazardous or not; the European List of Wastes provides the classification. However, some wastes may be classified either hazardous or non-hazardous, as a function of chemical-physical characteristics (including waste derived from remediation of contaminated soil, wastewater treatment plant's sludge, spent catalysts, vehicle antifreeze fluids, etc.). In such a case, an analysis is required to assign the proper waste code. In the absence of an analysis, a waste should be considered to be hazardous. Revisions to the European List of Wastes will be maintained by the DoD Lead Environmental Component (LEC). (Classification of unknown wastes will follow the procedure in C6.3.1.)

C6.1.2.5. A complete list of waste categories is provided in the European List of Wastes (Addendum 2).

C6.2. DEFINITIONS

C6.2.1. Acute Hazardous Waste. Those wastes listed in Appendix A, “List of Hazardous Substances & Materials,” with a “P” designator.

C6.2.2. Annual Waste Report (Modello Unico di Dichiarazione Ambientale - MUD). An official statement listing quantity and type of waste generated and disposed of in the previous calendar year.

C6.2.3. Battery or Accumulator. Any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or consisting of one or more secondary battery cells (rechargeable).

C6.2.3.1. Portable battery or accumulator. Any battery, button cell, battery pack, or accumulator that:

C6.2.3.1. Is sealed;

C6.2.3.2. Can be hand carried; and

C6.2.3.3. Is neither an industrial battery or accumulator nor an automotive battery or accumulator;

C6.2.3.2. Button cell. Any small disc-shaped portable battery or accumulator whose diameter is greater than its height and which is used for special purposes such as hearing aids, watches, small portable equipment, and back-up power.

C6.2.4. Bulky Waste. Refrigerators and freezers, televisions, computers, dishwashing and laundry machines, air conditioners, and any other large-sized waste (i.e., furniture). These comprise both hazardous and non-hazardous waste.

C6.2.5. By-product. All products that are not primary products and have another use or consumption. By-product that can be re-used directly without prior processing or treatment is not considered waste, provided that the characteristics of the by-product are suitable for the specific re-use with no prejudice for human health and/or the environment.

C6.2.6. Collection. The act of consolidating wastes (or materials which have been separated for the purpose of recycling) from various locations.

C6.2.7. Construction and Demolition Waste. A subcategory of special waste that includes hazardous and non-hazardous waste building materials, packaging, and rubble resulting from construction, remodeling, repair, and demolition operations on pavements, houses, commercial buildings, and other structures.

C6.2.8. Disposal. Any activity listed in Appendix B.2 (e.g., the discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste into or on any land or water that would allow the waste or constituent thereof to enter the environment). Proper disposal effectively mitigates hazards to human health and the environment.

C6.2.9. DLA. Defense Logistics Agency.

C6.2.10. European List of Wastes. A categorical list of wastes and associated classification codes. The waste classification system assigns a unique six-digit code to each type of waste, which must be used on all documents related to the management of that waste (e.g., shipping, transportation, record-keeping, etc.). The list is provided as Addendum 2.

C6.2.11. Hazardous Constituent. A chemical compound that is listed by name in Appendix A, "List of Hazardous Substances & Materials," or that possesses the characteristics described in Appendix B.1.

C6.2.12. Hazardous Urban Waste. A sub-category of urban waste identified as hazardous in the European List of Wastes or by Municipal authorities that includes:

C6.2.12.1. Mercury, nickel-cadmium, and lithium batteries from household appliances;

C6.2.12.2. Fluorescent lights;

C6.2.12.3. Pesticides;

C6.2.12.4. Photographic chemicals;

C6.2.12.5. Solvents;

C6.2.12.6. Acids;

C6.2.12.7. Discarded equipment containing chlorofluorocarbons;

C6.2.12.8. Non-edible oil and fat;

C6.2.12.9. Paints, inks, adhesives and resins containing hazardous substances;

C6.2.12.10. Detergents containing hazardous substances;

C6.2.12.11. Cytotoxic and cytostatic medicines;

C6.2.12.12. Electrical and electronic equipment;

C6.2.12.13. Wood containing hazardous substances; and

C6.2.12.14. Any container labeled with "T" (toxic) and/or "F" (flammable) sold for private use only (from households).

C6.2.13. Hazardous Waste (HW). Any waste which displays hazardous properties identified in Appendix B.1 and/or is denoted with an asterisk (*) next to the six-digit code in the European List of Wastes (Addendum 2). In Italy, hazardous waste is also referred to as "dangerous waste."

C6.2.14. Hazardous Waste Accumulation Point (HWAP). A shop, site, or other work center where hazardous wastes are accumulated until removed to a Temporary Waste Storage Area (TWSA) or Waste Storage Area (WSA), or shipped for treatment or disposal. A HWAP may be used to accumulate no more than 208 liters (55 gallons) of hazardous waste or 1 liter (1

quart) of acute hazardous waste, from each waste stream. The HWAP must be at or near the point of waste generation and under the control of the waste producer.

C6.2.15. Hazardous Waste Fuel. Hazardous wastes burned for energy recovery. Fuel produced from hazardous waste by processing, blending, or other treatment is also hazardous waste fuel.

C6.2.16. Hazardous Waste Generation. Any act or process that produces hazardous waste (HW) as defined in this FGS.

C6.2.17. Hazardous Waste Log. A listing of hazardous waste deposited and removed from a Temporary Waste Storage Area (TWSA) or Waste Storage Area (WSA). Information such as the waste type, volume, location, and storage removal dates should be recorded. (Note: This is distinct from the Waste Loading and Unloading Register).

C6.2.18. Hazardous Waste Profile Sheet (HWPS). A document that identifies and characterizes the waste by providing user's knowledge of the waste, and/or lab analysis, and details the physical, chemical, and other descriptive properties or processes which created the hazardous waste. The DLA Disposition Services Form 1930 is typically used for this purpose. Form 1930 may be modified after coordination with DLA Disposition Services or alternate disposal agent, while ensuring that the content remains the same.

C6.2.19. Landfill. Disposal site for the deposit of waste onto or into land (i.e., underground), including:

C6.2.19.1. Internal waste disposal sites (i.e., a landfill where a generator of waste is carrying out its own waste disposal at the place of production); and

C6.2.19.2. Permanent sites (i.e. operating longer than one year) which are not used for temporary storage of waste, but excluding:

C6.2.19.2.1. Facilities where waste is unloaded in preparation for further transport for recovery, treatment or disposal elsewhere; and

C6.2.19.2.2. Storage of waste prior to recovery or treatment for a period < three years; or

C6.2.19.2.3. Storage of waste prior to disposal for a period < one year.

C6.2.20. Landfill for Hazardous Waste. Landfill specifically designed to accept only hazardous waste (including hazardous waste with a dry-substance content not lower than 25%, hazardous waste whose leachate meets established standards, waste containing or contaminated with PCB in concentration lower than 50 ppm, waste containing or contaminated with dioxins and/or furans in concentration lower than 10 ppb, waste whose Total Organic Compounds concentration for reactive substances is lower than 5%).

C6.2.21. Leachate. Any liquid percolating through the deposited waste and emitted from or contained within a landfill.

C6.2.22. Medical Waste. Refer to Chapter 8, “Medical Waste.”

C6.2.23. National Environmental Managers’ Register (Albo nazionale gestori ambientali). The nationwide register that lists all of the companies that are authorized to conduct waste management activities (including transportation, storage, treatment, recycling, disposal, etc.). The register is divided by Region and is available at the local Chamber of Commerce.

C6.2.24. Non-hazardous Waste. Any waste that is not identified as hazardous by the European List of Wastes (Addendum 2), or presenting one or more hazardous properties and containing constituents in concentrations at or above the thresholds listed in Appendix B.1. The re-classification of hazardous waste to non-hazardous waste cannot be obtained by dilution or mixing with substances resulting in a reduction of the initial concentration of hazardous substances.

C6.2.25. Packaging Materials. Materials of any nature to be used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods. Items are considered to be packaging even if they may have other functions unless the item is an integral part of the product. Packaging components and ancillary elements integrated into packaging shall be considered to be part of the packaging into which they are integrated; for example labels, staples, plastic sleeves.

C6.2.26. Persistent Organic Pollutants (POPs). Persistent Organic Pollutants are chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment. This group of priority pollutants consists of pesticides (such as DDT), industrial chemicals (such as polychlorinated biphenyls), and unintentional by-products of industrial processes (such as dioxins and furan) as listed in Appendix B.6.

C6.2.27. POL. Refined petroleum, oils and lubricants, including but not limited to, petroleum, fuel, lubricant oils, synthetic oils, mineral oils, animal fats, vegetable oil, sludge, and POL mixed with wastes other than dredged spoil.

C6.2.28. Scrap Vehicle. A motor vehicle or its parts (including tires) that the owner intends to or is required to dispose of.

C6.2.29. Scrap Vehicle Collection Center. A (authorized) facility for the demolition and reclaiming operations for the crushing of parts of the vehicle being demolished, in order to obtain recyclable pieces of metal, separating them from non-metallic parts for recovery related energy savings, or disposal.

C6.2.30. Sludge. A special waste generated from drinking water or any other water treatment activities, from wastewater treatment activities, and from fumes abatement.

C6.2.31. Special Waste. Special waste includes both non-hazardous and hazardous waste. Non-hazardous special waste is further defined and addressed in Chapter 7, “Solid Waste.” Hazardous wastes are identified in the European List of Wastes (Addendum 2) and/or display the hazardous properties listed in Appendix B.1. The re-classification of hazardous waste to non-hazardous waste cannot be obtained by dilution or mixing with substances resulting in a

reduction of the initial concentration of hazardous substances. Special waste includes any non-urban waste generated by the following activities:

- C6.2.31.1. Waste from agricultural and agricultural-industrial activities;
- C6.2.31.2. Waste from demolition activities, construction, and excavation (see also Construction and Demolition Waste);
- C6.2.31.3. Waste from industrial activities (e.g., paint booth processes);
- C6.2.31.4. Waste from handicraft activities (e.g., Morale, Welfare and Recreation (MWR) hobby shops, car body shops, or wood carpentry shops);
- C6.2.31.5. Waste from commercial activities (e.g., commissaries, car repair shops, etc.);
- C6.2.31.6. Waste from service activities (e.g., offices);
- C6.2.31.7. Waste derived from waste recovery and/or disposal, including sludge;
- C6.2.31.8. Medical waste (e.g., hospitals, veterinary clinics, dental facilities, flightline clinics);
- C6.2.31.9. Tires; and
- C6.2.31.10. Military waste.

C6.2.32. Temporary Waste Storage Area (TWSA). A non-authorized area located within the installation fence line where temporary waste accumulation and storage activities occur (to include hazardous and non-hazardous waste) before being transferred to a WSA site or picked-up for off-site shipment. Each TWSA must be designated as either volume limited or time limited.

C6.2.33. Transporter. The authorized person, agent, or company who physically transports waste on public roads.

C6.2.34. TWSA/WSA Manager. A person(s) on the installation with the operational responsibility for receiving, storing, inspecting, and generally managing the installation's TWSA/WSA.

C6.2.35. Unique Generator Identification Number. The generator identification is accomplished using the Unique Identification Number assigned by the Italian authorities.

C6.2.36. Unique Identification Number (Codice Fiscale). A unique number that the Italian authorities issue to any citizen, company, or public body (including foreign citizens residing in Italy) doing business or having related activities in Italy. The 16-digit number is required when filing numerous public and private documents.

C6.2.37. Unique Waste Identification Code. The six-digit Waste Code listed in the European List of Wastes that is provided for each waste. This number is used by installations to identify a known waste and to ease the waste management and record-keeping process.

C6.2.38. Urban Waste. Refer to Chapter 7, “Solid Waste.”

C6.2.39. Used Oil. Any oil or other waste POL product (whether mineral or synthetic) that has become unsuitable for the use for which it was initially intended. Used oil includes oil mixtures, oily tank residues, mixtures of oil and water, and emulsions. Used oil (other than used oil burned for energy recovery) is classified as a hazardous waste and will be managed as such.

C6.2.40. Used Oil Burned for Energy Recovery. Used oil that is burned for energy recovery is termed "used oil fuel." Used oil fuel includes any fuel produced from used oil by processing, blending, or other treatment.

C6.2.41. Waste. Any substance, material, or object that the waste generator (producer) discards, intends to discard, or is required to discard, including material sent for recovery. Waste is classified according to its origin as either urban (municipal) waste or as special waste, and is further sub-classified as hazardous waste or as non-hazardous waste. A complete list of waste streams with the corresponding Waste Code is provided in the European List of Wastes.

C6.2.42. Waste Generation. The act or process of producing waste.

C6.2.43. Waste Generator. A generator is considered to be the person or entity whose processes or actions generate waste.

C6.2.44. Waste Loading and Unloading Register. A specific and dedicated log book, kept at the installation, used to record all waste transfers, which includes all onsite “loading” operations (i.e., data on waste temporarily stored at the site including waste code, amount and date of storage) and all “unloading” operations undertaken at the site (i.e. data on waste shipped off-site for disposal/recovery/recycling, including waste code, amount shipped, date of transport, and name of waste carrier). Waste collected by the municipality is not required to be recorded on this waste register.

C6.2.45. Waste Manifest. A specific form used to track the shipment of special waste from its point of origin to its point of disposal.

C6.2.46. Waste Storage Area (WSA). An authorized area (different than a TWSA) where the storage of waste (both hazardous and/or non-hazardous) occurs prior to disposal through any activity listed in Appendix B.2 or recovery activity listed in Appendix B.3. Special waste may be stored no longer than one year at a WSA unless otherwise specified in the authorization. A WSA site shall be authorized via the Italian Base Commander, in accordance with the procedures established in Chapter 1.

C6.2.47. Waste Treatment. Any method, technique, or process, designed to change the physical, chemical, or biological characteristics or composition of any waste so as to render such waste non-hazardous, or less hazardous to the persons exposed or to the environment; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

C6.3. CRITERIA

C6.3.1. Waste Classification. Waste generating activities will classify their waste streams using the European List of Wastes. Laboratory analysis shall be used to classify unknown wastes by determining their physical-chemical characteristics and their hazardous properties as presented in Appendix B.1.

C6.3.2. Waste Analysis Plan. The TWSA/WSA manager, in conjunction with the installation(s) served, will develop a plan to determine how and when wastes are to be analyzed. The waste analysis plan will also include procedures for characterization and verification testing of unknown wastes. The plan should include: parameters for testing and rationale for choosing them, frequency of analysis, test methods, and sampling methods. In addition, waste analyses shall be performed prior to transferring waste to recycling/disposal facilities (at the first shipment and then at least annually and when the waste generating process changes significantly).

C6.3.3. Waste generators shall keep a Waste Loading and Unloading Register in which each waste loading and unloading operation shall be registered with the proper unique waste identification codes from the European List of Wastes. In addition the waste generator shall complete the annual waste report (MUD); see C6.3.6.4.

C6.3.4. Transportation Criteria

C6.3.4.1. When transporting hazardous waste via commercial or military transportation on Italian public roads and highways, HW generators will prepare off-installation HW shipments in compliance with the packaging and labeling requirements of Chapter 5, "Hazardous Material." Requirements may include placarding, marking, containerization, and labeling. Hazardous waste designated for transport will be prepared in accordance with applicable international regulations, Italian regulations, and service-specific instructions.

C6.3.4.2. Hazardous waste transporters shall be registered in Italy and utilize licensed vehicles.

C6.3.4.3. When transporting HW via military vehicle on Italian public roads and highways, generators will ensure compliance with Service regulations for the transport of hazardous materials, and if required by applicable international agreements (Status of Forces Agreement (SOFA), basing, etc.), Italian transportation regulations. Transporters shall be registered in the Italian National Registry of Environmental Managers (Albo Nazionale Gestori Ambientali), unless they collect and transport to the disposal/recycling facility their own hazardous waste in quantities ≤ 30 kg/day or 30 l/day. This criterion does not apply to the movement of hazardous waste within the installation fence line.

C6.3.5. Manifesting Criteria. All waste (municipal and special waste, whether hazardous or non-hazardous) leaving the installation will be accompanied by the waste manifest to ensure a complete audit trail from point of origin to ultimate disposal. (Note: urban waste removed by the Municipal authority with its own vehicles does not have to be manifested.) This manifest should include the following information:

C6.3.5.1. Name, address, and Unique Identification Number of the generator of the waste;

C6.3.5.2. Name, address, and financial code of the waste transporter;

C6.3.5.3. Origin, waste code, and quantity of waste;

C6.3.5.4. Disposal or recovery code to be used (see Appendices B.2 and B.3);

C6.3.5.5. Name of disposal facility;

C6.3.5.6. Date and route to the disposal and/or treatment facility;

C6.3.5.7. Transport vehicle license plate number and driver's name; and

C6.3.5.8. Name and address of the receiver.

C6.3.5.9. The waste manifest shall be completed in quadruplet, all dated and signed by the waste generator and countersigned by the transporter. The waste generator shall retain one copy, and another copy must be returned by the transporter to the waste generator within three months of delivery of the waste to the disposal/treatment facility (or six months for out-of-country disposal). Installations shall notify the Italian Base Commander if the installation does not receive a copy of the manifest from the transporter within three months of the delivery of the waste for in-country disposal (or six months for out-of-country disposal).

C6.3.5.10. Both copies of the waste manifest shall be kept on file for at least five years from the date of shipment. These copies shall be kept physically together with the waste loading and unloading register.

C6.3.6. Record-Keeping Criteria

C6.3.6.1. ID Number.

C6.3.6.1.1. Each generator will use the installation's "Unique Identification Number" for all record-keeping, reports, and manifests for waste. For DoD internal tracking purposes, a separate unique identification number may also be used.

C6.3.6.2. Each generator will use the European List of Wastes (Addendum 2) to assign each waste a unique waste identification code. This unique waste identification code shall be used in all reporting, manifesting, and record-keeping.

C6.3.6.3. Audit Trail. Generators will maintain an audit trail of HW from the point of generation to disposal. Generators using DLA Disposition Services will obtain a signed copy of the manifest from the initial DLA Disposition Services recipient of the waste, at which time DLA Disposition Services assumes responsibility. A generator, as provided in a host-tenant agreement, that uses the hazardous waste management and/or disposal program of a DoD component that has a different unique identification number (see definition), will obtain a signed copy of the manifest from the receiving component, at which time the receiving component will assume responsibility for subsequent storage, transfer, and disposal of the waste.

C6.3.6.4. MUD Report (Annual Waste Report). An annual declaration of the waste generated during the previous year shall be submitted to the Italian Base Commander (see Chapter 1 for the process).

C6.3.6.5. Turn-In Documents. Turn-in documents [(e.g., waste manifests) and DD Form 1348-1A] must be maintained for five years.

C6.3.6.6. Hazardous Waste Log. A written log will be maintained for each TWSA and/or WSA. The log shall include the following:

- C6.3.6.6.1. Name/address of generator;
- C6.3.6.6.2. Description and hazard class of the hazardous waste;
- C6.3.6.6.3. Number and types of containers;
- C6.3.6.6.4. Quantity of hazardous waste;
- C6.3.6.6.5. Date stored;
- C6.3.6.6.6. Storage location; and
- C6.3.6.6.7. Disposition data, to include: dates received, sealed, and transported and transporter used.

C6.3.6.7. Waste Loading and Unloading Register. In addition to the various waste logs to be maintained for each TWSA and/or WSA, a Waste Loading and Unloading Register shall be maintained at each installation for both hazardous and non-hazardous waste. The waste register shall be used to record all manifested waste generated and shipped off base; entries shall be made within 10 business days from the generation/shipment operation. The waste loading and unloading register will be retained for five years after the date of its last entry, and will have the two signed copies of the waste manifest attached. More than one register can be present at each installation, as long as there are no duplicate entries.

C6.3.6.8. Availability of Hazardous Waste Log. The Hazardous Waste Log will be available to emergency personnel in the event of a fire or spill. Logs will be maintained until closure of the installation.

C6.3.6.9. Inspection Logs. Records of inspection logs shall be maintained for a period of 3 five years.

C6.3.6.10. Manifests. Manifests of incoming and outgoing hazardous wastes, including medical waste, will be retained for a period of five years. Two signed copies of the waste manifest shall be retained together with the Loading and Unloading Register (see C6.3.6.7).

C6.3.6.11. Waste Analysis/Characterization Records. Records of waste analysis/characterization shall be maintained for a period of five years.

C6.3.6.12. Waste Records. Installation will maintain records, identified in C6.3.6., for all waste streams generated on the installation.

C6.3.7. Training Criteria

C6.3.7.1. Personnel Training. Personnel assigned duty at a HWAP, TWSA and/or WSA must successfully complete appropriate HW training necessary to perform their assigned duties. At a minimum, this must include pertinent waste handling and emergency response procedures. Generic HW training requirements are described in paragraph C6.3.7.4.

C6.3.7.2. Application. Personnel and their supervisors who are assigned duties involving actual or potential exposure to HW must successfully complete an appropriate training program prior to assuming those duties. Personnel assigned to such duty after the effective date of this document must work under direct supervision until they have completed appropriate training. Additional guidance is contained in DoDI 6050.05 (DoD Hazard Communication Program).

C6.3.7.3. Refresher Training. All personnel performing HW duties must successfully complete annual HW refresher training.

C6.3.7.4. Training Contents and Requirements. The training program must:

C6.3.7.4.1. Include sufficient information to enable personnel to perform their assigned duties and fully comply with pertinent HW requirements.

C6.3.7.4.2. Be conducted by qualified trainers who have completed an instructor training program in the subject, have comparable academic credentials, or experience.

C6.3.7.4.3. Be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems.

C6.3.7.4.4. Address the following areas in particular for personnel whose duties include hazardous waste handling and management:

C6.3.7.4.4.1. Emergency procedures (response to fire/explosion/spills; use of communications/alarm systems; body and equipment clean-up);

C6.3.7.4.4.2. Drum/container handling/storage; safe use of HW equipment; proper sampling procedures;

C6.3.7.4.4.3. Employee Protection. Personal Protective Equipment (PPE), safety and health hazards, hazard communication, and worker exposure; and

C6.3.7.4.4.4. Record-Keeping. Record-keeping, security, inspections, contingency plans, storage requirements, and transportation requirements.

C6.3.7.4.5. Training shall be provided in Italian if HW handling duties are assigned to non-English speaking Italian personnel.

C6.3.7.5. Documentation of Training. Installations must document all HW training for each individual assigned duties involving actual or potential exposure to HW. Updated training records on personnel assigned duties involving actual or potential exposure to HW must be kept by the TWSA/WSA manager or the responsible installation office and retained for at least three years after termination of duty of these personnel.

C6.3.8. Hazardous Waste Management

C6.3.8.1. Segregation of Waste. Hazardous waste will be segregated by waste stream at its point of origin and while in storage (either at the HWAP, TWSA, or WSA). Hazardous waste will also be segregated from non-hazardous waste.

C6.3.8.2. Construction & Demolition Waste. Hazardous construction/demolition waste shall be disposed of in authorized landfills for hazardous waste.

C6.3.8.3. Waste Analysis & Verification

C6.3.8.3.1. Hazardous Waste Profile Sheet (HWPS). A HWPS will be used to identify each hazardous waste stream. The HWPS must be updated by the generator, as necessary, to reflect any new waste streams or process modifications that change the classification of the hazardous waste being handled at the storage area.

C6.3.8.3.2. Maintenance of Waste Analysis File. The TWSAs and/or WSAs must have, and keep on file, a HWPS for each hazardous waste stream that is stored at each TWSA and/or WSA.

C6.3.8.3.3. Waste Verification. Generating activities will provide identification of incoming hazardous waste on the HWPS to the TWSA and/or WSA manager. Prior to accepting the waste, the TWSA and/or WSA manager will:

C6.3.8.3.3.1. Inspect the waste to ensure it matches the description provided.

C6.3.8.3.3.2. Ensure that no waste is accepted for storage unless an HWPS is provided, or is available and properly referenced.

C6.3.8.3.3.3. Request a new HWPS from the generator if there is reason to believe that the process generating the waste has changed;

C6.3.8.3.3.4. Analyze waste shipments in accordance with the waste analysis plan to determine whether it matches the waste description on the accompanying manifest and documents; and

C6.3.8.3.3.5. Reject shipments that do not match the accompanying waste descriptions unless the generator provides an accurate description.

C6.3.9. Use and Management of Containers

C6.3.9.1. Container Handling & Storage. To protect human health and the environment, the following guidelines will apply when handling and storing hazardous waste containers:

C6.3.9.1.1. Containers holding hazardous waste will be in good condition, free from severe rusting, bulging, or structural defects.

C6.3.9.1.2. Containers used to store hazardous waste, including overpack containers, must be compatible with the materials stored.

C6.3.9.1.3. Storage containers previously used for hazardous waste shall not be used to store food products.

C6.3.9.1.4. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

C6.3.9.1.5. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

C6.3.9.1.6. Containers of flammable liquids must be grounded when transferring flammable liquids from one container to the other.

C6.3.9.1.7. Containers holding hazardous waste will be marked with a hazardous waste marking, and a label indicating the hazard class of the waste contained (flammable, corrosive, etc.) as applicable.

C6.3.9.1.8. Areas where containers of hazardous waste are stored must be inspected weekly for leaking containers and deteriorating containers as well as deterioration of containers and the containment system caused by corrosion or other factors. Secondary containment systems will be inspected for defects and emptied of accumulated releases or retained storm water.

C6.3.9.1.9. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material. Containers that have been used for temporary storage of hazardous waste, and that will not be re-used for the same type of waste, shall be properly decontaminated before further utilization.

C6.3.9.2. Containment. HWAPs, TWSAs, and WSAs containing hazardous waste must have a secondary containment system meeting the following:

C6.3.9.2.1. Must be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.

C6.3.9.2.2. The secondary containment system must have sufficient capacity to contain one-third of the total capacity of stored containers or the volume of the largest container, whichever is greater.

C6.3.9.2.3. Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system as described in C6.3.9.2.1., provided the

storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation, or the containers are elevated or are otherwise protected from contact with accumulated liquid.

C6.3.9.2.4. Rainwater captured in secondary containment areas should be inspected and/or tested prior to release. The inspection or testing must be reasonably capable of detecting contamination by the hazardous waste in the containers. Contaminated water shall be treated as hazardous waste until determined otherwise.

C6.3.9.2.5. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

C6.3.9.3. Hazardous Waste Accumulation Points (HWAPs)

C6.3.9.3.1. Each HWAP must be designed and operated to provide appropriate segregation for different hazardous waste streams, including those that are chemically incompatible. Each HWAP will have warning signs (National Fire Protection Association or appropriate international sign) appropriate for the waste being accumulated at that site.

C6.3.9.3.2. ~~A~~ HWAP will comply with the storage limits in the definitions. When these limits have been reached, the generator will make arrangements within five working days to move the HW to a TWSA or WSA or ship it off-site for treatment or disposal. Arrangements must include submission of all appropriate turn-in documents to initiate the removal (e.g., DD 1348-1A) to appropriate authorities responsible for removing the HW (e.g., DLA Disposition Services). Wastes intended to be recycled or used for energy recovery (e.g., used oil or antifreeze) are exempt from the 208-liter (55-gallons)/1-liter (1-quart) volume accumulation limits, but must be transported off-site to a final destination facility within one year.

C6.3.9.3.3. To initiate the removal of waste, the generating activity shall submit all appropriate turn-in documents (e.g., DD 1348-1A) to appropriate authorities responsible for removing the HW (e.g., DLA Disposition Services).

C6.3.9.3.4. All criteria of C6.3.9.1 (Container Storage & Handling) and C6.3.9.2. (Containment) apply to HWAPs with the exception of C6.3.9.1.8.

C6.3.9.3.5. Waste transfers from a HWAP to a TWSA or WSA shall be recorded in the TWSA or WSA log book, on a DD 1348, or other appropriate document. The HWAP does not need to maintain a waste log.

C6.3.9.4. Temporary Waste Storage Area (TWSA)

C6.3.9.4.1. TWSAs must be designed and operated to provide appropriate segregation for different waste streams, including those that are chemically incompatible. A TWSA does not need authorization as long as the following conditions are met:

C6.3.9.4.1.1. The waste shall not contain polychlorodibenzodioxines and/or polychlorodibenzofurans and polychlorodibenzophenols ≥ 2.5 ppm, nor PCBs and/or PCTs ≥ 25 ppm. The waste containing Persistent Organic Pollutants (POPs) listed in Appendix B.6 shall be managed in compliance with technical standards governing the storage and packaging of hazardous substances (please refer to Chapter 5, “Hazardous Material”).

C6.3.9.4.1.2. DoD installations shall select and indicate in their management plan one of the following two methods for managing hazardous waste temporarily stored in all the TWSAs within its physical boundaries:

C6.3.9.4.1.2.1 The volume of the hazardous waste shall not exceed 10 m^3 (353.14 ft^3 or 2,641 gallons) at any one time and waste may not be stored for more than one year; or

C6.3.9.4.1.2.2 The temporary storage of the hazardous waste shall not exceed three months (irrespective of the volume of waste stored). The duration may be extended to one year if the temporary deposit is located on a small island.

C6.3.9.4.1.2.3 The temporary storage of waste shall ensure the segregation of waste types with respect to technical-military standards and standards governing the management of the dangerous substances contained in the waste.

C6.3.9.4.1.2.4 Military waste as defined in the list for Special Waste and waste originating from military vessels and installations supporting military defense and national security cannot be held in a TWSA more than 12 months, regardless of the quantity.

C6.3.9.4.1.3. Each TWSA will have warning signs (appropriate Italian or international signs, or National Fire Protection Association signs) appropriate for the waste being accumulated at that site.

C6.3.9.4.2. When storage limits in C6.3.9.4.1.2.1. have been reached, the generator must have the waste removed for disposal or moved to a WSA. To initiate the waste removal, installations must submit all appropriate turn-in documents (e.g., DD Form 1348-1A) to appropriate DoD authorities responsible for removing the special waste (e.g., DLA Disposition Services) or prepare the waste manifest when using an Italian-authorized company.

C6.3.9.5. Waste Storage Area (WSA)

C6.3.9.5.1. Waste Acceptance. Prior to accepting hazardous special waste, the WSA manager shall:

C6.3.9.5.1.1. Inspect the waste to ensure it matches the description provided

C6.3.9.5.1.2. Ensure that no waste is accepted for storage unless a HWPS is provided, or available and properly referenced

C6.3.9.5.1.3. Obtain a new HWPS from the generator if there is reason to believe that the process generating the waste has changed

C6.3.9.5.1.4. Reject shipments that do not match the accompanying waste descriptions unless the generator provides an accurate description

C6.3.9.5.2. Installations shall notify the Italian Base Commander prior to operation of a WSA where an authorization for storage does not already exist (see Chapter 1 for the process).

C6.3.9.5.3. Hazardous waste shall not be stored longer than one year in a WSA.

C6.3.9.6. Requirements for TWSAs and WSAs

C6.3.9.6.1. Location Standards. To the maximum extent possible, all TWSAs and WSAs will be located to minimize the risk of release due to seismic activity, floods, or other natural events. For facilities located where they may face such risks, the installation spill prevention and control plan must address the risk.

C6.3.9.6.2. Design & Operation of TWSAs and WSAs. TWSAs and WSAs must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned release of HW or HW constituents to air, soil, groundwater or surface water that could threaten human health or the environment.

C6.3.9.6.3. Security

C6.3.9.6.3.1. General. The installation must prevent the unknowing entry, and minimize the possibility for unauthorized entry (of persons or livestock) onto the TWSAs and/or WSAs.

C6.3.9.6.3.2. Security System Design. An acceptable security system for a TWSA and/or WSA consists of either:

C6.3.9.6.3.2.1 A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or other designated personnel) that continuously monitors and controls entry into the TWSA and/or WSA; or

C6.3.9.6.3.2.2 An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff) that completely surrounds the TWSA and/or WSA, combined with a means to control entrance at all times (e.g., an attendant, television monitors, locked gate, or controlled roadway access).

C6.3.9.6.3.3. Required Signs. A sign with the legend "Danger - Unauthorized Personnel Keep Out," must be posted at each entrance to the TWSA and/or WSA, and at other locations, in sufficient numbers to be seen from any approach to the TWSA and/or WSA. The legend must be written in English and in any other language predominant in the area surrounding the installation, and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out," may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the TWSA and/or WSA, and that entry can be dangerous.

C6.3.9.6.4. Required Aisle Space. Aisle space must allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency. Containers must not obstruct an exit.

C6.3.9.6.5. Access to Communications or Alarm System

C6.3.9.6.5.1. General. Whenever HW is being poured, mixed, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another person.

C6.3.9.6.5.2. If there is only one person on duty at the TWSA and/or WSA, that person must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance.

C6.3.9.6.6. Required Equipment. All TWSAs and/or WSAs must be equipped with the following:

C6.3.9.6.6.1. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to TWSA and/or WSA personnel.

C6.3.9.6.6.2. A device, such as an intrinsically safe telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from installation security, fire departments, or emergency response teams.

C6.3.9.6.6.3. Portable fire extinguishers, fire control equipment appropriate to the material in storage (including special extinguishing equipment as needed, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment.

C6.3.9.6.6.4. Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

C6.3.9.6.6.5. Readily available personal protective equipment (appropriate to the materials stored), eyewash, and shower facilities.

C6.3.9.6.6.6. Testing and Maintenance of Equipment. All TWSAs and/or WSAs communications alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be maintained to ensure its proper operation in time of emergency.

C6.3.9.6.7. General Inspection Requirements

C6.3.9.6.7.1. General. The installation must inspect the TWSAs and/or WSAs for malfunctions and deterioration, operator errors, and discharges that may be causing, or may lead to, a release of HW constituents to the environment or threat to human health. The inspections must be conducted often enough to identify problems in time to correct them before they harm human health or the environment.

C6.3.9.6.7.2. Types of Equipment Covered. Inspections must include all equipment and areas involved in storage and handling of HW, including all containers and container storage areas, tank systems and associated piping, and all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

C6.3.9.6.7.3. Inspection Schedule. Inspections must be conducted according to a written schedule that is kept at the TWSA and/or WSA. The schedule must identify the types of problems (e.g., malfunctions or deterioration) that are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, or eroding dike).

C6.3.9.6.7.4. Frequency of Inspections. Minimum frequencies for inspecting containers and container storage areas are found in C6.3.9.1.8. Minimum frequencies for inspecting tank systems are found in C6.3.9.5.2. For equipment not covered by those sections, the inspection frequency should be based on the rate of possible deterioration of the equipment and probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use.

C6.3.9.6.7.5. Remedy of Problems Identified by Inspection. The installation must remedy any deterioration or malfunction of equipment or structures that the inspection reveals on a schedule, which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, action must be taken immediately.

C6.3.9.6.7.6. Maintenance of Inspection Records. The installation must record inspections in an inspection log or summary, and keep these records for at least five years from the date of inspection. At a minimum, these records must include the date and time of inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

C6.3.9.6.8. Storage Practices

C6.3.9.6.8.1. Compatible Storage. The storage of ignitable, reactive, or incompatible wastes must be handled so that it does not threaten human health or the environment. Dangers resulting from improper storage of incompatible wastes include generation of extreme heat, fire, and explosion, and generation of toxic gases.

C6.3.9.6.8.2. General Requirements for Ignitable, Reactive, or Incompatible Wastes. The TWSA and/or WSA manager must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the TWSA and/or WSA personnel must confine smoking and open flame to specially designated locations. "No smoking" signs, or appropriate icon, must be conspicuously placed wherever there is a hazard from ignitable or reactive waste. In areas where

access by non-English speaking persons is expected, the "no smoking" legend must be written in English, Italian, and in any other language predominant in the area. Water-reactive waste cannot be stored in the same area as flammable and combustible liquid.

C6.3.9.6.9. Closure and Closure Plans

C6.3.9.6.9.1. Closure. At closure of a TWSA and or WSA, HW and HW residues must be removed from the containment system including remaining containers, liners, and bases. Closure should be done in a manner that eliminates or minimizes the need for future maintenance or the potential for future releases of HW and according to the Closure Plan.

C6.3.9.6.9.2. Closure Plan. Closure plans will be developed before a new TWSA and/or WSA is opened. A closure plan will be developed for each existing TWSA and/or WSA. The closure plan will be implemented concurrent with the decision to close the TWSA and/or WSA. The closure plan will include: estimates of the storage capacity of HW, steps to be taken to remove or decontaminate all waste residues, and estimate of the expected date for closure.

C6.3.9.7. Additional Requirements for Ignitable, Reactive, or Incompatible Wastes

C6.3.9.7.1. Special Requirements for Ignitable or Reactive Waste. Areas that store containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) inside the installation's boundary.

C6.3.9.7.2. Special Requirements for Incompatible Wastes. Incompatible wastes and materials must not be placed in the same container.

C6.3.9.8. Contingency Plan

C6.3.9.8.1. Each installation will have a contingency plan that describes actions to be taken to contain and clean up spills and releases of HW in accordance with the provisions of Chapter 18, "Spill Prevention & Response Planning."

C6.3.9.8.2. Copies of Contingency Plan. A current copy of the installation contingency plan must be:

C6.3.9.8.2.1. Maintained at each HWAP, TWSA and/or WSA (HWAPs need maintain only portions of the contingency plan that are pertinent to their facilities and operation); and

C6.3.9.8.2.2. Submitted to all police departments, fire departments, hospitals, and emergency response teams identified in the plan, and upon which the plan relies to provide emergency services. Plans, including appropriate references to the Workplace Risk Evaluation (see Chapter 5, "Hazardous Material"), should be available in both English and Italian.

C6.3.9.9. Tank Systems. The following criteria apply to all storage tanks containing HW. See Chapter 19 "Underground Storage Tanks," for criteria dealing with underground storage tanks (USTs) containing petroleum, oil, and lubricants (POL) and hazardous substances.

C6.3.9.9.1. Application. The requirements of this section apply to TWSAs and/or WSAs that use tank systems for storing or treating HW. Tank systems that are used to store or treat HW that contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in C6.3.9.9.4 (Containment and Detection of Releases). Tank systems, including sumps, that serve as part of a secondary containment system to collect or contain releases of HW, are exempted from the requirements in C6.3.9.9.4.

C6.3.9.9.2. Assessment of the Integrity of an Existing Tank System. For each existing tank system that does not have secondary containment meeting the requirements of subparagraph C6.3.9.9.4, installations must determine annually whether the tank system is leaking or is fit for use. Tightness tests for UST systems shall be conducted according to the schedule specified in Chapter 19, "Underground Storage Tanks." Installations must obtain, and keep on file at the TWSA and/or WSA, a written assessment of UST-system integrity reviewed and certified by a competent authority.

C6.3.9.9.3. Design and Installation of New Tank Systems or Components. Managers of TWSAs and/or WSAs installing new tank systems or components must obtain a written assessment, reviewed and certified by a competent authority attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail.

C6.3.9.9.4. Containment and Detection of Releases. To prevent the release of HW or hazardous constituents to the environment, secondary containment that meets the requirements of this subparagraph must be:

C6.3.9.9.4.1. Provided for all new tank systems or components, prior to their being put into service;

C6.3.9.9.4.2. Provided for those existing tank systems when the tank system annual leak test detects leakage;

C6.3.9.9.4.3. Provided for tank systems that store or treat HW by 1 January 1999;

C6.3.9.9.4.4. Provided for above-ground storage tank (AST) used for hazardous waste storage. Each containment system shall meet the larger of the following volumes:

C6.3.9.9.4.4.1 Equal to the volume of the largest AST plus sufficient freeboard to allow for precipitation and expansion of product; and

C6.3.9.9.4.4.2 Equal to one-third of the total capacity stored in the ASTs in the containment system.

C6.3.9.9.4.5. Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any

time during the use of the tank system; and capable of detecting and collecting releases and accumulated liquid until the collected material is removed; and

C6.3.9.9.4.6. Constructed to include one or more of the following: a liner external to the tank, a vault, or double-walled tank.

C6.3.9.9.5. General Operating Requirements

C6.3.9.9.5.1. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

C6.3.9.9.5.2. The installation must inspect and log at least once each operating day:

C6.3.9.9.5.2.1 The above-ground portions of the tank system, if any, to detect corrosion or releases of waste;

C6.3.9.9.5.2.2 Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

C6.3.9.9.5.2.3 The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

C6.3.9.9.5.3. The installation must inspect cathodic protection systems to ensure that they are functioning properly. The proper operation of the cathodic protection system must be confirmed within 6 six months after initial installation and annually thereafter. All sources of impressed current must be inspected and/or tested, as appropriate, or at least every other month. The installation manager must document the inspections in the operating record of the TWSA and/or WSA site.

C6.3.9.9.6. Response to Leaks or Spills and Disposition of Leaking or Unfit-For-Use Tank Systems. A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately and repaired or closed. Installations must satisfy the following requirements:

C6.3.9.9.6.1. Cessation of use; prevention of flow or addition of wastes. The installation must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

C6.3.9.9.6.2. Containment of visible releases to the environment. The installation must immediately conduct an inspection of the release and, based upon that inspection:

C6.3.9.9.6.2.1 Prevent further migration of the leak or spill to soils or surface water

C6.3.9.9.6.2.2 Remove and properly dispose of any contamination of the soil or surface water

C6.3.9.9.6.2.3 Remove free product to the maximum extent possible

C6.3.9.9.6.2.4 Continue monitoring and mitigating for any additional fire and safety hazards posed by vapors or free products in subsurface structures

C6.3.9.9.6.3. Make required notifications and reports.

C6.3.9.9.7. Closure. At closure of a tank system, the installation must remove or decontaminate HW residues, contaminated containment system components (liners, etc.), contaminated soils to the extent practicable, and structures and equipment.

C6.3.9.10. Hazardous Waste Disposal

C6.3.9.10.1. Use of DLA Disposition Services. All DoD HW should normally be disposed of through DLA Disposition Services. A decision not to use DLA Disposition Services for HW disposal may be made in accordance with DoDD 4001.1 to best accomplish the installation mission, but should be concurred with by the component chain of command to ensure that installation contracts and disposal criteria are at least as protective as criteria used by DLA Disposition Services.

C6.3.9.10.2. In-Country & Out-of-Country Disposal. Installations and components shall use Italian-authorized companies to treat or dispose of their specific waste.

C6.3.9.10.2.1. When HW cannot be disposed of in accordance with this FGS within Italy, it will either be retrograded to the United States or, if permissible under international agreements, transferred to another country outside the United States where it can be disposed of in an environmentally sound manner and in compliance with FGS applicable to the country of disposal, if any exist. Transshipment of HW to a country other than the United States for disposal must be approved by, at a minimum, the DUSD(I&E) (Note: delegated to DLA Disposition Services on 25 May 1995).

C6.3.9.10.3. Recycling & Reuse Options. Hazardous waste will be recycled or reused to the maximum extent practical. Safe and environmentally acceptable methods will be used to identify, store, prevent leakage, and dispose of hazardous waste, to minimize risks to health and the environment.

C6.3.9.10.3.1. Installations shall utilize Italian consortiums, when required, to recycle/recover hazardous waste. DLA Disposition Services will assist the installations in identifying those Italian consortiums that are required to accept and recycle/recover selected waste streams (e.g., consortium for lead-acid battery recycling, consortium for used lubricant oil recycling, etc.).

C6.3.9.10.4. Incinerator Standards. This subparagraph applies to incinerators that incinerate HW as well as boilers and industrial furnaces that burn HW for any recycling purposes.

C6.3.9.10.4.1. All incinerators used to dispose of HW must be authorized. DoD installations that intend to operate on-base incinerators and must provide the Italian Base Commander with sufficient information to seek authorization of their incinerator (see Chapter 1 for the process). DoD facilities must consult with the DoD LEC prior to notifying the Italian Base Commander.

C6.3.9.10.4.2. A license, authorization, or DoD LEC approval for incineration of HW must require the incinerator to be designed to include appropriate equipment as well as to be operated according to management practices (including proper combustion temperature, waste feed rate, combustion gas velocity, and other relevant criteria) to effectively destroy hazardous constituents and control harmful emissions. An authorization, licensing, or approval scheme that would require an incinerator to achieve the standards set forth in either subparagraphs C6.3.9.10.4.2.1. or C6.3.9.10.4.2.2. is acceptable.

C6.3.9.10.4.2.1. The incinerator achieves a destruction and removal efficiency of 99.99% for the organic hazardous constituents that represent the greatest degree of difficulty of incineration in each waste or mixture of waste. The incinerator must minimize carbon monoxide in stack exhaust gas, minimize emission of particulate matter, and emit no more than 1.8 kg (4 pounds) of hydrogen chloride per hour.

C6.3.9.10.4.2.2. The incinerator has demonstrated, as a condition for obtaining a license, authorization, or DoD LEC approval, the ability to effectively destroy the organic hazardous constituents that represent the greatest degree of difficulty of incineration in each waste or mixture of waste to be burned. For example, this standard may be met by requiring the incinerator to conduct a trial burn, submit a waste feed analysis and detailed engineering description of the facility, and provide any other information that may be required to enable the competent Italian authority or the DoD LEC to conclude that the incinerator will effectively destroy the principal organic hazardous constituents of each waste to be burned.

C6.3.9.10.5. All hazardous waste treatment (disposal, recycling, recovery, etc.) shall be authorized (see C6.3.9.10.4.1). Authorizations are granted for specific types of wastes and treatments. A simplified authorization can be obtained for the waste recovery activities listed in Appendix B.5. DoD waste generators who intend to treat their hazardous waste on their installation shall consult with the DoD LEC (via the Component chain of command) and shall provide the Italian Base Commander with sufficient information to seek authorization for the treatment activity. A simplified authorization can be obtained for the waste recovery activities listed in Appendix B.5.

C6.3.9.10.5.1. Waste containing POPs shall be disposed of or recovered using the following options (included in Appendix B.2 and B.3):

C6.3.9.10.5.1.1. D9 - Physico-chemical treatment;

C6.3.9.10.5.1.2. D10 - Incineration on land;

C6.3.9.10.5.1.3. R1 - Use principally as a fuel or other means to generate energy, excluding waste containing PCBs; or

C6.3.9.10.5.1.4. R4 - Recycling/reclamation of metals and metal compounds, under the following conditions:

6.3.9.10.5.1.4.1 The operations are restricted to residues from iron- and steel-making processes such as dusts or sludge from gas treatment or mill scale or zinc-containing filter dusts from steelworks, dusts from gas cleaning systems of copper smelters and similar wastes and lead-containing leaching residues of the non-ferrous metal production. Waste containing PCBs is excluded. The operations are restricted to processes for the recovery of iron and iron alloys (blast furnace, shaft furnace and hearth furnace) and non-ferrous metals (Waelz rotary kiln process, bath melting processes using vertical or horizontal furnaces).

6.3.9.10.5.1.4.2 Pre-treatment prior to destruction or irreversible transformation may be performed, provided that a substance listed in Appendix B.6 that is isolated from the waste during the pre-treatment is subsequently disposed using the above listed operations. In addition, repackaging and temporary storage operations may be performed prior to such pre-treatment or prior to destruction or irreversible transformation.

6.3.9.10.5.1.4.3 Waste containing any substances listed in Appendix B.6 may be otherwise disposed with other waste operations listed in Appendix B.2 and B.3, provided that the content of the listed substances in the waste is below the concentration limits specified in Appendix B.6.

C6.3.9.11. Scrap Vehicles, Tires, & Other Car Parts

C6.3.9.11.1. Vehicles that are no longer usable and need to be dismantled shall be turned over to an authorized collection center. Motor vehicles may also be returned to the new (or used) vehicle dealer, when purchasing a new (or replacement) vehicle on the open market. The collection center is responsible for dismantling the vehicle, recovering of recyclable materials, and disposing of the scrap metal. In addition, the collection center will issue a certificate to the former vehicle owner releasing him/her from any penal or civil liability relating to the disposal of the vehicle. Vehicle spare parts (including tires, but excluding parts related to vehicle safety) can also be collected at the centers and sold on the open market, or disposed of as hazardous/non-hazardous waste, according to classification indicated in the European List of Wastes. Vehicle repair facilities shall consign directly to a collection center registered with the National registry, or to an operator authorized to collect and transport waste, regarding the used pieces that are waste resulting from the repair of vehicles.

C6.3.9.11.2. Scrap vehicle collection centers shall be authorized (in most cases, scrap vehicles are classified as hazardous waste and are therefore subject to the hazardous waste storage restrictions in the FGS). A DoD installation that intends to operate a scrap vehicle collection center shall provide the Italian Base Commander with sufficient information to seek authorization (see Chapter 1 for the process).

C6.3.9.12. Criteria for Batteries

C6.3.9.12.1. Lead Acid Batteries. Lead-acid batteries shall be managed as HW and shall be transferred (with other lead wastes) to the appropriate Italian mandatory consortium or authorized agent companies for the collection and recycling of used lead-acid batteries.

C6.3.9.12.2. Mercury, Nickel-Cadmium, & Lithium Batteries. The following classifications of these batteries shall be turned over to authorized members of the consortium for hazardous batteries:

C6.3.9.12.2.1. Mercury batteries or accumulators containing more than 0.0005% of mercury by weight (except for button batteries with a mercury level < 2% of weight);

C6.3.9.12.2.2. Portable batteries or accumulators including those incorporated into equipment, containing more than 0.0002% of cadmium by weight, except for batteries and accumulators intended for use in:

C6.3.9.12.2.2.1. Emergency systems and alarms, including emergency lights;

C6.3.9.12.2.2.2. Medical equipment; and

C6.3.9.12.2.2.3. Cordless electric utensils.

C6.3.9.12.2.3. In addition, nickel-cadmium and lithium batteries shall be turned over to authorized members of the consortium for hazardous batteries. Installations will follow the appropriate manifesting and record-keeping criteria when transferring the waste batteries to the consortium.

C6.3.9.13. Standards for the Management of Used Oil

C6.3.9.13.1. Used Oil Burned for Energy Recovery. Used oil fuel generated directly by the installation may be burned for energy recovery only in the following devices located within the boundary of the installation. This activity requires authorization. Installations that intend to burn used oil generated at their installation for energy recovery shall provide the Italian Base Commander with sufficient information to seek authorization (see Chapter 1 for the process).

C6.3.9.13.1.1. Industrial furnaces.

C6.3.9.13.1.2. Boilers that are identified as follows:

C6.3.9.13.1.2.1. Industrial boilers with a thermal capacity ≥ 6 MW (20.48 million Btu/hr) located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

C6.3.9.13.1.2.2. Utility boilers with a thermal capacity ≥ 6 MW (20.48 million Btu/hr) used to produce electric power, steam, or heated or cooled air, or other gases or fluids;

C6.3.9.13.1.3. Used oil shall not be used as a fuel supplement in boilers/thermal plants with a thermal capacity < 6 MW (20.48 million Btu/hr). Combustion of used oils containing PCBs and PCTs in concentrations ≥ 25 ppm is prohibited. The maximum emission limits for the following substances shall be met using the testing methodologies and frequencies established in the site-specific authorization:

Parameter	Maximum Emission Limit (as mg/m³)
Cd	0.2
Ni	1
Cr ^{VI}	1
Cu	5
Cl	30
F	5

Note: see Chapter 2, “Air Emissions” for more information

C6.3.9.13.1.4. To ensure proper handling and segregation from hazardous waste, used oil fuel intended for energy recovery shall be labeled with the words “used oil fuel for energy recovery.”

C6.3.9.13.2. Prohibitions on Dust Suppression or Road Treatment. Used oil, hazardous waste, or used oil contaminated with any HW will not be used for dust suppression or road treatment.

C6.3.9.13.3. Use of the Italian Mandatory Consortium for Used Oil. Used oil management, transportation, and disposal for all used oil other than used oil fuel (burned for energy recovery within the DoD installation; see C6.3.9.13.1) shall follow the hazardous waste storage, handling, and record-keeping criteria in this Chapter. Waste lubricant oil shall be transferred to the appropriate Italian mandatory consortium or its authorized agent companies for the collection and recycling of used lubricant oil.

C6.3.9.13.4. Store used oil in a manner that prevents mixing it with new oil, hazardous waste, and/or other substances.

C9. CHAPTER 9PETROLEUM, OIL, & LUBRICANTSC9.1. SCOPE

This Chapter contains criteria to control and abate pollution resulting from the storage, transport, and distribution of petroleum products. Criteria for Underground Storage Tanks (UST) containing POL or hazardous material products are addressed in Chapter 19, "Underground Storage Tanks." POL spill prevention and response planning criteria are contained in Chapter 18, "Spill Prevention & Response Planning."

C9.2. DEFINITIONS

C9.2.1. Aboveground Storage Container. POL storage containers, exempt from UST criteria, that are normally placed on or above the surface of the ground. POL storage containers located above the floor and contained in vaults or basements, bunkered containers, and also partially buried containers are considered aboveground storage containers. For the purposes of this Chapter, this includes any mobile or fixed structure, tank, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, and oil distribution. This also includes equipment in which oil is used as an operating fluid, but excludes equipment in which oil is used solely for motive power.

C9.2.2. Below Ground Storage Container. Completely buried POL storage containers, including deferred USTs, that are exempt from all criteria in Chapter 19, "Underground Storage Tanks." For purposes of this definition, ONLY below ground storage containers that are exempt from requirements of Chapter 19 are counted toward the aggregate thresholds in definition of POL facility below.

C9.2.3. Loading/Unloading Racks. Location where tanker trucks/rail cars are loaded and unloaded by pipes, pumps, and loading arms.

C9.2.4. Loading/Unloading Areas. Any location where POL is authorized to be loaded or unloaded to or from a POL storage container.

C9.2.5. Pipeline Facility. Includes new and existing pipes, pipeline rights of way, auxiliary equipment (e.g., valves and manifolds), and buildings or other facilities used in the transportation of POL.

C9.2.6. POL. Refined petroleum, oils, and lubricants, including, but not limited to, petroleum, fuel, lubricant oils, synthetic oils, mineral oils, animal fats, vegetable oil, sludge, and POL mixed with wastes other than dredged spoil.

C9.2.7. POL Facility. An installation with either:

C9.2.7.1. An aggregate aboveground storage container capacity (excluding below ground storage containers) of $\geq 5,000$ liters (1,320 gallons); or

C9.2.7.2. An aggregate below ground storage container capacity of $\geq 159,091$ liters (42,000 gallons); or

C9.2.7.3. A pipeline facility as identified in the definition above.

C9.2.8. POL Storage Container. POL containers with capacities > 208 liters (55 gallons) (mobile/portable and fixed; and above and below ground storage containers). USTs required to meet all requirements of Chapter 19 are EXCLUDED from the definition of POL storage containers.

C9.3. CRITERIA

C9.3.1. Applicability. The below criteria apply only at POL Facilities as defined above.

C9.3.2. General POL Storage Container Criteria

C9.3.2.1. Inspection and Testing. Inspection and testing shall be conducted on all POL storage containers in accordance with recognized industry standards.

C9.3.2.2. Secondary Containment. POL storage containers must be provided with a secondary means of containment (e.g., dike) capable of holding the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation and expansion of product. Alternatively, POL storage containers that are equipped with adequate technical spill and leak prevention options (such as overfill alarms and flow shutoff or restrictor devices) may provide secondary containment by use of a double wall container. Below ground storage containers may meet this criterion by use of a leak barrier with a leak detection pipe and basin. A licensed technical authority may waive this secondary containment criteria for below ground storage containers.

C9.3.2.3. Permeability. Permeability for containment areas will be a maximum of 10^{-7} cm/sec.

C9.3.2.4. Containment Area Drainage. Drainage of stormwater from containment areas will be controlled by a valve that is locked closed when not in active use. Stormwater will be inspected for petroleum sheen before being drained from containment areas. If a petroleum sheen is present it must be collected with sorbent materials prior to drainage, or treated using an oil-water separator. Disposal of sorbent material exhibiting the hazardous characteristics in Appendix B.1 will be in accordance with Chapter 6, "Hazardous Waste."

C9.3.2.5. Valves and Piping. All aboveground valves, piping, and appurtenances associated with POL storage containers shall be periodically inspected in accordance with recognized industry standards.

C9.3.3. Additional POL Storage Container Criteria

C9.3.3.1. Testing. Buried Piping associated with POL storage containers shall be tested for integrity and leaks at the time of installation, modification, construction, relocation, or replacement. New buried piping must be protected against corrosion in accordance with recognized industry standards.

C9.3.3.2. Storage Container Design. POL storage containers shall be designed or modernized in accordance with good engineering practice to prevent unintentional discharges by use of overflow prevention devices.

C9.3.3.3. Completely and Partially Buried Metallic POL Storage Containers. These must be protected from corrosion in accordance with recognized industry standards.

C9.3.4. Storage Container Wastes

C9.3.4.1. POL container cleaning wastes frequently have hazardous characteristics (as defined in Appendix B.1) and must be handled and disposed of in accordance with requirements of Chapter 6, "Hazardous Waste." POL container waste and handling procedures include:

C9.3.4.2. POL container cleaning wastes (sludge and washwaters) must be disposed of in accordance with the criteria of Chapter 6, "Hazardous Waste" or Chapter 7, "Solid Waste," as applicable.

C9.3.4.3. POL container bottom waters, which are periodically drained, must be collected and disposed of in accordance with Chapter 6, "Hazardous Waste" or Chapter 7, "Solid Waste," as applicable.

C9.3.5. General Transport and Distribution Criteria

C9.3.5.1. Loading/Unloading Racks and Areas

C9.3.5.1.1. Secondary Containment. Loading/unloading racks shall be designed to handle discharges of at least the maximum capacity of any single compartment of a rail car or tank truck loaded or unloaded at the loading/unloading rack.

C9.3.5.1.2. Departing Vehicle Warning Systems. Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break interlock system at loading/unloading racks to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines.

C9.3.5.1.3. Vehicle Inspections. Prior to filling and prior to departure of any tank car or tank truck, closely inspect for discharges from the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit.

C9.3.5.1.4. Loading/Unloading Areas. Provide appropriate containment and / or diversionary structures (dikes, berms, culverts, spill diversion ponds, etc.) or equipment (sorbent

materials, weirs, booms, other barriers etc.) at loading/unloading areas to prevent a discharge of POL which reasonably could be expected to cause a sheen on waters of Italy defined in Chapter 4, "Wastewater."

C9.3.5.2. POL Pipeline Facilities

C9.3.5.2.1. Provisions for Testing and Maintenance. All pipeline facilities carrying POL must be tested and maintained in accordance with recognized industry standards, including:

C9.3.5.2.1.1. Each pipeline operator handling POL will prepare and follow a procedural manual for operations, maintenance and emergencies.

C9.3.5.2.1.2. Each new pipeline facility and each facility in which pipe has been replaced or relocated must be tested in accordance with recognized industry standards, without leakage before being placed in service.

C9.3.5.2.1.3. All new POL pipeline facilities must be designed and constructed to meet recognized industry construction standards.

C9.3.6. Personnel Training. At a minimum, all personnel handling POL shall be trained annually in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; general facility operations; and the applicable contents of the facility Spill Plan.

C11. CHAPTER 11

PESTICIDES

C11.1. SCOPE

This Chapter contains criteria regulating the use, storage, and handling of pesticides, but does not address the use of these materials by individuals acting in an unofficial capacity in a residence or garden. The disposal of pesticides is covered in Chapter 6, “Hazardous Waste” and Chapter 7, “Solid Waste.”

C11.2. DEFINITIONS

C11.2.1. Certified Pesticide Applicators. All personnel who apply pesticides and who have been formally certified in accordance with DoD Manual 4150.07-M, “Volume 1 DoD Pest Management Training: The DoD Plan for the Certification of Pesticide Applicators” (which accepts Italian certification in appropriate circumstances). Local nationals applying pesticides classified as toxic or very toxic or harmful shall also hold a valid Italian authorization.

C11.2.2. Integrated Pest Management (IPM). A planned program incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, material, or the environment. IPM uses targeted, sustainable (effective, economical, environmentally sound) methods, including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control and, where necessary, the judicious use of least-hazardous pesticides.

C11.2.3. Local National. A DoD employee hired under Italian employment conditions.

C11.2.4. Pests. Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, undesirable vegetation, and other organisms (except for microorganisms that cause human or animal disease) that adversely affect the well being of humans or animals; attack real property, supplies, equipment, or vegetation; or are otherwise undesirable.

C11.2.5. Pest Management Consultant. Professional DoD pest management personnel located at component headquarters, field operating agencies, major commands, facilities engineering field divisions or activities, or area support activities who provide technical and management guidance for the conduct of installation pest management operations. Some pest management consultants may be designated by their component as certifying officials.

C11.2.6. Pesticide. Any substance or mixture of substances, including biological control agents, that may prevent, destroy, repel, or mitigate pests. Pesticide generally refers to insecticides, rodenticides, herbicides, and other chemicals used to control pests and undesirable vegetation.

C11.2.7. Pesticide Waste. Materials subject to pesticide disposal restrictions including:

C11.2.7.1. Any pesticide that has been identified by the pest management consultant as cancelled under U.S. or Italian authority;

C11.2.7.2. Any pesticide that does not meet specifications, is contaminated, has been improperly mixed, or otherwise unusable, whether concentrated or diluted;

C11.2.7.3. Any material used to clean up a pesticide spill; or

C11.2.7.4. Any containers, equipment, or material contaminated with pesticides; empty pesticide containers shall be disposed of in accordance with C11.3.12.

C11.2.8. Registered Pesticide. A pesticide that has been registered and approved for sale or use within the United States or Italy.

C11.2.9. Toxic, Very Toxic, or Harmful Pesticides. Dangerous pesticides presenting the following hazardous characteristics:

C11.2.9.1. Very toxic (symbol T⁺ on labels): pesticides which in very low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;

C11.2.9.2. Toxic (symbol T on labels): pesticides which in low quantities cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin;

C11.2.9.3. Harmful (symbol Xn on labels): pesticides which may cause death or acute or chronic damage to health when inhaled, swallowed or absorbed via the skin.

C11.3. CRITERIA

C11.3.1. Pesticide Application Records

C11.3.1.1. All pesticide applications (excluding arthropod repellents on skin and clothing) will be recorded daily, using DD Form 1532-1 (Pest Management Maintenance Report) or a computer-generated equivalent. The Pest Management Maintenance Report has been assigned Report Control Symbol DD-A&T(A&AR)1080 in accordance with DoD 8910-M "DoD Procedures for Management of Information Requirements." These records will be:

C11.3.1.1.1. Submitted at least quarterly to the Pest Management Consultant; and

C11.3.1.1.2. Archived for permanent retention in accordance with specific service procedures.

C11.3.1.2. The following additional information shall be included:

C11.3.1.2.1. For non-agricultural use: reason for application; and

C11.3.1.2.2. For stored vegetal foodstuff: used equipment and/or method, reason for application.

C11.3.1.2.3. Local National certified pesticide applicators shall also record their pesticide application information related to food and crops in a Pesticide Application Register. The register shall be signed by the pesticide applicator and shall remain at the user site or in the administrative office.

C11.3.2. Installations will implement and maintain a current pest management plan that includes measures for all installation activities and satellite sites that perform pest control. This written plan will include IPM procedures for preventing pest problems in order to minimize the use of pesticides. The plan must be reviewed and approved in writing by the appropriate pest management consultant. Italian regional pesticide limitations shall be incorporated into the plan.

C11.3.3. All pesticide applications will be made by certified pesticide applicators, with the following exceptions:

C11.3.3.1. New DoD employees who are not certified may apply pesticides that are not classified as toxic, very toxic or harmful during an apprenticeship period not to exceed 2 years and only under the supervision of a certified pesticide applicator;

C11.3.3.2. Arthropod skin and clothing repellents; and

C11.3.3.3. Pesticides applied as part of an installation's self-help program that are not classified as toxic, very toxic or harmful.

C11.3.4. All pesticide applicators will be included in a medical surveillance program to monitor the health and safety of persons occupationally exposed to pesticides.

C11.3.5. All pesticide applicators will be provided with personal protective equipment appropriate for the work they perform and the types of pesticides to which they may be exposed.

C11.3.6. Installations will only use registered pesticides that are on the list approved by the Armed Forces Pest Management Board (AFPMB) that have Italian approved equivalents (i.e., same manufacturer and same formulations), or Italian registered pesticides approved in writing by the appropriate pest management consultant. This may be documented as part of the approval of the pest management plan.

C11.3.7. Pesticides will be included in the installation spill contingency plan. (See Chapter 18, "Spill Prevention & Response Planning.")

C11.3.8. Pest management facilities, including mixing and storage areas, will comply with Armed Forces Pest Management Board Technical Guide No. 17, "Military Handbook - Design of Pest Management Facilities."

C11.3.9. All pesticide applications will be in accordance with guidance given on the pesticide label. Labels of U.S. products will bear the appropriate use instructions and precautionary message based on the toxicity category of the pesticide ("danger/pericolo," "warning/attenzione," or "caution/avvertimento"). If Local Nationals will be using the

pesticides, the precautionary messages and use instructions will be in English and Italian. Pesticides classified as hazardous chemicals shall be labeled in accordance with C5.3.7.

C11.3.10. Safety Data Sheets (SDSs) and labels for all pesticides will be available at the storage and holding facility. SDSs for pesticides classified as hazardous chemicals shall meet the requirements of C5.3.5. and shall be maintained in accordance with C5.3.6.

C11.3.11. Pesticide storage areas will contain a readily-visible current inventory of all items in storage and should be regularly inspected and secured to prevent unauthorized access. Pesticide derived waste awaiting disposal shall be stored and labeled in accordance with Chapter 6, "Hazardous Waste," and either segregated from pesticide products or transferred to a waste accumulation point or storage area (see Chapter 6).

C11.3.12. Unless otherwise restricted or canceled, pesticides in excess of installation needs will be redistributed within the supply system or disposed of in accordance with procedures outlined below:

C11.3.12.1. The generator of pesticide wastes will determine whether or not the waste is hazardous, in accordance with Chapter 6, "Hazardous Waste."

C11.3.12.2. Pesticide waste determined to be hazardous waste will be disposed of in accordance with the criteria for hazardous waste disposal in Chapter 6, "Hazardous Waste."

C11.3.12.3. Pesticide waste that is determined not to be a hazardous waste will be disposed of in accordance with the label instructions, through DLA Disposition Services. Empty pesticide containers shall not be reused.

C18. CHAPTER 18

SPILL PREVENTION AND RESPONSE PLANNINGC18.1. SCOPE

This Chapter contains criteria to plan for, prevent, control, and report spills of POL and hazardous substances resulting from DoD activities. It is DoD policy to prevent spills of these substances due to DoD activities and to provide for prompt, coordinated response to contain and clean up spills that might occur. Remediation beyond that required for the initial response is conducted pursuant to DoDI 4715.8 “Environmental Remediation for DoD Activities Overseas” and EUCOM Directive 80-2 “Environmental Executive Agent Remediation Policy.”

C18.2. DEFINITIONS

C18.2.1. Aboveground Storage Container. POL storage containers, exempt from UST criteria, that are normally placed on or above the surface of the ground. POL storage containers located above the floor and contained in vaults or basements, bunkered containers, and also partially buried containers are considered aboveground storage containers. For the purposes of this Chapter, this includes any mobile or fixed structure, tank, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, and oil distribution. This also includes equipment in which oil is used as an operating fluid but excludes equipment in which oil is used solely for motive power.

C18.2.2. Decontamination Wastes. Waste materials generated during the decontamination of equipment and personnel used during spill response including but not limited to purging water, rinsing water, plastic containers, rags, gloves, and other personal protective equipment.

C18.2.3. Facility Incident Commander (FIC) (previously known as the Installation On-scene Coordinator). The official who coordinates and directs DoD control and cleanup efforts at the scene of a POL or hazardous substance spill due to DoD activities on or near the installation. This official is designated by the installation commander.

C18.2.4. Facility Response Team (FRT) (previously known as the Installation Response Team). A team performing emergency functions as defined and directed by the FIC.

C18.2.5. Hazardous Substance. Any substance having the potential to do serious harm to human health or the environment if spilled or released in reportable quantity. A list of these substances and the corresponding reportable quantities is contained in Appendix A. Hazardous substances do not include:

C18.2.5.1. Petroleum, including crude POL or any fraction thereof, that is not otherwise specifically listed or designated as a hazardous substance above.

C18.2.5.2. Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

C18.2.6. Oil. Oil of any kind or in any form, including (but not limited to) petroleum, fuel POL, lube oils, animal fats, vegetable oil, sludge, POL refuse, and POL mixed with wastes other than dredged spoil.

C18.2.7. POL. Refined petroleum, oils, and lubricants. (See also definition in Chapter 9, “Petroleum, Oil, and Lubricants.”)

C18.2.8. Significant Spill. An uncontained release to the land or water in excess of any of the following quantities:

C18.2.8.1. For a hazardous wastes or hazardous substances identified as a result of inclusion in Appendix A, “List of Hazardous Substances & Materials,” any quantity in excess of the reportable quantity listed in Appendix A.

C18.2.8.2. For POL or liquid or semi-liquid hazardous material, hazardous waste, or hazardous substances, in excess of 400 liters (110 gallons);

C18.2.8.3. For other solid hazardous material, in excess of 225 kg (500 pounds);

C18.2.8.4. For combinations of POL and liquid, semi-liquid, and solid hazardous materials, hazardous waste, or hazardous substance, in excess of 340 kg (750 pounds); or

C18.2.8.5. If a spill is contained inside an impervious berm, or on a nonporous surface, or inside a building and is not volatilized and is cleaned up, the spill is considered a contained release and is not considered a significant spill.

C18.2.9. Worst Case Discharge. The largest foreseeable discharge from the facility, under adverse weather conditions, as determined using as a guide the worst case discharge planning volume criteria in Appendix C, “Determination of Worst Case Discharge Planning Volume.”

C18.3. CRITERIA

C18.3.1. Spill Prevention Control and Reporting Plan Requirement. All DoD installations will prepare, maintain, and implement a Spill Prevention and Response Plan, which provides for the prevention, control, and reporting of all spills of POL and hazardous substances. The plan will provide measures to prevent and, to the maximum extent practicable, to remove a worst case discharge from the facility. The plan should be kept in a location easily accessible to the FIC and FRT.

C18.3.1.1. The plan will be updated at least every 5 years or:

C18.3.1.1.1. Within 6 months of any significant changes to operations;

C18.3.1.1.2. When there have been two significant spills to navigable waters in any 12-month period;

C18.3.1.1.3. When there has been a spill of 1,000 gallons or greater.

C18.3.1.2. The plan shall be certified by an appropriately licensed or certified technical authority ensuring that the plan considers applicable industry standards for spill prevention and environmental protection, that the plan is prepared in accordance with good engineering practice, and is adequate for the facility. Technical changes (i.e., non-administrative) to the plan require recertification.

C18.3.2. Prevention Section. The prevention section of the plan will, at a minimum, contain the following:

C18.3.2.1. Name, title, responsibilities, duties, and telephone number of the designated FIC and an alternate.

C18.3.2.2. General information on the installation including name, type or function, location and address, charts of drainage patterns, designated water protection areas, maps showing locations of facilities described in subparagraph C18.3.2.3., critical water resources, land uses, and possible migration pathways.

C18.3.2.3. An inventory of storage, handling, and transfer sites that could possibly produce a significant spill. For each listing, using maps as appropriate include a prediction of the direction and rate of flow and total quantity of POL or hazardous substance that might be spilled as a result of a major failure.

C18.3.2.4. An inventory of all POL and hazardous substances at storage, handling, and transfer facilities described in subparagraph C18.3.2.3.

C18.3.2.5. Procedures for the periodic integrity testing of all aboveground storage containers, including visual inspection and where deemed appropriate, another form of non destructive testing. The frequency and type of inspection and testing must take into account container size and design (i.e., floating/fixed roof, skid-mounted, elevated, cut and cover, partially buried, vaulted above-ground, etc.) and industry standards.

C18.3.2.6. Procedures for periodic inspection for all above ground valves, piping, and appurtenances associated with POL storage containers, in accordance with Chapter 9, "Petroleum, Oil, and Lubricants," subparagraph C9.3.2.5.

C18.3.2.7. Arrangements for Emergency Services. The plan will describe arrangements with installation and/or local police departments, fire departments, hospitals, contractors, and emergency response teams to coordinate emergency services.

C18.3.2.8. Means to Contact Emergency Services. The plan will include a telephone number or other means to contact the appropriate emergency services provider (e.g., installation fire department) on a 24-hour basis.

C18.3.2.9. A detailed description of the facility's prevention, control, and countermeasures, including structures and equipment for diversion and containment of spills, for each site listed in the inventory. Measures should permit, as far as practical, reclamation of spilled substances. Chapters governing hazardous materials, hazardous waste, POL,

underground storage tanks, pesticides, and PCBs provide specific criteria for containment structure requirements.

C18.3.2.10. When secondary containment is not feasible for any container listed in the inventory, the plan shall include a detailed explanation of measures that will be taken to prevent spills (e.g., pre-booming, integrity testing, frequent inspection), as determined by the licensed or certified technical authority.

C18.3.2.11. A list of all emergency equipment (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment) at each site listed in the inventory where this equipment is required. This list will be kept up-to-date. In addition, the plan will include the location and a physical description of each item on the list, and a brief outline of its capabilities.

C18.3.2.12. An evacuation plan for each site listed in the inventory, where there is a possibility that evacuation would be necessary. This plan will describe signal(s) to be used to begin evacuation, evacuation routes, alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires), and a designated meeting place.

C18.3.2.13. A description of deficiencies in spill prevention and control measures at each site listed in the inventory, to include corrective measures required, procedures to be followed to correct listed deficiencies, and any interim control measures in place. Corrective actions must be implemented within 24 months of the date of plan preparation or revision.

C18.3.2.14. Written procedures for:

C18.3.2.14.1. Operations to preclude spills of POLs and hazardous substances;

C18.3.2.14.2. Inspections; and

C18.3.2.14.3. Record-keeping requirements.

C18.3.2.15. Site-specific procedures should be maintained at each site on the facility where significant spills could occur.

C18.3.3. Spill Control Section. The control section of the plan (which may be considered a contingency plan) will identify resources for cleaning up spills at installations and activities, and to provide assistance to other agencies when requested. At a minimum, this section of the plan will contain:

C18.3.3.1. Provisions specifying the responsibilities, duties, procedures, and resources to be used to contain and clean up spills.

C18.3.3.2. A description of immediate response actions that should be taken when a spill is first discovered.

C18.3.3.3. The responsibilities, composition, and training requirements of the FRT.

C18.3.3.4. The command structure that will be established to manage a worst case discharge. Include an organization chart and the responsibilities and composition of the organization.

C18.3.3.5. Procedures for FRT alert and response to include provisions for:

C18.3.3.5.1. Access to a reliable communications system for timely notification of a POL spill or hazardous substance spill.

C18.3.3.5.2. Public affairs involvement.

C18.3.3.6. A current roster of the persons, and alternates, who must receive notice of a POL or hazardous substance spill, including a Defense Logistics Agency (DLA) Energy representative if applicable. The roster will include name, organization mailing address, and work and home telephone numbers. Without compromising security, the plan will include provisions for the notification of the emergency coordinator after normal working hours.

C18.3.3.7. The plan will provide for notification of the FIC, installation commander, and local authorities in the event of hazard to human health or environment.

C18.3.3.8. Assignment of responsibilities for making the necessary notifications, including notification to the emergency services providers.

C18.3.3.9. Surveillance procedures for early detection of POL and hazardous substance spills.

C18.3.3.10. A prioritized list of various critical water and natural resources that will be protected in the event of a spill.

C18.3.3.11. Other resources addressed in prearranged agreements that are available to the installation to clean up or reclaim a large spill due to DoD activities, if such a spill exceeds the response capability of the installation.

C18.3.3.12. Cleanup methods, including procedures and techniques used to identify, contain, disperse, reclaim, and remove POL, and hazardous substances used in bulk quantity on the installation.

C18.3.3.13. Procedures for the proper reuse and disposal of recovered substances, decontamination wastes, contaminated POL, and absorbent materials, and procedures to be accomplished prior to resumption of operations.

C18.3.3.14. A description of general health, safety, and fire prevention precautions for spill cleanup actions.

C18.3.3.15. A public affairs section that describes the procedures, responsibilities, and methods for releasing information in the event of a spill.

C18.3.4. Reporting Section. The reporting section of the spill plan will address the following:

C18.3.4.1. Recordkeeping when emergency procedures are invoked.

C18.3.4.2. Any significant spill will be reported to the FIC immediately. Immediate actions will be taken to eliminate the source and contain the spill.

C18.3.4.3. The FIC will immediately notify the appropriate In-Theater Component Commander and/or Defense Agency and the EEA and submit a follow-up written report when:

C18.3.4.3.1. The spill occurs inside a DoD installation and cannot be contained within any required berm or secondary containment;

C18.3.4.3.2. The spill exceeds 400 liters (110 gallons) of POLs;

C18.3.4.3.3. A water resource has been polluted by the spill; or

C18.3.4.3.4. The FIC has determined that the spill is significant.

C18.3.4.4. When a significant spill occurs inside a DoD installation and cannot be contained within the installation boundaries or threatens the local Italian drinking water resource, the appropriate in-theater component commander and/or Defense Agency, EEA, and Italian Base Commander shall be notified immediately.

C18.3.4.5. If a significant spill occurs outside of a DoD installation, the person in charge at the scene will immediately notify the authorities listed in subparagraph C18.3.4.4. and additionally will notify the local fire departments and obtain necessary assistance.

C18.3.4.6. In addition, when any spill occurs that results in soil or groundwater contamination exceeding or likely to exceed the concentrations listed in Table 18.1, measures implemented to contain the potential contamination and ensure an adequate level of protection for human health and environment shall be immediately reported to the Italian authorities.

C18.3.4.7. Within 48 hours after this initial notification of a spill, or as soon as possible, preliminary investigations shall be carried out to ascertain whether the concentrations listed in Table 18.1 have been exceeded.

C18.3.5. Training. Installations will provide necessary training and spill response drills to ensure the effectiveness of personnel and equipment.

C18.3.6. Further Actions. After completion of the initial response, any remaining free product and/or obviously contaminated soil will be appropriately removed and managed. Further actions will be governed by DoDI 4715.8, "Environmental Remediation for DoD Activities Overseas" and EUCOM Directive 80-2 "Environmental Executive Agent Remediation Policy."

Table 18.1. Contamination Threshold Concentrations for Soil and Groundwater by Site Use

Parameter	Soil		Groundwater ²
	Recreation, Private, and Residential Use	Commercial and Industrial Use	
Units	(mg/kg)	(mg/kg)	(µ/L)
Metals			
Aluminum	NA	NA	200
Antimony	10	30	5
Arsenic	20	50	10
Beryllium	2	10	4
Cadmium	2	15	5
Chromium (Total)	150	800	50
Chromium VI	2	15	5
Cobalt	20	250	50
Copper	120	600	1,000
Iron	NA	NA	200
Lead	100	1,000	10
Manganese	NA	NA	50
Mercury	1	5	1
Nickel	120	500	20
Selenium	3	15	10
Silver	NA	NA	10
Thallium	1	10	2
Tin	1	350	NA
Vanadium	90	250	NA
Zinc	150	1,500	3,000
Inorganic Compounds			
Boron	NA	NA	1,000
Cyanides (Total)	1	100	50
Fluorides	100	2,000	100
Nitrites	NA	NA	500
Sulfates	NA	NA	250,000
Organic Aromatic Compounds			
A Benzene	0.1	2	1
B Ethylbenzene	0.5	50	50
C Styrene	0.5	50	25
D Toluene	0.5	50	15
E para-Xylene	0.5	50	10
Sum of Aromatic Compounds B-E	1	100	NA
Polycyclic Aromatic Compounds ⁽¹⁾			
F Benzo(a)anthracene	0.5	10	0.1
G Benzo(a)pyrene	0.1	10	0.01
H Benzo(b)fluoranthene	0.5	10	0.1
I Benzo(k)fluoranthene	0.5	10	0.05
J Benzo(g,h,i)perylene	0.1	10	0.01
K Chrysene	5	50	5
L Dibenzo(a, e)pyrene	0.1	10	NA
M Dibenzo(a, l)pyrene	0.1	10	NA
N Dibenzo(a, i)pyrene	0.1	10	NA
O Dibenzo(a, h)pyrene	0.1	10	NA
P Dibenzo(a,h)anthracene	0.1	10	0.01

Parameter	Soil		Groundwater ²
	Recreation, Private, and Residential Use	Commercial and Industrial Use	
Q Indeno(1,2,3-c,d)pyrene	0.1	5	0.1
R Pyrene	5	50	50
Sum of Polycyclic Aromatic Compounds F-O	10	100	NA
Sum of Polycyclic Aromatics Compounds H, I, J, and N	NA	NA	0.1
Carcinogenic Aliphatic Chlorinated Compounds⁽¹⁾			
Chloromethane	0.1	5	1.5
1,2-Dichloroethane	0.2	5	3
1,1-Dichloroethylene	0.1	1	0.05
1,1,1-Trichloroethane	0.5	50	NA
Dichloromethane	0.1	5	NA
Esachlorobutadiene	NA	NA	0.15
Tetrachloroethylene (PCE)	0.5	20	1.1
Trichloroethylene	1	10	1.5
Trichloromethane	0.1	5	0.15
Vinyl Chloride	0.01	0.1	0.5
Sum of Organohalogenated Compounds	NA	NA	10
Non-Carcinogenic Aliphatic Chlorinated Compounds			
1,1-Dichloroethane	0.5	30	810
1,2-Dichloroethylene	0.3	15	60
1,2-Dichloropropane	0.3	5	0.15
1,1,2-Trichloroethane	0.5	15	0.2
1,2,3-Trichloropropane	1	10	0.001
1,1,2,2-Tetrachloroethane	0.5	10	0.05
Carcinogenic Aliphatic Halogenated Compounds			
Bromodichloromethane	0.5	10	0.17
Bromoform	0.5	10	0.3
Dibromochloromethane	0.5	10	0.13
1,2-Dibromoethane	0.01	0.1	0.001
Nitrobenzene Compounds			
Chloronitrobenzenes (each)	0.1	10	0.5
1,2-Dinitrobenzene	0.1	25	15
1,3-Dinitrobenzene	0.1	25	3.7
Nitrobenzene	0.5	30	3.5
Chlorobenzene Compounds			
1,2-Dichlorobenzene	1	50	270
1,4-Dichlorobenzene	0.1	10	0.5
Esachlorobenzene	0.05	5	0.01
Monochlorobenzene	0.5	50	40
Pentachlorobenzene	0.1	50	5
1,2,4,5-Tetrachlorobenzene	1	25	1.8
1,2,4-Trichlorobenzene	1	50	190
Non-Chlorinated Phenols⁽¹⁾			
Methylphenol (o-,m-,p-)	0.1	25	NA
Phenol	1	60	NA
Phenols and Chlorinated Phenols			
2-Chlorophenol	0.5	25	180

Parameter	Soil		Groundwater ²
	Recreation, Private, and Residential Use	Commercial and Industrial Use	
2,4-Dichlorophenol	0.5	50	110
Pentachlorophenol	0.01	5	0.5
2,4,6-Trichlorophenol	0.01	5	5
Aromatic Amines			
Aniline	0.05	5	10
Diphenylamine	0.1	10	910
p-Toluidine	0.1	5	0.35
m-Anisidine	0.1	10	NA
p-Anisidine	0.1	10	NA
Sum of Aromatic Amines (73-77)	0.5	25	NA
Pesticides			
Alachlor	0.01	1	0.1
Aldrin	0.01	0.1	0.03
Atrazine	0.01	1	0.3
Chlordane	0.01	0.1	0.1
DDD, DDT, DDE	0.01	0.1	0.1
Dieldrin	0.01	0.1	0.03
Endrin	0.01	2	0.1
α-Lindane	0.01	0.1	0.1
β-Lindane	0.01	0.5	0.1
γ-Lindane	0.01	0.5	0.1
Sum of Pesticides	NA	NA	0.5
Dioxins and Furans			
PCBs	0.06	5	0.01
Sum of PCDD and PCDF (TEF conversion)	1 x 10 ⁻⁵	1 x 10 ⁻⁴	4 x 10 ⁻⁶
Hydrocarbons			
C≤12	10	250	NA
C>12	50	750	NA
Other Compounds			
Asbestos (Fibers A > 10 mm)	1,000*	1,000*	NA
Acrylamide	NA	NA	0.1
n-Hexane	NA	NA	350
para-Phthalic Acid	NA	NA	37,000
Phthalic Acid Ester (each)	10	60	NA

Notes:

- 1 The table includes, for each chemical category, compounds that are frequently encountered at contaminated sites. For those compounds not specifically included in this table, the maximum concentration limits are derived by comparison with the compound more similar toxicologically.
 - 2 In those cases when the regulations for the protection of water from pollution include different values than those reported in this table and specify a timeframe to achieve these concentrations, the values of this table are replaced by those in the regulations and the approval of remedial projects must take into consideration these values and the implementation of applicable deadlines.
- * Corresponding to the analytical method detection limit.

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C19. CHAPTER 19UNDERGROUND STORAGE TANKSC19.1. SCOPE

This Chapter contains criteria to control and abate pollution resulting from POL products and hazardous materials stored in underground storage tanks (USTs). Standards for USTs containing hazardous wastes are covered in Chapter 6, "Hazardous Waste." Criteria for aboveground and below ground POL storage containers are addressed in Chapter 9, "Petroleum, Oil, & Lubricants."

C19.2. DEFINITIONS

C19.2.1. Deferred UST. A deferred UST is an underground tank system that fits into one of the following categories:

C19.2.1.1. A hydrant fuel distribution system; or

C19.2.1.2. A field-constructed tank.

C19.2.2. Hazardous Material. Any material defined as a hazardous material in Chapter 5, "Hazardous Material." The term does not include:

C19.2.2.1. Petroleum, including crude POL or any fraction thereof, that is not otherwise specifically listed or designated as a hazardous material above.

C19.2.2.2. Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

C19.2.3. Hazardous Material UST. A UST that contains a hazardous material (but not including hazardous wastes as defined in Chapter 6) or any mixture of such hazardous materials and petroleum, and which is not a petroleum UST.

C19.2.4. POL. Refined petroleum, oils, and lubricants.

C19.2.5. Tank Tightness Testing. A test which must be capable of detecting a 0.38 liter (0.1 gallon) per hour leak from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

C19.2.6. Underground Storage Tank (UST). Any tank including underground piping connected thereto, larger than 416 liters (110 gallons), which is used to contain POL products or hazardous material and the volume of which, including the volume of connected pipes, is $\geq 10\%$ beneath the surface of the ground, but does not include:

C19.2.6.1. Tanks containing heating oil used for consumption on the premises where it is stored;

C19.2.6.2. Septic tanks;

C19.2.6.3. Stormwater or wastewater collection systems;

C19.2.6.4. Flow through process tanks;

C19.2.6.5. Surface impoundments, pits, ponds, or lagoons;

C19.2.6.6. Field constructed tanks;

C19.2.6.7. Hydrant fueling systems;

C19.2.6.8. Storage tanks located in an accessible underground area (such as a basement or vault) if the storage tank is situated upon or above the surface of the floor;

C19.2.6.9. USTs containing *de minimis* concentrations of regulated substances, except where C19.3.2.8. is applicable; and

C19.2.6.10. Emergency spill or overflow containment UST systems that are expeditiously emptied after use.

C19.3. CRITERIA

C19.3.1. All installations will maintain a UST inventory.

C19.3.2. POL USTs. All petroleum UST systems will be properly installed, protected from corrosion, provided with spill/overflow prevention, and will incorporate leak detection as described below. POL USTs installed at fuel filling stations will either be double-walled or have a secondary containment vault.

C19.3.2.1. Corrosion Protection. USTs and piping must be provided with corrosion protection unless constructed of fiberglass or other non-corrodible materials. The corrosion protection system must be certified by a competent authority.

C19.3.2.1.1. Fuel Filling Stations. Double-walled USTs installed at fuel filling stations shall have walls constructed of one of the following:

C19.3.2.1.1.1. Both metallic, with the external surface coated with an anti-corrosion layer;

C19.3.2.1.1.2. Metallic internal surface and non-metallic external surface;

C19.3.2.1.1.3. Both non-metallic surface if the wall material is both resistant to corrosion and to mechanical stress; or

C19.3.2.1.1.4. Non-metallic internal surface and anti-corrosion-coated metallic external surface.

C19.3.2.1.1.5. Single-walled USTs are allowed at fuel filling stations if placed in a containment vault that has been coated with an impermeable material and equipped with continuous leak monitoring. The same vault may hold more than one UST without partitioning.

C19.3.2.2. Spill/Overflow Protection. USTs will be provided with spill and overflow prevention equipment, except where transfers are made in the amounts of ≤ 95 liters (25 gallons). Where spill and overflow protection are required, a spill containment box must be installed around the fill pipe. Overfill prevention will be provided by one of the following methods:

C19.3.2.2.1. Automatic shut-off device (set at 95% of tank capacity).

C19.3.2.2.2. High level alarm (set at 90% of tank capacity).

C19.3.2.3. Leak Detection. Leak detection systems must be capable of detecting a 0.38 liter/hour (0.1 gallon/hour) leak rate or a release of 568 liters (150 gallons) (or 1% of the tank volume, whichever is less) within 30 days with a probability of detection of 0.95 and a probability of false alarm of < 0.05 .

C19.3.2.3.1. USTs will use at least one of the following leak detection methods:

C19.3.2.3.1.1. Automatic tank gauging;

C19.3.2.3.1.2. Vapor monitoring;

C19.3.2.3.1.3. Groundwater monitoring; or

C19.3.2.3.1.4. Interstitial monitoring.

C19.3.2.3.2. All pressurized UST piping must be equipped with automatic line leak detectors and utilize either an annual tightness test or monthly monitoring. New UST piping shall also be equipped with a “sleeve” or equivalent system to collect leaks/spills.

C19.3.2.3.3. Suction piping will either have a line tightness test conducted every three years or use monthly monitoring.

C19.3.2.4. USTs and piping will be properly closed if not needed, or be upgraded or replaced.

C19.3.2.5. Any UST and piping not incorporating a functioning leak detection system will require immediate corrective action. Such systems will be tightness tested annually in accordance with recognized U.S. industry standards and inventoried monthly to determine system tightness.

C19.3.2.6. Liquefied Petroleum Gas (LPG) USTs. Integrity tests on LPG USTs shall be conducted every ten years using the acoustic emissions methodology by certified personnel.

C19.3.2.7. Any verified leaking UST or UST piping will be immediately removed from service. Any UST and piping suspected of leaking (e.g., leak detection equipment), will be verified for leakage to ensure there is not a false positive, or alternately, will immediately be removed from service. If the UST is still required, it will be repaired or replaced. If the UST is no longer required it will be removed from the ground. When a leaking UST is removed, exposed free product and/or obviously contaminated soil in the immediate vicinity of the tank will be appropriately removed and managed. Notification of the Italian Base Commander (see Chapter 1 for the process) shall follow the criteria established in Chapter 18, "Spill Prevention & Response Planning." Additional action will be governed by DoDI 4715.8, "Environmental Remediation for DOD Activities Overseas," and EUCOM Directive 80-2, "Environmental Executive Agent Remediation Policy." Under extenuating circumstances (e.g., where the UST is located under a building), the UST will be cleaned and filled with an inert substance, and left in place.

C19.3.2.8. When a UST has not been used for one year, or is determined to no longer be required, all of the product and sludges must be removed. Subsequently, the UST must be either cleaned and filled with an inert substance, or removed. UST wastes must be handled in accordance with Chapter 9, "Petroleum, Oil, & Lubricants," paragraph C9.3.4.

C19.3.2.9. When the product stored in a UST is changed, the UST must be emptied and cleaned by removing all liquid and accumulated sludge.

C19.3.2.10. When a UST system is temporarily closed, corrosion protection and leak detection systems (if the UST is not empty) must be operated and maintained. If a UST system is temporarily closed for ≥ 3 months, the following must be complied with:

C19.3.2.10.1. Vent lines must be left open and functioning; and

C19.3.2.10.2. All other lines, pumps, manways, and ancillary equipment must be secured and capped.

C19.3.3. UST Recordkeeping. Installations will maintain a tank system inventory to include tank system installation, repair, removal, replacement, or upgrade, and operation of corrosion protection equipment for the life of the tank.

C19.3.4. Hazardous Material USTs

C19.3.4.1. All hazardous material USTs and piping must meet the same design and construction standards as required for petroleum USTs and piping, and in addition must be provided with secondary containment for both tank and piping. Secondary containment can be met by using double-walled tanks and piping, liners, or vaults.

C19.3.4.2. Leak Detection. The interstitial space (space between the primary and secondary containment) for tanks and piping must be monitored monthly for liquids or vapors.

C19.3.4.3. Hazardous material USTs and piping that do not incorporate the criteria contained in subparagraph C19.3.4.1 shall be immediately removed from service and upgraded or replaced as necessary.

C19.3.5. Deferred USTs. Deferred USTs constructed after 8 May 1985 must be designed and constructed with corrosion protection, non-corrodible materials, or be otherwise designed and constructed to prevent releases from corrosion or structural failure. UST materials must be compatible with the substance(s) to be stored.

C19.3.6. Identification Tags for USTS Installed at Fuel Filling Stations

C19.3.6.1. The maximum storage capacity of POL USTs installed at fuel filling stations is 50 m³ (1,765 ft³). POL USTs installed at fuel filling stations shall have an identification tag with the following information:

C19.3.6.1.1. Name and address of the UST manufacturer;

C19.3.6.1.2. Year of construction;

C19.3.6.1.3. Storage capacity, wall thickness, and construction material(s); and

C19.3.6.1.4. UST operating pressure and operating pressure of the interstitial space.

C19.3.7. Minimum Distance for USTS from Drinking Water Supply Wells. USTs for POL and/or hazardous materials shall be \geq 200 meters (656 feet) from any drinking water supply well. Refer to Chapter 3, "Drinking Water."

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Conversion Key (for Threshold Planning Quantity and RQ)

1 Pound = 0.454 Kilograms

10 Pounds = 4.54 Kilograms

100 Pounds = 45.4 Kilograms

500 Pounds = 227 Kilograms

1,000 Pounds = 454 Kilograms

5,000 Pounds = 2,270 Kilograms

10,000 Pounds = 4,540 Kilograms

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List of Hazardous Substances & Materials

All notes appear at the end of the table.

Hazardous Substance/Material	CAS No. ¹	Threshold Planning Quantity (Pounds) ²	RQ (Pounds) ³	HW Designator
Acenaphthene	83329		100	
Acenaphthylene	208968		5,000	
Acetaldehyde (I)	75070		1,000	
Acetaldehyde, chloro-	107200		1,000	P
Acetaldehyde, trichloro-	75876		5,000	P
Acetamide	60355		100	
Acetamide, N-(aminothioxomethyl)-	591082		1,000	
Acetamide, N-(4-ethoxyphenyl)-	62442		100	
Acetamide, 2-fluoro-	640197		100	P
Acetamide, N-9H-fluoren-2-yl-	53963		1	
Acetic acid	64197		5,000	
Acetic acid (2,4-dichlorophenoxy)-salts and esters	94757		100	
Acetic acid, lead(2+) salt	301042		10	
Acetic acid, thallium(1+) salt	563688		1000	
Acetic acid, (2,4,5-trichlorophenoxy)	93765		1,000	
Acetic acid, ethyl ester (I)	141786		5,000	
Acetic acid, fluoro-, sodium salt	62748		10	P
Acetic anhydride	108247		5,000	
Acetone (I)	67641		5,000	
Acetone cyanohydrin	75865	1,000	10	P
Acetone thiosemicarbazide	1752303	1,000/10,000	1	
Acetonitrile (I,T)	75058		5,000	
Acetophenone	98862		5,000	
2-Acetylaminofluorene	53963		1	
Acetyl bromide	506967		5,000	
Acetyl chloride (C,R,T)	75365		5,000	
1-Acetyl-2-thiourea	591082		1	P
Acrolein	107028	500	1	P
Acrylamide	79061	1,000/10,000	5,000	
Acrylic acid (I)	79107		5,000	
Acrylonitrile	107131	10,000	100	
Acrylyl chloride	814686	100	1	
Adipic acid	124049		5,000	
Adiponitrile	111693	1,000	1	
Aldicarb	116063	100/10,000	1	P
Aldrin	309002	500/10,000	1	P
Allyl alcohol	107186	1,000	100	P
Allylamine	107119	500	1	
Allyl chloride	107051		1,000	
Aluminum phosphide (R,T)	20859738	500	100	P
Aluminum sulfate	10043013		5,000	
4-Aminobiphenyl	92671		1	
5-(Aminomethyl)-3-isoxazolol	2763964		1,000	P
Aminopterin	54626	500/10,000	1	
4-Aminopyridine	504245		1,000	P

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List of Hazardous Substances & Materials

Hazardous Substance/Material	CAS No. ¹	Threshold Planning Quantity (Pounds) ²	RQ (Pounds) ³	HW Designator
Amiton	78535	500	1	
Amiton oxalate	3734972	100/10,000	1	
Amitrole	61825		10	
Ammonia	7664417	500	100	
Ammonium acetate	631618		5,000	
Ammonium benzoate	1863634		5,000	
Ammonium bicarbonate	1066337		5,000	
Ammonium bichromate	7789095		10	
Ammonium bifluoride	1341497		100	
Ammonium bisulfite	10192300		5,000	
Ammonium carbamate	1111780		5,000	
Ammonium carbonate	506876		5,000	
Ammonium chloride	12125029		5,000	
Ammonium chromate	7788989		10	
Ammonium citrate, dibasic	3012655		5,000	
Ammonium fluoborate	13826830		5,000	
Ammonium fluoride	12125018		100	
Ammonium hydroxide	1336216		1,000	
Ammonium oxalate	6009707 5972736 14258492		5,000	
Ammonium picrate (R)	131748		10	P
Ammonium silicofluoride	16919190		1,000	
Ammonium sulfamate	7773060		5,000	
Ammonium sulfide	12135761		100	
Ammonium sulfite	10196040		5,000	
Ammonium tartrate	14307438 3164292		5,000	
Ammonium thiocyanate	1762954		5,000	
Ammonium vanadate	7803556		1,000	P
Amphetamlne	300629	1,000	1	
Amyl acetate:	628637		5,000	
Iso-Amyl acetate	123922			
Sec-Amyl acetate	626380			
Tert-Amyl acetate	625161			
Aniline (I,T)	62533	1,000	5,000	
Aniline, 2,4,6- trimethyl	88051	500	1	
o-Anisidine	90040		100	
Anthracene	120127		5,000	
Antimony ⁴	7440360		5,000	
Antimony pentachloride	7647189		1,000	
Antimony pentafluoride	7783702	500	1	
Antimony potassium tartrate	28300745		100	
Antimony tribromide	7789619		1,000	
Antimony trichloride	10025919		1,000	
Antimony trifluoride	7783564		1,000	
Antimony trioxide	1309644		1,000	
Antimycin A	1397940	1,000/10,000	1	
ANTU (Thiourea 1-Naphthalenyl)	86884	500/10,000	100	

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List of Hazardous Substances & Materials

Hazardous Substance/Material	CAS No. ¹	Threshold Planning Quantity (Pounds) ²	RQ (Pounds) ³	HW Designator
Argentate(1-), bis(cyano-C)-, potassium	506616		1	P
Aroclor 1016	12674112		1	
Aroclor 1221	11104282		1	
Aroclor 1232	11141165		1	
Aroclor 1242	53469219		1	
Aroclor 1248	12672296		1	
Aroclor 1254	11097691		1	
Aroclor 1260	11096825		1	
Aroclors	1336363		1	
Arsenic ⁴	7440382		1	
Arsenic acid H ₃ AsO ₄	1327522 7778394		1	P
Arsenic disulfide	1303328		1	
Arsenic oxide As ₂ O ₃	1327533		1	P
Arsenic oxide As ₂ O ₅	1303282		1	P
Arsenic pentoxide	1303282	100/10,000	1	P
Arsenic trichloride	7784341		1	
Arsenic trioxide	1327533		1	P
Arsenic trisulfide	1303339		1	
Arsenous oxide	1327533	100/10,000	1	P
Arsenous trichloride	7784341	500	5,000	
Arsine	7784421	100	1	
Arsine, diethyl-	692422		1	P
Arsinic acid, dimethyl-	75605		1	
Arsorous dichloride, phenyl-	696286		1	P
Asbestos ⁵	1332214		1	
Auramine	492808		100	
Azaserine	115026		1	
Aziridine	151564		1	P
Azindine, 2-methyl-	75558		1	P
Azirino[2',3',3,4]pyrrolo[1,2-a]indole-4, 7-dione,6-amino-8-[[aminocarbonyloxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-,[1aS-(1a-alpha, 8-beta, 8a-alpha, 8b-alpha)]-	50077		10	
Azinphos-ethyl	2642719	100/10,000	100	
Azinphos-methyl	86500	10/10,000	1	
Barium cyanide	542621		10	P
Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56495		10	
Benz[c]acridine	225514		100	
Benzal chloride	98873	500	5,000	
Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950585		5,000	
Benz[a]anthracene	56553		10	
1,2-Benzanthracene	56553		10	
Benz[a]anthracene, 7,12-dimethyl-	57976		1	
Benzenamine (I,T)	62533		5,000	
Benzenamine, 3-(Trifluoromethyl)	98168	500	1	
Benzenamine, 4,4'-carbonimidoylbis (N,N-	492808		100	

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dimethyl-				
Benzenamine, 4-chloro-	106478		1,000	P
Benzenamine, 4-chloro-2-methyl-, hydrochloride	3165933		100	
Benzenamine, N,N-dimethyl-4-(phenylazo-)	60117		10	
Benzenamine, 2-methyl-	95534		100	
Benzenamine, 4-methyl-	106490		100	
Benzenamine, 4,4'-methylenebis(2-chloro-	101144		10	
Benzenamine, 2-methyl-, hydrochloride	636215		100	
Benzenamine, 2-methyl-5-nitro-	99558		100	
Benzenamine, 4-nitro-	100016		5,000	P
Benzene (I,T)	71432		10	
Benzene, 1-(Chloromethyl)-4-Nitro-	100141	500/10,000	1	
Benzeneacetic acid, 4-chloro-alpha- (4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510156		10	
Benzene, 1-bromo-4-phenoxy-	101553		100	
Benzeneearsonic Acid	98055	10/10,000	1	
Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305033		10	
Benzene, chloro-	108907		100	
Benzene, chloromethyl-	100447		100	P
Benzenediamin, ar-methyl-	25376458 95807 496720 823405		10	
1,2-Benzenedicarboxylic acid, dioctyl ester	117840		5,000	
1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)]-ester	117817		100	
1,2-Benzenedicarboxylic acid, dibutyl ester	84742		10	
1,2-Benzenedicarboxylic acid, diethyl ester	84662		1,000	
1,2-Benzenedicarboxylic acid, dimethyl ester	131113		5,000	
Benzene, 1,2-dichloro-	95501		100	
Benzene, 1,3-dichloro-	541731		100	
Benzene, 1,4-dichloro-	106467		100	
Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72548		1	
Benzene, dichloromethyl-	98873		5,000	
Benzene, 1,3-diisocyanotomethyl- (R,T)	584849 91087 264716254		100	
Benzene, dimethyl (I,T)	1330207		100	
m-Benzene, dimethyl	108383		1,000	
o-Benzene, dimethyl	95476		1,000	
p-Benzene, dimethyl	106423		100	
1,3-Benzenediol	108463		5,000	
1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]- (R) -	51434		1,000	P
Benzeneethanamine, alpha, alpha-dimethyl-	122098		5,000	P
Benzene, hexachloro-	118741		10	

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Benzene, hexahydro- (I)	110827		1,000	
Benzene, hydroxy-	108952		1,000	
Benzene, methyl-	108883		1,000	
Benzene, 2-methyl-1,3-dinitro-	606202		100	
Benzene, 1-methyl-2,4-dinitro-	121142		10	
Benzene, 1-methylethyl- (I)	98828		5,000	
Benzene, nitro-	98953		1,000	
Benzene, pentachloro-	608935		10	
Benzene, pentachloronitro-	82688		100	
Benzenesulfonic acid chloride (C,R)	98099		100	
Benzenesulfonyl chloride	98099		100	
Benzene, 1,2,4,5-tetrachloro-	95943		5,000	
Benzenethiol	108985		100	P
Benzene, 1,1'-(2,2,2-tri-chloroethylidene)bis[4-chloro-	50293		1	
Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy-	72435		1	
Benzene, (trichloromethyl)-	98077		10	
Benzene, 1,3,5-trinitro-	99354		10	
Benzidine	92875		1	
Benzimidazole, 4,5-Dichloro-2-(Trifluoromethyl)-	3615212	500/10,000	1	
1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81072		100	
Benzo[a]anthracene	56553		10	
Benzo[b]fluoranthene	205992		1	
Benzo[k]fluoranthene	207089		5,000	
Benzo[j,k]fluorene	206440		100	
1,3-Benzodioxole, 5-(1-propenyl)-	120581		100	
1,3-Benzodioxole, 5-(2-propenyl)-	94597		100	
1,3-Benzodioxole, 5-propyl-	94586		10	
Benzoic acid	65850		5,000	
Benzonitrile	100470		5,000	
Benzo[rs]pentaphene	189559		10	
Benzo[ghi]perylene	191242		5,000	
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations greater than 0.3%	81812		100	P
Benzo[a]pyrene	50328		1	
3,4-Benzopyrene	50328		1	
p-Benzoquinone	106514		10	
Benzotrichloride (C,R,T)	98077	500	10	
Benzoyl chloride	98884		1,000	
1,2-Benzphenanthrene	218019		100	
Benzyl chloride	100447	500	100	P
Benzyl cyanide	140294	500	1	
Beryllium ⁴	7440417		10	P
Beryllium chloride	7787475		1	
Beryllium fluoride	7787497		1	

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Beryllium nitrate	13597994 7787555		1	
alpha-BHC	319846		10	
beta-BHC	319857		1	
delta-BHC	319868		1	
gamma-BHC	58899		1	
Bicyclo [2,2,1]Heptane-2-carbonitrile, 5-chloro-6-(((Methylamino)Carbonyl Oxy)Imino)-, (1s-(1-alpha, 2-beta, 4-alpha, 5-alpha, 6E))-	15271417	500/10,000	1	
2,2'-Bioxirane	1464535		10	
Biphenyl	92524		100	
(1,1'-Biphenyl)-4,4'diamine	92875		1	
(1,1'-Biphenyl)-4,4'diamine, 3,3'dichloro-	91941		1	
(1,1'-Biphenyl)-4,4'diamine, 3,3'dimethoxy-	119904		10	
(1,1'-Biphenyl)-4,4'diamine, 3,3'dimethyl-	119937		10	
Bis(chloromethyl) ketone	534076	10/10,000	1	
Bis(2-chloroethyl)ether	111444		10	
Bis(2-chloroethoxy)methane	111911		1,000	
Bis(2-ethylhexyl)phthalate	117817		100	
Bitoscanate	4044659	500/10,000	1	
Boron trichloride	10294345	500	1	
Boron trifluoride	7637072	500	1	
Boron trifluoride compound with methyl ether (1:1)	353424	1,000	1	
Bromoacetone	598312		1,000	P
Bromadiolone	28772567	100/10,000	1	
Bromine	7726956	500	1	
Bromoform	75252		100	
4-Bromophenyl phenyl ether	101553		100	
Brucine	357573		100	P
1,3-Butadiene	106990		10	
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87683		1	
1-Butanamine, N-butyl-N-nitroso-	924163		10	
1-Butanol	71363		5,000	
2-Butanone	78933		5,000	
2-Butanone peroxide (R,T)	1338234		10	
2-Butanone, 3,3-dimethyl-1-(methylthio)-, O[(methylamino)carbonyl] oxime	39196184		100	P
2-Butenal	123739 4170303		100	
2-Butene, 1,4-dichloro- (I,T)	764410		1	
2-Butenoic acid, 2-methyl-, 7[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1-alpha(Z),7(2S*,3R*), 7a-alpha]]-	303344		10	

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Butyl acetate:	123864		5,000	
iso-Butyl acetate	110190			
sec-Butyl acetate	105464			
tert-Butyl acetate	540885			
n-Butyl alcohol (I)	71363		5,000	
Butylamine:	109739		1,000	
iso-Butylamine	78819			
sec-Butylamine	513495			
tert-Butylamine	13952846 75649			
Butyl benzyl phthalate	85687		100	
n-Butyl phthalate	84742		10	
Butyric acid	107926		5,000	
iso-Butyric acid	79312			
Cacodylic acid	75605		1	
Cadmium (2+) ⁴	7440439		10	
Cadmium acetate	543908		10	
Cadmium bromide	7789426		10	
Cadmium chloride	10108642		10	
Cadmium oxide	1306190	100/10,000	1	
Cadmium stearate	2223930	1,000/10,000	1	
Calcium arsenate	7778441	500/10,000	1	
Calcium arsenite	52740166		1	
Calcium carbide	75207		10	
Calcium chromate	13765190		10	
Calcium cyanamide	156627		1,000	
Calcium cyanide Ca(CN) ₂	592018		10	P
Calcium dodecylbenzenesulfonate	26264062		1,000	
Calcium hypochlorite	7778543		10	
Camphchlor	8001352	500/10,000	1	
Camphene, octachloro-	8001352		1	P
Cantharidin	56257	100/10,000	1	
Carbachol chloride	51832	500/10,000	1	
Captan	133062		10	
Carbamic acid, ethyl ester	51796		100	
Carbamic acid, methylnitroso-, ethyl ester	615532		1	
Carbamic acid, Methyl-, 0-(((2,4-Dimethyl-1, 3-Dithiolan-2-yl)Methyllene)Amino)-	26419738	100/10,000	1	
Carbamic chloride, dimethyl-	79447		1	
Carbamodithioic acid, 1,2-ethaneiylbis, salts & esters	111546		5,000	
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	2303164		100	
Carbaryl	63252		100	
Carbofuran	1563662	10/10,000	10	
Carbon disulfide	75150	10,000	100	P
Carbon oxyfluoride (R,T)	353504		1,000	
Carbon tetrachloride	56235		10	
Carbonic acid, dithallium(1+) salt	6533739		100	

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Carbonic dichloride	75445		10	P
Carbonic difluoride	353504		1,000	
Carbonochloridic acid, methyl ester	79221		1,000	
Carbonyl Sulfide	463581		100	
Carbophenothion	786196	500	1	
Catechol	120809		100	
Chloral	75876		5,000	
Chlorambem	133904		100	
Chlorambucil	305033		10	
Chlordane	57749	1,000	1	
Chlordane, alpha & gamma isomers	57749		1	
Chlordane, technical	57749		1	
Chlorfenvinfos	470906	500	1	
Chlorinated champhene (Campheclor)	8001352		1	
Chlorine	7782505	100	10	
Chlormephos	24934916	500	1	
Chlormequat chloride	999815	100/10,000	1	
Chlornaphazine	494031		100	
Choroacetaldehyde	107200		1,000	P
Chloroacetophenone	532274		100	
Chloroacetic acid	79118	100/10,000	100	
p-Chloroaniline	106478		1,000	P
Chlorobenzene	108907		100	
Chlorobenzilate	510156		10	
p-Chloro-m-cresol (4)	59507		5,000	
1-Chloro-2,3-epoxypropane	106898		100	
Chlorodibromomethane	124481		100	
Chloroethane	75003		100	
Chloroethanol	107073	500	1	
Chloroethyl chlorofomate	627112	1,000	1	
2-Chloroethyl vinyl ether	110758		1,000	
Chloroform	67663	10,000	10	
Chloromethane	74873		100	
Chloromethyl ether	542881	100	1	P
Chloromethyl methyl ether	107302	100	1	
beta-Chloronaphthalene	91587		5,000	
2-Chloronaphthalene	91587		5,000	
Chlorophacinone	3691358	100/10,000	1	
o-Chlorophenol (2)	95578		100	
4-Chlorophenyl phenyl ether	7005723		5,000	
1-(o-Chlorophenyl)thiourea	5344821		100	P
Chloroprene	126998		100	
3-Chloropropionitrile	542767		1,000	P
Chlorosulfonic acid	7790945		1,000	
4-Chloro-o-toluidine, hydrochloride	3165933		100	
Chlorpyrifos	2921882		1	
Chloroxuron	1982474	500/10,000	1	
Chlorthiophos	21923239	500	1	

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Chromic acetate	1066304		1,000	
Chromic acid	11115745 7738945		10	
Chromic acid H ₂ CrO ₄ , calcium salt	13765190		10	
Chromic chloride (Chromium chloride)	10025737	1/10,000	1	
Chromic sulfate	10101538		1,000	
Chromium ⁴	7440473		5,000	
Chromous chloride	10049055		1,000	
Chrysene	218019		100	
Cobalt, ((2,2'-(1,2-ethanediybis (Nitrilo-methylidyne))Bis(6-fluoro-phenolato))(2--N,N',O,O')-	62207765	100/10,000	1	
Cobaltous bromide	7789437		1,000	
Cobalt carbonyl	10210681	10/10,000	1	
Cobaltous formate	544183		1,000	
Cobaltous sulfamate	14017415		1,000	
Coke Oven Emissions	NA		1	
Colchicine	64868	10/10,000	1	
Copper ⁴	7440508		5,000	
Copper cyanide	544923		10	P
Coumaphos	56724	100/10,000	10	
Coumatetralyl	5836293	500/10,000	1	
Creosote	8001589		1	
Cresol(s) (Phenol, Methyl):	1319773		100	
m-Cresol	108394	1,000/10,000	100	
o-Cresol	95487		100	
p-Cresol	106445		100	
Cresylic acid:	1319773		100	
m-Cresylic acid	108394		100	
o-Cresylic acid	95487		100	
p-Cresylic acid	106445		100	
Crimidine	535897	100/10,000	1	
Crotonaldehyde	123739 4170303	1,000 1,000	100 100	
Cumene (I)	98828		5,000	
Cupric acetate	142712		100	
Cupric acetoarsenite	12002038		1	
Cupric chloride	7447394		10	
Cupric nitrate	3251238		100	
Cupric oxalate	5893663		100	
Cupric sulfate	7758987		10	
Cupric sulfate, ammoniated	10380297		100	
Cupric tartrate	815827		100	
Cyanides (soluble salts and complexes) not otherwise specified	57125		10	P
Cyanogen	460195		100	P
Cyanogen bromide	506683	500/10,000	1,000	
Cyanogen chloride	506774		10	P
Cyanogen iodide (Iodine cyanide)	506785	1,000/10,000	1	

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Cyanophos	2636262	1,000	1	
Cyanuric fluoride	675149	100	1	
2,5-Cyclohexadiene-1,4-dione	106514		10	
Cyclohexane (I)	110827		1,000	
Cyclohexane, 1,2,3,4,5,6-hexachloro, (1-alpha, 2-alpha, 3-beta, 4-alpha, 5-alpha, 6-beta)-	58899		1	
Cyclohexanone (I)	108941		5,000	
2-Cyclohexanone	131895		100	P
Cycloheximide	66819	100/10,000	1	
Cyclohexylamine	108918	10,000	1	
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77474		10	
Cyclophosphamide	50180		10	
2,4-D Acid	94757		100	
2,4-D Ester	94111 94791 94804 1320189 1928387 1928616 1929733 2971382 25168267 53467111		100	
2,4-D, salts & esters (2,4-Dichlorophenoxyacetic Acid)	94757		100	
Daunomycin	20830813		10	
Decaborane(14)	17702419	500/10,000	1	
Demeton	8065483	500	1	
Demeton-S-Methyl	919868	500	1	
DDD, 4,4'DDD	72548		1	
DDE, 4,4'DDE	72559		1	
DDT, 4,4'DDT	50293		1	
DEHP (Diethylhexyl phthalate)	117817		100	
Diallate	2303164		100	
Dialifor	10311849	100/10,000	1	
Diazinon	333415		1	
Diazomethane	334883		100	
Dibenz[a,h]anthracene	53703		1	
1,2:5,6-Dibenzanthracene	53703		1	
Dibenzo[a,h]anthracene	53703		1	
Dibenzofuran	132649		100	
Dibenz[a,i]pyrene	189559		10	
1,2-Dibromo-3-chloropropane	96128		1	
Dibromoethane	106934		1	
Diborane	19287457	100	1	
Dibutyl phthalate	84742		10	
Di-n-butyl phthalate	84742		10	
Dicamba	1918009		1,000	
Dichlobenil	1194656		100	

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Dichlone	117806		1	
Dichlorobenzene	25321226		100	
m-Dichlorobenzene (1,3)	541731		100	
o-Dichlorobenzene (1,2)	95501		100	
p-Dichlorobenzene (1,4)	106467		100	
3,3'-Dichlorobenzidine	91941		1	
Dichlorobromomethane	75274		5,000	
1,4-Dichloro-2-butene (I,T)	764410		1	
Dichlorodifluoromethane	75718		5,000	
1,1-Dichloroethane	75343		1,000	
1,2-Dichloroethane	107062		100	
1,1-Dichloroethylene	75354		100	
1,2-Dichloroethylene	156605		1,000	
Dichloroethyl ether	11444	10,000	10	
Dichloroisopropyl ether	108601		1,000	
Dichloromethoxy ethane	111911		1,000	
Dichloromethyl ether	542881		1	P
Dichloromethylphenylsilane	149746	1,000	1	
2,4-Dichlorophenol	120832		100	
2,6-Dichlorophenol	87650		100	
Dichlorophenylarsine	696286		1	P
Dichloropropane	26638197		1,000	
1,1-Dichloropropane	78999			
1,3-Dichloropropane	142289			
1,2-Dichloropropane	78875		1,000	
Dichloropropane--Dichloropropene (mixture)	8003198		100	
Dichloropropene	26952238		100	
2,3-Dichloropropene	78886			
1,3-Dichloropropene	542756		100	
2,2-Dichloropropionic acid	75990		5,000	
Dichlorvos	62737	1,000	10	
Dicofol	115322		10	
Dicrotophos	141662	100	1	
Dieldrin	60571		1	P
1,2:3,4-Diepoxybutane (I,T)	1464535	500	10	
Diethanolamine	111422		100	
Diethyl chlorophosphate	814493	500	1	
Diethylamine	109897		1,000	
Diethylarsine	692422		1	P
Diethylcarbamazine citrate	1642542	100/10,000	1	
1,4-Diethylenedioxiide	123911		100	
Diethylhexyl phthalate	117817		100	
N,N-Diethylaniline	91667		1,000	
N,N'-Diethylhydrazine	1615801		10	
O,O-Diethyl S-methyl dithiophosphate	3288582		5,000	
Diethyl-p-nitrophenyl phosphate	311455		100	P
Diethyl phthalate	84662		1,000	
O,O-Diethyl O-pyrazinyl phosphorothioate	297972		100	P

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Diethylstilbestrol	56531		1	
Diethyl sulfate	64675		10	
Digitoxin	71636	100/10,000	1	
Diglycidyl ether	2238075	1,000	1	
Digoxin	20830755	10/10,000	1	
Dihydrosafrole	94586		10	
Diisopropylfluorophosphate	55914		100	P
Diisopropylfluorophosphate, 1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1-alpha, 4-alpha, 4a-beta, 5-alpha, 8-alpha, 8a-beta)-	309002		1	P
1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1-alpha, 4-alpha, 4a-beta, 5a-beta, 8-beta, 8a-beta)-	465736		1	P
2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(1a-alpha, 2-beta, 2a-alpha, 3-beta, 6-beta, 6a-alpha, 7beta, 7aalpha)-	60571		1	P
2,7:3,6 Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1a-alpha, 2-beta, 2a-beta, 3-alpha, 6-alpha, 6a-beta, 7-beta, 7a-alpha)-	72208		1	P
Dimethoate	60515		10	P
3,3'-Dimethoxybenzidine	119904		10	
Dimefox	115264	500	1	
Dimethoate	60515	500/10,000	10	
Dimethyl Phosphorochloridithioate	2524030	500	1	
Dimethyl sulfate	77781	500	100	
Dimethylamine (I)	124403		1,000	
p-Dimethylaminoazobenzene	60117		10	
7,12-Dimethylbenz[a]anthracene	57976		1	
3,3'-Dimethylbenzidine	119937		10	
alpha, alpha-Dimethylbenzylhydroperoxide(R)	80159		10	
Dimethylcarbamoyl chloride	79447		1	
Dimethylformamide	68122		100	
Dimethyldichlorosilane	75785	500	1	
1,1-Dimethylhydrazine	57147	1,000	10	
1,2-Dimethylhydrazine	540738		1	
alpha, alpha-Dimethylphenethylamine	122098		5,000	P
Dimethyl-p-phenylenediamine	99989	10/10,000	1	
2,4-Dimethylphenol	105679		100	
Dimethyl phthalate	131113		5,000	
Dimethyl sulfate	77781		100	
Dimetilan	644644	500/10,000	1	
Dinitrobenzene (mixed): m-Dinitrobenzene o-Dinitrobenzene p-Dinitrobenzene	25154545 99650 528290 100254		100	
4,6-Dinitro-o-cresol and salts	534521	10/10,000	10	P

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Dinitrophenol:	25550587		10	
2,5-Dinitrophenol	329715			
2,6-Dinitrophenol	573568			
2,4-Dinitrophenol	51285		10	P
Dinitrotoluene	25321146		10	
3,4-Dinitrotoluene	610399			
2,4-Dinitrotoluene	121142		10	
2,6-Dinitrotoluene	606202		100	
Dinoseb	88857	100/10,000	1,000	P
Dinoterb	1420071	500/10,000	1	
Di-n-octyl phthalate	117840		5,000	
1,4-Dioxane	123911		100	
Dioxathion	78342	500	1	
Diphacinone	82666	10/10,000	1	
1,2-Diphenylhydrazine	122667		10	
Diphosphoramidate, octamethyl-	152169	100	100	P
Diphosphoric acid, tetraethyl ester	107493		10	P
Dipropylamine	142847		5,000	
Di-n-propylnitrosamine	621647		10	
Diquat	85007 2764729		1,000	
Disulfoton	298044	500	1	P
Dithiazanine iodide	514738	500/10,000	1	
Dithiobiuret	541537	100/10,000	100	P
Diuron	330541		100	
Dodecylbenzenesulfonic acid	27176870		1,000	
Emetine, Dihydrochloride	316427	1/10,000	1	
Endosulfan	115297	10/10,000	1	P
alpha-Endosulfan	959988		1	
beta-Endosulfan	33213659		1	
Endosulfant sulfate	1031078		1	
Endothall	145733		1,000	P
Endothion	2778043	500/10,000	1	
Endrin	72208	500/10,000	1	P
Endrin aldehyde	7421934		1	
Endrin & metabolites	72208		1	P
Epichlorohydrin	106898	1,000	100	
Epinephrine	51434		1,000	P
EPN	2104645	100/10,000	1	
1,2-Epoxybutane	106887		100	
Ergocalciferol	50146	1,000/10,000	1	
Ergotamine tartrate	379793	500/10,000	1	
Ethanal	75070		1,000	
Ethanamine, N-ethyl-N-nitroso-	55185		1	
1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91805		5,000	
Ethane, 1,2-dibromo-	106934		1	
Ethane, 1,1-dichloro-	75343		1,000	
Ethane, 1,2-dichloro-	107062		100	

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Hazardous Substance/Material	CAS No. ¹	Threshold Planning Quantity (Pounds) ²	RQ (Pounds) ³	HW Designator
Ethanedinitrile	460195		100	P
Ethane, hexachloro-	67721		100	
Ethane, 1,1'-[methylenebis(oxy)]bis(2-chloro-	111911		1,000	
Ethane, 1,1'-oxybis-	60297		100	
Ethane, 1,1'-oxybis(2-chloro-	111444		10	
Ethane, pentachloro-	76017		10	
Ethanesulfonyl chloride, 2-chloro	1622328	500	1	
Ethane, 1,1,1,2-tetrachloro-	630206		100	
Ethane, 1,1,2,2-tetrachloro-	79345		100	
Ethanethioamide	62555		10	
Ethane, 1,1,1-trichloro-	71556		1,000	
Ethane, 1,1,2-trichloro-	79005		100	
Ethanimidothioic acid, N-[[[(methylamino) carbonyl]oxy]-, methyl ester	16752775		100	P
Ethanol, 1,2-Dichloro-, acetate	10140871	1,000	1	
Ethanol, 2-ethoxy-	110805		1,000	
Ethanol, 2,2'-(nitrosoimino)bis-	1116547		1	
Ethanone, 1-phenyl-	98862		5,000	
Ethene, chloro-	75014		1	
Ethene, 2-chloroethoxy-	110758		1,000	
Ethene, 1,1-dichloro-	75354		100	
Ethene, 1,2-dichloro- (E)	156605		1,000	
Ethene, tetrachloro-	127184		100	
Ethene, trichloro-	79016		100	
Ethion	563122	1,000	10	
Ethoprophos	13194484	1,000	1	
Ethyl acetate (I)	141786		5,000	
Ethyl acrylate (I)	140885		1,000	
Ethylbenzene	100414		1,000	
Ethylbis(2-Chloroethyl)amine	538078	500	1	
Ethyl carbamate (urethane)	51796		100	
Ethyl chloride	75003		100	
Ethyl cyanide	107120		10	P
Ethylenebisdithiocarbamic acid, salts & esters	111546		5,000	
Ethylenediamine	107153		5,000	
Ethylenediamine-tetraacetic acid (EDTA)	60004		5,000	
Ethylene dibromide	106934		1	
Ethylene dichloride	107062		100	
Ethylene fluorohydrin	371620	10	1	
Ethylene glycol	107211		5,000	
Ethylene glycol monoethyl ether	110805		1,000	
Ethylene oxide (I,T)	75218	1,000	10	
Ethylenediamine	107153	10,000	5,000	
Ethylenethiourea	96457		10	
Ethyleneimine	151564	500	1	P
Ethyl ether (I)	60297		100	
Ethylthiocyanate	542905	10,000	1	
Ethylidene dichloride	75343		1,000	

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Ethyl methacrylate	97632		1,000	
Ethyl methanesulfonate	62500		1	
Famphur	52857		1,000	P
Fenamphos	22224926	10/10,000	1	
Fenlrothion	122145	500	1	
Fensulfothion	115902	500	1	
Ferric ammonium citrate	1185575		1,000	
Ferric ammonium oxalate	2944674 55488874		1,000	
Ferric chloride	7705080		1,000	
Ferric fluoride	7783508		100	
Ferric nitrate	10421484		1,000	
Ferric sulfate	10028225		1,000	
Ferrous ammonium sulfate	10045893		1,000	
Ferrous chloride	7758943		100	
Ferrous sulfate	7720787 7782630		1,000	
Fluenetil	4301502	100/10,000	1	
Fluoranthene	206440		100	
Fluorene	86737		5,000	
Fluorine	7782414	500	10	P
Fluoroacetamide	640197	100/10,000	100	P
Fluoroacetic acid	144490	10/10,000	1	
Fluoroacetic acid, sodium salt	62786		10	P
Fluoroacetyl chloride	359068	10	1	
Fluorouracil	51218	500/10,000	1	
Fonofos	944229	500	1	
Formaldehyde	50000	500	100	
Formaldehyde cyanohydrin	107164	1,000	1	
Formetanate hydrochloride	23422539	500/10,000	1	
Formothion	2540821	100	1	
Formparanate	17702577	100/10,000	1	
Formic acid (C,T)	64186		5,000	
Fosthletan	21548323	500	1	
Fubendazole	3878191	100/10,000	1	
Fulminic acid, mercury(2 ⁺) salt (R,T)	628864		10	P
Fumaric acid	110178		5,000	
Furan (I)	110009	500	100	
Furan, tetrahydro- (I)	109999		1,000	
2-Furancarboxaldehyde (I)	98011		5,000	
2,5-Furandione	108316		5,000	
Furfural (I)	98011		5,000	
Furfuran (I)	110009		100	
Gallium trichloride	13450903	500/10,000	1	
Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	18883664		1	
D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-carbonyl]amino]-	18883664		1	
Glycidylaldehyde	765344		10	

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Glycol ethers ⁶				**
Guanidine, N-methyl-N'-nitro-N-nitroso-	70257		10	
Guthion	86500		1	
Heptachlor	76448		1	P
Heptachlor epoxide	1024573		1	
Hexachlorobenzene	118741		10	
Hexachlorobutadiene	87683		1	
Hexachlorocyclohexane (gamma isomer)	58899		1	
Hexachlorocyclopentadiene	77474	100	10	
Hexachloroethane	67721		100	
Hexachlorophene	70304		100	
Hexachloropropene	1888717		1,000	
Hexaethyl tetraphosphate	757584		100	P
Hexamethylene-1, 6-diisocyanate	822060		100	
Hexamethylphosphoramide	680319		1	
Hexamethylenediamine, N,N'-Dibutyl	4835114	500	1	
Hexane	110543		5,000	
Hexone (Methyl isobutyl ketone)	108101		5,000	
Hydrazine (R,T)	302012	1,000	1	
Hydrazine, 1,2-diethyl-	1615801		10	
Hydrazine, 1,1-dimethyl-	57147		10	
Hydrazine, 1,2-dimethyl-	540738		1	
Hydrazine, 1,2-diphenyl-	122667		10	
Hydrazine, methyl-	60344		10	P
Hydrazinecarbothioamide	79196		100	P
Hydrochloric acid	7647010		5,000	
Hydrocyanic acid	74908	100	10	P
Hydrofluoric acid	7664393		100	
Hydrogen chloride (gas only)	7647010	500	5,000	
Hydrogen cyanide	74908		10	P
Hydrogen fluoride	7664393	100	100	
Hydrogen peroxide (Conc. >52%)	7722841	1,000	1	
Hydrogen phosphide	7803512		100	P
Hydrogen selenide	7783075	10	1	
Hydrogen sulfide	7783064	500	100	
Hydroperoxide, 1-methyl-1-phenylethyl-	80159		10	
Hydroquinone	123319	500/10,000	100	
2-Imidazolidinethione	96457		10	
Indeno(1,2,3-cd)pyrene	193395		100	
Iodomethane	74884		100	
Iron, Pentacarbonyl-	13463406	100	1	
Isobenzan	297789	100/10,000	1	
1,3-Isobenzofurandione	85449		5,000	
Isobutyronitrile	78820	1,000	1	
Isobutyl alcohol (I,T)	78831		5,000	
Isocyanic acid, 3,4-Dichlorophenyl ester	102363	500/10,000	1	
Isodrin	465736	100/10,000	1	P
Isofluorphate	55914	100	100	

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Isophorone	78591		5,000	
Isophorone Diisocyanate	4098719	100	1	
Isoprene	78795		100	
Isopropanolamine dodecylbenzene sulfonate	42504461		1,000	
Isopropyl chloroformate	108236	1,000	1	
Isopropylmethylpyrazolyl dimethylcarbamate	119380	500	1	
Isosafrole	120581		100	
3(2H)-Isoxazolone, 5-(aminomethyl)-	2763964		1,000	P
Kepone	143500		1	
Lactonitrile	78977	1,000	1	
Lasiocarpine	303344		10	
Lead acetate	301042			
Lead arsenate	7784409 7645252 10102484		1	
Lead, bis(acetato-O)tetrahydroxytri	1335326		10	
Lead chloride	7758954		10	
Lead fluoborate	13814965		10	
Lead fluoride	7783462		10	
Lead iodide	10101630		10	
Lead nitrate	10099748		10	
Lead phosphate	7446277		10	
Lead stearate	7428480 1072351 52652592 56189094		10	
Lead subacetate	1335326		10	
Lead sulfate	15739807 7446142		10	
Lead sulfide	1314870		10	
Lead thiocyanate	592870		10	
Leptophos	21609905	500/10,000	1	
Lewisite	541253	10	1	
Lindane	58899	1,000/10,000	1	
Lithium chromate	14307358		10	
Lithium hydride	7580678	100	1	
Malathion	121755		100	
Maleic acid	110167		5,000	
Maleic anhydride	108316		5,000	
Maleic hydrazide	123331		5,000	
Malononitrile	109773	500/10,000	1,000	
Manganese, tricarbonyl methylcyclopentadienyl	12108133	100	1	
MDI (Methylene diphenyl diisocyanate)	101688		5,000	
Mechlorethamine	51752	10	1	
MEK (Methyl ethyl ketone)	78933		5,000	
Melphalan	148823		1	
Mephosfolan	950107	500	1	
Mercaptodimethur	2032657		10	
Mercuric acetate	1600277	500/10,000	1	

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Mercuric chloride	7487947	500/10,000	1	
Mercuric cyanide	592041		1	
Mercuric nitrate	10045940		10	
Mercuric oxide	21908532	500/10,000	1	
Mercuric sulfate	7783359		10	
Mercuric thiocyanate	592858		10	
Mercurous nitrate	10415755 7782867		10	
Mercury	7439976		1	
Mercury (acetate-O)phenyl-	62384		100	P
Mercury fulminate	628864		10	P
Methacrolein diacetate	10476956	1,000	1	
Methacrylic anhydride	760930	500	1	
Methacrylonitrile (I,T)	126987	500	1,000	
Methacryloyl chloride	920467	100	1	
Methacryloyloxyethyl isocyanate	30674807	100	1	
Methamidophos	10265926	100/10,000	1	
Methanamine, N-methyl-	124403		1,000	
Methanamine, N-methyl-N-nitroso-	62759		10	P
Methane, bromo-	74839		1,000	
Methane, chloro- (I,T)	74873		100	
Methane, chloromethoxy-	107302		1	
Methane, dibromo-	74953		1,000	
Methane, dichloro-	75092		1,000	
Methane, dichlorodifluoro-	75718		5,000	
Methane, iodo-	74884		100	
Methane, isocyanato-	624839		10	P
Methane, oxybis(chloro-	542881		1	P
Methanesulfonyl chloride, trichloro-	594423		100	P
Methanesulfonyl fluoride	558258	1,000	1	
Methanesulfonic acid, ethyl ester	62500		1	
Methane, tetrachloro-	56235		10	
Methane, tetranitro- (R)	509148		10	P
Methane, tribromo-	75252		100	
Methane, trichloro-	67663		10	
Methane, trichlorofluoro-	75694		5,000	
Methanethiol (I,T)	74931		100	
6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10, 10-hexa-chloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide	115297		1	P
1,3,4-Metheno-2H-cyclobutal[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-	143500		1	
4,7-Methano-1H-indene, 1,4,5,6,7,8,8 heptachloro-3a,4,7,7a-tetrahydro-	76448		1	P
4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8 octachloro-2,3,3a,4,7,7a-hexahydro-	57749		1	
Methanol (I)	67561		5,000	
Methapyrilene	91805		5,000	
Methidathion	950378	500/10,000	1	

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Methiocarb	2032657	500/10,000	10	P
Methomyl	16752775	500/10,000	100	P
Methoxychlor	72435		1	
Methoxyethylmercuric acetate	151382	500/10,000	1	
Methyl alcohol (I)	67561		5,000	
Methyl aziridine	75558		1	P
Methyl bromide	74839	1,000	1,000	
1-Methylbutadiene (I)	504609		100	
Methyl chloride (I,T)	74873		100	
Methyl 2-chloroacrylate	80637	500	1	
Methyl chlorocarbonate (I,T)	79221		1,000	
Methyl chloroform	71556		1,000	
Methyl chloroformate	79221	500	1,000	
3-Methylcholanthrene	56495		10	
4,4'-Methylenebis(2-chloroaniline)	101144		10	
Methylene bromide	74953		1,000	
Methylene chloride	75092		1,000	
4,4'-Methylenedianiline	101779		10	
Methylene diphenyl diisocyanate (MDI)	101688		5,000	
Methyl ethyl ketone (MEK) (I,T)	78933		5,000	
Methyl ethyl ketone peroxide (R,T)	1338234		10	
Methyl hydrazine	60344	500	10	P
Methyl iodide	74884		100	
Methyl isobutyl ketone	108101		5,000	
Methyl isocyanate	624839	500	10	P
Methyl isothiocyanate	556616	500	1	
2-Methylacetonitrile	75865		10	P
Methyl mercaptan	74931	500	100	
Methyl methacrylate (I,T)	80626		1,000	
Methyl parathion	298000		100	P
Methyl phenkapton	3735237	500	1	
Methyl phosphonic dichloride	676971	100	1	
4-Methyl-2-pentanone (I)	108101		5,000	
Methyl tert-butyl ether	1634044		1,000	
Methyl thiocyanate	556649	10,000	1	
Methylthiouracil	56042		10	
Methyl vinyl ketone	78944	10	1	
Methylmercuric dicyanamide	502396	500/10,000	1	
Methyltrichlorosilane	75796	500	1	
Metolcarb	1129415	100/10,000	1	
Mevinphos	7786347	500	10	
Mexacarbate	315184	500/10,000	1,000	
Mitomycin C	50077	500/10,000	10	
MNNG	70257		10	
Monocrotophos	6923224	10/10,000	1	
Monoethylamine	75047		100	
Monomethylamine	74895		100	
Muscimol	2763964	500/10,000	1,000	P

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Mustard gas	505602	500	1	
Naled	300765		10	
5,12-Naphthaacenedione, 8-acetyl-10-[3 amino-2,3,6-tri-deoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830813		10	
1-Naphthalenamine	134327		100	
2-Naphthalenamine (beta-Naphthylamine)	91598		1	
Naphthalenamine, N,N'-bis(2-chloroethyl)-	494031		100	
Naphthalene	91203		100	
Naphthalene, 2-chloro-	91587		5,000	
1,4-Naphthalenedione	130154		5,000	
2,7-Naphthalenedisulfonic acid, 3,3' [(3,3'-dimethyl-(1,1'-biphenyl)-4,4'-dryl)-bis(azo)] bis(5-amino-4-hydroxy)-tetrasodium salt	72571		10	
Naphthenic acid	1338245		100	
1,4-Naphthoquinone	130154		5,000	
alpha-Naphthylamine	134327		100	
beta-Naphthylamine (2-Naphthalenamine)	91598		1	
alpha-Naphthylthiourea	86884		100	P
Nickel ⁴	7440020		100	
Nickel ammonium sulfate	15699180		100	
Nickel carbonyl	13463393	1	10	P
Nickel carbonyl Ni(CO) ₄ , (T-4)-	13463393		10	P
Nickel chloride	7718549 37211055		100	
Nickel cyanide	557197		10	P
Nickel hydroxide	12054487		10	
Nickel nitrate	14216752		100	
Nickel sulfate	7786814		100	
Nicotine & salts	54115	100	100	P
Nicotine sulfate	65305	100/10,000	1	
Nitric acid	7697372	1,000	1,000	
Nitric acid, thallium(1+) salt	10102451		100	
Nitric oxide	10102439	100	10	P
p-Nitroaniline	100016		5,000	P
Nitrobenzene (I,T)	98953	10,000	1,000	
4-Nitrobiphenyl	92933		10	
Nitrocyclohexane	1122607	500	1	
Nitrogen dioxide	10102440 10544726	100	10	P
Nitrogen oxide	10102439		10	P
Nitroglycerine	55630		10	P
Nitrophenol (mixed): m-Nitrophenol o-Nitrophenol (2) p-Nitrophenol (4)	25154556 554847 88755 100027		100 100 100 100	
2-Nitropropane (I,T)	79469		10	
N-Nitrosodi-n-butylamine	924163		10	

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N-Nitrosodiethanolamine	1116547		1	
N-Nitrosodiethylamine	55185		1	
N-Nitrosodimethylamine	62759	1,000	10	P
N-Nitrosodiphenylamine	86306		100	
N-Nitroso-N-ethylurea	759739		1	
N-Nitroso-N-methylurea	684935		1	
N-Nitroso-N-methylurethane	615532		1	
N-Nitrosomethylvinylamine	4549400		10	P
N-Nitrosomorpholine	59892		1	
N-Nitrosopiperidine	100754		10	
N-Nitrosopyrrolidine	930552		1	
Nitrotoluene:	1321126		1,000	
m-Nitrotoluene	99081			
o-Nitrotoluene	88722			
p-Nitrotoluene	99990			
5-Nitro-o-toluidine	99558		100	
Norbromide	991424	100/10,000	1	
Octamethylpyrophosphoramidate	152169		100	P
Organorhodium complex (PMN-82-147)	0	10/10,000	1	
Osmium tetroxide	20816120		1,000	P
Ouabain	630604	100/10,000	1	
7-Oxabicyclo[2,2,1]heptane-2,3-dicarboxylic acid	145733		1,000	P
Oxamyl	23135220	100/10,000	1	P
1,2-Oxathiolane, 2,2-dioxide	1120714		10	
2H-1,3,2-Oxazaphosphorin-2-amine, N,N bis (2-chloroethyl)tetrahydro-, 2-oxide	50180		10	
Oxetane, 3,3-bis(chloromethyl)-	78717	500	1	
Oxirane (I,T)	75218		10	
Oxiranecarboxyaldehyde	765344		10	
Oxirane, (chloromethyl)-	106898		100	
Oxydisulfoton	2497076	500	1	
Ozone	10028156	100	1	
Paraformaldehyde	30525894		1,000	
Paraldehyde	123637		1,000	
Paraquat	1910425	10/10,000	1	
Paraquat methosulfate	2074502	10/10,000	1	
Parathion	56382	100	10	P
Parathion-methyl	298000	100/10,000	100	
Paris green	12002038	500/10,000	100	
PCBs:	1336363			
Aroclor 1016	12674112		1	
Aroclor 1221	11104282		1	
Aroclor 1232	11141165		1	
Aroclor 1242	53469219		1	
Aroclor 1248	12672296		1	
Aroclor 1254	11097691		1	
Aroclor 1260	11096825		1	
PCNB (Pentachloronitrobenzene)	82688		100	

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Pentaborane	19624227	500	1	
Pentachlorobenzene	608935		10	
Pentachloroethane	76017		10	
Pentachlorophenol	87865		10	
Pentachloronitrobenzene (PCNB)	82688		100	
Pentadecylamine	2570265	100/10,000	1	
Paracetic acid	79210	500	1	
1,3-Pentadiene (I)	504609		100	
Perchloroethylene	127184		100	
Perchloromethylmercaptan	594423	500	100	
Phenacetin	62442		100	
Phenanthrene	85018		5,000	
Phenol	108952	500/10,000	1,000	
Phenol, 2-chloro-	95578		100	
Phenol, 4-chloro-3-methyl-	59507		5,000	
Phenol, 2-cyclohexyl-4,6-dinitro-	131895		100	P
Phenol, 2,4-dichloro-	120832		100	
Phenol, 2,6-dichloro-	87650		100	
Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)	56531		1	
Phenol, 2,4-dimethyl-	105679		100	
Phenol, 2,4-dinitro-	51285		10	P
Phenol, methyl-:	1319773		1,000	
m-Cresol	108394			
o-Cresol	95487			
p-Cresol	106445			
Phenol, 2-methyl-4,6-dinitro-and salts	534521		10	P
Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70304		100	
Phenol, 2,2'-thiobis(4-chloro-6-methyl)-	4418660	100/10,000	1	
Phenol, 2-(1-methylpropyl)-4,6-dinitro	88857		1,000	P
Phenol, 3-(1-methylethyl)-, methylcarbamate	64006	500/10,000	1	
Phenol, 4-nitro-	100027		100	
Phenol, pentachloro-	87865		10	
Phenol, 2,3,4,6-tetrachloro-	58902		10	
Phenol, 2,4,5-trichloro-	95954		10	
Phenol, 2,4,6-trichloro-	88062		10	
Phenol, 2,4,6-trinitro-, ammonium salt	131748		10	P
Phenoxarsine, 10,10'-oxydi-	58366	500/10,000	1	
L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]	148823		1	
Phenyl dichloroarsine	696286	500	1	
1,10-(1,2-Phenylene)pyrene	193395		100	
p-Phenylenediamine	106503		5,000	
Phenylhydrazine hydrochloride	59881	1,000/10,000	1	
Phenylmercury acetate	62384	500/10,000	100	P
Phenylsilatrane	2097190	100/10,000	1	
Phenylthiourea	103855	100/10,000	100	P
Phorate	298022	10	10	P
Phosacetim	4104147	100/10,000	1	
Phosfolan	947024	100/10,000	1	
Phosgene	75445	10	10	P

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Phosmet	732116	10/10,000	1	
Phosphamidon	13171216	100	1	
Phosphine	7803512	500	100	
Phosphorothioic acid, o,o-Dimethyl-s (2-Methylthio) ethyl ester	2587908	500	1	
Phosphorothioic acid, methyl-, o-ethyl o-(4-(methylthio)phenyl) ester	2703131	500	1	
Phosphorothioic acid, methyl-, s-(2-(bis(1-methylethyl)amino)ethyl o-ethyl ester	50782699	100	1	
Phosphorothioic acid, methyl-, 0-(4-nitrophenyl) o-phenyl ester	2665307	500	1	
Phosphoric acid	7664382		5,000	
Phosphoric acid, diethyl 4-nitrophenyl ester	311455		100	P
Phosphoric acid, dimethyl 4-(methylthio) phenyl ester	3254635	500	1	
Phosphoric acid, lead(2+) salt (2:3)	7446277	500	10	
Phosphorodithioic acid, O,O-diethyl S-[2 (ethylthio)ethyl]ester	298044		1	P
Phosphorodithioic acid, O,O-diethyl S-(ethylthio), methyl ester	298022		10	P
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288582		5,000	
Phosphorodithioic acid, O,O-dimethyl S-[2(methyl-amino)-2-oxoethyl] ester	60515		10	P
Phosphorofluondic acid, bis(1-methylethyl) ester	55914		100	P
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56382		10	P
Phosphorothioic acid, O,[4-[(dime-thylamino)sulfonyl]phenyl]O,O-dimethyl ester	52857		1,000	P
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298000		100	P
Phosphorothioic acid, 0,0-diethyl 0 pyrazinyl ester	297972		100	P
Phosphorus	7723140	100	1	
Phosphorus oxychloride	10025873	500	1,000	
Phosphorous pentachloride	10026138	500	1	
Phosphorus pentasulfide (R)	1314803		100	
Phosphorus pentoxide	1314563	10	1	
Phosphorus trichloride	7719122	1,000	1,000	
Phthalic anhydride	85449		5,000	
Physostigmine	57476	100/10,000	1	P
Phosostigmine, salicylate (1:1)	57647	100/10,000	1	
2-Picoline	109068		5,000	
Picotoxin	124878	500/10,000	1	
Piperidine	110894	1,000	1	
Piperidine, 1-nitroso-	100754		10	
Pirimifos-ethyl	23505411	1,000	1	
Plumbane, tetraethyl-	78002		10	P

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Polychlorinated biphenyls (See PCBs or Aroclor)	1336363		1	
Potassium arsenate	7784410		1	
Potassium arsenite	10124502	500/10,000	1	
Potassium bichromate	7778509		10	
Potassium chromate	7789006		10	
Potassium cyanide	151508	100	10	P
Potassium hydroxide	1310583		1,000	
Potassium permanganate	7722647		100	
Potassium silver cyanide	506616	500	1	P
Promecarb	2631370	500/10,000	1	
Pronamide	23950585		5,000	
Propanal, 2-methyl-2-(methylthio)-, O- [(methylamino)carbonyl]oxime	116063		1	P
1-Propanamine (I,T)	107108		5,000	
1-Propanamine, N-propyl-	142847		5,000	
1-Propanamine, N-nitroso-N-propyl-	621647		10	
Propane, 1,2-dibromo-3-chloro	96128		1	
Propane, 2-nitro- (I,T)	79469		10	
1,3-Propane sultone	1120714		10	
Propane 1,2-dichloro-	78875		1,000	
Propanedinitrile	109773		1,000	
Propanenitrile	107120		10	P
Propanenitrile, 3-chloro-	542767		1,000	P
Propanenitrile, 2-hydroxy-2-methyl-	75865		10	P
Propane, 2,2'-oxybis[2-chloro-	108601		1,000	
1,2,3-Propanetrol, trinitrate- (R)	55630		10	P
1-Propanol, 2,3-dibromo-, phosphate (3:1)	126727		10	
1-Propanol, 2-methyl- (I,T)	78831		5,000	
2-Propanone (I)	67641		5,000	
2-Propanone, 1-bromo-	598312		1,000	P
Propargite	2312358		10	
Propargyl alcohol	107197		1,000	P
Propargyl bromide	106967	10	1	
2-Propenal	107028		1	P
2-Propenamide	79061		5,000	
1-Propene, 1,1,2,3,3,3-hexachloro-	1888717		1,000	
1-Propene, 1,3-dichloro-	542756		100	
2-Propenenitrile	107131		100	
2-Propenenitrile, 2-methyl- (I,T)	126987		1,000	
2-Propenoic acid (I)	79107		5,000	
2-Prepenoic acid, ethyl ester (I)	140885		1,000	
2-Prepenoic acid, 2-methyl-, ethyl ester	97632		1,000	
2-Prepenoic acid, 2-methyl-, methyl ester (I,T)	80626		1,000	
2-Propen-1-ol	107186		100	P
Propiolactone, beta-	57578	500	1	
Propionaldehyde	123386		1,000	
Propionic acid	79094		5,000	

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Propionic acid, 2-(2,4,5-trichlorophenoxy)-	93721		100	
Propionic anhydride	123626		5,000	
Propoxor (Baygon)	114261		100	
Propionitrile	107120	500	10	
Propionitrile, 3-chloro-	542767	1,000	1,000	
Propiophenone, 1, 4-amino phenyl	70699	100/10,000	1	
n-Propylamine	107108		5,000	
Propyl chloroformate	109615	500	1	
Propylene dichloride	78875		1,000	
Propylene oxide	75569	10,000	100	
1,2-Propylenimine	75558	10,000	1	P
2-Propyn-1-ol	107197		1,000	P
Prothoate	2275185	100/10,000	1	
Pyrene	129000	1,000/10,000	5,000	
Pyrethrins	121299 121211 8003347		1	
3,6-Pyridazinedione, 1,2-dihydro-	123331		5,000	
4-Pyridinamine	504245		1,000	P
Pyridine	110861		1,000	
Pyridine, 2-methyl-	109068		5,000	
Pyridine, 2-methyl-5-vinyl-	140761	500	1	
Pyridine, 4-amino-	504245	500/10,000	1,000	
Pyridine, 4-nitro-, 1-oxide	1124330	500/10,000	1	
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)	54115		100	P
2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66751		10	
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56042		10	
Pyriminil	53558251	100/10,000	1	
Pyrrolidine, 1-nitroso-	930552		1	
Quinoline	91225		5,000	
Quinone (p-Benzoquinone)	106514		10	
Quintobenzene	82688		100	
Reserpine	50555		5,000	
Resorcinol	108463		5,000	
Saccharin and salts	81072		100	
Salcomine	14167181	500/10,000	1	
Sarin	107448	10	1	
Safrole	94597		100	
Selenious acid	7783008	1,000/10,000	10	
Selenious acid, dithallium (1+) salt	12039520		1,000	P
Selenium ⁴	7782492		100	
Selenium dioxide	7446084		10	
Selenium oxychloride	7791233	500	1	
Selenium sulfide (R,T)	7488564		10	
Selenourea	630104		1,000	P
Semicarbazide hydrochloride	563417	1,000/10,000	1	
L-Serine, diazoacetate (ester)	115026		1	

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Silane, (4-aminobutyl)diethoxymethyl-	3037727	1,000	1	
Silver ⁴	7440224		1,000	
Silver cyanide	506649		1	P
Silver nitrate	7761888		1	
Silvex (2,4,5-TP)	93721		100	
Sodium	7440235		10	
Sodium arsenate	7631892	1,000/10,000	1	
Sodium arsenite	7784465	500/10,000	1	
Sodium azide	26628228	500	1,000	P
Sodium bichromate	10588019		10	
Sodium bifluoride	1333831		100	
Sodium bisulfite	7631905		5,000	
Sodium cacodylate	124652	100/10,000	1	
Sodium chromate	7775113		10	
Sodium cyanide	143339	100	10	P
Sodium dodecylbenzenesulfonate	25155300		1,000	
Sodium fluoride	7681494		1,000	
Sodium fluoroacetate	62748	10/10,000	10	
Sodium hydrosulfide	16721805		5,000	
Sodium hydroxide	1310732		1,000	
Sodium hypochlorite	7681529 10022705		100	
Sodium methylate	124414		1,000	
Sodium nitrite	7632000		100	
Sodium prentachlorophenate	131522	100/10,000	1	
Sodium phosphate, dibasic	7558794 10039324 10140655		5,000	
Sodium phosphate, tribasic	7601549 7758294 7785844 10101890 10124568 10361894		5,000	
Sodium selenate	13410010	100/10,000	1	
Sodium selenite	10102188 7782823	100/10,000	100	
Sodium tellurite	10102202	500/10,000	1	
Stannane, acetoxytriphenyl	900958	500/10,000	1	
Streptozotocin	18883664		1	
Strontium chromate	7789062		10	
Strychnidin-10-one	57249		10	P
Strychnidin-10-one, 2,3-dimethoxy-	357573		100	P
Strychnine, & salts	572494	100/10,000	10	P
Strychnine sulfate	60413	100/10,000	1	
Styrene	100425		1,000	
Styrene oxide	96093		100	
Sulfotep	3689245	500	100	
Sulfoxide, 3-chloropropyl octyl	3569571	500	1	

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Sulfur monochloride	12771083		1,000	
Sulfur dioxide	7446095	500	1	
Sulfur phosphide (R)	1314803		100	
Sulfur tetrafluoride	7783600	100	1	
Sulfur trioxide	7446119	100	1	
Sulfuric acid	7664939 8014957	1,000	1,000	
Sulfuric acid, dithallium (1+) salt	7446186 10031591		100	P
Sulfuric acid, dimethyl ester	77781		100	
Tabun	77816	10	1	
2,4,5-T acid	93765		1,000	
2,4,5-T amines	2008460 1319728 3813147 6369966 6369977		5,000	
Tellurium	13494809	500/10,000	1	
Tellurium hexafluoride	7783804	100	1	
2,4,5-T esters	93798 1928478 2545597 25168154 61792072		1,000	
2,4,5-T salts	13560991		1,000	
2,4,5-T	93765		1,000	
TDE (Dichloro diphenyl dichloroethane)	72548		1	
TEPP (Tetraethyl ester diphosphoric acid)	107493	100	10	
Terbufos	13071799	100	1	
1,2,4,5-Tetrachlorobenzene	95943		5,000	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746016		1	
1,1,1,2-Tetrachloroethane	630206		100	
1,1,2,2-Tetrachloroethane	79345		100	
Tetrachloroethene	127184		100	
Tetrachloroethylene	127184		100	
2,3,4,6-Tetrachlorophenol	58902		10	
Tetraethyl lead	78002	100	10	P
Tetraethyl pyrophosphate	107493		10	P
Tetraethyldithiopyrophosphate	3689245		100	P
Tetraethyltin	597648	100	1	
Tetramethyllead	75741	100	1	
Tetrahydrofuran (I)	109999		1,000	
Tetranitromethane (R)	509148	500	10	P
Tetraphosphoric acid, hexaethyl ester	757584		100	P
Thallic oxide	1314325		100	P
Thallium ⁴	7440280		1,000	
Thallium acetate	563688		100	
Thallium carbonate	6533739		100	
Thallium chloride	7791120		100	

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Thallium nitrate	10102451		100	
Thallium oxide	1314325		100	P
Thallium selenite	12039520		1,000	P
Thallium sulfate	7446186 10031591	100/10,000	100	P
Thallos carbonate (Thallium (I) carbonate)	6533739	100/10,000	100	
Thallos chloride (Thallium (I) chloride)	7791120	100/10,000	100	
Thallos malonate (Thallium (I) malonate)	2757188	100/10,000	1	
Thallos sulfate (Thallium (I) sulfate)	7446186	100/10,000	100	P
Thioacetamide	62555		10	
Thiocarbazide	2231574	1,000/10,000	1	
Thiodiphosphoric acid, tetraethyl ester	3689245		100	P
Thiofanox	39196184	100/10,000	100	P
Thioimidodicarbonic diamide [(H2N)C(S)] 2NH	541537		100	P
Thiomethanol (I,T)	74931		100	
Thionazin	297972	500	100	
Thioperoxydicarbonic diamide [(H2N)C(S)] 2S2, tetra-methyl-	137268		10	
Thiophenol	108985	500	100	P
Thiosemicarbazide	79196	100/10,000	100	P
Thiourea	62566		10	
Thiourea, (2-chlorophenyl)-	5344821	100/10,000	100	P
Thiourea, (2-methylphenyl)-	614788	500/10,000	1	
Thiourea, 1-naphthalenyl-	86884		100	P
Thiourea, phenyl-	103855		100	P
Thiram	137268		10	
Titanium tetrachloride	7550450	100	1,000	
Toluene	108883		1,000	
Toluenediamine	95807 496720 823405 25376458		10	
Toluene diisocyanate (R,T)	584849 91087 26471625	500	100	
o-Toluidine	95534		100	
p-Toluidine	106490		100	
o-Toluidine hydrochloride	636215		100	
Toxaphene	8001352		1	P
2,4,5-TP acid	93721		100	
2,4,5-TP acid esters	32534955		100	
1H-1,2,4-Triazol-3-amine	61825		10	
Trans-1,4-dichlorobutene	110576	500	1	
Triamiphos	1031476	500/10,000	1	
Triazofos	24017478	500	1	
Trichloroacetyl chloride	76028	500	1	
Trichlorfon	52686		100	
1,2,4-Trichlorobenzene	120821		100	

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1,1,1-Trichloroethane	71556		1,000	
1,1,2-Trichloroethane	79005		100	
Trichloroethene	79016		100	
Trichloroethylene	79016		100	
Trichloroethylsilane	115219	500	1	
Trichloronate	327980	500	1	
Trichloromethanesulfonyl chloride	594423		100	P
Trichloromonofluoromethane	75694		5,000	
Trichlorophenol:	21567822		10	
2,3,4-Trichlorophenol	15950660			
2,3,5-Trichlorophenol	933788			
2,3,6-Trichlorophenol	933755			
2,4,5-Trichlorophenol	95954		10	
2,4,6-Trichlorophenol	88062		10	
3,4,5-Trichlorophenol	609198			
Trichlorophenylsilane	98135	500	1	
Trichloro(chloromethyl)silane	1558254	100	1	
Trichloro(dichlorophenyl)silane	27137855	500	1	
Triethanolamine dodecylbenzene-sulfonate	27323417		1,000	
Triethoxysilane	998301	500	1	
Trifluralin	1582098		10	
Triethylamine	121448		5,000	
Trimethylamine	75503		100	
Trimethylchlorsilane	75774	1,000	1	
2,2,4-Trimethylpentane	540841		1,000	
Trimethylolpropane phosphite	824113	100/10,000	1	
Trimethyltin chloride	1066451	500/10,000	1	
1,3,5-Trinitrobenzene (R,T)	99354		10	
1,3,5-Trioxane, 2,4,6-trimethyl-	123637		1,000	
Triphenyltin chloride	639587	500/10,000	1	
Tris(2-chloroethyl)amine	555771	100	1	
Tris(2,3-dibromopropyl) phosphate	126727		10	
Trypan blue	72571		10	
Unlisted Hazardous Wastes Characteristic of Ignitability	NA		100	
Unlisted Hazardous Wastes Characteristic of Corrosivity	NA		100	
Unlisted Hazardous Wastes Characteristic of Reactivity	NA		100	
Unlisted Hazardous Wastes Characteristic of Toxicity:				
Arsenic			1	
Barium			1000	
Benzene			10	
Cadmium			10	
Carbon Tetrachloride			10	
Chlordane			1	
Chlorobenzene			100	
Chloroform			10	

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Chromium			10	
o-Cresol			100	
m-Cresol			100	
p-Cresol			100	
Cresol			100	
2,4-D (Dichlorophenoxyacetic acid)			100	
1,4-Dichlorobenzene			100	
1,2-Dichloroethane			100	
1,1-Dichloroethylene			100	
2,4-Dinitrotoluene			10	
Endrin			1	
Heptachlor (and epoxide)			1	
Hexachlorobenzene			10	
Hexachlorobutadiene			1	
Hexachloroethane			100	
Lead			10	
Lindane			1	
Mercury			1	
Methoxychlor			1	
Methyl ethyl ketone			5,000	
Nitrobenzene			1,000	
Pentachlorophenol			10	
Pyridine			1,000	
Selenium			10	
Silver			1	
Tetrachloroethylene			100	
Toxaphene			1	
Trichloroethylene			100	
2,4,5 Trichlorophenol			10	
2,4,5-TP			100	
Vinyl chloride			1	
Uracil mustard	66751		10	
Uranyl acetate	541093		100	
Uranyl nitrate	10102064 36478769		100	
Urea, N-ethyl-N-nitroso	759739		1	
Urea, N-methyl-N-nitroso	684935		1	
Urethane (Carbamic acid ethyl ester)	51796		100	
Valinomycin	2001958	1,000/10,000	1	
Vanadic acid, ammonium salt	7803556		1,000	P
Vanadic oxide V ₂ O ₅	1314621		1,000	P
Vanadic pentoxide	1314621		1,000	P
Vanadium pentoxide	1314621	100/10,000	1,000	
Vanadyl sulfate	27774136		1,000	
Vinyl chloride	75014		1	
Vinyl acetate	108054		5,000	
Vinyl acetate monomer	108054	1,000	5,000	
Vinylamine, N-methyl-N-nitroso-	4549400		10	P

ITALY - APPENDIX A

List of Hazardous Substances & Materials

Hazardous Substance/Material	CAS No. ¹	Threshold Planning Quantity (Pounds) ²	RQ (Pounds) ³	HW Designator
Vinyl bromide	593602		100	
Vinylidene chloride	75354		100	
Warfarin, & salts, when present at concentrations greater than 0.3%	81812	500/10,000	100	P
Warfarin sodium	129066	100/10,000	100	
Xylene (mixed):	1330207		100	
m-Benzene, dimethyl	108383		1,000	
o-Benzene, dimethyl	95476		1,000	
p-Benzene, dimethyl	106423		100	
Xylenol	1300716		1,000	
Xylylene dichloride	28347139	100/10,000	1	
Yohimban-16-carboxylic acid, 11,17 dimethoxy-18-[(3,4,5-trimethoxy-benzoyl)oxy]-, methyl ester (3-beta, 16-beta,17-alpha,18-beta,20-alpha)-	50555		5,000	
Zinc ⁴	7440666		1,000	
Zinc acetate	557346		1,000	
Zinc ammonium chloride	52628258 14639975 14639986		1,000	
Zinc borate	1332076		1,000	
Zinc bromide	7699458		1,000	
Zinc carbonate	3486359		1,000	
Zinc chloride	7646857		1,000	
Zinc cyanide	557211		10	P
Zinc, dichloro(4,4-dimethyl-5(((methyl-amino)carbonyl)oxy)imino)pentaenitrile)-(t-4)-	58270089	100/10,000	1	
Zinc fluoride	7783495		1,000	
Zinc formate	557415		1,000	
Zinc hydrosulfite	7779864		1,000	
Zinc nitrate	7779886		1,000	
Zinc phenosulfonate	127822		5,000	
Zinc phosphide	1314847	500	100	P
Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10%	1314847		100	P
Zinc silicofluoride	16871719		5,000	
Zinc sulfate	7733020		1,000	
Zirconium nitrate	13746899		5,000	
Zirconium potassium fluoride	16923958		1,000	
Zirconium sulfate	14644612		5,000	
Zirconium tetrachloride	10026116		5,000	

Notes:

1. Chemical Abstract Service (CAS) Registry Number.
2. Quantity in storage above which DoD LEC must be notified (See Chapter 5, "Hazardous Material").
3. Reportable quantity release which requires notification (See Chapter 18, "Spill Prevention & Response Planning").
4. No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is ≥ 100 micrometers (0.004 inches).

5. The RQ for asbestos is limited to friable forms only.
 6. Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R-(OCH_2CH_2)_n-OR'$. Where $n = 1, 2, \text{ or } 3$; $R = \text{alkyl C7 or less}$; or $R = \text{phenyl or alkyl substituted phenyl}$; $R' = H \text{ or alkyl C7 or less}$; or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.
- ** Indicates that no RQ is being assigned to the generic or broad class.

APB1. APPENDIX B.1 – HAZARDOUS PROPERTIES

H1	EXPLOSIVE: substances and preparations which may explode under the effect of flame or which are more sensitive to shocks or friction than dinitrobenzene.
H2	OXIDIZING: substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances.
H3-A	HIGHLY FLAMMABLE: <ul style="list-style-type: none"> - liquid substances and preparations having a flash point < 21 °C (including extremely flammable liquids), or - substances and preparations which may become hot and finally catch fire in contact with air at ambient temperature without any application of energy, or - solid substances and preparations which may readily catch fire
H3-B	FLAMMABLE: liquid substances and preparations having a flash point ≥ 21 °C and ≤ 55 °C.
H4	IRRITANT: non-corrosive substances and preparations which, through immediate, prolonged or repeated contact with skin or mucose membrane, can cause inflammation.
H5	HARMFUL; substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may involve limited health risks.
H6	TOXIC; substances and preparations (including very toxic substances and preparations) which, if they are inhaled or ingested or if they penetrate the skin, may involve serious, acute or chronic health risks and even death.
H7	CARCINOGENIC: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence.
H8	CORROSIVE: substances and preparations which may destroy living tissue on contact.
H9	INFECTIOUS: substances containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms.
H10	TERATOGENIC: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce non-hereditary congenital malformations or increase their incidence.
H11	MUTAGENIC: substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce hereditary genetic defects or increase their incidence.
H12	Substances and preparations which release toxic or very toxic gases in contact with water, air or an acid.
H13	SENSITIZING: substances and preparations which, if they are inhaled or if they penetrate the skin, are capable of eliciting a reaction of hypersensitization such that on further exposure to the substance or preparation, characteristic adverse effects are produced.
H14	ECOTOXIC: substances and preparations which present or may present immediate or delayed risks for one or more sectors of the environment.
H15	Substances and preparations capable by any means, after disposal, of yielding another substance (e.g. a leachate), which possesses any of the characteristics listed

	above.
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APB1.2 THRESHOLDS FOR CERTAIN HAZARDOUS PROPERTIES

Wastes are classified as hazardous if they have one or more of the following characteristics:

(a)	Flash point ≤ 55 °C
(b)	One or more substances classified as very toxic at a total concentration ≥ 0.1 %
(c)	One or more substances classified as toxic at a total concentration ≥ 3 %
(d)	One or more substances classified as harmful at a total concentration ≥ 25 %
(e)	One or more corrosive substances classified as R35 at a total concentration ≥ 1 %
(f)	One or more corrosive substances classified as R34 at a total concentration ≥ 5 %
(g)	One or more irritant substances classified as R41 at a total concentration ≥ 10 %
(h)	One or more irritant substances classified as R36, R37, R38 at a total concentration ≥ 20 %
(i)	One substance known to be carcinogenic of category 1 or 2 at a concentration ≥ 0.1 %
(j)	One substance known to be carcinogenic of category 3 at a concentration ≥ 1 %
(k)	One substance toxic for reproduction of category 1 or 2 classified as R60, R61 at a concentration ≥ 0.5 %
(l)	One substance toxic for reproduction of category 3 classified as R62, R63 at a concentration ≥ 5 %
(m)	One mutagenic substance of category 1 or 2 classified as R46 at a concentration ≥ 0.1 %
(n)	One mutagenic substance of category 3 classified as R40 at a concentration ≥ 1 %

Category	Description
D1	Open ground storage (e.g., landfills) – <i>Deposito sul o nel suolo (a esempio discarica)</i>
D2	Treatment on land (e.g., liquid wastes or sludge biodegradation on soils) – <i>Trattamento in ambiente terrestre (a esempio biodegradazione di rifiuti liquidi o fanghi nei suoli)</i>
D3	Deep injection (e.g., waste injection into wells, salt domes, or natural geological faults) – <i>Iniezioni in profondità (a esempio iniezioni dei rifiuti pompabili in pozzi, in cupole saline o faglie geologiche naturali)</i>
D4	Surface impoundments (e.g., discharge of liquid waste or sludge into wells, ponds, lagoons, etc.) – <i>Lagunaggio (a esempio scarico di rifiuti liquidi o di fanghi in pozzi, stagni o lagune, ecc.)</i>
D5	Specially equipped landfills (e.g., placing waste in separate airtight cells, covered and isolated from each other and from the environment) – <i>Messa in discarica specialmente allestita (a esempio sistemizzazione in alveoli stagni separati, ricoperti o isolati gli uni dagli altri e dall'ambiente)</i>
D6	Discharge of solid waste into water, except for immersion – <i>Scarico dei rifiuti solidi nell'ambiente idrico eccetto l'immersione</i>
D7	Immersion, including landfills under the sea subsoil – <i>Immersione, compreso il seppellimento nel sottosuolo marino</i>
D8	Biological treatment not specified in this Appendix, resulting in compounds and mixtures eliminated according to one of the processes included in Categories D1 to D12 – <i>Trattamento biologico non specificato altrove nel presente allegato, che dia origine a composti o a miscugli che vengono eliminati secondo uno dei procedimenti elencati nei punti da D1 a D12</i>
D9	Physical and chemical treatment not specified in this Appendix, resulting in compounds and mixtures eliminated according to one of the processes included in Categories D1 to D12 (e.g., evaporation, drying processes, cementation, etc.) – <i>Trattamento fisico-chimico non specificato altrove nel presente allegato che dia origine a composti o a miscugli eliminati secondo uno dei procedimenti elencati nei punti da D1 a D12 (a esempio evaporazione, essiccazione, calcinazione, ecc.)</i>
D10	Incineration on land – <i>Incenerimento a terra</i>
D11	Incineration at sea – This activity is not permitted. <i>Incenerimento in mare – Questa operazione è vietata</i>
D12	Permanent storage (e.g., emplacement of containers in a mine, etc.) – <i>Deposito permanente (a esempio sistemazione di contenitori in una miniera, ecc.)</i>
D13	Preliminary collection prior to one of the processes listed in Categories D1 to D12; to be used in the cases when a different D-code suitable for the activity is not available (D13 can be used to cover preliminary processing of waste such as sorting, fragmentation, compaction, pelletizing, drying, shredding, conditioning – <i>Raggruppamento preliminare prima di una delle operazioni di cui ai punti da D1 a D12. In mancanza di un altro codice D appropriato, può comprendere le operazioni preliminari precedenti allo smaltimento, incluso il pretrattamento come, tra l'altro, la cernita, la frammentazione, la compattazione, la pellettizzazione, l'essiccazione, la triturazione, il condizionamento o la separazione prima di una delle operazioni indicate da D1 a D12</i>
D14	Preliminary reconditioning prior to one of the processes listed in Categories D1 to D12 – <i>Ricondizionamento preliminare prima di una delle operazioni di cui ai punti da D1 a D13</i>
D15	Preliminary storage prior to one of the processes listed in D1 to D14 (except for temporary storage before waste collection at the site where it is produced) – <i>Deposito preliminare prima di una delle operazioni di cui ai punti da D1 a D14 (escluso il deposito temporaneo, prima della raccolta, nel luogo in cui sono prodotti)</i>

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Category	Description
R1	<p>Main use as fuel or as other means of producing energy. In case of incineration, the activity is classified as recovery “R” provided that the incinerator meets energy efficiency targets of 0.6 for plants installed before year 2009, or of 0.65 for plants installed after year 2009 –</p> <p><i>Utilizzazione principale come combustibile o come altro mezzo per produrre energia. Gli impianti di incenerimento dei rifiuti solidi urbani sono compresi solo se la loro efficienza energetica è uguale o superiore a 0.6 per impianti anteriori al 2009, o superiore a 0.65 per impianti successivi al 2009</i></p>
R2	<p>Solvent regeneration and recovery –</p> <p><i>Rigenerazione/recupero di solventi</i></p>
R3	<p>Organic substance recycling and recovery not used as solvents (including composting processes and other biological transformations). Includes gasification and pyrolysis where the substances are used as chemicals –</p> <p><i>Riciclo/recupero delle sostanze organiche non utilizzate come solventi (comprese le operazioni di compostaggio e altre trasformazioni biologiche). Sono comprese la gassificazione e la pirolisi che utilizzano i componenti come sostanze chimiche</i></p>
R4	<p>Metal or metallic component recycling or recovery –</p> <p><i>Riciclo/recupero dei metalli e dei composti metallici</i></p>
R5	<p>Other inorganic substance recycling and recovery. It includes the cleaning activities resulting in the re-use of soil, and the recycling of inorganic construction material –</p> <p><i>Riciclo/recupero di altre sostanze inorganiche. È compresa la pulizia risultante in un recupero del suolo e il riciclaggio dei materiali da costruzione inorganici</i></p>
R6	<p>Acid or base regeneration –</p> <p><i>Rigenerazione degli acidi o delle basi</i></p>
R7	<p>Recovery of products useful to capture pollutants –</p> <p><i>Recupero dei prodotti che servono a captare gli inquinanti</i></p>
R8	<p>Recovery of products from catalysts –</p> <p><i>Recupero dei prodotti provenienti dai catalizzatori</i></p>
R9	<p>Oil regeneration and other re-utilization of oils –</p> <p><i>Rigenerazione o altri reimpieghi degli oli</i></p>
R10	<p>Spreading on soil for the benefit of agriculture or ecology –</p> <p><i>Spandimento sul suolo a beneficio dell'agricoltura o dell'ecologia</i></p>
R11	<p>Use of wastes from one of the processes in R1 to R10 –</p> <p><i>Utilizzazione di rifiuti ottenuti da una delle operazioni indicate da R1 a R10</i></p>
R12	<p>Exchanging wastes in order to subject them to one of the processes in R1 to R11; to be used in the cases when a different R-code suitable for the activity is not available (R12 can be used to cover preliminary processing of waste such as sorting, fragmentation, compaction, pelletizing, drying, shredding, conditioning –</p> <p><i>Scambio di rifiuti per sottoporli a una delle operazioni indicate da R1 a R11. In mancanza di un altro codice R appropriato, può comprendere le operazioni preliminari precedenti al recupero, incluso il pretrattamento come, tra l'altro, la cernita, la frammentazione, la compattazione, la pelletizzazione, l'essiccazione, la triturazione, il condizionamento, il ricondizionamento, la separazione, il raggruppamento prima di una delle operazioni indicate da R1 a R11</i></p>
R13	<p>Waste stockpiling in order to subject them to one of the processes in R1 to R12 (except for temporary storage before waste collection at the site where it is produced) –</p> <p><i>Messa in riserva di rifiuti per sottoporli a una delle operazioni indicate nei punti da R1 a R12 (escluso il deposito temporaneo, prima della raccolta, nel luogo in cui sono prodotti)</i></p>

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APB4. APPENDIX B.4TYPICAL NON-HAZARDOUS WASTE RECOVERY ACTIVITIES

NOTE: Appendix B.4 lists the types of non-hazardous waste (and their related codes) applicable to waste recovery under simplified authorization procedures, as well as applicable waste recovery activities. Only the most significant have been reported hereunder (contact DoD LEC for more information, as necessary).

Tabella 1 - Suballegato 1**NORME TECNICHE GENERALI PER IL RECUPERO DI MATERIA DAI RIFIUTI NON PERICOLOSI****Table 1 - Sub-Annex 1****TECHNICAL RULES FOR THE RECOVERY OF MATERIAL FROM NON-HAZARDOUS WASTE****1. RIFIUTI DI CARTA, CARTONE E PRODOTTI DI CARTA/PAPER AND CARDBOARD WASTE**

1.1 **Tipologia:** rifiuti di carta, cartone e cartoncino, inclusi poliaccoppiati, anche di imballaggi. [150101] [150105] [1501061][200101]

1.1 **Type:** paper and cardboard waste, included those from mixed joined materials, also from packaging [150101] [150105] [1501061][200101]

1.1.1 **Provenienza:** attività produttive: raccolta differenziata di RU, altre forme di raccolta in appositi contenitori su superfici private; aSeptember 2012attività di servizio.

1.1.1 **Source:** productive activities: Separate Urban Waste collection, other types of collection in dedicated containers on private areas, service activities.

1.1.2 **Caratteristiche del rifiuto:** rifiuti, costituiti da: cartaccia derivante da raccolta differenziata, rifiuti di carte e cartoni non rispondenti alle specifiche delle norme Uni-En 643.

1.1.2 **Waste Characteristics:** residues: Waste paper coming from the separate collection, waste paper and waste cardboards not in compliance with the specifications of Technical Norm Uni-En 643.

1.1.3 Attività di recupero:

a) riutilizzo diretto nell'industria cartaria [R3].

b) messa in riserva [R13] per la produzione di materia prima secondaria per l'industria cartaria mediante selezione, eliminazione di impurezze e di materiali contaminati, compattamento in conformità alle seguenti specifiche [R3]:

impurezze quali metalli, sabbie e materiali da costruzione, materiali sintetici, vetro, carte

prodotte con fibre sintetiche, tessili, legno, nonché altri materiali estranei, max 1% come somma totale; carta carbone, carte bituminate assenti; formaldeide non superiore allo 0,1% in peso; fenolo non superiore allo 0,1% in peso; PCB + PCT < 25 ppm

1.1.3 Recovery activity:

- a) direct recovery in paper mills [R3].
- b) storage [R13] in order to produce the secondary raw material for paper mills by selection and compacting, as allowed by the following specific requirements [R3]:
presence of impurities as metals, sand and construction materials, synthetic materials, glass, papers made by synthetic fibers, textiles, wood, and other extraneous materials, max 1% as total sum; absence of waxed and; absence of bituminized papers; formaldehyde not higher than 0.1 % in weight; phenol not higher than 0.1 % in weight; PCB + PCT < 25 ppm

1.1.4 Caratteristiche delle materie prime e/o dei prodotti ottenuti:

- a) carta, cartone e cartoncino nelle forme usualmente commercializzate;
- b) materie prime secondarie per l'industria cartaria rispondenti alle specifiche delle norme UNI - EN 643.

1.1.4 Characteristics of obtained raw materials and/or products:

- a) paper and cardboard as usually put on the market;
- b) raw materials and secondary raw materials for paper industry meeting UNI - EN 643 standards.

2. RIFIUTI DI VETRO IN FORMA NON DISPERSIBILE/GLASS WASTE

2.1 Tipologia: imballaggi, vetro di scarto ed altri rifiuti e frammenti di vetro; rottami di vetro [170202] [200102] [150107] [191205] [160120] [101112].

2.1 Type: packaging, glass residues; glass scraps [170202] [200102] [150107] [191205] [160120] [101112].

2.1.1 Provenienza: raccolta differenziata in appositi contenitori c/o altre raccolte differenziate; selezione da RSU c/o RAU; attività industriali, artigianali commerciali e di servizi; autodemolizione autorizzate ai sensi del decreto legislativo 5 febbraio 1997, n. 22 e successive modifiche e integrazioni.

2.1.1 Source: separate collection, separation from urban waste; residues from industrial or commercial activities, car repairing.

2.1.2 Caratteristiche del rifiuto: vetro di scarto con l'esclusione dei vetri da tubi raggio - catodici delle lampade a scarica ed altri vetri contaminati da sostanze radioattive e dei contenitori etichettati come pericolosi ai sensi della legge 29 maggio 1974, n. 256, decreto del Presidente della Repubblica 24 novembre 1981, N. 927 e successive modifiche e integrazioni; non radioattivo ai sensi del decreto legislativo 17 marzo 1995, n. 230.

2.1.2 Waste characteristics: glass residues, excluded cathode-ray tubes and other glass contaminated by radioactive substances and containers labeled as hazardous, and non-radioactive.

2.1.3 Attivita' di recupero:

- a) recupero diretto nell'industria vetraria [R5];
- b) messa in riserva [R13] per la produzione di materie prime secondarie per l'industria vetraria mediante cernita manuale, vagliatura, frantumazione c/o macinazione, separazione metalli magnetici, asportazione dei materiali leggeri, separazione automatica metalli non magnetici, separazione automatica corpi opachi, per l'ottenimento di rottame di vetro pronto al forno con le seguenti caratteristiche: Pb < 0,3 ppm sull'eluato effettuato in base ai criteri riportati nel D.M. 21/3/73 "Disciplina igienica degli imballaggi, recipienti, utensili destinati a venire in contatto con le sostanze alimentari o con sostanze di uso personale" e successive modifiche e integrazioni (Supplemento G.U. n. 104 del 20 aprile 1973); per il rottame di vetro di colore misto pronto al forno: materiale solido costituito da rottame di vetro sodio - calcico con granulometria > 3 mm, ceramica e porcellana < 0,01%, pietre <0,02%, metalli magnetici <0,002%, metalli amagnetici <0,01%, materiali organici <0,1%, altri vetri 0,5%, umidità <3% in peso, frazione sottovaglio (<3 mm) <5%; per il rottame di vetro di colore giallo, mezzo bianco o bianco pronto al forno: materiale solido costituito da rottame di vetro sodico - calcico con granulometria >3 mm, ceramica e porcellana <0,01%, pietre<0,01%, metalli magnetici <0,002%, metalli amagnetici 0,01%, (0,003% per il rottame di vetro trasparente), materiali organici <0,1% , altri vetri <0,5%, (4% per il rottame di vetro trasparente), umidità<3% in peso, frazione sottovaglio (<3 mm) <5%. [R5];
- c) messa in riserva [R13] per la produzione di materie prime secondarie per l'edilizia, per la formazione di rilevati e sottofondi stradali, riempimenti e colmature, come strato isolante e di appoggio per tubature, condutture e pavimentazioni anche stradali e come materiale di drenaggio, mediante cernita manuale, vagliatura, frantumazione e/o macinazione, separazione metalli magnetici, asportazione dei materiali leggeri, separazione automatica metalli non magnetici, separazione automatica corpi opachi, analisi del contenuto in metalli pesanti, e verifica dei limiti di cui al test di cessione effettuato sul rifiuto tal quale secondo il metodo in allegato 3 al presente decreto [R5].

2.1.3 Recovery activities:

- a) direct recovery in glass manufacturing industry [R5];
- b) storage [R13] in order to produce the secondary raw materials for glass industry, by selection, milling, separation of metals and light materials, to obtain glass scarp with the following characteristics: Pb < 0.3 ppm in the leachate (according to criteria set by Ministerial Decree 21/3/73); for mixed colored glass: solid material made of sodium-calcium glass with size > 3 mm, ceramics and porcelain < 0.01%, stones <0.02%, magnetic metals <0.002%, non-magnetic metals <0.01%, organic materials <0.1%, other glass 0.5%, humidity <3% in weight, fine fraction (<3 mm) <5%; for yellow or white glass: solid material made of sodium-calcium glass with size > 3 mm, ceramics and porcelain <0.01%, stones <0.01%, magnetic metals <0.002%, non-magnetic metals 0.01%, (0.003% for transparent glass scarp), organic materials <0.1%, other glass <0.5%, (4% for transparent glass scarp), humidity <3% in weight, fine fraction (<3 mm) <5%. [R5];
- c) storage [R13] in order to produce the secondary raw materials for building, road foundations, filling material, insulating layer for piping floor or roads, and draining material, by selection, milling, separation of metals and light materials, analysis of heavy metals' content and cession test as per the described method

2.1.4 Caratteristiche delle materie prime e/o dei prodotti ottenuti:

- a) manufatti in vetro;
- b) materie prime secondarie conformi alle specifiche merceologiche fissate dalle CCIAA di Roma e Milano destinate alla produzione di vetro, carta vetro e materiali abrasivi nelle forme usualmente commercializzate;
- c) materie prime secondarie per l'edilizia.

2.1.4 Characteristics of obtained raw materials and/or products:

- a) glass products;
- b) secondary raw materials meeting fixed standards , for the production of glass products;
- c) secondary raw materials for building industry.

3. RIFIUTI DI METALLI E LORO LEGHE SOTTO FORMA METALLICA NON DISPERSIBILE/METAL AND ALLOY WASTE

3.3 Tipologia: sfridi o scarti di imballaggi in alluminio, e di accoppiati carta plastica e metallo [150104] [1501051] [150106] [191203].

3.3 Type: aluminum scraps or residues and residues from mixed paper, plastic and metal products [150104] [1501051] [150106] [191203].

3.3.1 Provenienza: industria cartotecnica; attività industriali, commerciali e di servizio.

3.3.1 Source: industrial, commercial and service activities.

3.3.2 Caratteristiche del rifiuto: sfridi o scarti di imballaggi in alluminio e imballaggi compositi con carta plastica e metallo.

3.3.2 Waste characteristics: scraps or residues of aluminum packaging and mixed paper, plastic, metal packaging.

3.3.3 Eventuale Attività di recupero: macinatone, combustione a 400 - 500 °C per l'eliminazione delle frazioni di plastica e carta [R4].

3.3.3 Possible Recovery activities: milling, combustion at 752 - 932 °F to eliminate plastic and paper fraction [R4].

3.3.4 Caratteristiche delle materie prime e/o dei prodotti ottenuti: alluminio granulare conforme alle norme UNI 3950.

3.3.4 Characteristics of obtained raw materials and/or products: granular aluminum meeting UNI 3950 standards.

6. RIFIUTI DI PLASTICHE/PLASTIC WASTE

6.1 Tipologia: rifiuti di plastica; imballaggi usati in plastica compresi i contenitori per liquidi, con esclusione dei contenitori per fitofarmaci e per presidi medico - chirurgici [020104] [150102] [200103] [200104] [170203] [200139] [191204].

6.1 **Type:** plastic waste; plastic packaging excluding packaging for pesticides and medicines [020104] [150102] [200103] [200104] [170203] [200139] [191204].

6.1.1 **Provenienza:** raccolte differenziate, selezione da R.S.U. o R.A.; attività industriali, artigianali e commerciali e agricole, attività di costruzione e demolizione.

6.1.1 **Source:** separate collection; industrial, commercial, craft and agriculture activities, construction and demolition activities.

6.1.2 **Caratteristiche del rifiuto:** materiali plastici, compresi teli e sacchetti, tubetti per rocche di filati, di varia composizione e forma con eventuale presenza di rifiuti di altra natura.

6.1.2 **Waste characteristics:** plastic materials, including sheets and bags, of different shape and composition, also with other waste.

6.1.3 **Attività di recupero:** messa in riserva [R13] per la produzione di materie prime secondarie per l'industria delle materie plastiche, mediante asportazione delle sostanze estranee (qualora presenti), trattamento per l'ottenimento di materiali plastici conformi alle specifiche UNIPLAST-UNI 10667 e per la produzione di prodotti in plastica nelle forme usualmente commercializzate [R3].

6.1.3 **Recovery activities:** storage [R13] to produce secondary raw materials for plastic manufacturing industry, by separation of extraneous materials, treatment to obtain plastic materials in compliance with the specifications UNIPLAST-UNI 10667 for the productions of plastic products in the forms usually sold on the market.

6.1.4 **Caratteristiche delle materie prime e/o dei prodotti ottenuti:** materie prime secondarie conformi alle specifiche UNIPLAST - UNI 10667 e prodotti in plastica nelle forme usualmente commercializzate.

6.1.4 **Characteristics of obtained raw materials and/or products:** secondary raw materials meeting UNIPLAST - UNI 10667 standards and plastic products in the forms usually sold on the market.

7. RIFIUTI CERAMICI E INERTI/CERAMIC AND INERT WASTE

7.1 **Tipologia:** rifiuti costituiti da laterizi, intonaci e conglomerati di cemento armato e non, comprese le traverse e traversoni ferroviari e i pali in calcestruzzo armato provenienti da linee ferroviarie, telematiche ed elettriche e frammenti di rivestimenti stradali, purché privi di amianto. [101311] [170101] [170102] [170103] [170802] [170107] [170904] [200301].

7.1 **Type:** building materials, concrete, road foundation, with no asbestos [101311] [170101] [170102] [170103] [170802] [170107] [170904] [200301].

7.1.1 **Provenienza:** attività di demolizione, frantumazione e costruzione; selezione da RSU e/o RAU; manutenzione reti; attività di produzione di lastre e manufatti in fibrocemento.

7.1.1 **Source:** building and demolition activities; separate collection; maintaining and repairing of networks; production of cement slabs.

7.1.2 **Caratteristiche del rifiuto:** materiale inerte, laterizio e ceramica corta anche con presenza di frazioni metalliche, legno, plastica, carta e isolanti escluso amianto.

7.1.2 **Waste characteristics:** inert material, building materials and ceramic also containing metals, wood, plastic, paper and insulations, excluded asbestos.

7.1.3 **Attività di recupero:**

- a) messa in riserva di rifiuti inerti [R13] per la produzione di materie prime secondarie per l'edilizia, mediante fasi meccaniche e tecnologicamente interconnesse di macinazione, vagliatura, selezione granulometrica e separazione della frazione metallica e delle frazioni indesiderate per l'ottenimento di frazioni inerti di natura lapidea a granulometria idonea e selezionata, con eluato del test di cessione conforme a quanto previsto in allegato 3 al presente decreto [R5];
- b) utilizzo per recuperi ambientali previo trattamento di cui al punto a) (il recupero è subordinato all'esecuzione del test di cessione sul rifiuto tal quale secondo il metodo in allegato 3 al presente decreto [R10];
- c) utilizzo per la realizzazione di rilevati e sottofondi stradali e ferroviari e aeroportuali, piazzali industriali previo trattamento di cui al punto a) (il recupero è subordinato all'esecuzione del test di cessione sul rifiuto tal quale secondo il metodo in allegato 3 al presente decreto [R5].

7.1.3 **Recovery activities:**

- a) storage of inert materials [R13] for the secondary raw materials production for building industry by mechanical operations and technologically connected to milling, screening, granulometric selection and separation of the metallic portion and of the unwanted fractions for obtaining inert lapped fractions with a selected and suitable granulometry with compliant leachate test results;
- b) use for environmental recoveries, before treatment of point a) (the recovery is subordinated at the execution of the leachate test on the waste ;
- c) use for road, rail and airport embankments and sub-bases, industrial yards, before the treatment of point a) (the recovery is subordinated at the execution of the leachate test on the waste .

7.1.4 **Caratteristiche delle materie prime e/o dei prodotti ottenuti:** materie prime secondarie per l'edilizia con caratteristiche conformi all'allegato C della circolare del Ministero dell'ambiente e della tutela del territorio 15 luglio 2005, n. UL/2005/5205

7.1.4 Characteristics of the obtained raw materials and/or products: secondary raw materials for building industry meeting standards.

9. RIFIUTI DI LEGNO E SUGHERO/WOOD AND CORK WASTE

9.1 **Tipologia:** scarti di legno e sughero, imballaggi di legno [030101] [030105] [150103] [030105] [030199] [170201] [200138] [191207] [200301].

9.1 **Type:** wood and cork residues, wood packaging [030101] [030105] [150103] [030105] [030199] [170201] [200138] [191207] [200301].

9.1.1 **Provenienza:** industria edile e raccolta differenziata, attività industriali, artigianati, commerciali, agricole e di servizio; attività di demolizioni.

9.1.1 **Source:** building industry; separate collection; industrial, craft, commercial, and agriculture and service activities; demolitions.

9.1.2 **Caratteristiche del rifiuto:** legno in scarti di diverse dimensioni e segatura, con possibili presenze di polveri di natura inerte; cassette, pallets e altri imballaggi in legno non trattato.. sfridi di pannelli (compensati listellari, di fibra, di particelle ecc.) di legno trattato, nobilitato, compreso MDF, polverino di carteggiatura.

9.1.2 **Waste characteristics:** wood residues, also with inert material's dust, boxes, pallets and other packagings in non-treated wood, residues of treated wood, including dust from sandpapering.

9.1.3 **Attività di recupero:** messa in riserva di rifiuti di legno [R13] con lavaggio eventuale, cernita, adeguamento volumetrico o cippatura per sottoporli alle seguenti operazioni di recupero:

- a) recupero nell'industria della falegnameria e carpenteria [R3];
- b) recupero nell'industria cartaria [R3];
- c) recupero nell'industria del pannello di legno [R3];

9.1.3 **Waste recovery:** storage [R13] also with washing, selection, volume reduction, prior recovery in woodwork and carpentry R3]; in paper mills [R3]; and in wood manufacturing [R3];

9.1.4 **Caratteristiche delle materie prime e/o dei prodotti ottenuti:**

- a) manufatti a base legno e sughero nelle forme usualmente commercializzate;
- b) pasta di carta e carta nelle forme usualmente commercializzate;
- c) pannelli nelle forme usualmente commercializzate.

9.1.4 **Characteristics of raw materials and/or products:**

- a) wood and cork products;
- b) pulp and paper;
- c) panels.

10. RIFIUTI SOLIDI IN CAUCCIU' E GOMMA/CAOUTCHOUC AND RUBBER SOLID WASTE

10.2 **Tipologia:** pneumatici non ricostruibili, camere d'aria non riparabili e altri scarti di gomma [160103].

10.2 **Type:** tires that cannot be re-built, inner tubes and other rubber waste [160103].

10.2.1 **Provenienza:** industria della ricostruzione pneumatici, attività di sostituzione e riparazione pneumatici e attività di servizio, attività di autodemolizione autorizzata ai sensi del decreto legislativo 5 febbraio 1997, n. 22 e successive modifiche e integrazioni, autoriparazione e industria automobilistica.

10.2.1 **Source:** tire-repair industry and tire-repair activities, end-of-life vehicles collection centers, automotive industry.

10.2.2 **Caratteristiche del rifiuto:** pneumatici usurati e camere d'aria con eventuale presenza di inquinanti superficiali (IPA < 10 ppm); scarti di gomma di varie dimensioni e forme.

10.2.2 **Waste Characteristics:** used tires and inner tubes, with PAH < 10 ppm; rubber waste.

10.2.3. **Attività di recupero:** messa in riserva di rifiuti di gomma [R13] con lavaggio, triturazione e/o vulcanizzazione per sottoporli alle seguenti operazioni di recupero:

- a) recupero nell'industria della gomma per mescole compatibili [R3];
- b) recupero nella produzione bitumi [R3];
- c) realizzazione di parabordi previo lavaggio chimico fisico se contaminato, eventuale macinazione, compattazione e devulcanizzazione [R3];

10.2.3. **Waste recovery:** storage [R13] with washing, grinding and/or vulcanization, in order to recover the waste by:

- a) recovery in the rubber industry in mixtures [R3];
- b) recovery in bitumen production [R3];
- c) production of curbs, after chemical-physical washing if contaminated, or grinding, compacting and de-vulcanization [R3];

10.2.4 **Caratteristiche delle materie prime e/o dei prodotti ottenuti:**

- a) manufatti un gomma nelle forme usualmente;
- b) e c) bitumi e parabordi nelle forme usualmente commercializzate.

10.2.4 **Characteristics of the obtained raw materials and/or products:**

- a) products in rubber, as usually put on the market;
- b) e c) bitumen and curbs, as usually put on the market.

13. RIFIUTI CONTENENTI PRINCIPALMENTE COSTITUENTI INORGANICI CHE POSSONO A LORO VOLTA CONTENERE METALLI O MATERIE ORGANICHE/WASTE MAINLY CONTAINING INORGANIC CONSTITUENTS WHICH CAN CONTAIN METALS OR ORGANIC MATERIALS

13.20 **Tipologia:** gruppo cartuccia toner per stampante laser, contenitori toner per fotocopiatrici, cartucce per stampanti fax e calcolatrici a getto d'inchiostro, cartucce nastro per stampanti ad aghi [080318] [160216].

13.20 **Type:** cartridges [080318] [160216]

13.20.1 **Provenienza:** raccolta differenziata da parte dei distributori o di altri operatori specializzati, attività produttive o di servizio.

13.20.1 **Source:** separate collection

13.20.2 **Caratteristiche del rifiuto:** contenitore in materiale plastico e/o metallico con tracce di toner o di inchiostro o di nastro inchiostroato.

13.20.2 **Waste characteristics:** plastic/metal containers containing traces of toner or ink.

13.20.3 **Attività di recupero:** verifica di funzionalità e ricarica del toner, dell'inchiostro o del nastro inchiostro [R5].

13.20.3 **Recovery activity:** check of functionality and toner or ink's re-charge [R5].

13.20.4 **Caratteristiche delle materie prime e/o dei prodotti ottenuti:** contenitore in materiale plastico e metallico con toner, inchiostro o nastro inchiostro nelle forme usualmente commercializzate.

13.20.4 **Characteristics of the obtained raw materials and/or products:** plastic/metal containers with toner or ink, as usually put on the market.

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APB5. APPENDIX B.5TYPICAL HAZARDOUS WASTE RECOVERY ACTIVITIES

NOTE: Appendix B.5 lists the types of hazardous waste (and their related code) applicable to waste recovery under simplified authorization procedures, as well as applicable waste recovery activities. Only the most significant wastes have been reported hereunder (contact DoD LEC for more information, as necessary).

TABELLA 1 - Suballegato 1**NORME TECNICHE GENERALI PER IL RECUPERO DI MATERIA DAI RIFIUTI PERICOLOSI****TABLE 1 – Sub-Annex 1****GENERAL TECHNICAL RULES FOR THE RECOVERY OF MATERIAL FROM HAZARDOUS WASTE****1. METALLI NON FERROSI/NON-FERROUS METALS**

1.4 *Tipologia*: batterie al piombo esauste e di scarto e loro parti [160601*] [200133*].

1.4 *Type*: waste lead batteries and their parts [160601*] [200133*].

1.4.1 *Provenienza*: raccolta finalizzata di batterie al piombo esauste; selezione di qualità da industria produzione accumulatori.

1.4.1 *Source*: separate collection; battery production industry.

1.4.2 *Caratteristiche del rifiuto e valori limite delle sostanze pericolose*: batterie al piombo esauste e di scarto e loro parti, con contenuto di Piombo fino al 90% e contenenti: Sn <1%, As <0,5%, Sb <10%, Se <0,05%; contenenti soluzione acquosa di H₂SO₄ con Pb <1%, Cd <0,1%, Cu, Zn, As, Sn e Sb <0,1% per ciascun elemento.

1.4.2 *Waste characteristics and threshold limits for hazardous substance*: waste lead batteries and their parts, with a lead content up to 90% and containing: Sn <1%, As <0.5%, Sb <10%, Se <0.05%; containing water solution of H₂SO₄ with Pb <1%, Cd <0.1%, Cu, Zn, As, Sn and Sb <0.1% for each element.

1.4.3 *Attività di recupero*: recupero al ciclo termico o idrometallurgico delle componenti metalliche a base di piombo ottenute mediante pretrattamento di frantumazione e vagliatura per la separazione delle componenti plastiche [R4]: decantazione, filtrazione e/o concentrazione dell'acido solforico [R5].

1.4.3 *Recovery activity*: recovery of metal components obtained by a crushing and riddling pre-treatment, by thermal or hydro-metallurgic cycles to separate plastic components [R4]; decanting, filtration and/or concentration of sulfuric acid [R5].

1.4.4 *Caratteristiche delle materie prime e/o dei prodotti ottenuti*: piombo e sue leghe e soluzione diluita di acido solforico nelle forme usualmente commercializzate.

1.4.4 *Characteristics of the obtained raw materials and/or products*: lead and its alloys and sulfuric acid diluted solution, as usually put on the market.

Substance	CAS No.	Concentration Limit
Tetrabromodiphenyl ether C 12 H 6 Br 4 O		
Pentabromodiphenyl ether C 12 H 5 Br 5 O		
Hexabromodiphenyl ether C 12 H 4 Br 6 O		
Heptabromodiphenyl ether C 12 H 3 Br 7 O		
Perfluorooctane sulfonic acid and its derivatives (PFOS) C 8 F 17 SO 2 X (X = OH, Metal salt (O-M +), halide, amide, and other derivatives including polymers)		
Polychlorinated dibenzo-p- dioxins and dibenzofurans (PCDD/PCDF)		15 µg/kg (1)
DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl) ethane)	50-29-3	50 mg/kg
Chlordane	57-74-9	50 mg/kg
Hexachlorocyclohexanes, including lindane	58-89-9 319-84-6 319-85-7 608-73-1	50 mg/kg
Dieldrin	60-57-1	50 mg/kg
Endrin	72-20-8	50 mg/kg
Heptachlor	76-44-8	50 mg/kg
Hexachlorobenzene	118-74-1	50 mg/kg
Chlordecone	143-50-0	50 mg/kg
Aldrin	309-00-2	50 mg/kg
Pentachlorobenzene	608-93-5	50 mg/kg
Polychlorinated Biphenyls (PCB)	1336-36-3 and others	50 mg/kg
Mirex	2385-85-5	50 mg/kg
Toxaphene	8001-35-2	50 mg/kg
Hexabromobiphenyl	36355-01-8	50 mg/kg

Notes:

(1) The limit is calculated as PCDD and PCDF according to the following toxic equivalency factors (TEFs)

PCDD	TEF
2,3,7,8-TeCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
OCDD	0.0003
PCDF	TEF
2,3,7,8-TeCDF	0.1
1,2,3,7,8-PeCDF	0.03
2,3,4,7,8-PeCDF	0.3
1,2,3,4,7,8-HxCDF	0.1
PCDD	TEF
1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
OCDF	0.0003

(2) Where applicable, the calculation method in European standards EN 12766-1 and EN 12766-2 shall be applied.

ITALY - APPENDIX C Determination of Worst Case Discharge Planning Volume

APC1. APPENDIX C

DETERMINATION OF WORST CASE DISCHARGE PLANNING VOLUME

APC1.1. This appendix provides criteria to determine, on an installation-specific basis, the extent of a worst-case discharge (WCD).

APC1.2. This Appendix provides criteria to determine the volume of oil or hazardous substance to be used in planning for a WCD. Installations should calculate both WCD volumes that apply to the installation's design and operation and use the larger volume as the WCD planning volume.

APC1.3. For installations transferring oil to and from vessels with tank capacities of $\geq 10,500$ gallons (250 barrels), the WCD planning volume is calculated as follows:

APC1.3.1. Where applicable, the loss of the entire capacity of all in-line and break out tank(s) needed for the continuous operation of the pipelines used for the purposes of handling or transporting oil, in bulk, to or from a vessel regardless of the presence of secondary containment; plus

APC1.3.2. The discharge from all piping carrying oil between the marine transfer manifold and the valve or manifold adjacent to the POL storage container. The discharge from each pipe is calculated as follows: The maximum time to discover the release from the pipe in hours, plus the maximum time to shut down flow from the pipe in hours (based on historic discharge data or the best estimate in the absence of historic discharge data for the installation) multiplied by the maximum flow rate expressed in gallons per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided) plus the total line drainage volume expressed in gallons for the pipe between the marine transfer manifold and the valve or manifold adjacent to the POL storage container.

APC1.4. For installations with POL Storage Containers:

APC1.4.1. Single POL Storage Container Facilities. For facilities containing only one aboveground oil or hazardous substance storage container, the WCD planning volume equals the capacity of the oil or hazardous substance storage container. If adequate secondary containment (sufficiently large to contain the capacity of the above ground oil or hazardous substance storage container plus sufficient freeboard to allow for precipitation) exists for the oil storage container, multiply the capacity of the container by 0.8.

APC1.4.2. Multiple POL Storage Container Facilities

APC1.4.2.1. Facilities having no secondary containment. If none of the above ground storage containers at the facility have adequate secondary containment, the worst case planning volume equals the total above ground oil and hazardous substance storage capacity at the facility.

APC1.4.2.2. Facilities having complete secondary containment. If every above ground storage container at the facility has adequate secondary containment, the WCD planning volume

ITALY - APPENDIX C Determination of Worst Case Discharge Planning Volume

equals the capacity of the largest single above ground oil or hazardous substance storage container.

APC1.4.2.3. Facilities having partial secondary containment. If some, but not all above ground storage containers at the facility have adequate secondary containment, the WCD planning volume equals the sum of:

APC1.4.2.3.1. The total capacity of the above ground oil and hazardous substance storage container that lacks adequate secondary containment; plus

APC1.4.2.3.2. The capacity of the largest single above ground oil or hazardous substance storage container that has adequate secondary containment.

APC1.4.3. For purposes of this Appendix, the term “adequate secondary containment” means an impervious containment system such as a dike, berm, containment curb, drainage system or other device that will prevent the escape of spilled material into the surrounding soil.

ADDENDUM 1

EU List of Hazardous Materials

To obtain a copy of this Addendum, please contact the DoD LEC.

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European List of Wastes

Introduction

The different types of wastes in the list are fully defined by the six-digit code for the waste and the respective two-digit and four-digit chapter headings. This implies that the following steps should be taken to identify a waste in the list:

1. Identify the source generating the waste in chapters 01 to 12 or 17 to 20 and identify the appropriate six-digit code of the waste (excluding codes ending with 99 of these chapters).
2. Separately collected packaging waste (including mixtures of different packaging materials) shall be classified in 15 01, not in 20 01.
3. If no appropriate waste code can be found in chapters 01 to 12 or 17 to 20, the chapters 13, 14 and 15 must be examined to identify the waste.
4. If none of these waste codes apply, the waste must be identified according to chapter 16.
5. If the waste is not in chapter 16 either, the 99 code (wastes not otherwise specified) must be used in the section of the list corresponding to the activity identified in step 1.

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| 02 | Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing |
| 03 | Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard |
| 04 | Wastes from the leather, fur and textile industries |
| 05 | Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal |
| 06 | Wastes from inorganic chemical processes |
| 07 | Wastes from organic chemical processes |
| 08 | Wastes from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks |
| 09 | Wastes from the photographic industry |
| 10 | Wastes from thermal processes |

- 11 Wastes from chemical surface treatment and coating of metals and other materials; non-ferrous hydro-metallurgy
- 12 Wastes from shaping and physical and mechanical surface treatment of metals and plastics
- 13 Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)
- 14 Waste organic solvents, refrigerants and propellants (except 07 and 08)
- 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
- 16 Wastes not otherwise specified in the list
- 17 Construction and demolition wastes (including excavated soil from contaminated sites)
- 18 Wastes from human or animal health care and/or related research (except kitchen and restaurant wastes not arising from immediate health care)
- 19 Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
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- 01 01 01 wastes from mineral metalliferous excavation
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- 01 03 04* acid-generating tailings from processing of sulfide ore*
- 01 03 05* other tailings containing dangerous substances*
- 01 03 06 tailings other than those mentioned in 01 03 04 and 01 03 05
- 01 03 07* other wastes containing dangerous substances from physical and chemical processing of metalliferous minerals*
- 01 03 08 dusty and powdery wastes other than those mentioned in 01 03 07
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European List of Wastes

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- 01 04 wastes from physical and chemical processing of non-metalliferous minerals**
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- 01 04 08 waste gravel and crushed rocks other than those mentioned in 01 04 07
- 01 04 09 waste sand and clays
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- 01 05 drilling muds and other drilling wastes**
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- 02 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING**
- 02 01 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
- 02 01 01 sludges from washing and cleaning
- 02 01 02 animal-tissue waste
- 02 01 03 plant-tissue waste

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- 02 01 04 waste plastics (except packaging)
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- 02 03 04 materials unsuitable for consumption or processing
- 02 03 05 sludges from on-site effluent treatment
- 02 03 99 wastes not otherwise specified
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- 02 04 01 soil from cleaning and washing beet
- 02 04 02 off-specification calcium carbonate
- 02 04 03 sludges from on-site effluent treatment
- 02 04 99 wastes not otherwise specified

- 02 05** **wastes from the dairy products industry**
- 02 05 01 materials unsuitable for consumption or processing
- 02 05 02 sludges from on-site effluent treatment
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- 03 02 03* organometallic wood preservatives*
- 03 02 04* inorganic wood preservatives*
- 03 02 05* other wood preservatives containing dangerous substances*
- 03 02 99 wood preservatives not otherwise specified
- 03 03 wastes from pulp, paper and cardboard production and processing**
- 03 03 01 waste bark and wood
- 03 03 02 green liquor sludge (from recovery of cooking liquor)
- 03 03 05 de-inking sludges from paper recycling
- 03 03 07 mechanically separated rejects from pulping of waste paper and cardboard
- 03 03 08 wastes from sorting of paper and cardboard destined for recycling
- 03 03 09 lime mud waste
- 03 03 10 fiber rejects, fiber-, filler- and coating-sludges from mechanical separation
- 03 03 11 sludges from on-site effluent treatment other than those mentioned in 03 03 10
- 03 03 99 wastes not otherwise specified
- 04 WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES**
- 04 01 wastes from the leather and fur industry**
- 04 01 01 fleshings and lime split wastes
- 04 01 02 liming waste
- 04 01 03* degreasing wastes containing solvents without a liquid phase*
- 04 01 04 tanning liquor containing chromium
- 04 01 05 tanning liquor free of chromium
- 04 01 06 sludges, in particular from on-site effluent treatment containing chromium
- 04 01 07 sludges, in particular from on-site effluent treatment free of chromium
- 04 01 08 waste tanned leather (blue sheetings, shavings, cuttings, buffing dust) containing chromium
- 04 01 09 wastes from dressing and finishing
- 04 01 99 wastes not otherwise specified
- 04 02 wastes from the textile industry**

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- 04 02 09 wastes from composite materials (impregnated textile, elastomer, plastomer)
- 04 02 10 organic matter from natural products (for example grease, wax)
- 04 02 14*** *wastes from finishing containing organic solvents*
- 04 02 15 wastes from finishing other than those mentioned in 04 02 14
- 04 02 16*** *dyestuffs and pigments containing dangerous substances*
- 04 02 17 dyestuffs and pigments other than those mentioned in 04 02 16
- 04 02 19*** *sludges from on-site effluent treatment containing dangerous substances*
- 04 02 20 sludges from on-site effluent treatment other than those mentioned in 04 02 19
- 04 02 21 wastes from unprocessed textile fibers
- 04 02 22 wastes from processed textile fibers
- 04 02 99 wastes not otherwise specified
- 05 WASTES FROM PETROLEUM REFINING, NATURAL GAS PURIFICATION AND PYROLYTIC TREATMENT OF COAL**
- 05 01 wastes from petroleum refining**
- 05 01 02*** *desalter sludges*
- 05 01 03*** *tank bottom sludges*
- 05 01 04*** *acid alkyl sludges*
- 05 01 05*** *oil spills*
- 05 01 06*** *oily sludges from maintenance operations of the plant or equipment*
- 05 01 07*** *acid tars*
- 05 01 08*** *other tars*
- 05 01 09*** *sludges from on-site effluent treatment containing dangerous substances*
- 05 01 10 sludges from on-site effluent treatment other than those mentioned in 05 01 09
- 05 01 11*** *wastes from cleaning of fuels with bases*
- 05 01 12*** *oil containing acids*
- 05 01 13 boiler feedwater sludges
- 05 01 14 wastes from cooling columns
- 05 01 15*** *spent filter clays*

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- 05 01 16 sulfur-containing wastes from petroleum desulfurization
- 05 01 17 bitumen
- 05 01 99 wastes not otherwise specified
- 05 06 wastes from the pyrolytic treatment of coal**
- 05 06 01* acid tars*
- 05 06 03* other tars*
- 05 06 04 waste from cooling columns
- 05 06 99 wastes not otherwise specified
- 05 07 wastes from natural gas purification and transportation**
- 05 07 01* wastes containing mercury*
- 05 07 02 wastes containing sulfur
- 05 07 99 wastes not otherwise specified
- 06 WASTES FROM INORGANIC CHEMICAL PROCESSES**
- 06 01 wastes from the manufacture, formulation, supply and use (MFSU) of acids**
- 06 01 01* sulfuric acid and sulfurous acid*
- 06 01 02* hydrochloric acid*
- 06 01 03* hydrofluoric acid*
- 06 01 04* phosphoric and phosphorous acid*
- 06 01 05* nitric acid and nitrous acid*
- 06 01 06* other acids*
- 06 01 99 wastes not otherwise specified
- 06 02 wastes from the MFSU of bases**
- 06 02 01* calcium hydroxide*
- 06 02 03* ammonium hydroxide*
- 06 02 04* sodium and potassium hydroxide*
- 06 02 05* other bases*
- 06 02 99 wastes not otherwise specified

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- 06 03** wastes from the MFSU of salts and their solutions and metallic oxides
- 06 03 11** *solid salts and solutions containing cyanides*
- 06 03 13** *solid salts and solutions containing heavy metals*
- 06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
- 06 03 15** *metallic oxides containing heavy metals*
- 06 03 16 metallic oxides other than those mentioned in 06 03 15
- 06 03 99 wastes not otherwise specified
- 06 04** **metal-containing wastes other than those mentioned in 06 03**
- 06 04 03** *wastes containing arsenic*
- 06 04 04** *wastes containing mercury*
- 06 04 05** *wastes containing other heavy metals*
- 06 04 99 wastes not otherwise specified
- 06 05** **sludges from on-site effluent treatment**
- 06 05 02** *sludges from on-site effluent treatment containing dangerous substances*
- 06 05 03 sludges from on-site effluent treatment other than those mentioned in 06 05 02
- 06 06** **wastes from the MFSU of sulfur chemicals, sulfur chemical processes and desulfurization processes**
- 06 06 02** *wastes containing dangerous sulfides*
- 06 06 03 wastes containing sulfides other than those mentioned in 06 06 02
- 06 06 99 wastes not otherwise specified
- 06 07** **wastes from the MFSU of halogens and halogen chemical processes**
- 06 07 01** *wastes containing asbestos from electrolysis*
- 06 07 02** *activated carbon from chlorine production*
- 06 07 03** *barium sulfate sludge containing mercury*
- 06 07 04** *solutions and acids, for example contact acid*
- 06 07 99 wastes not otherwise specified
- 06 08** **wastes from the MFSU of silicon and silicon derivatives**
- 06 08 02** *waste containing dangerous silicones*

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- 06 08 99 wastes not otherwise specified
- 06 09 wastes from the MSFU of phosphorous chemicals and phosphorous chemical processes**
- 06 09 02 phosphorous slag
- 06 09 03* calcium-based reaction wastes containing or contaminated with dangerous substances**
- 06 09 04 calcium-based reaction wastes other than those mentioned in 06 09 03
- 06 09 99 wastes not otherwise specified
- 06 10 wastes from the MFSU of nitrogen chemicals, nitrogen chemical processes and fertilizer manufacture**
- 06 10 02* wastes containing dangerous substances**
- 06 10 99 wastes not otherwise specified
- 06 11 wastes from the manufacture of inorganic pigments and opacifiers**
- 06 11 01 calcium-based reaction wastes from titanium dioxide production
- 06 11 99 wastes not otherwise specified
- 06 13 wastes from inorganic chemical processes not otherwise specified**
- 06 13 01* inorganic plant protection products, wood-preserving agents and other biocides**
- 06 13 02* spent activated carbon (except 06 07 02)**
- 06 13 03 carbon black
- 06 13 04* wastes from asbestos processing**
- 06 13 05* soot**
- 06 13 99 wastes not otherwise specified
- 07 WASTES FROM ORGANIC CHEMICAL PROCESSES**
- 07 01 wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals**
- 07 01 01* aqueous washing liquids and mother liquors**
- 07 01 03* organic halogenated solvents, washing liquids and mother liquors**
- 07 01 04* other organic solvents, washing liquids and mother liquors**
- 07 01 07* halogenated still bottoms and reaction residues**

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- 07 01 08* other still bottoms and reaction residues*
- 07 01 09* halogenated filter cakes and spent absorbents*
- 07 01 10* other filter cakes and spent absorbents*
- 07 01 11* sludges from on-site effluent treatment containing dangerous substances*
- 07 01 12 sludges from on-site effluent treatment other than those mentioned in 07 01 11
- 07 01 99 wastes not otherwise specified
- 07 02 wastes from the MFSU of plastics, synthetic rubber and man-made fibers**
- 07 02 01* aqueous washing liquids and mother liquors*
- 07 02 03* organic halogenated solvents, washing liquids and mother liquors*
- 07 02 04* other organic solvents, washing liquids and mother liquors*
- 07 02 07* halogenated still bottoms and reaction residues*
- 07 02 08* other still bottoms and reaction residues*
- 07 02 09* halogenated filter cakes and spent absorbents*
- 07 02 10* other filter cakes and spent absorbents*
- 07 02 11* sludges from on-site effluent treatment containing dangerous substances*
- 07 02 12 sludges from on-site effluent treatment other than those mentioned in 07 02 11
- 07 02 13 waste plastic
- 07 02 14* wastes from additives containing dangerous substances*
- 07 02 15 wastes from additives other than those mentioned in 07 02 14
- 07 02 16* waste containing dangerous silicones*
- 07 02 17 waste containing silicones other than those mentioned in 07 02 16
- 07 02 99 wastes not otherwise specified
- 07 03 wastes from the MFSU of organic dyes and pigments (except 06 11)**
- 07 03 01* aqueous washing liquids and mother liquors*
- 07 03 03* organic halogenated solvents, washing liquids and mother liquors*
- 07 03 04* other organic solvents, washing liquids and mother liquors*
- 07 03 07* halogenated still bottoms and reaction residues*

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- 07 03 08* *other still bottoms and reaction residues*
- 07 03 09* *halogenated filter cakes and spent absorbents*
- 07 03 10* *other filter cakes and spent absorbents*
- 07 03 11* *sludges from on-site effluent treatment containing dangerous substances*
- 07 03 12 sludges from on-site effluent treatment other than those mentioned in 07 03 11
- 07 03 99 wastes not otherwise specified
- 07 04 wastes from the MFSU of organic plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides**
- 07 04 01* *aqueous washing liquids and mother liquors*
- 07 04 03* *organic halogenated solvents, washing liquids and mother liquors*
- 07 04 04* *other organic solvents, washing liquids and mother liquors*
- 07 04 07* *halogenated still bottoms and reaction residues*
- 07 04 08* *other still bottoms and reaction residues*
- 07 04 09* *halogenated filter cakes and spent absorbents*
- 07 04 10* *other filter cakes and spent absorbents*
- 07 04 11* *sludges from on-site effluent treatment containing dangerous substances*
- 07 04 12 sludges from on-site effluent treatment other than those mentioned in 07 04 11
- 07 04 13* *solid wastes containing dangerous substances*
- 07 04 99 wastes not otherwise specified
- 07 05 wastes from the MFSU of pharmaceuticals**
- 07 05 01* *aqueous washing liquids and mother liquors*
- 07 05 03* *organic halogenated solvents, washing liquids and mother liquors*
- 07 05 04* *other organic solvents, washing liquids and mother liquors*
- 07 05 07* *halogenated still bottoms and reaction residues*
- 07 05 08* *other still bottoms and reaction residues*
- 07 05 09* *halogenated filter cakes and spent absorbents*
- 07 05 10* *other filter cakes and spent absorbents*
- 07 05 11* *sludges from on-site effluent treatment containing dangerous substances*

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- 07 05 12 sludges from on-site effluent treatment other than those mentioned in 07 05 11
- 07 05 13*** *solid wastes containing dangerous substances*
- 07 05 14 solid wastes other than those mentioned in 07 05 13
- 07 05 99 wastes not otherwise specified
- 07 06** **wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics**
- 07 06 01*** *aqueous washing liquids and mother liquors*
- 07 06 03*** *organic halogenated solvents, washing liquids and mother liquors*
- 07 06 04*** *other organic solvents, washing liquids and mother liquors*
- 07 06 07*** *halogenated still bottoms and reaction residues*
- 07 06 08*** *other still bottoms and reaction residues*
- 07 06 09*** *halogenated filter cakes and spent absorbents*
- 07 06 10*** *other filter cakes and spent absorbents*
- 07 06 11*** *sludges from on-site effluent treatment containing dangerous substances*
- 07 06 12 sludges from on-site effluent treatment other than those mentioned in 07 06 11
- 07 06 99 wastes not otherwise specified
- 07 07** **wastes from the MFSU of fine chemicals and chemical products not otherwise specified**
- 07 07 01*** *aqueous washing liquids and mother liquors*
- 07 07 03*** *organic halogenated solvents, washing liquids and mother liquors*
- 07 07 04*** *other organic solvents, washing liquids and mother liquors*
- 07 07 07*** *halogenated still bottoms and reaction residues*
- 07 07 08*** *other still bottoms and reaction residues*
- 07 07 09*** *halogenated filter cakes and spent absorbents*
- 07 07 10*** *other filter cakes and spent absorbents*
- 07 07 11*** *sludges from on-site effluent treatment containing dangerous substances*
- 07 07 12 sludges from on-site effluent treatment other than those mentioned in 07 07 11
- 07 07 13 wastes not otherwise specified

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- 08 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS**
- 08 01 wastes from MFSU and removal of paint and varnish**
- 08 01 11* waste paint and varnish containing organic solvents or other dangerous substances*
- 08 01 12 waste paint and varnish other than those mentioned in 08 01 11
- 08 01 13* sludges from paint or varnish containing organic solvents or other dangerous substances*
- 08 01 14 sludges from paint or varnish other than those mentioned in 08 01 13
- 08 01 15* aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances*
- 08 01 16 aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
- 08 01 17* wastes from paint or varnish removal containing organic solvents or other dangerous substances*
- 08 01 18 wastes from paint or varnish removal other than those mentioned in 08 01 17
- 08 01 19* aqueous suspensions containing paint or varnish containing organic solvents or other dangerous substances*
- 08 01 20 aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19
- 08 01 21* waste paint or varnish remover*
- 08 01 99 wastes not otherwise specified
- 08 02 wastes from MFSU of other coatings (including ceramic materials)**
- 08 02 01 waste coating powders
- 08 02 02 aqueous sludges containing ceramic materials
- 08 02 03 aqueous suspensions containing ceramic materials
- 08 02 99 wastes not otherwise specified
- 08 03 wastes from MFSU of printing inks**
- 08 03 07 aqueous sludges containing ink
- 08 03 08 aqueous liquid waste containing ink
- 08 03 12* waste ink containing dangerous substances*

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- 08 03 13 waste ink other than those mentioned in 08 03 12
- 08 03 14*** *ink sludges containing dangerous substances*
- 08 03 15 ink sludges other than those mentioned in 08 03 14
- 08 03 16*** *waste etching solutions*
- 08 03 17*** *waste printing toner containing dangerous substances*
- 08 03 18 waste printing toner other than those mentioned in 08 03 17
- 08 03 19*** *disperse oil*
- 08 03 99 wastes not otherwise specified
- 08 04 wastes from MFSU of adhesives and sealants (including waterproofing products)**
- 08 04 09*** *waste adhesives and sealants containing organic solvents or other dangerous substances*
- 08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09
- 08 04 11*** *adhesive and sealant sludges containing organic solvents or other dangerous substances*
- 08 04 12 adhesive and sealant sludges other than those mentioned in 08 04 11
- 08 04 13*** *aqueous sludges containing adhesives or sealants containing organic solvents or other dangerous substances*
- 08 04 14 aqueous sludges containing adhesives or sealants other than those mentioned in 08 04 13
- 08 04 15*** *aqueous liquid waste containing adhesives or sealants containing organic solvents or other dangerous substances*
- 08 04 16 aqueous liquid waste containing adhesives or sealants other than those mentioned in 08 04 15
- 08 04 17*** *rosin oil*
- 08 04 99 wastes not otherwise specified
- 08 05 wastes not otherwise specified in 08**
- 08 05 01*** *waste isocyanates*
- 09 WASTES FROM THE PHOTOGRAPHIC INDUSTRY**
- 09 01 wastes from the photographic industry**

- 09 01 01* water-based developer and activator solutions*
- 09 01 02* water-based offset plate developer solutions*
- 09 01 03* solvent-based developer solutions*
- 09 01 04* fixer solutions*
- 09 01 05* bleach solutions and bleach fixer solutions*
- 09 01 06* wastes containing silver from on-site treatment of photographic wastes*
- 09 01 07 photographic film and paper containing silver or silver compounds
- 09 01 08 photographic film and paper free of silver or silver compounds
- 09 01 10 single-use cameras without batteries
- 09 01 11* single-use cameras containing batteries included in 16 06 01, 16 06 02 or 16 06 03*
- 09 01 12 single-use cameras containing batteries other than those mentioned in 09 01 11
- 09 01 13* aqueous liquid waste from on-site reclamation of silver other than those mentioned in 09 01 06*
- 09 01 99 wastes not otherwise specified
- 10 WASTES FROM THERMAL PROCESSES**
- 10 01 wastes from power stations and other combustion plants (except 19)**
- 10 01 01 bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
- 10 01 02 coal fly ash
- 10 01 03 fly ash from peat and untreated wood
- 10 01 04* oil fly ash and boiler dust*
- 10 01 05 calcium-based reaction wastes from flue-gas desulfurization in solid form
- 10 01 07 calcium-based reaction wastes from flue-gas desulfurization in sludge form
- 10 01 09* sulfuric acid*
- 10 01 13* fly ash from emulsified hydrocarbons used as fuel*
- 10 01 14* bottom ash, slag and boiler dust from co-incineration containing dangerous substances*
- 10 01 15 bottom ash, slag and boiler dust from co-incineration other than those mentioned in 10 01 14

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- 10 01 16*** *fly ash from co-incineration containing dangerous substances*
- 10 01 17 fly ash from co-incineration other than those mentioned in 10 01 16
- 10 01 18*** *wastes from gas cleaning containing dangerous substances*
- 10 01 19 wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
- 10 01 20*** *sludges from on-site effluent treatment containing dangerous substances*
- 10 01 21 sludges from on-site effluent treatment other than those mentioned in 10 01 20
- 10 01 22*** *aqueous sludges from boiler cleansing containing dangerous substances*
- 10 01 23 aqueous sludges from boiler cleansing other than those mentioned in 10 01 22
- 10 01 24 sands from fluidized beds
- 10 01 25 wastes from fuel storage and preparation of coal-fired power plants
- 10 01 26 wastes from cooling-water treatment
- 10 01 99 wastes not otherwise specified
- 10 02 wastes from the iron and steel industry**
- 10 02 01 wastes from the processing of slag
- 10 02 02 unprocessed slag
- 10 02 07*** *solid wastes from gas treatment containing dangerous substances*
- 10 02 08 solid wastes from gas treatment other than those mentioned in 10 02 07
- 10 02 10 mill scales
- 10 02 11*** *wastes from cooling-water treatment containing oil*
- 10 02 12 wastes from cooling-water treatment other than those mentioned in 10 02 11
- 10 02 13*** *sludges and filter cakes from gas treatment containing dangerous substances*
- 10 02 14 sludges and filter cakes from gas treatment other than those mentioned in 10 02 13
- 10 02 15 other sludges and filter cakes
- 10 02 99 wastes not otherwise specified
- 10 03 wastes from aluminum thermal metallurgy**
- 10 03 02 anode scraps
- 10 03 04*** *primary production slags*

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- 10 03 05 waste alumina
- 10 03 08*** *salt slags from secondary production*
- 10 03 09*** *black drosses from secondary production*
- 10 03 15*** *skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities*
- 10 03 16 skimmings other than those mentioned in 10 03 15
- 10 03 17*** *tar-containing wastes from anode manufacture*
- 10 03 18 carbon-containing wastes from anode manufacture other than those mentioned in 10 03 17
- 10 03 19*** *flue-gas dust containing dangerous substances*
- 10 03 20 flue-gas dust other than those mentioned in 10 03 19
- 10 03 21*** *other particulates and dust (including ball-mill dust) containing dangerous substances*
- 10 03 22 other particulates and dust (including ball-mill dust) other than those mentioned in 10 03 21
- 10 03 23*** *solid wastes from gas treatment containing dangerous substances*
- 10 03 24 solid wastes from gas treatment other than those mentioned in 10 03 23
- 10 03 25*** *sludges and filter cakes from gas treatment containing dangerous substances*
- 10 03 26 sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
- 10 03 27*** *wastes from cooling-water treatment containing oil*
- 10 03 28 wastes from cooling-water treatment other than those mentioned in 10 03 27
- 10 03 29*** *wastes from treatment of salt slags and black drosses containing dangerous substances*
- 10 03 30 wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
- 10 03 99 wastes not otherwise specified
- 10 04 wastes from lead thermal metallurgy**
- 10 04 01*** *slags from primary and secondary production*
- 10 04 02*** *dross and skimmings from primary and secondary production*
- 10 04 03*** *calcium arsenate*

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- 10 04 04** *flue-gas dust*
- 10 04 05** *other particulates and dust*
- 10 04 06** *solid wastes from gas treatment*
- 10 04 07** *sludges and filter cakes from gas treatment*
- 10 04 09** *wastes from cooling-water treatment containing oil*
- 10 04 10 wastes from cooling-water treatment other than those mentioned in 10 04 09
- 10 04 99 wastes not otherwise specified
- 10 05 wastes from zinc thermal metallurgy**
- 10 05 01 slags from primary and secondary production
- 10 05 03** *flue-gas dust*
- 10 05 04 other particulates and dust
- 10 05 05** *solid waste from gas treatment*
- 10 05 06** *sludges and filter cakes from gas treatment*
- 10 05 08** *wastes from cooling-water treatment containing oil*
- 10 05 09 wastes from cooling-water treatment other than those mentioned in 10 05 08
- 10 05 10** *dross and skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities*
- 10 05 11 dross and skimmings other than those mentioned in 10 05 10
- 10 05 99 wastes not otherwise specified
- 10 06 wastes from copper thermal metallurgy**
- 10 06 01 slags from primary and secondary production
- 10 06 02 dross and skimmings from primary and secondary production
- 10 06 03** *flue-gas dust*
- 10 06 04 other particulates and dust
- 10 06 06** *solid wastes from gas treatment*
- 10 06 07** *sludges and filter cakes from gas treatment*
- 10 06 09** *wastes from cooling-water treatment containing oil*
- 10 06 10 wastes from cooling-water treatment other than those mentioned in 10 06 09

- 10 06 99 wastes not otherwise specified
- 10 07 wastes from silver, gold and platinum thermal metallurgy**
- 10 07 01 slags from primary and secondary production
- 10 07 02 dross and skimmings from primary and secondary production
- 10 07 03 solid wastes from gas treatment
- 10 07 04 other particulates and dust
- 10 07 05 sludges and filter cakes from gas treatment
- 10 07 07* *wastes from cooling-water treatment containing oil***
- 10 07 08 wastes from cooling-water treatment other than those mentioned in 10 07 07
- 10 07 99 wastes not otherwise specified
- 10 08 wastes from other non-ferrous thermal metallurgy**
- 10 08 04 particulates and dust
- 10 08 08* *salt slag from primary and secondary production***
- 10 08 09 other slags
- 10 08 10* *dross and skimmings that are flammable or emit, upon contact with water, flammable gases in dangerous quantities***
- 10 08 11 dross and skimmings other than those mentioned in 10 08 10
- 10 08 12* *tar-containing wastes from anode manufacture***
- 10 08 13 carbon-containing wastes from anode manufacture other than those mentioned in 10 08 12
- 10 08 14 anode scrap
- 10 08 15* *flue-gas dust containing dangerous substances***
- 10 08 16 flue-gas dust other than those mentioned in 10 08 15
- 10 08 17* *sludges and filter cakes from flue-gas treatment containing dangerous substances***
- 10 08 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
- 10 08 19* *wastes from cooling-water treatment containing oil***
- 10 08 20 wastes from cooling-water treatment other than those mentioned in 10 08 19

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- 10 08 99 wastes not otherwise specified
- 10 09 wastes from casting of ferrous pieces**
- 10 09 03 furnace slag
- 10 09 05* *casting cores and molds which have not undergone pouring containing dangerous substances***
- 10 09 06 casting cores and molds which have not undergone pouring other than those mentioned in 10 09 05
- 10 09 07* *casting cores and molds which have undergone pouring containing dangerous substances***
- 10 09 08 casting cores and molds which have undergone pouring other than those mentioned in 10 09 07
- 10 09 09* *flue-gas dust containing dangerous substances***
- 10 09 10 flue-gas dust other than those mentioned in 10 09 09
- 10 09 11* *other particulates containing dangerous substances***
- 10 09 12 other particulates other than those mentioned in 10 09 11
- 10 09 13* *waste binders containing dangerous substances***
- 10 09 14 waste binders other than those mentioned in 10 09 13
- 10 09 15* *waste crack-indicating agent containing dangerous substances***
- 10 09 16 waste crack-indicating agent other than those mentioned in 10 09 15
- 10 09 99 wastes not otherwise specified
- 10 10 wastes from casting of non-ferrous pieces**
- 10 10 03 furnace slag
- 10 10 05* *casting cores and molds which have not undergone pouring, containing dangerous substances***
- 10 10 06 casting cores and molds which have not undergone pouring, other than those mentioned in 10 10 05
- 10 10 07* *casting cores and molds which have undergone pouring, containing dangerous substances***
- 10 10 08 casting cores and molds which have undergone pouring, other than those mentioned in 10 10 07
- 10 10 09* *flue-gas dust containing dangerous substances***

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- 10 10 10 flue-gas dust other than those mentioned in 10 10 09
- 10 10 11*** *other particulates containing dangerous substances*
- 10 10 12 other particulates other than those mentioned in 10 10 11
- 10 10 13*** *waste binders containing dangerous substances*
- 10 10 14 waste binders other than those mentioned in 10 10 13
- 10 10 15*** *waste crack-indicating agent containing dangerous substances*
- 10 10 16 waste crack-indicating agent other than those mentioned in 10 10 15
- 10 10 99 wastes not otherwise specified
- 10 11 wastes from manufacture of glass and glass products**
- 10 11 03 waste glass-based fibrous materials
- 10 11 05 particulates and dust
- 10 11 09*** *waste preparation mixture before thermal processing, containing dangerous substances*
- 10 11 10 waste preparation mixture before thermal processing, other than those mentioned in 10 11 09
- 10 11 11*** *waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)*
- 10 11 12 waste glass other than those mentioned in 10 11 11
- 10 11 13*** *glass-polishing and -grinding sludge containing dangerous substances*
- 10 11 14 glass-polishing and -grinding sludge other than those mentioned in 10 11 13
- 10 11 15*** *solid wastes from flue-gas treatment containing dangerous substances*
- 10 11 16 solid wastes from flue-gas treatment other than those mentioned in 10 11 15
- 10 11 17*** *sludges and filter cakes from flue-gas treatment containing dangerous substances*
- 10 11 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
- 10 11 19*** *solid wastes from on-site effluent treatment containing dangerous substances*
- 10 11 20 solid wastes from on-site effluent treatment other than those mentioned in 10 11 19
- 10 11 99 wastes not otherwise specified

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- 10 12** **wastes from manufacture of ceramic goods, bricks, tiles and construction products**
- 10 12 01 waste preparation mixture before thermal processing
- 10 12 03 particulates and dust
- 10 12 05 sludges and filter cakes from gas treatment
- 10 12 06 discarded molds
- 10 12 08 waste ceramics, bricks, tiles and construction products (after thermal processing)
- 10 12 09*** *solid wastes from gas treatment containing dangerous substances*
- 10 12 10 solid wastes from gas treatment other than those mentioned in 10 12 09
- 10 12 11*** *wastes from glazing containing heavy metals*
- 10 12 12 wastes from glazing other than those mentioned in 10 12 11
- 10 12 13 sludge from on-site effluent treatment
- 10 12 99 wastes not otherwise specified
- 10 13** **wastes from manufacture of cement, lime and plaster and articles and products made from them**
- 10 13 01 waste preparation mixture before thermal processing
- 10 13 04 wastes from calcination and hydration of lime
- 10 13 06 particulates and dust (except 10 13 12 and 10 13 13)
- 10 13 07 sludges and filter cakes from gas treatment
- 10 13 09*** *wastes from asbestos-cement manufacture containing asbestos*
- 10 13 10 wastes from asbestos-cement manufacture other than those mentioned in 10 13 09
- 10 13 11 wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
- 10 13 12*** *solid wastes from gas treatment containing dangerous substances*
- 10 13 13 solid wastes from gas treatment other than those mentioned in 10 13 12
- 10 13 14 waste concrete and concrete sludge
- 10 13 99 wastes not otherwise specified
- 10 14** **waste from crematoria**

- 10 14 01** *waste from gas cleaning containing mercury*
- 11** **WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY**
- 11 01** **wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodizing)**
- 11 01 05** *pickling acids*
- 11 01 06** *acids not otherwise specified*
- 11 01 07** *pickling bases*
- 11 01 08** *phosphatizing sludges*
- 11 01 09** *sludges and filter cakes containing dangerous substances*
- 11 01 10 sludges and filter cakes other than those mentioned in 11 01 09
- 11 01 11** *aqueous rinsing liquids containing dangerous substances*
- 11 01 12 aqueous rinsing liquids other than those mentioned in 11 01 11
- 11 01 13** *degreasing wastes containing dangerous substances*
- 11 01 14 degreasing wastes other than those mentioned in 11 01 13
- 11 01 15** *eluate and sludges from membrane systems or ion exchange systems containing dangerous substances*
- 11 01 16** *saturated or spent ion exchange resins*
- 11 01 98** *other wastes containing dangerous substances*
- 11 01 99 wastes not otherwise specified
- 11 02** **wastes from non-ferrous hydrometallurgical processes**
- 11 02 02** *sludges from zinc hydrometallurgy (including jarosite, goethite)*
- 11 02 03 wastes from the production of anodes for aqueous electrolytical processes
- 11 02 05** *wastes from copper hydrometallurgical processes containing dangerous substances*
- 11 02 06 wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
- 11 02 07** *other wastes containing dangerous substances*

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- 11 02 99 wastes not otherwise specified
- 11 03 sludges and solids from tempering processes**
- 11 03 01* wastes containing cyanide*
- 11 03 02* other wastes*
- 11 05 wastes from hot galvanizing processes**
- 11 05 01 hard zinc
- 11 05 02 zinc ash
- 11 05 03* solid wastes from gas treatment*
- 11 05 04* spent flux*
- 11 05 99 wastes not otherwise specified
- 12 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS**
- 12 01 waste from shaping and physical and mechanical surface treatment of metals and plastics**
- 12 01 01 ferrous metal filings and turnings ferrous metal dust and particles
- 12 01 02 non-ferrous metal filings and turnings
- 12 01 03 non-ferrous metal dust and particles
- 12 01 04 plastics shaving and turnings
- 12 01 05 mineral-based machining oils containing halogens (except emulsions and solutions)
- 12 01 06* mineral-based machining oils free of halogens (except emulsions and solutions)*
- 12 01 07* machining emulsions and solutions containing halogens*
- 12 01 08* machining emulsions and solutions free of halogens*
- 12 01 09* synthetic machining oils*
- 12 01 12* spent waxes and fats*
- 12 01 13 welding wastes
- 12 01 14* machining sludges containing dangerous substances*
- 12 01 15 machining sludges other than those mentioned in 12 01 14
- 12 01 16* waste blasting material containing dangerous substances*

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- 12 01 17 waste blasting material other than those mentioned in 12 01 16
- 12 01 18* metal sludge (grinding, honing and lapping sludge) containing oil*
- 12 01 19* readily biodegradable machining oil*
- 12 01 20* spent grinding bodies and grinding materials containing dangerous substances*
- 12 01 21 spent grinding bodies and grinding materials other than those mentioned in 12 01 20
- 12 01 99 wastes not otherwise specified
- 12 03 wastes from water and steam degreasing processes (except 11)**
- 12 03 01* aqueous washing liquids*
- 12 03 02* steam degreasing wastes*
- 13 OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)**
- 13 01 waste hydraulic oils**
- 13 01 01* hydraulic oils, containing PCBs*
- 13 01 04* chlorinated emulsions*
- 13 01 05* non-chlorinated emulsions*
- 13 01 09* mineral-based chlorinated hydraulic oils*
- 13 01 10* mineral based non-chlorinated hydraulic oils*
- 13 01 11* synthetic hydraulic oils*
- 13 01 12* readily biodegradable hydraulic coils*
- 13 01 13* other hydraulic oils*
- 13 02 waste engine, gear and lubricating oils**
- 13 02 04* mineral-based chlorinated engine, gear and lubricating oils*
- 13 02 05* mineral-based non-chlorinated engine, gear and lubricating oils*
- 13 02 06* synthetic engine, gear and lubricating oils*
- 13 02 07* readily biodegradable engine, gear and lubricating oils*
- 13 02 08* other engine, gear and lubricating oils*
- 13 03 waste insulating and heat transmission oils**

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- 13 03 01* insulating or heat transmission oils containing PCBs*
- 13 03 06* mineral-based chlorinated insulating and heat transmission oils other than those mentioned in 13 03 01*
- 13 03 07* mineral-based non-chlorinated insulating and heat transmission oils*
- 13 03 08* synthetic insulating and heat transmission oils*
- 13 03 09* readily biodegradable insulating and heat transmission oils*
- 13 03 10* other insulating and heat transmission oils*
- 13 04 bilge oils**
- 13 04 01* bilge oils from inland navigation*
- 13 04 02* bilge oils from jetty sewers*
- 13 04 03* bilge oils from other navigation*
- 13 05 oil/water separator contents**
- 13 05 01* solids from grit chambers and oil/water separators*
- 13 05 02* sludges from oil/water separators*
- 13 05 03* interceptor sludges*
- 13 05 06* oil from oil/water separators*
- 13 05 07* oily water from oil/water separators*
- 13 05 08* mixtures of wastes from grit chambers and oil/water separators*
- 13 07 wastes of liquid fuels**
- 13 07 01* fuel oil and diesel*
- 13 07 02* petrol*
- 13 07 03* other fuels (including mixtures)*
- 13 08 oil wastes not otherwise specified**
- 13 08 01* desalter sludges or emulsions*
- 13 08 02* other emulsions*
- 13 08 99* wastes not otherwise specified*
- 14 WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (except 07 and 08)**

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- 14 06** waste organic solvent, refrigerants and foam/aerosol propellants
 - 14 06 01*** *chlorofluorocarbons, HCFC, HFC*
 - 14 06 02*** *other halogenated solvents and solvent mixtures*
 - 14 06 03*** *other solvents and solvent mixtures*
 - 14 06 04*** *sludges or solid wastes containing halogenated solvents*
 - 14 06 05*** *sludges or solid wastes containing other solvents*
- 15** **WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**
 - 15 01** **packaging (including separately collected municipal packaging waste)**
 - 15 01 01 paper and cardboard packaging
 - 15 01 02 plastic packaging
 - 15 01 03 wooden packaging
 - 15 01 04 metallic packaging
 - 15 01 05 composite packaging
 - 15 01 06 mixed packaging
 - 15 01 07 glass packaging
 - 15 01 09 textile packaging
 - 15 01 10*** *packaging containing residues of or contaminated by dangerous substances*
 - 15 01 11*** *metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers*
 - 15 02** **absorbents, filter materials, wiping cloths and protective clothing**
 - 15 02 02*** *absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances*
 - 15 02 03 absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
- 16** **WASTES NOT OTHERWISE SPECIFIED IN THE LIST**
 - 16 01** **end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**

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- 16 01 03 end-of-life tires
- 16 01 04 end-of-life vehicles
- 16 01 06 end-of-life vehicles, containing neither liquids nor other hazardous components
- 16 01 07* *oil filters***
- 16 01 08* *components containing mercury***
- 16 01 09* *components containing PCBs***
- 16 01 10* *explosive components (for example air bags)***
- 16 01 11* *brake pads containing asbestos***
- 16 01 12 brake pads other than those mentioned in 16 01 11
- 16 01 13* *brake fluids***
- 16 01 14* *antifreeze fluids containing dangerous substances***
- 16 01 15 antifreeze fluids other than those mentioned in 16 01 14
- 16 01 16 tanks for liquefied gas
- 16 01 17 ferrous metal
- 16 01 18 non-ferrous metal
- 16 01 19 plastic
- 16 01 20 glass
- 16 01 21* *hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14***
- 16 01 22 components not otherwise specified
- 16 01 99 wastes not otherwise specified
- 16 02 wastes from electrical and electronic equipment**
- 16 02 09* *transformers and capacitors containing PCBs***
- 16 02 10* *discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09***
- 16 02 11* *discarded equipment containing chlorofluorocarbons, HCFC, HFC***
- 16 02 12* *discarded equipment containing free asbestos***

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- 16 02 13*** *discarded equipment containing hazardous components (¹) other than those mentioned in 16 02 09 to 16 02 12*
- 16 02 14 discarded equipment other than those mentioned in 16 02 09 to 16 02 13
- 16 02 15*** *hazardous components removed from discarded equipment*
- 16 02 16 components removed from discarded equipment other than those mentioned in 16 02 15
- 16 03 off-specification batches and unused products**
- 16 03 03*** *inorganic wastes containing dangerous substances*
- 16 03 04 inorganic wastes other than those mentioned in 16 03 03
- 16 03 05*** *organic wastes containing dangerous substances*
- 16 03 06 organic wastes other than those mentioned in 16 03 05
- 16 04 waste explosives**
- 16 04 01*** *waste ammunition*
- 16 04 02*** *fireworks wastes*
- 16 04 03*** *other waste explosives*
- 16 05 gases in pressure containers and discarded chemicals**
- 16 05 04*** *gases in pressure containers (including halons) containing dangerous substances*
- 16 05 05 gases in pressure containers other than those mentioned in 16 05 04
- 16 05 06*** *laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals*
- 16 05 07*** *discarded inorganic chemicals consisting of or containing dangerous substances*
- 16 05 08*** *discarded organic chemicals consisting of or containing dangerous substances*
- 16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
- 16 06 batteries and accumulators**
- 16 06 01*** *led batteries*
- 16 06 02*** *Ni-Cd batteries*
- 16 06 03*** *mercury-containing batteries*
- 16 06 04 alkaline batteries (except 16 06 03)

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- 16 06 05 other batteries and accumulators
- 16 06 06* separately collected electrolyte from batteries and accumulators*
- 16 07 wastes from transport tank, storage tank and barrel cleaning (except 05 and 13)**
- 16 07 08* wastes containing oil*
- 16 07 09* wastes containing other dangerous substances*
- 16 07 99 wastes not otherwise specified
- 16 08 spent catalysts**
- 16 08 01 spent catalysts containing gold, silver, rhenium, rhodium, palladium, iridium or platinum (except 16 08 07)
- 16 08 02* spent catalysts containing dangerous transition metals (²) or dangerous transition metal compounds*
- 16 08 03 spent catalysts containing transition metals or transition metal compounds not otherwise specified
- 16 08 04 spent fluid catalytic cracking catalysts (except 16 08 07)
- 16 08 05* spent catalysts containing phosphoric acid*
- 16 08 06* spent liquids used as catalysts*
- 16 08 07* spent catalysts contaminated with dangerous substances*
- 16 09 oxidizing substances**
- 16 09 01* permanganates, for example potassium permanganate*
- 16 09 02* chromates, for example potassium chromate, potassium or sodium*
- 16 09 03* dichromate peroxides, for example hydrogen peroxide*
- 16 09 04* oxidizing substances, not otherwise specified*
- 16 10 aqueous liquid wastes destined for off-site treatment**
- 16 10 01* aqueous liquid wastes containing dangerous substances*
- 16 10 02 aqueous liquid wastes other than those mentioned in 16 10 01
- 16 10 03* aqueous concentrates containing dangerous substances*
- 16 10 04 aqueous concentrates other than those mentioned in 16 10 03
- 16 11 waste linings and refractories**

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- 16 11 01*** *carbon-based linings and refractories from metallurgical processes containing dangerous substances*
- 16 11 02 carbon-based linings and refractories from metallurgical processes others than those mentioned in 16 11 01
- 16 11 03*** *other linings and refractories from metallurgical processes containing dangerous substances*
- 16 11 04 other linings and refractories from metallurgical processes other than those mentioned in 16 11 03
- 16 11 05*** *linings and refractories from non-metallurgical processes containing dangerous substances*
- 16 11 06 linings and refractories from non-metallurgical processes others than those mentioned in 16 11 05
- 17 CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
- 17 01 concrete, bricks, tiles and ceramics**
- 17 01 01 concrete
- 17 01 02 bricks
- 17 01 03 tiles and ceramics
- 17 01 06*** *mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances*
- 17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
- 17 02 woods, glass and plastic**
- 17 02 01 wood
- 17 02 02 glass
- 17 02 03 plastic
- 17 02 04*** *glass, plastic and wood containing or contaminated with dangerous substances*
- 17 03 bituminous mixtures, coal tar and tarred products**
- 17 03 01*** *bituminous mixtures containing coal tar*
- 17 03 02 bituminous mixtures other than those mentioned in 17 03 01
- 17 03 03*** *coal tar and tarred products*

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- 17 04** **metals (including their alloys)**
- 17 04 01 copper, bronze, brass
- 17 04 02 aluminum
- 17 04 03 lead
- 17 04 04 zinc
- 17 04 05 iron and steel
- 17 04 06 tin
- 17 04 07 mixed metals
- 17 04 09*** *metal waste contaminated with dangerous substances*
- 17 04 10*** *cables containing oil, coal tar and other dangerous substances*
- 17 04 11 cables other than those mentioned in 17 04 10
- 17 05** **soil (including excavated soil from contaminated sites), stones and dredging spoil**
- 17 05 03*** *soil and stones containing dangerous substances*
- 17 05 04 soil and stones other than those mentioned in 17 05 03
- 17 05 05*** *dredging spoil containing dangerous substances*
- 17 05 06 dredging spoil other than those mentioned in 17 05 05
- 17 05 07*** *track ballast containing dangerous substances*
- 17 05 08 track ballast other than those mentioned in 17 05 07
- 17 06** **insulation materials and asbestos-containing construction materials**
- 17 06 01*** *insulation materials containing asbestos*
- 17 06 03*** *other insulation materials consisting of or containing dangerous substances*
- 17 06 04 insulation materials other than those mentioned in 17 06 01 and 17 06 03
- 17 06 05*** *construction materials containing asbestos*
- 17 08** **gypsum-based construction material**
- 17 08 01*** *gypsum-based construction materials contaminated with dangerous substances*
- 17 08 02 gypsum-based construction materials other than those mentioned in 17 08 01
- 17 09** **other construction and demolition wastes**

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- 17 09 01* construction and demolition wastes containing mercury*
- 17 09 02* construction and demolition wastes containing PCB (for example PCB-containing sealants, PCB-containing resin-based floorings, PCB-containing sealed glazing units, PCB-containing capacitors)*
- 17 09 03* other construction and demolition wastes (including mixed wastes) containing dangerous substances*
- 17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
- 18 WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH** (except kitchen and restaurant wastes not arising from immediate health care)
- 18 01 wastes from natal care, diagnosis, treatment or prevention of disease in humans**
- 18 01 01 sharps (except 18 01 03)
- 18 01 02 body parts and organs including blood bags and blood preserves (except 18 01 03)
- 18 01 03* wastes whose collection and disposal is subject to special requirements in order to prevent infection*
- 18 01 04 wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers)
- 18 01 06* chemicals consisting of or containing dangerous substances*
- 18 01 07 chemicals other than those mentioned in 18 01 06
- 18 01 08* cytotoxic and cytostatic medicines*
- 18 01 09 medicines other than those mentioned in 18 01 08
- 18 01 10* amalgam waste from dental care*
- 18 02 wastes from research, diagnosis, treatment or prevention of disease involving animals**
- 18 02 01 sharps (except 18 02 02)
- 18 02 02* wastes whose collection and disposal is subject to special requirements in order to prevent infection*
- 18 02 03 wastes whose collection and disposal is not subject to special requirements in order to prevent infection
- 18 02 05* chemicals consisting of or containing dangerous substances*

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- 18 02 06 chemicals other than those mentioned in 18 02 05
- 18 02 07*** *cytotoxic and cytostatic medicines*
- 18 02 08 medicines other than those mentioned in 18 02 07
- 19 WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE**
- 19 01 wastes from incineration or pyrolysis of waste**
- 19 01 02 ferrous materials removed from bottom ash
- 19 01 05*** *filter cake from gas treatment*
- 19 01 06*** *aqueous liquid wastes from gas treatment and other aqueous liquid wastes*
- 19 01 07*** *solid wastes from gas treatment*
- 19 01 10*** *spent activated carbon from flue-gas treatment*
- 19 01 11*** *bottom ash and slag containing dangerous substances*
- 19 01 12 bottom ash and slag other than those mentioned in 19 01 11
- 19 01 13*** *fly ash containing dangerous substances*
- 19 01 14 fly ash other than those mentioned in 19 01 13
- 19 01 15*** *boiler dust containing dangerous substances*
- 19 01 16 boiler dust other than those mentioned in 19 01 15
- 19 01 17*** *pyrolysis wastes containing dangerous substances pyrolysis*
- 19 01 18 wastes other than those mentioned in 19 01 17
- 19 01 19 sands from fluidized beds
- 19 01 99 wastes not otherwise specified
- 19 02 wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralization)**
- 19 02 03 premixed wastes composed only of non-hazardous wastes
- 19 02 04*** *premixed wastes composed of at least one hazardous waste*
- 19 02 05*** *sludges from physico/chemical treatment containing dangerous substances*
- 19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05

- 19 02 07*** *oil and concentrates from separation*
- 19 02 08*** *liquid combustible wastes containing dangerous substances*
- 19 02 09*** *solid combustible wastes containing dangerous substances*
- 19 02 10 combustible wastes other than those mentioned in 19 02 08 and 19 02 09
- 19 02 11*** *other wastes containing dangerous substances*
- 19 02 99 wastes not otherwise specified
- 19 03 stabilized/solidified wastes** ⁽³⁾
- 19 03 04*** *wastes marked as hazardous, partly* ⁽⁴⁾ *stabilized*
- 19 03 05 stabilized wastes other than those mentioned in 19 03 04
- 19 03 06*** *wastes marked as hazardous, solidified*
- 19 03 07 solidified wastes other than those mentioned in 19 03 06
- 19 04 vitrified waste and wastes from vitrification**
- 19 04 01 vitrified waste
- 19 04 02*** *fly ash and other flue-gas treatment wastes*
- 19 04 03*** *non-vitrified solid phase*
- 19 04 04 aqueous liquid wastes from vitrified waste tempering
- 19 05 wastes from aerobic treatment of solid wastes**
- 19 05 01 non-composted fraction of municipal and similar wastes
- 19 05 02 non-composted fraction of animal and vegetable waste
- 19 05 03 off-specification compost
- 19 05 99 wastes not otherwise specified
- 19 06 wastes from anaerobic treatment of waste**
- 19 06 03 liquor from anaerobic treatment of municipal waste
- 19 06 04 digestate from anaerobic treatment of municipal waste
- 19 06 05 liquor from anaerobic treatment of animal and vegetable waste
- 19 06 06 digestate from anaerobic treatment of animal and vegetable waste
- 19 06 99 wastes not otherwise specified

- 19 07** **landfill leachate**
- 19 07 02* landfill leachate containing dangerous substances*
- 19 07 03 landfill leachate other than those mentioned in 19 07 02
- 19 08** **wastes from waste water treatment plants not otherwise specified**
- 19 08 01 screenings
- 19 08 02 waste from desanding
- 19 08 05 sludges from treatment of urban waste water
- 19 08 06* saturated or spent ion exchange resins*
- 19 08 07* solutions and sludges from regeneration of ion exchangers*
- 19 08 08* membrane system waste containing heavy metals*
- 19 08 09 grease and oil mixture from oil/water separation containing only edible oil and fats
- 19 08 10* grease and oil mixture from oil/water separation other than those mentioned in 19 08 09*
- 19 08 11* sludges containing dangerous substances from biological treatment of industrial waste water*
- 19 08 12 sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
- 19 08 13* sludges containing dangerous substances from other treatment of industrial waste water*
- 19 08 14 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
- 19 08 99 wastes not otherwise specified
- 19 09** **wastes from the preparation of water intended for human consumption or water for industrial use**
- 19 09 01 solid waste from primary filtration and screenings
- 19 09 02 sludges from water clarification
- 19 09 03 sludges from decarbonation
- 19 09 04 spent activated carbon
- 19 09 05 saturated or spent ion exchange resins
- 19 09 06 solutions and sludges from regeneration of ion exchangers

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- 19 09 99 wastes not otherwise specified
- 19 10 wastes from shredding of metal-containing wastes**
- 19 10 01 iron and steel waste
- 19 10 02 non-ferrous waste
- 19 10 03* *fluff-light fraction and dust containing dangerous substances***
- 19 10 04 fluff-light fraction and dust other than those mentioned in 19 10 03
- 19 10 05* *other fractions containing dangerous substances***
- 19 10 06 other fractions other than those mentioned in 19 10 05
- 19 11 wastes from oil regeneration**
- 19 11 01* *spent filter clays***
- 19 11 02* *acid tars***
- 19 11 03* *aqueous liquid wastes***
- 19 11 04* *wastes from cleaning of fuel with bases***
- 19 11 05* *sludges from on-site effluent treatment containing dangerous substances***
- 19 11 06 sludges from on-site effluent treatment other than those mentioned in 19 11 05
- 19 11 07* *wastes from flue-gas cleaning***
- 19 11 99 wastes not otherwise specified
- 19 12 wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletizing) not otherwise specified**
- 19 12 01 paper and cardboard
- 19 12 02 ferrous metal
- 19 12 03 non-ferrous metal
- 19 12 04 plastic and rubber
- 19 12 05 glass
- 19 12 06* *wood containing dangerous substances***
- 19 12 07 wood other than that mentioned in 19 12 06
- 19 12 08 textiles
- 19 12 09 minerals (for example sand, stones)

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- 19 12 10 combustible waste (refuse derived fuel)
- 19 12 11*** *other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances*
- 19 12 12 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
- 19 13 wastes from soil and groundwater remediation**
- 19 13 01*** *solid wastes from soil remediation containing dangerous substances*
- 19 13 02 solid wastes from soil remediation other than those mentioned in 19 13 01
- 19 13 03*** *sludges from soil remediation containing dangerous substances*
- 19 13 04 sludges from soil remediation other than those mentioned in 19 13 03
- 19 13 05*** *sludges from groundwater remediation containing dangerous substances*
- 19 13 06 sludges from groundwater remediation other than those mentioned in 19 13 05
- 19 13 07*** *aqueous liquid wastes and aqueous concentrates from groundwater remediation containing dangerous substances*
- 19 13 08 aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07
- 20 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**
- 20 01 separately collected fractions (except 15 01)**
- 20 01 01 paper and cardboard
- 20 01 02 glass
- 20 01 08 biodegradable kitchen and canteen
- 20 01 10 waste clothes
- 20 01 11 textiles
- 20 01 13*** *solvents*
- 20 01 14*** *acids*
- 20 01 15*** *alkalines*
- 20 01 17*** *photo chemicals*
- 20 01 19*** *pesticides*

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- 20 01 21*** *fluorescent tubes and other mercury-containing waste*
- 20 01 23*** *discarded equipment containing chlorofluorocarbons*
- 20 01 25 edible oil and fat
- 20 01 26*** *oil and fat other than those mentioned in 20 01 25*
- 20 01 27*** *paint, inks, adhesives and resins containing dangerous substances*
- 20 01 28 paint, inks, adhesives and resins other than those mentioned in 20 01 27
- 20 01 29*** *detergents containing dangerous substances*
- 20 01 30 detergents other than those mentioned in 20 01 29
- 20 01 31*** *cytotoxic and cytostatic medicines*
- 20 01 32 medicines other than those mentioned in 20 01 31
- 20 01 33*** *batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries*
- 20 01 34 batteries and accumulators other than those mentioned in 20 01 33
- 20 01 35*** *discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components (¹)*
- 20 01 36 discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
- 20 01 37*** *wood containing dangerous substances*
- 20 01 38 wood other than that mentioned in 20 01 37
- 20 01 39 plastics
- 20 01 40 metals
- 20 01 41 wastes from chimney sweeping
- 20 01 99 other fractions not otherwise specified
- 20 02** **garden and park wastes (including cemetery waste)**
- 20 02 01 biodegradable waste
- 20 02 02 soil and stones
- 20 02 03 other non-biodegradable wastes
- 20 03** **other municipal wastes**

20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste
20 03 99	municipal wastes not otherwise specified

Notes:

- (¹) Hazardous components from electrical and electronic equipment may include accumulators and batteries mentioned in 16 06 and marked as hazardous; mercury switches, glass from cathode ray tubes and other activated glass, etc.
- (²) For the purpose of this entry, transition metals are: scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum. These metals or their compounds are dangerous if they are classified as dangerous substances. The classification of dangerous substances shall determine which among those transition metals and which transition metal compounds are hazardous.
- (³) Stabilization processes change the hazard of the constituents in the waste and thus transform hazardous waste into non-hazardous waste. Solidification processes only change the physical state of the waste (e.g. liquid into solid) by using additives without changing the chemical properties of the waste.
- (⁴) A waste is considered as partly stabilized if, after the stabilization process, dangerous constituents which have not been changed completely into non-dangerous constituents could be released into the environment in the short, middle or long term.

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APPENDIX B
OPNAVINST 5090 (Chapters 20, 21, 28, 39 & 42)

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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

OPNAVINST 5090.1D
N45
10 Jan 2014

OPNAV INSTRUCTION 5090.1D

From: Chief of Naval Operations

Subj: ENVIRONMENTAL READINESS PROGRAM

Ref: (a) SECNAVINST 5090.8A
(b) SECNAVINST 5090.6A
(c) OPNAV M-5090.1, Environmental Readiness Program
Manual

1. Purpose. To discuss requirements, delineate responsibilities, and issue implementing policy guidance for the management of the environmental, natural, and cultural resources for all Navy ships and shore activities, per references (a) and (b). This instruction is a complete revision and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 5090.1C.

3. Scope and Applicability

a. This instruction and reference (c) discuss Federal environmental laws and regulations, executive orders, and Department of Defense (DoD) and Department of the Navy (DON) environmental policies applicable to Navy installations, organizations, and platforms. Shore command personnel shall be aware of and comply with the additional environmental requirements imposed by State and local governments.

b. Overseas commands should consult the applicable DoD final governing standards (FGS), or the Overseas Environmental Baseline Guidance Document when host nation-specific FGS have not been developed.

c. This instruction and reference (c) also address procedures by which ships will be made aware of the applicable State and local environmental requirements for U.S. ports in which they may be moored.

4. Background. The Navy is committed to operating successfully in a manner compatible with the environment while upholding its warfighting mission. The goal of the Navy's Environmental Readiness Program is to ensure the U.S. Navy forces' ability to effectively operate worldwide in an environmentally responsible manner, both afloat and ashore. Navy joint and combined operations and training must be planned and executed to fully meet operational readiness requirements and Navy environmental objectives. National defense and environmental protection are, and will continue to be, compatible goals. Achievement of these goals requires the leadership and personal commitment of all military and civilian personnel throughout the Navy chain of command.

5. Implementation. Reference (c) contains the Navy's implementing policy guidance for environmental readiness. Reference (c) has been reorganized and revised to reflect changes in Federal environmental legislation and DoD and DON policy.

6. Action

a. All afloat and ashore commands shall comply with the implementing policy guidance stated and established in this instruction and reference (c). The policies, procedures, and actions required are published without the necessity for further implementing instructions from the various commands and budget submitting offices, unless specifically directed otherwise. Organizations having significant environmental, natural, or cultural resources responsibilities may find it necessary to provide additional guidance and supplemental instructions specific to their local area.

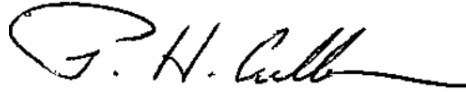
b. All Navy military and civilian personnel, installation tenants, and contractors working for the Navy shall comply with the applicable Federal, State, and local environmental laws and regulations, as well as the requirements of executive orders; Navy and DoD policies, regulations, and requirements; and, where applicable, DoD FGS.

c. All commands shall integrate the requirements of this instruction and reference (c) into their operations.

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7. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per Secretary of the Navy Manual 5210.1 of January 2012.

8. Forms and Reports Control. Forms and reports are listed in appendix F of reference (c).



P. H. CULLOM
Deputy Chief of Naval Operations
(Fleet Readiness and Logistics)

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ENVIRONMENTAL READINESS PROGRAM MANUAL



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON D.C.

Table of Revisions/Changes

OPNAV Manual	Basic Issuance Date

Change Number	Revision Date

Brief of Revisions/Changes

The following are major changes in policy and/or procedures that have been incorporated in the latest revision of this OPNAV Manual. A revised Foreword and Table of Contents will be issued with each new revision.

1. Chapter _____, Page _____, Paragraph _____:

2. Chapter _____, Page _____, Paragraph _____:

3. Chapter _____, Page _____, Paragraph _____:

4. Chapter _____, Page _____, Paragraph _____:



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

FOREWORD

This manual implements the policy set forth in Chief of Naval Operations Instruction (OPNAVINST) 5090.1D, *Environmental Readiness Program*. It is issued under the authority of Secretary of the Navy Instruction (SECNAVINST) 5090.8A, *Policy for Environmental Protection, Natural Resources, and Cultural Resources Programs*, 30 January 2006.

This manual contains the Navy's policy guidance for environmental readiness. It discusses requirements, delineates responsibilities, and issues policy guidance for the management of the environmental, natural, and cultural resources for all Navy ships and shore activities.

Effective immediately, it is mandatory and applicable to all afloat and ashore Navy commands.

This manual may be accessed through the DON Issuances website:
<http://doni.daps.dla.mil/>.

A handwritten signature in black ink, appearing to read "P. H. Cullom", is positioned above the printed name.

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ENVIRONMENTAL READINESS PROGRAM MANUAL

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CHAPTER 20

CLEAN WATER ASHORE

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20-1 Scope. This chapter identifies requirements and responsibilities for the control and prevention of surface water pollution and ground water pollution related to underground injection control (UIC) at Navy shore facilities within the United States and its territories.

20-1.1. Related Chapters. Refer to chapter 2 (Funding) for information on resourcing, chapter 3 (Environmental Readiness Training) for information on Clean Water Act (CWA) training, chapter 4 (Environmental Performance Reporting) for reporting CWA metric data, chapter 19 (Processing Notices of Violation Under

Environmental Laws and Regulations), chapter 34 (Overseas Environmental Compliance Ashore) for information on Navy activities in foreign countries, and chapter 35 (Environmental Compliance Afloat) for information on ship discharges.

20-1.2. References

(a) E.O. 12088, Federal Compliance with Pollution Control Standards

(b) 40 CFR 130

(c) 33 U.S.C. 1342

(d) 40 CFR 122

(e) 40 CFR 403 and 405-471

(f) 33 U.S.C. §1329

(g) 40 CFR 144, 146, and 147.1250

(h) 40 CFR 148

(i) 42 U.S.C. §6901 et seq.

(j) 42 U.S.C. §6939e

(k) 40 CFR 503

(l) DUSD(I&E) Memorandum of 22 Apr 2009, Perchlorate Release Management Policy

(m) OPNAVINST F3100.6J Special Incident Reporting (OPREP-3 PINNACLE, OPREP-3 NAVY BLUE, and OPREP-3 NAVY UNIT SITREP) Procedures

(n) 33 U.S.C. §1323

(o) Assistant DUSD (I&E) Memorandum of 20 Apr 2011, DoD Legal Guidance on Stormwater Charges Under Clean Water Act

(p) 64 FR 48701

(q) 33 U.S.C. §1251 et seq.

(r) Public Law 83-703, Atomic Energy Act of 1954

(s) 15 U.S.T. 1606

(t) United Nations, Convention on the Law of the Sea, December 1982

(u) 54 FR 777

20-2 Legislation

a. The following legislation contains provisions that pertain to the restoration, maintenance, and protection of the nation's waters:

- (1) CWA,
- (2) Coastal Zone Management Act,
- (3) Federal Facilities Compliance Act,
- (4) Marine Protection, Research, and Sanctuaries Act,
- (5) Oil Pollution Act of 1990,
- (6) Rivers and Harbors Act, and
- (7) Safe Drinking Water Act (SDWA).

b. A summary of this legislation is included in appendix A (Laws and Regulations).

20-3 Requirements

20-3.1. Compliance. As required by reference (a) and CWA, Navy facilities shall comply with all substantive and procedural requirements applicable to point and non-point sources of pollution. These requirements include federal, state, interstate, and local laws, E.O.s, and regulations respecting the control and abatement of water pollution such as load reduction requirements resulting from the development of total maximum daily loads (TMDLs) for impaired water bodies (reference (b)). Navy facilities must comply in the same manner and same extent as any nongovernmental entity, including the payment of reasonable service charges (not payment of civil penalties or fines). The discharge of any pollutant that does not comply with effluent standards or other procedural requirements is unlawful. The

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discharge of radiological, chemical, or biological warfare agents or low-level radioactive waste is prohibited.

20-3.2. Surface Water Discharges

a. Direct Discharges. Permits are required for all point source discharges of pollutants to waters of the U.S. (reference (c)). For all discharge points in states with an Environmental Protection Agency (EPA)-approved National Pollutant Discharge Elimination System (NPDES) Program for federal facilities, permits must be requested from the applicable state environmental agency. For all discharge points in states that do not have authority to issue NPDES permits for federal facilities, permits must be requested from EPA. All permit compliance records must be retained as required by federal, state, and local regulations.

(1) Wastewater Discharges. Navy installations shall explore opportunities for pollutant reduction or elimination in wastewater discharges through product substitution, wastewater reduction, water conservation, reuse, and recycling. Domestic and industrial wastewater treatment plant discharges as well as wastewater and cooling water discharges to waters of the U.S. from other processes from Navy installations must comply with all terms or conditions of EPA, state, or locally issued permits.

(2) Stormwater Discharges. Pollutants shall be reduced or eliminated from stormwater discharges by control of pollutant sources through procedural and structural best management practices (BMPs).

(a) Compliance. Stormwater discharges must meet all applicable federal, state, and local permit requirements. Stormwater discharges are a major contributor to surface water quality impairment. The NPDES Stormwater Program regulates stormwater discharges from municipal separate storm sewer systems (MS4s), construction activities, and industrial activities. These types of stormwater discharges are either regulated under Phase I or Phase II of the CWA Stormwater Program. Phase I regulations apply to MS4s serving a population of 100,000 or more, as well as stormwater discharges associated with regulated industrial activities as defined in the stormwater regulations, including construction activities disturbing 5 acres of land or more. Phase II regulations apply to MS4s serving a population less than 100,000 that are located in an "urbanized area," and construction activities that disturb greater than or equal to 1 acre of land (including smaller sites in a larger common plan of

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development or sale), or as specified by an individual state. Federally-operated storm sewer systems are defined as MS4s.

(b) Permit Application. Navy installations subject to stormwater regulations must apply for NPDES permit coverage under either an individual permit or a general permit. Installations applying for coverage under an individual or general stormwater NPDES permit will be required to prepare a stormwater pollution prevention plan (SWPPP). Part 122.26, paragraph (a) of reference (d) includes information on the types of stormwater discharges that are regulated. Part 122.34, paragraph (b)(3)(iii) of reference (d) includes information on non-stormwater discharges such as water line flushing, lawn watering, and firefighting activities that may be a significant contributor of pollutants to an MS4.

(3) Pesticide Discharges. Installations shall obtain a NPDES permit for all point source discharges to waters of the U.S. of biological pesticides and chemical pesticides that leave a residue. In many cases, installations can be covered under an EPA or state issued general permit. Installations shall ensure on-site contractors are covered under the permit or obtain their own permit.

b. Indirect Discharges. Indirect discharges to Navy owned treatment works (NOTW), publicly owned treatment works (POTW), and privately owned treatment works must meet all applicable federal effluent guidelines (reference (e)) and any state, county, and local permit requirements. Industrial wastewater discharges from Navy facilities may be subject to federal categorical treatment or pretreatment standards (reference (e)) or other applicable standards as established by state, county, and local regulations.

c. Non-Point Source Control. Non-point source discharges must conform to best practicable management procedures defined by federal, state, or local requirements (reference (f)). Navy installations must comply with state and local laws and regulations regarding non-point source pollution control.

20-3.3. Subsurface Discharges. Discharges to groundwater must meet applicable requirements of SDWA, state and local implementing requirements, and applicable permit conditions. Additional information on SDWA's Underground Injection and Wellhead Protection Program can be found in sections 21-3.5 and 21-3.6. All owners or operators of Class I and V wells and all applicants for UIC permits shall comply with applicable

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provisions of subpart Z of reference (g) and reference (h). On-site wastewater treatments systems, commonly referred to as septic systems, can also be considered Class V underground injection wells. New large-capacity cesspools are banned nationwide as of 5 April 2000 (new large-capacity cesspools are those for which construction was started on or after 5 April 2000 (part 144.88, paragraph (a)(2) of reference (h))). Large-capacity cesspools may no longer be constructed. Existing large-capacity cesspools should have been closed by 5 April 2005 (part 144.88, paragraph (a)(1)(i) of reference (h)). The definition of large-capacity cesspool may vary from state to state.

20-3.4. Land Application. A permit may be required from the state for land application which includes the use and disposal of treated wastewater, biosolids (sewage sludge), industrial sludge, or septage. These systems may include spray fields, tile fields, rapid infiltration basins, percolation ponds, and evaporation basins.

20-3.5. Hazardous Pollutant Discharges. Hazardous waste (HW) may be introduced into a treatment facility only if the facility is specifically permitted to treat the type of waste introduced under a Resource Conservation and Recovery Act (RCRA) treatment, storage, and disposal permit or a "permit by rule" (reference (i)). Reference (j) provides federally owned treatment works (FOTW) with the same domestic sewage exclusion provided to POTWs, provided no HW is introduced to the FOTW.

20-3.6. Sludge Disposal. The sewage sludge use and disposal regulation (reference (k)) sets national standards for management and disposal of biosolids (sewage sludge). The rule is designed to protect human health and the environment when biosolids (sewage sludge) is beneficially applied to the land, placed in a surface disposal site, or incinerated. Generally, NOTW biosolids (sewage sludge) disposal requirements are incorporated into NPDES permits. If they are not, reference (k) is self-implementing in most cases. This means the rule will generally be fully enforceable, even in the absence of a permit. In addition, all installations shall comply with applicable federal, state, and local biosolids (sewage sludge) disposal requirements. Navy facilities shall take all reasonable measures to beneficially dispose of sludge including land application methods and composting.

20-3.7. Waste Disposal Sites. Surface water runoff and leachate from waste disposal sites will conform to applicable requirements specified for disposal of HW (refer to chapter 27 (Hazardous

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Waste Management Ashore)) or solid waste (refer to chapter 28 (Solid Waste Management and Resource Recovery Ashore)).

20-3.8. Dredge and Fill Operations

a. Permit Application

(1) Permit applications must be made to U.S. Army Corps of Engineers (USACE) for:

(a) A permit to construct a structure in, or to otherwise alter or modify, navigable waters or wetlands;

(b) Dredge operations, including maintenance dredging; and

(c) Dredge disposal unless the disposal is permitted under a nationwide permit.

(2) In addition, applicants are required to obtain state certification that such actions comply with applicable state effluent limitations, water quality implementation plans, toxic effluent limitations, and fish and wildlife protection plans. State certifications may be done either as a part of the USACE permit process or independently if no USACE permit is required because of a nationwide permit. Projects covered by a nationwide permit require USACE notification even though no permit application is required.

b. Permit Renewal. Requests for renewal of permits for maintenance dredging from USACE shall be filed with the cognizant district engineer at least 2 years before expiration.

c. Permit Exemptions. Projects for which environmental impact statements (EISs) have been written and submitted to Congress and that have specific congressional authorization do not require USACE or state permits. Projects covered by a nationwide general permit require USACE notification, but do not require individual permits. However, on a case-by-case basis, some additional individual requirements may be applied by USACE or states.

d. Discharges of Dredged or Fill Material

(1) Early planning for dredge spoils disposal site selection, preparation, and use is essential. CWA requires a permit for discharge of dredged or fill materials into waters of

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the U.S. Refer to chapter 27 (Hazardous Waste Management Ashore), chapter 30 (Oil Management Ashore), chapter 31 (Storage Tanks), and chapter 39 (Oil and Hazardous Substance Spill Preparedness and Response) for information on oil and HW handling requirements. Discharges of dredged or fill material into waters under USACE jurisdiction shall comply with federal regulations. Discharges to waters of the U.S. under the regulatory jurisdiction of states shall comply with applicable permits and discharge regulations, including state fee schedules. Disposal by ocean dumping requires a USACE permit and compliance with EPA requirements (refer to chapter 36 (Permitted Ocean Disposition)).

(2) Existing dredge spoil disposal sites, approved by USACE, shall be used wherever possible. Proposed new dredge spoil disposal sites shall be identified to the cognizant USACE district engineer for evaluation and approval from 2 to 2.5 years before project initiation. Disposal site selection may entail field sampling and analyses. Elutriate and bioassay testing may be required to determine if the proposed dredged materials should be classed as polluted or unpolluted. Other surveys, including site monitoring, may be required at disposal sites before, during, and after disposal (reference (k)).

e. Environmental Assessment or EIS. An environmental assessment (EA) or EIS shall be prepared by the sponsoring Navy installation and reviewed under chapter 10 (Environmental Planning Under the National Environmental Policy Act and Executive Order 12114) for each project involving a change to the width or depth of a channel or other water body.

20-3.9. In-Water Construction. USACE and some states require a permit for any in-water construction. Installations proposing in-water construction shall obtain applicable permits prior to award of construction contracts and comply with all permit conditions. Construction activities that will need permit coverage are construction of piers, wharfs, bulkheads, pilings, marinas, docks, ramps, floats, moorings, and like structures; construction of wires and cables over the water, and pipes, cables, or tunnels under the water; dredging and excavation; any obstruction or alteration of navigable waters; depositing fill and dredged material; filling of wetlands adjacent or contiguous to waters of the U.S.; construction of riprap, revetments, groins, breakwaters, and levees; and transportation of dredged material for dumping into ocean waters.

20-3.10. Watershed Management

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a. Installations should apply a watershed approach when evaluating the impact of their overall activities on the quality of area water resources and address water impacts by reducing pollutant discharges. A watershed approach is an integrated holistic management strategy that addresses the condition of land areas within the entire watershed. It ensures non-point sources as well as point sources of pollution are addressed. Navy water program managers should consult other media experts (e.g., natural resources; RCRA; Comprehensive Environmental Response, Compensation, and Liability Act; air) to fully implement the watershed approach.

b. Installations that discharge pollutants to or near impaired waters should get involved as early as possible in the state or local process that leads to the identification of impaired waters and the development of TMDLs. Even those installations with only a potential to discharge pollutants to an impaired water body should participate as stakeholders in the process. Participation should occur early in the TMDL process, including, when practicable, before the state or other authority approves or creates a schedule for establishing the applicable TMDL.

20-3.11. Pretreatment Program. NOTWs shall develop, implement, and maintain pretreatment programs for all known industrial dischargers to the NOTW that could affect treatment processes or impact compliance with permit limits. Installations shall periodically develop a list of all industrial waste discharges on the installation. This is to be accomplished no less than once every 5 years as part of an industrial wastewater management plan.

20-3.12. Water Reuse. To support water conservation efforts, Navy commands shall ensure all activities implement water reuse practices to reclaim, recycle, and reuse wastewater to the maximum extent feasible, taking into account economic payback, process requirements, and the scarcity of water resources available to the primary water supplier for the installation. Reuse of water shall be accomplished per all applicable federal, state, and local laws, E.O.s, regulations and requirements.

20-3.13. Perchlorate. Permitted wastewater effluent discharges at installations where the use of perchlorate is associated with processes related to the manufacture, maintenance, processing, recycling, or demilitarization of military munitions shall sample for perchlorate at permitted wastewater discharge points, per reference (1). Sampling shall be conducted semi-annually and, if

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possible, in conjunction with effluent sampling already conducted under the applicable permit to each point source. Installations with confirmed results that indicate the presence of perchlorate in wastewater effluent discharges at the level identified in reference (1) shall consult with their budget submitting office (BSO) on appropriate actions. Installations may cease sampling after 2 consecutive semi-annual samples are below 15 parts per billion. Sample results are to be reported to the permitting regulatory authority if it is required by the NPDES permit or state regulations.

20-3.14. Spills. Spills of sewage or other substances that might be considered pollutants which endanger critical water areas, have the potential to generate public concern, become the focus of enforcement action, or pose a threat to public health or welfare shall be reported by Operations Event/Incident Report (OPREP-3) NAVY BLUE or OPREP-3 NAVY UNIT Situation Report (SITREP) per reference (m). Spills of oil and hazardous substances shall be reported per the requirements in chapter 39 (Oil and Hazardous Substance Spill Preparedness and Response).

20-3.15. Fines, Penalties, and Notices of Violation. There is no waiver of sovereign immunity for fines and penalties in CWA. This includes EPA imposed penalties, state imposed penalties, local penalties, or any penalties sought by citizens in a citizen's suit. Because Navy cannot pay penalties, Navy also cannot undertake supplemental environmental projects in lieu of environmental penalties. Refer to chapter 19 (Processing Notices of Violation under Environmental Laws and Regulations) for more detailed and specific Navy policy guidance on what actions shall be taken upon receipt of any notice of violation of federal, state, interstate, or local environmental control laws, E.O.s or regulations. This paragraph does not apply to payment of reasonable stormwater service charges, which are discussed in section 20-3.18.

20-3.16. Request to Board or Regulate Navy Vessels. Refer to chapter 35 (Environmental Compliance Afloat) if there is any request by federal, state, or local regulators to board or regulate any Navy vessel.

20-3.17. Training Requirements

a. Every person involved in operations at naval shore facilities which could result in pollution of surface or groundwater shall have received environmental overview training specified in chapter 3 (Environmental Readiness Training); shall

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have received specific comprehensive training in water pollution prevention required by CWA and implementing regulations; and shall be familiar with the provisions of this chapter.

b. Wastewater treatment plant operators shall have received training and certification required by applicable state and local water quality regulations. Where state or local regulations do not specify training, the following subjects shall be included in their training plan:

- (1) Basic wastewater plant design,
- (2) Wastewater plant operations,
- (3) Basic maintenance and calibration of plant controls and equipment,
- (4) Wastewater treatment principles,
- (5) Wastewater sampling and analysis, and
- (6) Wastewater plant and systems documentation and reporting requirements.

20-3.18. Payment of Reasonable Stormwater Service Charges

a. Reference (n) requires federal entities to pay "reasonable service charges," to include any reasonable, nondiscriminatory fee, charge, or assessment to state and local authorities to pay or reimburse the costs of managing stormwater from federal property or facilities. The stormwater management costs that may be reimbursed include the full range of costs attributable to collecting stormwater, reducing pollutants in stormwater, and reducing the volume and rate of stormwater discharge. Any such reasonable fee, charge, or assessment must be paid regardless of whether it is denominated a tax.

b. Determining whether a stormwater service charge is "reasonable" and therefore payable requires a fact-specific analysis of the circumstances. In reference (o), the Department of Defense provides guidance for conducting this analysis using seven criteria. To be payable by a Navy facility, a stormwater service charge must:

- (1) Relate to the control and abatement of water pollution;

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(2) Be reasonable;

(3) Be nondiscriminatory;

(4) Be based on some fair approximation of the proportionate contribution of the property or facility to stormwater pollution;

(5) Be measured in terms of quantities of pollutants, or volume or rate of stormwater discharge or runoff from the property or facility;

(6) Be used to pay or reimburse the costs associated with any stormwater management program (whether associated with a separate storm sewer system or a sewer system that manages a combination of stormwater and sanitary waste); and

(7) May include the full range of programmatic and structural costs attributable to collecting stormwater, reducing pollutants in stormwater, and reducing the volume and rate of stormwater discharge.

c. Navy installations receiving a new or revised demand for payment of stormwater service charges from a state or local entity shall inform Facilities Engineering Command (FEC) or Region Counsel of the demand for payment, and a coordinated review of the demand by both environmental technical and legal staff shall be performed. Initial payment of a stormwater service charge shall not be made without region counsel's advice that it is payable. Recurring charges may be paid without additional legal analysis provided that the justification for and method of calculating the amount payable remains unchanged.

(1) The coordinated review shall consist of the following steps:

(a) Ensure that the charges are based on a reasonable assessment of the facility's stormwater profile using the criteria in paragraph 20-3.18.b. This includes, but is not limited to, careful analysis of any assumption or algorithms used to estimate impervious surface area.

(b) Ensure that Region Counsel is given the opportunity to review all coordinated technical and legal reviews. Region counsel will advise through documented analysis whether the demand to payment is payable under reference (o) and communicate its advice in writing to the Region Comptroller.

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Payment of a stormwater service change shall not be made without Region Counsel's advice that it is payable.

(2) If after review and negotiation it is determined that the stormwater service charges are valid and appropriate, payment must be made and cannot wait until the next program objective memorandum (POM). The project shall be entered as an emergent project into the Environmental Readiness Program Requirements Web (EPRWeb) (refer to appendix E (Web Sites) for Web site address) under the guidebook for wastewater and stormwater fees along with all legal and cost documents that support the requirement. A legal memorandum or assessment supporting the decision to pay must be attached to the EPR project demonstrating how the seven criteria in section 20-3.18.b have been met. This memorandum or assessment only needs to be resubmitted in subsequent EPRWeb projects if the original assessment changes.

(3) If Region Counsel determines that a stormwater service charge is not payable, Region Counsel shall provide a legal opinion providing the reasons for determining why the bill is not payable, along with the bill itself to Commander, Navy Installations Command (CNIC), which is responsible for notifying the Office of the Chief of Naval Operations, Energy and Environmental Readiness Division (OPNAV (N45)) and Assistant Deputy Under Secretary of Defense (Installations and Environment) through the chain of command prior to communication of the determination to the state or local government entity that presented the demand for payment. The Department of Justice has determined that no stormwater charge may be denied based on lack of specific appropriations act language.

20-4 Responsibilities

20-4.1. BSOs shall:

a. Ensure activities under their command comply with current federal, state, regional, and local laws, E.O.s, regulations, and permits; and

b. Plan, program, budget, and provide funding for current and future requirements under CWA and revisions to the applicable regulations.

20-4.2. Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) shall:

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a. Prepare permit applications for construction and initial operation of military construction funded projects, pay related fees from the funds appropriated and budgeted for the projects, and provide permit applications for submittal to the applicable regulatory agency;

b. Assist commands, as requested, in identifying applicable effluent standards, appropriate control technologies, and BMPs, and in developing SWPPPs and industrial wastewater management plans;

c. Coordinate the review of all projects for the construction of new treatment works with the appropriate federal, state, and local regulatory agencies;

d. Maintain liaisons with USACE to facilitate dredge and fill project planning, preparation of EAs and EISs, and disposal site approval; and

e. Operate and maintain NOTWs.

20-4.3. Region commanders and commanding officers (COs) of shore installations shall:

a. Comply with the applicable substantive and procedural federal, state, local, and regional clean water laws, E.O.s, regulations, and permits;

b. Prepare or review and sign, or designate in writing the appropriate person to sign, all applications for permits to construct wastewater treatment plants, for in-water construction, or for all new dredging, maintenance dredging, and dredge disposal operations; and obtain, renew, and pay for all new and recurring permits;

c. Identify and submit environmental compliance projects, per chapter 1 (Organization and Coordination), required to bring wastewater sources into compliance with applicable requirements;

d. Identify, plan, program, budget, and implement requirements for current and future requirements under CWA;

e. Improve opportunities to recycle and reclaim and reuse wastewater and sludge;

f. Develop, implement, and maintain current SWPPPs;

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g. Ensure environmental personnel are properly trained and certified, as applicable; and

h. Implement the instructions outlined in chapter 19 (Processing Notices of Violation under Environmental Laws and Regulations) upon receipt of a CWA violation.

20-4.4. COs or officers in charge (OICs) of tenant commands that operate or use sewage and wastewater collection or treatment systems shall:

a. Ensure compliance with all permit conditions for applicable federal, state, and local permits;

b. Ensure compliance with the policies of this manual and with written sewage and wastewater collection and treatment requirements established by the BSO and commanders of districts and regions; and

c. Advise host command of any changes in process, materials, or procedures that may impact permit requirements.

20-5 Definitions

20-5.1. Contiguous Zone. The contiguous zone of the United States is a zone contiguous to the territorial sea of the United States, in which the United States may exercise the control necessary to prevent infringement of its customs, fiscal, immigration, or sanitary laws and regulations within its territory or territorial sea, and to punish infringement of the above laws and regulations committed within its territory or territorial sea. The U.S. contiguous zone, as proclaimed in reference (o), extends to 24 nautical miles (NM) from the baselines of the United States determined per international law, but in no case within the territorial sea of another nation.

20-5.2. Direct Discharge. A direct discharge is a discharge of a pollutant directly into the waters of the U.S.

20-5.3. Discharge. Discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of any pollutant, but excludes certain cases under section 402 of reference (p).

20-5.4. Discharge of a Pollutant

a. Discharge of a pollutant includes:

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(1) Any addition of any pollutant or combination of pollutants to waters of the U.S. from any point source; or

(2) Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation.

b. This definition includes additions of pollutants into waters of the U.S. from:

(1) Surface runoff which is collected or channeled by man;

(2) Discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment work; and

(3) Discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

c. This term does not include an addition of pollutants by any indirect discharger.

20-5.5. Domestic Discharge. Domestic discharge is any wastewater discharge produced by ordinary living uses, including liquid waste containing animal or vegetable matter in suspension or solution; water-carried waste from the discharge of water closets, laundry tubs, washing machines, sinks, or dishwashers; or other source of water carried wastes of human origin.

20-5.6. Dredge and Fill Operations. Dredge and fill operations encompass construction or other work involving excavation or discharge of dredged or fill material in waters of the U.S.

20-5.7. Federally Owned Treatment Works. An FOTW is a domestic sewage treatment works owned by the federal government. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to the FOTW. FOTWs that discharge treated effluent directly to waters of the U.S. are "treatment works." FOTWs that discharge pretreated effluent to another treatment works for final treatment and ultimate discharge to waters of the U.S. are "pretreatment works."

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20-5.8. Indirect Discharge. An indirect discharge is a nondomestic discharge introducing pollutants to a POTW, FOTW, or NOTW.

20-5.9. Industrial Wastewater. Industrial wastewater is water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Examples of this type of wastewater on Navy installations includes, but is not limited to, wastewater resulting from production of energetics and propellants, used oil and solvent handling operations, photo and X-ray processing, laboratories and clinics activities, and operation of large food services and large-scale laundries.

20-5.10. Industrial Wastewater Management Plan. An industrial wastewater management plan is a document that includes a list of all industrial discharges and treatment processes, a copy of the applicable permit(s), and a description of how industrial wastewater will be managed to maintain compliance with the applicable permit(s).

20-5.11. Industrial Wastewater Treatment Plant. An industrial wastewater treatment plant is a facility that treats exclusively nondomestic wastewater. Treatment may be chemical or physical. An oily waste treatment facility is a type of industrial waste treatment plant.

20-5.12. Injection Well. An injection well is any excavation that is cored, bored, drilled, jetted, dug, or otherwise constructed, the depth of which is greater than its largest surface dimension used to inject fluids into the subsurface. An injection well may also be any dug hole with a depth that is greater than the largest surface dimension. Also included are improved sinkholes or subsurface fluid distribution systems.

20-5.13. Land Application. Land application is the use or disposal of treated wastewater, biosolids (sewage sludge), industrial sludge, or septage by application upon or incorporated into the soil with no resulting discharge to surface waters.

20-5.14. National Pollutant Discharge Elimination System. NPDES is a national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements under sections 307, 318, 402, and 405 of reference (p). The term includes a

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state or interstate program which has been approved or authorized by EPA.

20-5.15. Navigable Waters. As defined in section 502.7 of reference (p), navigable waters means the waters of the U.S., including the territorial seas.

20-5.16. Navy Owned Treatment Works. An NOTW is a type of FOTW that is owned by a Navy installation. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to the NOTW. NOTWs that discharge treated effluent directly to waters of the U.S. are "treatment works." NOTWs that discharge pretreated effluent to another treatment works for final treatment and ultimate discharge to waters of the U.S. are Navy owned pretreatment works.

20-5.17. Non-Point Source Pollution. Non-point source pollution is water pollution originating from diffuse, non-discrete sources. Non-point source water pollution generally results from land runoff, percolation, atmospheric deposition, hydrologic modification, or precipitation.

20-5.18. Point Source. A point source is any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

20-5.19. Pollutant. Pollutants include dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, biosolids (sewage sludge), munitions, chemical wastes, biological material, radioactive materials (other than those regulated as source, by-product, or special nuclear material under reference (q)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

20-5.20. Pretreatment. Pretreatment is the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater

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prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW, FOTW, or NOTW.

20-5.21. Privately Owned Treatment Works. A privately owned treatment works is any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a private entity or corporation. This definition includes sewers, pipes, and other conveyances only if they convey wastewater to a privately owned treatment works providing treatment.

20-5.22. Publicly Owned Treatment Works. A POTW is any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or a municipality. This definition includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW providing treatment.

20-5.23. Stormwater. Stormwater is the portion of precipitation that does not naturally percolate into the ground or evaporate but flows via overland flows, channels, or pipes into a defined surface water channel or stormwater system during and immediately following a storm event. Examples include stormwater runoff, surface water runoff, infiltration (other than infiltration contaminated by seepage from sanitary sewers or by other discharges), and drainage related to storm events or snowmelt.

20-5.24. Territorial Sea Baseline. The territorial sea baseline is the line defining the shoreward extent of the territorial sea of the United States drawn according to the principles, as recognized by the United States, of references (r) and (s). Normally, the territorial sea baseline is the mean lower low water line along the coast of the United States, as shown on official U.S. nautical charts.

20-5.25. Territorial Seas of the United States. The territorial sea of the United States is a maritime zone extending beyond the land territory and internal waters of the United States over which the United States exercises sovereignty and jurisdiction over the water column, airspace above, and seabed and subsoil below. The breadth of the U.S. territorial sea is 12 NM from the baselines of the United States, as proclaimed in reference (t).

20-5.26. Total Maximum Daily Load. The TMDL is the amount of a specific pollutant that a water body can receive, assimilate, and still meet water quality standards. The TMDL consists of the sum

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of waste load allocations from point sources, load allocations from non-point sources, and a margin of safety.

20-5.27. Treatment Works. A treatment works is any domestic or industrial wastewater treatment devices or systems, regardless of ownership (including federal facilities, such as FOTWs and NOTWs), used in the storage, treatment, recycling, and reclamation of domestic and industrial wastewater (including land dedicated for the disposal of associated sludge).

20-5.28. Water Quality Standards. Water quality standards are the water quality goals of a water body (or a portion of the water body) designating the use or uses to be made of the water and establishing criteria necessary to protect those uses, including anti-degradation policies. Standards can be either state regulations or laws, or federal regulations applied to a specific state.

20-5.29. Waters of the United States

a. Waters of the U.S. include:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:

(a) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(b) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(c) Which are used or could be used for industrial purposes by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the U.S. under this definition;

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(5) Tributaries of waters identified in sections 1-4 of this definition;

(6) The territorial sea; and

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in sections 1-6 of this definition.

b. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in part 423.11, paragraph (m) of reference (e) which also meet the criteria of this definition) are not waters of the U.S. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of CWA, the final authority regarding CWA jurisdiction remains with EPA.

20-5.30. Watershed. A watershed is a drainage area or basin in which all precipitation and other waters drain or flow to a marsh, stream, river, lake, or groundwater.

CHAPTER 21

SAFE DRINKING WATER ACT COMPLIANCE ASHORE

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21-1 Scope. This chapter identifies requirements, establishes policy guidance, and assigns responsibilities for the production, use, and protection of drinking water at shore installations in the United States and its territories.

21-1.1. Related Chapters. Drinking water performance reporting shall be reported per chapter 4 (Environmental Performance Reporting). Chapter 7 (Sampling and Laboratory Testing) provides Navy policy guidance regarding sampling and testing protocols. Violations of the Safe Drinking Water Act (SDWA) shall be reported per chapter 19 (Processing Notices of

Violation Under Environmental Laws and Regulations). Navy installations overseas shall follow chapter 34 (Overseas Environmental Compliance Ashore) for drinking water requirements.

21-1.2. References

- (a) 40 CFR 141
- (b) EPA Operator Certification Guidelines Implementation Guidance of Jan 2000
- (c) NAVMED P-5010-5, Manual of Naval Preventative Medicine, Water Supply Ashore
- (d) EPA 812-8-94-002, Lead in Drinking Water in Schools and Non-Residential Buildings, April 1994
- (e) COMNAVFACENGCOM Guidance for Sampling Lead in Drinking Water of 22 Jul 1998
- (f) 40 CFR 141.201 - 211
- (g) EPA 816-R-09-011, 2nd Revision, Preparing Your Drinking Water Consumer Confidence Report, Guidance for Water Suppliers of Apr 2010
- (h) Department of Defense Consumer Confidence Report Guidance Document of Sep 1999
- (i) 40 CFR 144-147
- (j) Public Law 107-188, Public Health Security and Bioterrorism Preparedness and Response Act of 2002
- (k) USD(AT&L) Memorandum of 3 Jul 2003, DoD Policy on Drinking Water Vulnerability Assessments and Emergency Response Plans
- (l) Naval Facilities Engineering Service Center User's Guide, Cross-Connection Control and Backflow Prevention Program Implementation at Navy Shore Facilities of May 1998
- (m) EPA, Cross Connection Control Manual, 1973, updated 2003
- (n) American Water Works Association Manual of Standard Practices, Emergency Planning for Water Utility Management

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(o) EPA/State Joint Guidance on Sanitary Surveys of Dec 1995

(p) Public Law 104-182, Safe Drinking Water Act Amendments of 1996

21-2 Legislation

a. The following legislation contains provisions that pertain to the regulation of the nation's public drinking water supply and its sources:

- (1) National Primary Drinking Water Regulations (NPDWR),
- (2) National Secondary Drinking Water Regulations, and
- (3) SDWA.

b. A summary of this legislation is included in appendix A (Laws and Regulations).

21-3 Requirements. Safe drinking water must be provided to all personnel assigned to Navy shore facilities and installations. Navy water systems must comply with all applicable federal, state, and local safe drinking water regulations, executive orders (E.O.s), and Navy policy. In general, states are responsible for implementation of SDWA programs.

21-3.1 Executive Agent for Drinking Water Quality

a. Commander, Navy Installations Command (CNIC) is a designated as executive agent for drinking water quality matters for all Navy shore facilities and installations worldwide, including government properties, leased facilities, non-contiguous facilities, Naval Sea Systems Command (NAVSEASYS COM), Bureau of Medicine and Surgery (BUMED), or other budget submitting office (BSO) operated facilities. This responsibility extends to all property that is operated by or under the responsibility of an installation commanding officer.

b. As executive agent for drinking water quality at Navy shore facilities and installations, CNIC shall serve as the single point of contact on all matters related to water systems that provide drinking water to Navy personnel. Executive agent responsibility shall include oversight and ensure:

- (1) Compliance testing and monitoring of drinking water

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supplied both by outside vendors and Navy owned treatment works;

(2) Treatment and distribution of drinking water;

(3) Operation and maintenance of all aspects of drinking water systems;

(4) Training and certification of personnel who operate such systems;

(5) Preparation and submission of annual Consumer Confidence Reports where applicable; and

(6) Preparation and submission of applicable public notifications and contingency plans for alternative water supplies required in the event that a water system is unable to supply drinking water that meets public health standards.

c. By 15 December of each year CNIC shall provide an annual report on the status of Navy shore facility and installation drinking water quality worldwide for previous fiscal year to the Vice Chief of Naval Operations (VCNO), via CNO (N4). This detailed report shall include:

(1) An inventory of all water systems providing drinking water to Navy shore facilities and installations;

(2) An analysis of the quality of drinking water provided by each system;

(3) Identification of any outstanding maintenance or repair requirements;

(4) Identification of any operational and water quality deficiencies; and

(5) Any other significant discrepancies or problems and associated funding requirements. Discrepancies and problems to be identified include, but are not limited to, violations of applicable standards, issuance of public notifications, delayed or deferred maintenance and repair, and any case in which an applicable water system outside the United States is providing Navy consumers with lower quality drinking water than provided to Navy consumers within the United States as determined by the executive agent. Significant issues or discrepancies noted shall be accompanied by a plan of action to address the matter expeditiously and shall include contingency plans to provide

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alternate water supplies when necessary.

21-3.2. Water System Classification. Water systems are initially classified as public water systems (PWSs) or non-PWSs. Federal, state, and local regulations for determining compliance with SDWA generally apply to PWSs and are not applicable to non-PWSs. Regulatory requirements for each PWS depend on the classification of the system (i.e., primary or consecutive; community water system (CWS) or non-community water system; transient, non-community water system (TNCWS) or non-transient, non-community water system (NTNCWS)); and the type of source water used (i.e., groundwater, surface water, or groundwater under the direct influence (GWUDI) of surface water). Refer to section 21-5 and figure 21-1 to determine the type of water system in operation.

21-3.3. Consecutive Public Water Systems (PWSs)

a. Consecutive PWSs generally are not subject to the requirements of SDWA if they satisfy all of the following criteria specified in part 141.3 of reference (a):

(1) Consist only of distribution and storage facilities and do not have any collection and treatment facilities;

(2) Obtain all their water from, but are not owned or operated by, a PWS to which the regulations apply;

(3) Do not sell water to any persons; and

(4) Are not carriers that convey passengers in interstate commerce.

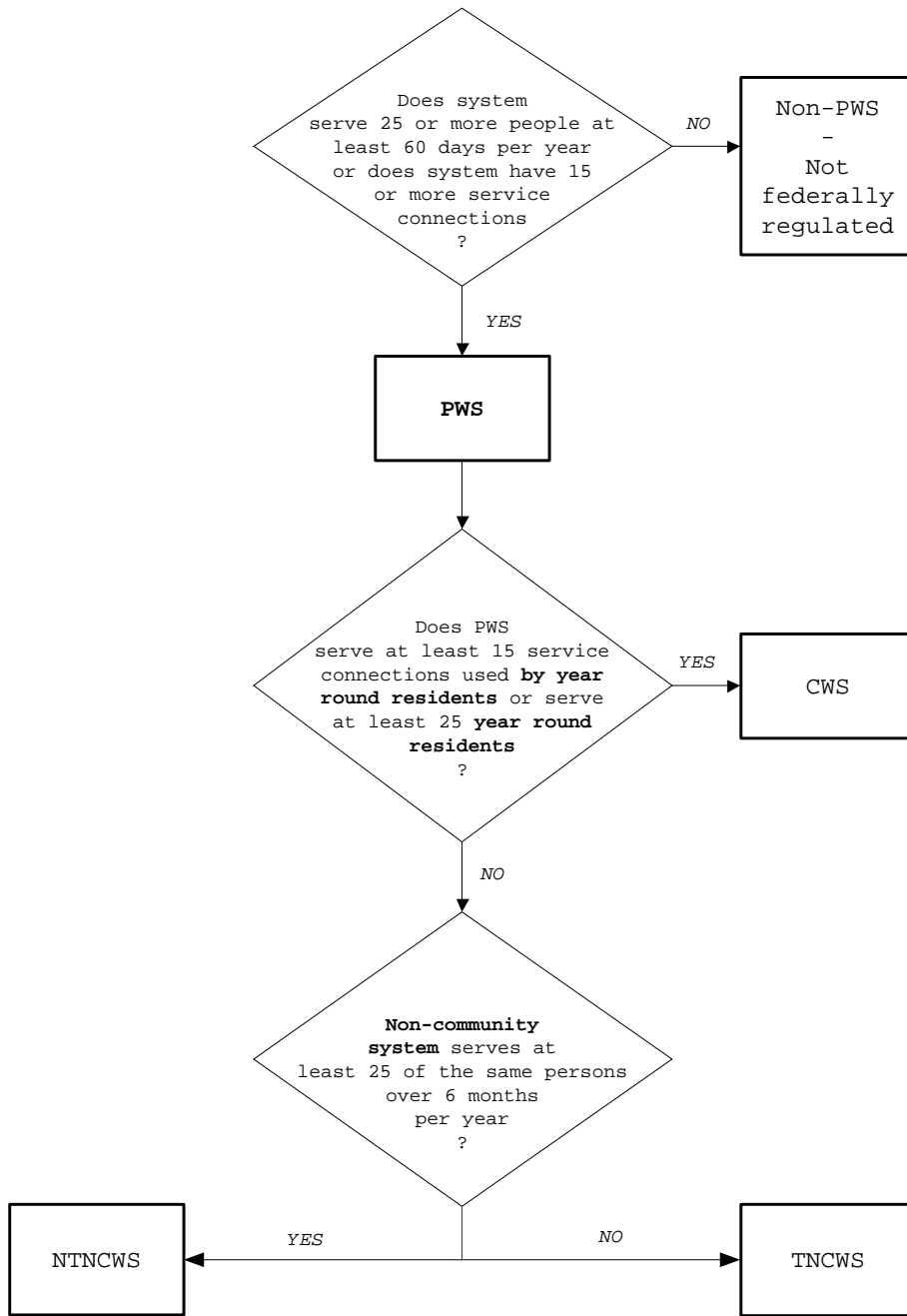
b. There is no definition of "selling water" in SDWA; however, reference (b) defines selling water as follows: "A distributor of water for human consumption "sells" water within the meaning of the Act if it charges consumers for the water as a separate item or bills separately for the water it provides. (House Report No. 93-1185). Conversely, if the entity includes charges for water in the rental fee, then it is not selling water within the context of the Act." Navy does not consider reimbursement for distribution system maintenance costs and water from one federal entity to another as selling water; this is merely an internal allocation of funds within the executive branch. The Environmental Protection Agency (EPA) definition above would apply to non-federal consumers including banks,

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credit unions, private companies, and restaurants to which Navy distributes water.

c. If a consecutive PWS does not satisfy all of the above exemption criteria specified under part 141.3 of reference (a), it may still be exempt from some regulatory requirements based on the fact that it obtains all of its water from another regulated PWS. This exemption criteria is addressed in part 141.29 of reference (a). In general, the consecutive PWS would, at a minimum, be required to comply with requirements pertaining to those contaminants which could be contributed by the consecutive PWS distribution system downstream of the point of connection to the regulated PWS.

Figure 21-1. Water System Classification Flowchart



Notes:

1. Per federal laws. State and local laws may be more stringent.
2. Does not address regulatory requirements of consecutive water systems. This is determined independently by each state.

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21-3.4. Water System Monitoring. Navy water systems will, at a minimum, accomplish the monitoring described in the following sections. This monitoring is required regardless of variance or exemptions (refer to section 21-3.3.k) from regulatory monitoring requirements. Any modified monitoring would be conducted under a schedule specified by the applicable state regulatory agency and agreed upon by the EPA administrator. Installations shall consult with the Chief, Bureau of Medicine and Surgery (BUMED) for public health and preventative medicine guidance for Navy personnel concerned with medical surveillance of public water systems at shore installations in accordance with chapter 5 of reference (c).

a. Arsenic. Navy water systems are required to comply with EPA's 10 parts per billion (ppb) standard including reporting on the consumer confidence report (CCR) (refer to section 21-3.4).

b. Asbestos. All Navy water systems with asbestos cement pipes shall monitor for asbestos. At a minimum, one sample shall be taken during the first 3 years of every 9 year compliance period and must comply with EPA's limit of 7 million fibers per liter (longer than 10 micrometer).

c. Lead and Copper. All Navy PWSs shall comply with all applicable requirements for the control of lead and copper, as stated in the federal Lead and Copper Rule (subpart I of reference (a)), to ensure the levels of lead and copper remain below the levels associated with health risks in treated (finished) water and at the consumer's free flowing tap. Per reference (a) and if approved by the state regulatory agency or EPA (whichever has primacy), installations may combine their consecutive PWS monitoring plan as part of the supplier's plan, instead of treating each as a separate system.

(1) Lead Action Level

(a) The lead action level (AL) is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted per reference (a) is greater than 0.015 milligrams per liter (mg/L) (i.e., if the 90th percentile lead level is greater than 0.015 mg/L). The copper AL is exceeded if concentrations of copper in more than 10 percent of tap water samples collected during any monitoring period conducted per reference (a) is greater than 1.3 mg/L (i.e., if the 90th percentile copper level is greater than 1.3 mg/L).

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(b) As specified in reference (a), if an AL is exceeded, installation PWSs must collect additional water quality parameter samples. Optimal corrosion control treatment may also be required. Should prescribed treatment options fail to bring lead levels below the AL, lead service lines may have to be replaced. Water systems that meet the lead and copper ALs during specified monitoring periods may reduce the number and frequency of sampling per reference (a).

(2) Lead in Priority Areas

(a) All Navy installations shall sample, test, and maintain resultant records for all drinking water coolers and outlets in the following priority areas to determine the presence of lead: primary and secondary schools, day care centers, hospital pediatric wards, maternity wards, and food preparation areas located on medical facilities. References (d) and (e) provide program information including rationale and sampling protocols. If initial screening results exceed 20 ppb in 250 mL samples, installations shall use full protocol sampling on affected outlets. If full protocol sampling exceeds 20 ppb, installations shall secure the affected water outlets from service and institute permanent corrective measures.

(b) A copy of all test results shall be made available for all schools, day care centers, and medical facilities where testing has been conducted. A notice of availability of the testing results shall be sent to the parents or legal guardians of children attending the affected school.

(3) Lead and Copper in Family Housing. Navy consecutive PWSs that serve family housing and are not included in the primary system sampling pool (at the time the primary system performed Lead and Copper Rule monitoring) for lead and copper shall sample for lead and copper. Installations shall ensure the number and location of samples are sufficient to be representative of the system and in conformance with Lead and Copper Rule procedures. This requirement can be waived if Navy installations operating consecutive PWSs document that their water supplier passed its Lead and Copper Rule monitoring and that the water being supplied to them is noncorrosive. A formal waiver does not need to be submitted but documentation must be maintained in drinking water program records.

d. Radionuclides. Navy water systems are required to comply with EPA's standards for radionuclides and uranium as follows: combined radium 226/228 (5 picocuries per liter

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(pCi/L)), beta emitters (4 millirems), gross alpha standard (15 pCi/L), and uranium (30 micrograms per liter).

e. Unregulated Contaminants. Large Navy PWS and some small PWSs may be required to collect data on a selection of unregulated contaminants. Data from this monitoring will be used in future rulemaking.

f. Coliform Bacteria

(1) Navy PWSs shall perform bacteriological monitoring as specified in the Total Coliform Rule at part 141.21 of reference (a). This rule sets requirements for coliform levels in drinking water. Coliform bacteria in drinking water indicate the treatment system is not working or there are problems in the distribution system. EPA standards require systems to detect coliforms in no more than 5 percent of samples taken each month. The minimum number of samples a system must take depends on system size and is outlined in part 141.21 of reference (a).

(2) Consecutive non-community water systems may request waivers from this requirement. Waivers shall be submitted by budget submitting offices (BSOs) to the Office of the Chief of Naval Operation, Energy and Environmental Readiness Division (OPNAV (N45)) for approval. The use of EPA-approved kits by trained personnel is acceptable for Navy policy total coliform analyses. However, if a sample tests positive, follow-up analysis must be accomplished using a certified laboratory.

g. Surface Water Treatment Rule. The objective of this rule is to prevent waterborne diseases caused by viruses, Legionella, and Giardia lamblia. The rule requires water systems using surface water and GWUDI of surface water provide filtration and disinfection. Under certain criteria, the filtration requirement can be waived; however, there are no exceptions to the disinfection requirement.

(1) Interim Enhanced Surface Water Treatment Rule. This rule strengthens filter turbidity performance and monitoring requirements to optimize treatment reliability. An overall goal of this rule is to minimize levels of cryptosporidium in finished water. The rule applies to PWSs serving at least 10,000 people that use surface water or GWUDI of surface water. The rule also requires states to conduct sanitary surveys for all surface water and GWUDI systems, regardless of size.

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(2) Filter Backwash Recycle Rule. This rule applies to all PWSs using surface water or GWUDI of surface water; utilizing direct or conventional filtration processes; and recycling spent filter backwash water, sludge thickener supernatant, or liquids from dewatering processes. Recycle systems will be required to return spent filter backwash water, thickener supernatant, and liquids from dewatering process prior to the point of primary coagulant addition unless the state specifies an alternative location.

(3) Long-Term 1 Enhanced Surface Water Treatment Rule. The rule applies to PWSs using surface water or GWUDI of surface water and extends protection against cryptosporidium and other disease causing microbes to water systems that serve fewer than 10,000 people annually.

(4) Long-Term 2 Enhanced Surface Water Treatment Rule. This rule increases monitoring and treatment requirements for water systems at high risk of outbreaks of cryptosporidium and requires PWSs supplied by surface water sources to monitor for cryptosporidium. Those water systems that measure higher levels of cryptosporidium or do not filter their water must provide additional protection by using options from a "microbial toolbox" of treatment and management processes. The rule requires open reservoirs to either be covered or receive added treatment.

h. Groundwater Rule. This rule provides increased protection against microbial contamination of drinking water systems that use groundwater sources by requiring sanitary surveys be conducted by the state every 3 years for CWSs and every 5 years for non-community water systems. In addition, the rule contains additional requirements such as hydrogeologic sensitivity assessments and enhanced source water monitoring for certain systems. Monitoring of source water is also required if there is a detection of coliform in the distribution system.

i. Disinfectant and Disinfection Byproducts

(1) Stage 1 Disinfectant and Disinfection Byproduct Rule. This rule applies to all CWSs and NTNCWSs that use a chemical disinfectant in any part of their system. It establishes maximum residual disinfectant levels for disinfection using chlorine, chloramine, and chlorine dioxide, and maximum contaminant levels (MCLs) for disinfection byproducts (i.e., total trihalomethanes, haloacetic acids, chlorite, and bromate).

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(2) Stage 2 Disinfectant and Disinfection Byproduct Rule. This rule provides additional public health protection from disinfection byproducts and tightens compliance monitoring requirements for trihalomethanes and haloacetic acids. In addition, this rule imposes requirements on consecutive systems.

j. Public Notification and Violations. The owner or operator of a PWS that fails to comply with an applicable MCL, AL, or treatment technique (TT), or with the requirements of any schedule prescribed under a variance or exemption (refer to section 21-3.3.k) shall notify persons served by the system per reference (f). The notices shall include specific language about the health effects of each contaminant. The PWS shall publish notices by newspaper, mail delivery, hand delivery, radio, and television announcements depending upon the type of violation or risk involved. Notices of violation shall be reported per chapter 19 (Processing Notices of Violation Under Environmental Laws and Regulations).

k. Exemptions. Navy installations that own and operate a consecutive PWS subject to full or partial exemption from regulatory monitoring requirements under parts 141.3 or 141.29 of reference (a), respectively, shall submit a letter to the state regulatory agency explaining the degree to which exemption criteria are applicable and request the exact requirements to be imposed on the consecutive PWS. The state's response letter is to be permanently retained in Navy files.

l. Review of Primary PWS System Records. Navy consecutive PWSs shall, at least once a year, review the monitoring reports of the primary PWS. Installations shall use these reports and other sources of information to determine the risk of water quality deterioration within the distribution system. Installations shall ensure water quality has not degraded above the MCL for parameters within the distribution system.

21-3.5. Consumer Confidence Reports

a. CCRs present the quality of the water delivered by the system. Each report must contain data collected during, or prior to, the previous calendar year. Requirements are outlined in reference (g) and parts 141.151 and 141.155 of reference (a). For exceedances, only report data based on certified laboratory results.

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b. Each CWS shall mail or otherwise directly deliver one copy of the CCR to each of its customers by 1 July on an annual basis. Recommended methods of report delivery include mailing to each housing unit, publishing in the command newspaper, posting on a Web site, and posting in conspicuous locations in each building on the installation (reference (h)). States may waive the mailing requirement for CWSs serving fewer than 10,000 persons. In such cases, systems would be required to inform their customers that the report will not be mailed, make the report available on request to the public, and publish the report annually in one or more local newspapers serving the areas in which the systems' customers are located. Navy consecutive CWSs shall obtain a copy of their water supplier's CCR and amend this report with information on any additional testing or exceedances.

c. A good faith effort shall be made to ensure all customers are aware of the CCR and additional information. Alternative delivery methods should be used to make a "good faith" effort to reach customers who do not receive water bills including a mix of methods appropriate to the particular system. In states with primary enforcement authority, utilities must mail a copy of the completed CCR to the state, followed, within 3 months, by a certification that the report has been distributed to customers and the information in the CCR is correct.

d. Certain electronic methods may be used to accomplish the required "direct delivery" of CCRs.

(1) Electronic delivery must provide the CCR in a manner that is "direct." This means CWSs can use paper or electronic communication with uniform resource locators (URLs) to meet their CCR requirement if the URL provides a direct link to the CCR, and the communication prominently displays the URL and a notice explaining the nature of the link. The link must take the customer to the entire CCR so that navigation to another webpage to find the required CCR content is not necessary.

(2) Use of social media (e.g., Facebook or Twitter) directed at customers does not meet the requirement to "directly deliver" since these internet outlets require a customer to join the website in order to read the CCR.

(3) Use of automated phone calls (e.g., emergency telephone notification systems) is not considered direct

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delivery, because the entire contents of the CCR cannot be provided in a phone call.

(4) If a CWS is aware of a customer's inability to receive a CCR by the chosen electronic means, it must provide the CCR by an alternative means allowed by the rule, including those discussed in paragraph 21-3.5.b.

21-3.6. Underground Injection Program. Reference (i) requires each state to have an Underground Injection Control (UIC) Program to ensure underground injection does not endanger underground sources of drinking water. All groundwater injection systems must be permitted or authorized by rule. Under these requirements, installations must implement a program that establishes and maintains a UIC well inventory and procedures for proper well closure. The broadest category of UIC wells (i.e., Class V) includes stormwater drainage wells, aquifer remediation wells, and some septic systems.

21-3.7. Wellhead Protection Program. Installations that receive drinking water from wells shall establish a wellhead protection program that meets applicable state or local wellhead protection requirements or adopt and comply with local wellhead protection program requirements to minimize contamination.

21-3.8. Water System Vulnerability Assessments and Emergency Response Plans

a. All Navy drinking water systems serving more than 25 consumers must complete a water system vulnerability assessment (WSVA) and emergency response plan (ERP) as required by reference (j) and Department of Defense policy (reference (k)). Systems covered under this requirement include consecutive and unregulated systems, as well as small community and non-community PWSs in the United States and its possessions and territories.

b. Specific criteria to be addressed by the WSVA include, but are not limited to:

(1) Pipes and constructed conveyances;

(2) Physical barriers;

(3) Water collection, pretreatment, treatment, storage, and distribution facilities;

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(4) Electronic, computer, or other automated systems utilized by the PWS;

(5) The use, storage, or handling of various chemicals; and

(6) The operation and maintenance of the system.

c. Activities shall maintain accurate WSVVA and ERP status in the water quality module of the U.S. Navy Environmental Portal.

21-3.9. Cross-Connection and Backflow Prevention

a. Cross-connection control programs apply to building interior domestic plumbing systems, fire protection plumbing systems, and exterior water distribution systems. These programs, overseen by states with SDWA primacy, ensure compliance with primary and secondary drinking water standards by establishing policy, procedures, and instructions for installing, repairing, maintaining, inspecting, and testing backflow preventers.

b. All installations that own or operate a water system shall develop and implement a cross-connection control and backflow prevention program. At a minimum, this program shall include procedures and mechanisms to:

(1) Find and eliminate existing cross-connections and prevent new cross-connections;

(2) Install, inspect, and test backflow preventers when cross-connections cannot be eliminated, or as required by state or local regulations;

(3) Keep an inventory of all existing backflow preventers;

(4) Certify all backflow preventers as required by the regulatory agency. If there is no regulatory requirement, then all backflow preventers should be certified at least once every 6 months for high hazards and once every 12 months for low hazards by a state or local water authority certified tester; and

(5) Promptly repair or replace defective backflow preventers, and retain cross-connection and backflow preventer inspection and maintenance records for at least 5 years.

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c. Reference (l) provides guidance to Navy installations for complying with this requirement and reference (m) provides EPA guidance on the Cross-Connection Control Program.

21-3.10. Operation and Maintenance. Installations that own or operate water systems (public and non-public, permitted and non-permitted) shall develop and implement an operation and maintenance program applicable to the system. Minimum requirements of the program are to meet the requirements of reference (a), in particular part 141.63, paragraph (d)(3) which stresses "proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, and continual maintenance of positive water pressure in all parts of the distribution system." The program shall include the proper implementation and documentation of:

- a. Emergency and preventive maintenance;
- b. System disinfection after maintenance work is performed;
- c. Scheduled flushing of the system;
- d. Reduction of water quality problems (as needed);
- e. Implementation and documentation of a valve exercise and maintenance program;
- f. Proper operation and maintenance of storage tanks and reservoirs;
- g. Maintenance of current water distribution maps;
- h. Documentation of location and dates of water line breakage;
- i. Documentation of emergency operations procedures required as a result of events such as earthquakes, hurricanes, chemical releases, and terrorist activities; and
- j. Determination of response roles and responsibilities as well as contingency plans for providing potable water to the Navy installation. Reference (n) provides information on emergency planning.

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21-3.11. Sanitary Surveys. In many instances, a state may require treatment plants or PWSs experiencing compliance problems, particularly with microbial pathogens, to perform a sanitary survey. The state regulatory agency will usually perform the survey; however, if the state allows, the installation can use a service provider of choice to complete the survey. In the absence of a state requirement, all Navy PWSs shall perform a sanitary survey every 5 years.

a. Survey Requirements. For treatment plants, the survey should include the following:

(1) Verification and reevaluation of vulnerability assessments, watershed protection programs, and wellhead protection programs, as applicable;

(2) Examination of the source water physical components and condition;

(3) Schematic diagrams of the treatment process and examination and evaluation of the adequacy and appropriateness of all elements of the current treatment process, including an assessment of operational flows versus treatment process rated capacity and, where appropriate, contact time assessment as defined in part 141.2 of reference (a);

(4) Examination and evaluation of the operation and maintenance of the treatment facility including the condition and reliability of equipment, operator qualifications, use of approved chemicals, recordkeeping, process control, and safety programs;

(5) Evaluation of the ability of the treatment plant to respond to changes in raw water fluctuations; and

(6) Evaluation of the treatment plant's emergency power supply and security measures.

b. Distribution System Sanitary Survey Review

(1) Concerning the distribution system, the sanitary survey should include a review of the operations and maintenance program to ensure attention to the following areas of concern:

(a) Elimination of unneeded or excess storage;

(b) Adequate turnover of storage tanks;

- (c) Storage tank cleaning and maintenance;
- (d) Adequate disinfection practices during all main repairs and replacements;
- (e) Effective corrosion control program, if applicable;
- (f) Comprehensive cross-connection control program;
- (g) Aggressive valve and hydrant exercise program;
- (h) Adequate water quality monitoring program that achieves compliance with the appropriate regulations and provides for effective water quality control;
- (i) Adequate flushing program, preferably a unidirectional flushing program that is implemented on a yearly basis; and
- (j) Review of location and dates of water line breakage and system failures to evaluate overall system reliability.

(2) Reference (o) includes more information on sanitary surveys.

21-3.12. Consumptive Use Permits. In coordination with legal and technical staff at the BSO and appropriate region commander, installations that withdraw groundwater shall:

- a. Document historical water use;
- b. Determine reasonably foreseeable future water uses;
- c. Evaluate water rights laws;
- d. Determine on a case-by-case basis whether the installation should obtain a consumptive use permit; and
- e. Ensure, if applying for a consumptive use permit, that restrictions will not impact mission requirements or existing water rights.

21-3.13. Exemption from Permitting. Navy installations that qualify for exemption from PWS permitting shall apply, in

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writing, to the regulatory agency with SDWA primacy for an exemption. In some cases, regulators issue a permit when it is not required.

21-3.14. Recordkeeping. In the absence of more stringent federal, state, or local recordkeeping requirements, installations shall maintain records as follows:

- a. Bacteriological results - 5 years;
- b. Chemical results - 10 years;
- c. Lead and copper testing results - 12 years;
- d. Actions taken to correct violations - 3 years after acting on the particular violation involved;
- e. Sanitary survey reports - 10 years;
- f. Variance or exemption records - 5 years following the expiration of such variance or exemption;
- g. Water treatment plant and distribution system operating records (including monthly reports) - 5 years;
- h. Cross-connection inspection records - 5 years; and
- i. CCRs - 5 years.

21-3.15. Sampling and Analysis. Installations shall use laboratories certified by EPA or the cognizant state to perform all PWS SDWA compliance sample analyses. Installations must collect water samples at points that represent the quality of water in the distribution system. Sampling and testing shall comply with chapter 7 (Sampling and Laboratory Testing) requirements.

21-3.16. Fines and Penalties. Reference (p) waives sovereign immunity for the payment of fines and penalties imposed by federal, state, or local agencies for violations. In addition, EPA may assess administrative penalties of up to \$25,000 per day per violation.

21-3.17. Certification and Training

- a. All Navy personnel involved in the drinking water program shall receive appropriate environmental training (refer

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to chapter 3 (Environmental Readiness Training) for detailed information). Installations shall ensure their water treatment and distribution system operators are trained and certified per applicable federal, state, and local regulations. Training should include the following elements:

(1) Basic water plant and distribution system design and operation;

(2) Basic maintenance and calibration of plant controls and equipment;

(3) Water plant and distribution systems treatment principles, including chemical storage and handling;

(4) Water sampling and analysis;

(5) Water plant and distribution system documentation and reporting requirements; and

(6) Cross-connection control and backflow prevention.

b. Reference (p) requires states to develop operator certification programs which must specify minimum standards for operators of community and non-transient, non-community PWSs. Details include provisions for certification, recertification, and grandfathering.

21-4 Responsibilities

21-4.1. OPNAV (N45) shall:

a. Coordinate the overall implementation of SDWA requirements,

b. Issue policy guidance as needed,

c. Act as the assessment sponsor for SDWA projects, and

d. Approve or disapprove monitoring waivers for bacteriological sampling by Navy consecutive non-community water systems.

21-4.2 CNIC shall:

a. Serve as executive agent for drinking water quality matters for all Navy shore facilities and installations;

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b. Provide annually, by 15 December, a report on the status of Navy shore facility and installation drinking water quality for the previous fiscal year as specified in section 21-3.1.c;

21-4.3 NAVFACENGCOM shall support CNIC on all aspects of drinking water system management, including, but not limited to: operation, maintenance, repair, compliance testing results from the United States accredited and certified laboratories, and compliance with applicable drinking water quality standards.

21-4.4. BUMED shall:

a. Establish and publish appropriate medical surveillance guidance for Navy water systems; and

b. Provide public health advice and consultative services to CNIC and Navy commands for drinking water quality to include: risk assessment and risk communication; review of drinking water sampling and compliance data; public health assistance on preparation of consumer confidence reports and public notifications; and health related recommendations when water does not meet U.S. water quality standards; and

c. Determine when drinking water system issues or discrepancies warrant implementation of alternative water supplies and coordinate corrective action with the CNIC and NAVFACENGCOM.

21-4.5. Regional environmental coordinators (RECs) shall:

a. Provide coordination and assistance to installations within the applicable region regarding implementation of this chapter; and

b. Assist BSOs with resolution of issues and communication with OPNAV (N45) and federal, state, and local regulators.

21-4.6. BSOs shall:

a. Implement SDWA program requirements at their shore installations;

b. Plan, program, budget, and provide funding for current and future requirements of SDWA, state and local regulations, E.O.s, and Navy policy; and

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c. Ensure activities under their command comply with current federal, state, regional, and local laws, E.O.s, regulations, and permits.

d. Provide any information to CNIC as necessary for the annual drinking water quality report to VCNO specified in section 21-3.1.c.

21-4.7. Commanding officers (COs) or officers in charge of shore installations shall:

a. Ensure the installation is in compliance with all federal, state, and local regulations; E.O.s; and Navy policy pertaining to drinking water;

b. Identify, plan, program, budget, and implement requirements for current and future requirements under SDWA state and local regulations, E.O.s, and Navy policy;

c. Ensure contracts between Navy and water suppliers require the supplier to provide the results of all permit required NPDWR monitoring performed on raw and treated water that serves the applicable Navy installation or command at least once a year;

d. Ensure all personnel involved in the drinking water program are properly trained; and

e. Report noncompliance with any NPDWR.

21-5 Definitions

21-5.1. Action Level. The AL is the concentration of lead or copper in water that is used to determine compliance with the Lead and Copper Rule. Under the Lead and Copper Rule, ALs have replaced lead and copper MCLs.

21-5.2. Backflow Preventer. A backflow preventer is an approved device, assembly, or piping arrangement (i.e., air gap) used to prevent backflow into a potable water system.

21-5.3. Community Water System. A CWS is a PWS that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

21-5.4. Consecutive Public Water System. A consecutive PWS is a water system which has no water production or source facility

of its own, which obtains all of its water from another water system, and meets the definition of a PWS.

21-5.5. Consecutive Water System. A consecutive water system is a water system which has no water production or source facility of its own and which obtains all of its water from another water system. A consecutive water system may be further classified as any of the water system types shown in figure 21-1.

21-5.6. Consumer. A consumer is any person served by a PWS. Human consumption includes drinking, bathing, showering, cooking, dishwashing, and maintaining oral hygiene.

21-5.7. Consumer Confidence Report. A CCR is an annual report which provides water quality information to consumers. The CCR must contain mandatory information and be delivered to customers annually by 1 July.

21-5.8. Consumptive Use Permit. A consumptive use permit regulates the withdrawal of groundwater.

21-5.9. Cross-Connection. A cross-connection is any physical arrangement whereby a water supply system is connected, directly or indirectly, with any other sewer, drain, plumbing fixture, or other device which contains or may contain contaminated water.

21-5.10. Customer. A customer is a billing unit or service connection to which water is delivered.

21-5.11. Disinfectant. A disinfectant is any oxidant including, but not limited to, chlorine, chlorine dioxide, chloramines, and ozone added to any part of the treatment or distribution process for the purpose of killing or inactivating pathogenic microorganisms.

21-5.12. Disinfection Byproducts. Disinfection byproducts are compounds formed from the reaction of a disinfectant with organic and inorganic compounds in the source water during the disinfection process.

21-5.13. Emergency Response Plan. The potable water ERP shall include, but not be limited to, plans, procedures, and identification of equipment that can be implemented and utilized in the event of a terrorist or other intentional attack on the PWS.

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21-5.14. Lead-Free. Solders and flux are considered lead-free if they contain no more than 0.2 percent lead; wetted surfaces of pipes, pipe fittings, plumbing fittings, plumbing fixture and fixtures are considered lead-free if they contain no more than an 8 percent (note: beginning January 2014, this will change from 8 percent to a weighted average of 0.25 percent lead).

21-5.15. Lead Service Line. A lead service line is a service line made of lead that connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting that is connected to such lead line.

21-5.16. Maximum Contaminant Level. The MCL is the maximum permissible level of a contaminant in water that is delivered to any user of a PWS.

21-5.17. Non-Community Water System. A non-community water system is a PWS that is not a CWS. There are two kinds of non-community water systems: transient and non-transient.

21-5.18. Non-Transient, Non-Community Water System. A NTNCWS is a PWS that is not a CWS and that regularly serves at least 25 of the same persons over 6 months per year.

21-5.19. Permitted Public Water System. A permitted PWS is a PWS that has been issued a permit or other formal authorization to operate (i.e., has been issued a PWS identification number).

21-5.20. Potable Water. Potable water is water that has been examined and treated to meet the proper standards and declared by the responsible authorities to be fit for drinking.

21-5.21. Public Water System

a. A PWS is a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year. Such term includes:

(1) Any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and

(2) Any collection or pretreatment storage facilities not under such control, used primarily in connection with such system.

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b. A PWS is either a CWS or a non-community water system. Figure 21-1 helps installations determine what type of system they operate.

21-5.22. Sanitary Survey. A sanitary survey is an on-site review of the water sources, facilities, equipment, operation, and maintenance of a PWS for the purpose of evaluating the adequacy of such sources, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.

21-5.23. Selling Water. There is no definition of "selling water" in the SDWA. Refer to discussion under section 21-3.2.

21-5.24. Service Connection. A service connection is the opening, including all fittings and appurtenances, at the water main through which water is supplied to the user.

21-5.25. Source Water Assessment Program. Source water assessment programs delineate source water protection areas, inventory significant contaminants in these areas, and determine the susceptibility of each public water supply to contamination.

21-5.26. Source Water Protection Program. Source water protection programs are state efforts to manage identified sources of contamination in a manner that will protect drinking water supplies based on the source water assessment program.

21-5.27. Supplier of Water. A supplier of water is any person who owns or operates a PWS. Under SDWA, a person is defined as an individual, corporation, company, association, partnership, municipality, or federal, state, or tribal agency.

21-5.28. Transient, Non-Community Water System. A TNCWS is a non-community water system that does not regularly serve at least 25 of the same persons over 6 months per year.

21-5.29. Treatment Technique. A TT is a required process intended to reduce the level of a contaminant in drinking water.

21-5.30. Underground Injection. Underground injection means well injection (i.e., the subsurface emplacement of fluids through a bored, drilled, or driven well or through a dug well where the depth of the dug well is greater than the largest surface dimension (reference (i))).

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21-5.31. Water System Vulnerability Assessment. A WSVVA is an assessment of the vulnerability of a PWS to a terrorist attack or other intentional acts intended to substantially disrupt the ability of the system to provide safe and reliable supply of drinking water.

21-5.32. Well. A well is a bored, drilled, or driven shaft; or a dug hole whose depth is greater than the largest surface dimension.

21-5.33. Wellhead Protection Program. A wellhead protection program is a program to protect groundwater supply wells and well fields that contribute drinking water to public water supply systems.

CHAPTER 28

SOLID WASTE MANAGEMENT AND RESOURCE RECOVERY ASHORE

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28-1 Scope. This chapter identifies solid waste (SW) and electronic waste (e-waste) management, waste prevention, and recycling policies.

28-1.1. Related Chapters. This chapter is applicable to other chapters in this manual which discuss topics pertinent to SW including pollution prevention (P2) and green procurement (chapter 17 (Environmental Management Systems)), management of hazardous material (chapter 23 (Hazardous Materials Management Ashore)), management of hazardous waste (HW) (chapter 27 (Hazardous Waste Management Ashore)), reclamation and recycling of used oils (chapter 30 (Oil Management Ashore)), Navy SW policy specific to overseas installations (chapter 34 (Overseas Environmental Compliance Ashore)), and handling of SW aboard ships (chapter 35 (Environmental Compliance Afloat)).

28-1.2. References

(a) NAVFAC UG-2084-ENV, Integrated Solid Waste Management Plan (ISWMP) Guide April 2009

(b) 40 CFR 243

- (c) NAVMED P5010, Manual of Naval Preventive Medicine, August 1999
- (d) 40 CFR 262.11
- (e) 40 CFR 240
- (f) 40 CFR 268
- (g) 40 CFR 257
- (h) 40 CFR 258
- (i) DoD 4160.21-M, Defense Materiel Disposition Manual, August 1997
- (j) 40 CFR 247
- (k) 40 CFR 246
- (l) NAVFAC NFESC UG-2039-ENV, Qualified Recycling Program (QRP) Guide
- (m) 10 U.S.C. §2577
- (n) DoD Instruction 4715.4 of 18 June 1996
- (o) USD (AT&L) Memo of 23 Jun 2011, DoD Implementation Guidance for Commercial Sale of Expended Small Arms Cartridge Cases (ESACCS)
- (p) 32 CFR 172
- (q) 40 U.S.C. §571
- (r) 41 CFR 102-38
- (s) DoD 7000.14-R, Department of Defense Financial Management Regulations (FMRS), Volume 11A, May 2009
- (t) E.O. 13423, Strengthening Federal Environmental, Energy, and Transportation Management
- (u) Council on Environmental Quality, Instructions for Implementing Executive Order 13423, March 2007

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(v) Department of Defense Electronics Stewardship Implementation Plan, 27 February 2008

(w) Navy Energy Efficiency and Electronic Stewardship of Information Technology (Green IT) Implementation Plan, 31 July 2009

(x) USACE UFGS-017492, Construction and Demolition Waste Management

(y) 9 CFR 94.5

(z) 42 U.S.C. §2011 et seq.

(aa) 33 U.S.C. §1342

(bb) Atomic Energy Act of 1954, as amended (68 Stat. 923)

28-1.3. Applicability. Requirements and policies in this chapter derived from the Resource Conservation and Recovery Act (RCRA) and similar statutes apply to installations within the United States, Commonwealth of Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, and Commonwealth of the Northern Mariana Islands. Policies regarding integrated solid waste management (ISWM), green procurement, and recycling apply to all installations worldwide.

28-2 Legislation. The Solid Waste Disposal Act (SWDA) requires federal facilities to comply with all federal, state, interstate, and local requirements concerning the disposal and management of SW, including permitting, licensing, and reporting. SWDA encourages beneficial reuse of wastes through recycling and incineration for energy recovery. A summary of this legislation is included in appendix A (Laws and Regulations).

28-3 Requirements. All Navy installations worldwide shall follow an ISWM hierarchy of source reduction, diversion, and as a last resort, disposal of SW generated in support of Navy's mission, and shall incorporate green procurement and recycling into their ISWM program. Those installations generating 1 ton or more of SW per day must prepare written integrated solid waste management plans (ISWMPs) and report ISWM metrics as outlined in this chapter.

28-3.1. Integrated Solid Waste Management. Installations shall utilize the guidance in reference (a) when developing and

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implementing written ISWMPs. They may satisfy this requirement by participation in a regional ISWM program with a written plan that specifically addresses the installation's ISWM requirements. It is Navy policy to use ISWM to pursue Department of Defense (DoD) diversion goals established by executive order (E.O.) or DoD and Navy policy. Navy ISWM programs shall implement the following practices:

a. Compliance with Federal, State, and Local Requirements. Navy installations and commands shall comply with all applicable federal, state, and local regulatory requirements concerning collection, storage, handling, recycling, and disposal of SW (references (b) through (i)) and ensure any SW that is also an HW is managed per reference (d) and chapter 27 (Hazardous Waste Management Ashore). SW generated by Navy operations and actions on a Navy installation is government property for purposes of disposal. Non-government-owned SW may not be brought aboard Navy installations for disposal at government expense. Contractors, including public-private venture housing contractors, shall manage SW generated on a Navy installation as specified in their contracts. Refer to chapter 34 (Overseas Environmental Compliance Ashore) for regulatory requirements applicable to installations located outside the United States.

b. Source Reduction. Source reduction through P2 and green procurement shall be practiced per chapter 17 (Environmental Management Systems) to reduce generation of SW. RCRA amendments require federal agencies to procure Environmental Protection Agency guideline products containing recovered materials to the maximum extent possible (refer to chapter 17 (Environmental Management Systems) and reference (j)). Examples of source reduction include using electronic documents in lieu of printed materials; dual-sided printing; take-back provisions for packing materials; and purchasing items that are reusable, have extended service life, reduced packaging, or recyclable packaging materials.

c. Diversion. It is Navy policy to reuse or donate unneeded but usable property and to recycle or compost SW to minimize the amount of material sent to landfills and incinerators. Navy installations shall strive to meet any diversion goals established by E.O. or DoD and Navy policy. If existing reuse, donation, recycling, and composting practices are not sufficient to attain diversion goals, the installation shall plan, program, and budget necessary resources to achieve those goals in a cost-effective manner. Installations shall implement the following diversion practices:

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(1) Reuse and Donation. Property no longer needed may be internally reassigned from one Navy command to another. If there is no potential Navy recipient for such property, it must be consigned to the Defense Logistics Agency (DLA) Disposition Services for other DoD reutilization, transfer to other federal agencies, donation to state or local agencies, or sale to the public, per reference (i). Installations and activities anticipating large quantities of unneeded property (e.g., furniture during a building renovation) shall coordinate with DLA Disposition Services as early as possible to arrange for a reuse customer. Navy installations and commands shall take reasonable steps to provide interim storage for such items to be held in place until DLA Disposition Services can take custody or arrange for customer pick up. DLA Disposition Services may elect to issue a certificate of abandonment and destruction (A/D) in accordance with reference (i) for property with little or no value. Items covered by a certificate of A/D must be recycled for their scrap value or disposed of as SW. Navy installations and commands are not authorized to transfer, sell, or donate usable property outside the Navy except through DLA Disposition Services as described in this paragraph. Scrap sold via the QRP or otherwise recycled or diverted is not considered usable property.

(2) Recycling. All Navy installations shall incorporate recycling into their ISWM program. Tenants, except for commissaries, exchanges, or working capital fund (WCF) activities, are not authorized to operate their own recycling program and shall participate in the host's recycling program and reimburse the cost, if any, associated only with legally mandated recycling requirements. Commissaries and exchanges have the option of participating in the installation's recycling program, operating a program of their own, or both. Working capital funded activities must operate their own recycling programs for WCF scrap turned into DLA Disposition Services, but shall participate in installation recycling programs for municipal waste streams. Recycling programs may operate on a regional basis in conjunction with regional ISWM programs. Where regional programs are in effect, the region commander may require installations to participate in the regional program. It is Navy policy to:

(a) Recycle all commodities in the solid waste stream for which federal, state, or local regulations require recycling, regardless of the cost relative to the revenue obtained from recycling or economics of other disposal options.

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Note that reference (k) makes the recycling of certain paper and cardboard products (including high grade office paper and corrugated containers) mandatory at most Navy installations;

(b) In addition to any legally mandated recycling requirements, recycle all commodities in the solid waste stream for which the cost of recycling is less than or equal to the cost of disposal;

(c) Establish qualified recycling programs (QRPs) (refer to section 28-3.2), where economically feasible, to retain the proceeds from the sale of recyclable materials per the guidance in reference (l). QRPs are the only authorized mechanism for an installation to receive funds from the sale of recyclable materials and augment overall recycling efforts. They are not intended to be the sole means of achieving compliance with regulatory mandates or diversion goals;

(d) Participate in external recycling programs. Where warranted, Navy installations may participate in existing or planned civilian community or commercial resource recovery facilities or systems. Such participation may include funding a pro rata share of a community facility; and

(e) Limit recycling to authorized materials only. Scrap paper, office paper, cardboard, wood, glass, and other obvious scrap may be recycled by the installation. QRPs (refer to section 28-3.2) are prohibited from recycling excluded items as defined in references (m) and (n). Useable items are not to be recycled unless the item has no value aside from its inherent material content. In such cases, the item(s) may be downgraded to scrap and recycled (but not transferred outside Navy, donated, or sold as a usable item). Installations may not accept non-government-owned property for recycling.

(3) Composting, Chipping, and Mulching. Navy installations shall compost, chip, or mulch landscaping cuttings, yard and green waste, limbs, branches, and other suitable organic materials at an installation, municipal, or private facility. Installations or regions may establish their own facilities for these processes if municipal composting facilities are not available or feasible. Note that some state and local regulations may require permitting of composting facilities. Incineration or landfill disposal shall only be used if allowed by state and local regulations; and composting, chipping, or mulching are not available, cost-effective, or

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feasible at the installation. Note that many jurisdictions prohibit yard waste from landfills.

d. Disposal. Navy installations shall follow all federal, state, and local regulations for the protection of human health and the environment when disposing of SW. Incineration with energy recovery is preferred over landfill disposal, but does not count toward diversion rates. Burn pits and open burning are prohibited except in very limited circumstances as defined in section 28-3.1.d.3. Navy installations shall construct new SW facilities such as transfer stations, incinerators, and landfills only when there is a clear and compelling need that cannot be met with existing DoD, Navy, or public infrastructure.

(1) Incineration with Energy Recovery. Incineration with energy recovery at municipal or Navy-owned facilities may be used for disposal of SW that cannot be diverted from the waste stream. When disposing of SW via incineration, installations shall utilize only appropriately permitted, designed, constructed, and operated facilities. Incinerators must be operated in conjunction with a final land disposal facility for residues from the incineration operation and those non-hazardous wastes that cannot be incinerated for reasons of health, safety, or technological limitation per reference (e). Navy-owned incinerators shall be designed, constructed, and operated per the most stringent of federal, state, or local regulations.

(2) Landfill Disposal. Landfill disposal at municipal or Navy-owned facilities may be used for disposal of SW that cannot be diverted from the waste stream. When disposing of SW via landfill, installations shall utilize only appropriately permitted, designed, and constructed landfills. Navy-owned landfills shall be designed, constructed, and operated per the most stringent federal, state, or local regulations.

(3) Burn Pits and Open Burning. Disposal of SW via burn pits and open burning is prohibited except in emergencies for health or safety considerations. Approval from cognizant state and local regulators is required for every instance of burn pit and open burning.

e. Recordkeeping and Reporting. Installations shall keep records of SW generation, diversion, and disposal by actual waste measurement including weight (in tons), type of waste, and method of diversion or disposal. Installation reporting shall include all tenant commands, including commissaries and

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exchanges. Tenant commands shall support the host command's ISWM data collection efforts.

(1) Reuse, Transfer, and Donation Accomplished via DLA Disposition Services. Installations shall keep records of the total weight of materials consigned to DLA Disposition Services and the amount diverted through reuse, transfer, sale, or donation.

(2) Diversion. Installations shall keep records of all diversion activities whether by QRP (refer to section 28-3.2) or other recycling operation, disposal contracts or other contracts generating SW, WCF operation, consignment to DLA Disposition Services, or any other method. Commissaries, exchanges, and WCF activities operating recycling programs independent of the host installation shall report SW and diversion data to the host.

(3) Construction and Demolition. Installations shall maintain records of all construction and demolition (C&D) waste generated and diversion via recycling, reuse, or other methods (refer to section 28-3.4).

(4) Reporting. All Navy shore installations worldwide that generate more than 1 ton of SW per day shall prepare an annual report following the fiscal year end using guidance provided by Naval Facilities Engineering and Expeditionary Warfare Center (EXWC). Each year, detailed guidance for installation SW reporting is provided in a data call package from EXWC. Information obtained from the installation SW annual report is used to track diversion rates and prepare Navywide reports to Congress and the Office of the Federal Environmental Executive.

28-3.2. Qualified Recycling Programs. References (m) and (n) authorize installations to establish QRPs to receive proceeds from the sale of recyclable materials. An installation may not retain proceeds from the sale of recyclable materials via contract, consignment to DLA Disposition Services, direct sales, or any other means without first establishing a QRP. In the absence of a QRP, any proceeds from recycling will be deposited to the U.S. Treasury.

a. Establishment. Installations shall request authorization from their budget submitting office (BSO), via letter, for approval to establish and operate a QRP. BSOs shall authorize only one QRP per installation. All or part of a region's QRP operations may be conducted on a regional basis to

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reduce costs or improve efficiency. Installations or regions that generate 1 ton or more of SW per day and operate a QRP shall include a written QRP business plan as part of their ISWMP (refer to section 28-3.1). Reference (l) includes detailed guidance on establishing and operating QRPs.

b. Administration. The host usually administers the QRP; however, administration may be delegated to a tenant command at the installation. Installations and regions shall charter and establish QRPs via directive or instruction. QRP charters shall include provisions for a QRP committee to make recommendations regarding capital expenditures for equipment and recycling infrastructure; improvements and corrective actions based on financial and environmental compliance audits; and disposition of excess recycling funds, if any. Region commanders and commanding officers (COs) of Navy installations shall appoint QRP managers, in writing, to oversee day-to-day operation of the QRP.

c. Operation. QRPs shall operate in compliance with all applicable environmental and occupational safety and health regulations.

(1) Authorized Recyclable Materials. In general, only obvious scrap materials may be recycled by the QRP. There are strict prohibitions against sale of excluded materials via QRPs (refer to section 28-3.2.c.2). QRP-recyclable materials can include, but are not limited to:

(a) High quality paper and paper products, mixed paper, newspaper, cardboard, plastic, metal cans, glass, used oil, batteries, tires, and other obvious scrap;

(b) Universal waste (subject to oversight by installation environmental personnel);

(c) Scrap metal (ferrous and non-ferrous scrap), excluding precious metals; and

(d) Expended small arms cartridge casings (ESACCs) and unrecognizable metal scrap gleaned from ranges. ESACCs and range scrap must be certified safe prior to acceptance by the QRP (refer to section 28-3.5). Reference (o) includes DoD guidance for QRP sale of ESSACCs.

(2) Excluded Materials. QRPs are prohibited from selling excluded materials as defined in references (m) and (n).

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QRP managers shall consult with DLA Disposition Services regarding any questionable item or waste stream considered for recycling. QRP authority may be restricted, suspended, or revoked by the BSO for selling excluded materials.

(3) Sales. All QRP sales shall be conducted per references (i), (m), (n), (p), (q), (r), and volume 11A, chapter 5 of reference (s). QRPs may sell recyclable materials via any combination of the following strategies:

(a) Direct sales of recyclable materials by competitively selling materials to a vendor without utilizing DLA Disposition Services. BSO authorization to operate a QRP confers direct sales authority;

(b) Consignment of recyclable materials to DLA Disposition Services, with net proceeds allocated to the QRP; or

(c) Indirect sales through contractors or partners, with net proceeds allocated to the QRP.

(4) Financial Management. All QRP financial operations are subject to audits, inspections, and other oversight. QRPs shall account for all financial transactions per reference (s). QRPs shall deposit all proceeds from the sale of recyclable materials to **F3875 "Budget Clearing Account (suspense) or other approved account established by the installation comptroller and authorized by the BSO."

(5) Reimbursement of Recycling Operations. QRPs may be used to recycle commodities that have a net cost to recycle (the cost of recycling exceeds the revenue obtained from recycling) when there is a regulatory requirement for recycling or the cost of recycling is less than the cost of disposal. Installations may reimburse QRPs for recycling commodities that have a net cost to recycle. Reimbursement is limited to the difference between the cost of recycling and the revenue from the sale of the commodity or waste stream (Reimbursement = Recycling Cost - Recycling Revenue). Reimbursement is prohibited when the proceeds from recycling equal or exceed the cost of recycling.

(6) Recordkeeping and Reporting. QRPs shall maintain accountable, auditable financial records and records of SW diversion to substantiate reporting requirements identified in section 28-3.1.e.

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(7) Recycling Proceeds. Fiscal year (FY) end does not affect the accumulation of funds in the **F3875 "Budget Clearing Account (suspense)," so balances may carry forward up to the statutory limit of \$2M at the end of each FY. Per references (m) and (n), disposition of proceeds from the sale of recycled materials shall be as follows:

(a) Navy installations and regions shall first use sales proceeds to cover the costs directly attributable to QRP operations, including, but not limited to, manpower, facilities, collection, transportation, equipment, overhead, and other capital investments. In addition, sufficient proceeds shall be held in reserve to sustain fiscal viability of the QRP, based on historic and projected income and loss;

(b) After QRP costs are recovered, installation commanders may use up to 50 percent of the remaining proceeds for pollution abatement, P2 (including other recycling efforts), composting, alternative fueled vehicle infrastructure support and vehicle conversion, energy conservation, or occupational safety and health projects. All such projects must be reviewed by the same chain of command that would normally review such projects if funded from normal appropriations. Installations not meeting established diversion goals shall give first consideration to P2 projects designed to improve diversion rates; and

(c) Installations may transfer any remaining proceeds to the non-appropriated morale, welfare, and recreation account for any approved programs, or hold them in reserve to sustain fiscal viability of the QRP (subject to the \$2M limit in reference (m)). Per references (t) and (u), proceeds may not be used to offset the cost of ordinary SW disposal activities (e.g., trash collection, landfill disposal, incineration).

28-3.3. Electronic Waste. It is Navy policy to practice environmentally sound management (ESM) of e-wastes. Landfill disposal and incineration of e-waste are prohibited due to potentially hazardous constituents that may be released to the environment by these disposal methods. E-waste shall be handled per references (i) and (v). The Navy's goal is to maximize reuse, donation, transfer, sale, and recycling of e-wastes. Per reference (v), DLA Disposition Services is the primary agent for ESM of e-waste generated by DoD components.

a. Enterprise and Leased Electronics. Per reference (w), ESM and disposal costs, if any, for enterprise (i.e., Navy

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Marine Corps Intranet or Next Generation Enterprise Network) assets are the responsibility of the respective enterprise program. Leased electronic equipment is the responsibility of the contractor or vendor providing the equipment per provisions of the lease or contract. If the lease or contract transfers ownership to Navy, the items shall be treated as Navy-owned electronics.

b. Navy-Owned Electronics

(1) Useable Electronics. Most e-waste consists of useable electronics that must be handled per property management regulations per references (i) and (v). Note that usable electronics may not be in working condition, but may still be candidates for reuse, donation, transfer, sale, or recycling. Navy-owned usable electronics may be reassigned to new owners within the Navy or consigned to DLA Disposition Services for reuse, transfer, donation, sale, or disposal. DLA Disposition Services assumes responsibility for ESM of e-waste upon turn-in.

(2) Non-Useable Electronics. E-waste items that cannot be consigned to DLA Disposition Services must be handled in an environmentally sound manner. Because e-waste typically includes hazardous constituents such as lead, cadmium, mercury, and other metals, non-useable electronics shall be handled per the HW management requirements in chapter 27 (Hazardous Waste Management Ashore) including a preference for reuse or recycling where feasible.

c. Non-Government-Owned Electronics. Installations shall prohibit landfill disposal of personally-owned electronics generated on Navy property by personnel assigned to Navy housing or quartered aboard Navy vessels. The provisions of section 28-3.1.c.2(e) notwithstanding, installations shall facilitate cost-effective certified, e-waste recycling opportunities via e-waste turn-in events, regularly scheduled collections, partnering with local recyclers, or other mechanisms to prevent landfill disposal of e-waste. QRPs may participate in or facilitate such events, including actual recycling of personally owned electronic items, at the discretion of the installation integrated SW manager. Shore installations shall support afloat units as needed per section 35-3.2.

28-3.4. Construction and Demolition Waste. All C&D projects awarded to contractors at Navy installations shall include a construction waste management plan for C&D debris, per reference (x), to support E.O. or DoD and Navy diversion goals.

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Recyclable C&D waste may be processed through installation QRPs for in-house projects or contracted projects if appropriate provisions are included in the contract and coordinated with the QRP.

28-3.5. Operational Range Waste. Waste generated from operational range clearance, including ESACCs and firing range scrap, shall be certified safe in writing by trained personnel designated by the CO prior to recycling or disposal. Once certified safe, ordnance, munitions, and any other items requiring demilitarization, trade security controls, or both shall be processed accordingly, then recycled or disposed of by the range clearance contractor or transferred to DLA Disposition Services for recycling or disposal. The only exceptions to this requirement are ESACCs and unrecognizable scrap gleaned from ranges that, once certified as safe, may be transferred to QRPs for recycling. QRPs in the United States may consign brass to DLA Disposition Services for sale or conduct direct sales for brass that has been shredded, crushed, or mutilated. QRPs outside of the United States must crush, shred, or mutilate all brass regardless of whether it is sold directly or via DLA Disposition Services. Note that some waste generated from operational ranges may be HW subject to the munitions rule requirements in chapter 27 (Hazardous Waste Management Ashore). Navy commands responsible for range clearance shall ensure reporting requirements for diversion data are incorporated into range clearance contracts and provided to the host installation per section 28-3.1.e.

28-3.6. Foreign Source Garbage. Foreign source garbage includes goods, food wastes, wrappers, containers, and disposable materials originating outside the United States and Canada. Navy installations in the United States that receive foreign source garbage from ships, aircraft, or any other source shall maintain appropriate U.S. Department of Agriculture compliance agreements and process and dispose of foreign source garbage per reference (y). Refer to chapter 35 (Environmental Compliance Afloat) for shipboard procedures to minimize foreign source garbage transferred from U.S. Navy vessels to shore installations.

28-3.7. Training Requirements. Environmental personnel involved in the SW program shall receive the appropriate, job-specific education, experience, and training to perform their assigned tasks. SW media managers and QRP managers shall receive, at a minimum, recycling program management training within 1 year of appointment to their position. Completion of

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Air Force Institute of Technology Qualified Recycling Program Management Course (WENV 160) will satisfy this requirement. Refer to chapter 3 (Environmental Readiness Training) for Navy environmental training requirements and approved Navy training resources.

28-4 Responsibilities

28-4.1. Commander, Navy Installations Command (CNIC) shall:

a. As program manager for ISWM, ensure regions and installations comply with applicable federal, state, and local regulatory requirements concerning collection, storage, handling, recycling, and disposal of SW via an ISWM approach;

b. Monitor regions and installations for progress toward any SW diversion goals established by E.O. or DoD and Navy policy;

c. Ensure underperforming regions and installations develop and implement plans to improve diversion rates;

d. Upon request, authorize regions and installations to establish QRPs for the receipt of proceeds from the sale of recyclable materials;

e. Establish procedures to restrict, suspend, or revoke QRP authority in the event of mismanagement of recycling proceeds or recycling of excluded materials;

f. Establish detailed guidance for installations and regions to use when evaluating the cost of recycling versus disposal, identifying and calculating the costs attributable to QRP operations, assessing overall cost-effectiveness of ISWM programs, reimbursing QRPs per section 28-3.2.c.5, and determining reserve proceeds required to sustain future QRP operations;

g. Ensure regions and installations periodically audit ISWM programs, including QRPs, for both fiscal and regulatory compliance with applicable requirements. Fiscal audits shall reconcile financial transactions and verify that ISWM programs including QRPs are operated in a cost-effective manner. Regulatory audits shall include evaluation of progress toward any diversion goals established by E.O. or DoD and Navy policy; and

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h. Ensure that regions provide both facilities management and environmental representatives to participate in meetings and activities of the Navy Integrated Solid Waste Management Working Group.

28-4.2. Commander, Naval Facilities Engineering Command shall:

a. Execute regional and installation level ISWM programs and serve as the technical focal point for ISWM issues;

b. Maintain appropriate technical directives, design manuals, and operation manuals concerning ISWM;

c. Develop and maintain ISWM reporting and information collection systems;

d. Collect and consolidate Navy's annual ISWM data from installations and other information as directed by the Office of the Chief of Naval Operations, Energy and Environmental Readiness Division;

e. Include ISWM considerations in execution of green procurement program (GPP) responsibilities outlined in chapter 17 (Environmental Management Systems);

f. Incorporate ISWM diversion goals into environmental management system and environmental quality audit programs;

g. Incorporate diversion requirements into contracts that generate C&D waste and contracts for collection and disposal of non-C&D waste; and

h. Maintain ISWM cost data for both in-house and contract actions in sufficient detail to support business case analyses using guidance developed by CNIC under section 28-4.1.f.

28-4.3. Commander, Naval Supply Systems Command shall:

a. Investigate and develop methods to reduce packaging of materials supplied to Navy;

b. Develop specifications for the purchase of items manufactured with recyclable materials; and

c. Include ISWM considerations in execution of GPP responsibilities outlined in chapter 17 (Environmental Management Systems).

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28-4.4. Region commanders and COs of shore installations shall:

- a. Comply with all applicable federal, state, and local regulatory requirements concerning collection, storage, handling, recycling, and disposal of SW;
- b. Appoint ISWM program managers and QRP managers;
- c. Develop ISWMPs and programs that maintain regulatory compliance and meet diversion goals in a cost-effective manner;
- d. Include recycling as part of all ISWM programs, including QRPs when cost-effective to retain proceeds from the sale of recyclable materials;
- e. Recycle or otherwise divert all materials for which the cost of disposal (via landfill or incineration) equals or exceeds the cost of diversion;
- f. Strive to meet any SW diversion goals established by E.O. or DoD and Navy policy and develop and implement plans to achieve these goals if they have not yet been met;
- g. Cooperate with the designated metropolitan statistical area (MSA) lead agency, if in a listed MSA (Note: MSAs are defined by the U.S. Office of Management and Budget and used by the U.S. Census Bureau and other U.S. government agencies for statistical purposes);
- h. Report annual ISWM information per guidance provided by EXWC, including C&D data from local contracts; and
- i. Include ISWM considerations in execution of GPP responsibilities outlined in chapter 17 (Environmental Management Systems).

28-4.5. COs of tenant commands shall cooperate with the installation, host, or lessor providing ISWM services, report required ISWM data, and reimburse the cost of those services, including recycling costs if any, per host-tenant agreements.

28-4.6. COs of fleet activities shall cooperate with the host command while in port and comply with the command's ISWM requirements.

28-5 Definitions

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28-5.1. Diversion Rate. The diversion rate is the rate at which non-hazardous SW is diverted from disposal via landfill or incineration. Reuse, donation, composting, mulching, and recycling are generally accepted waste diversion methods. Diversion rates are tracked for both C&D debris and non-C&D SW. Refer to reference (l) for calculation details.

28-5.2. Electronic Waste. E-waste consists of electronic items and components, not requiring demilitarization, that have reached the end of their service life. E-waste typically consists of commercial off-the-shelf electronic items or consumer grade electronics that are still useable and suitable for transfer, donation, or sale through DLA Disposition Services. E-waste sometimes includes non-useable items that are damaged, broken, or inoperable items and must be handled as HW due to constituents regulated under RCRA Subpart C.

28-5.3. Environmentally Sound Management. ESM ensures e-waste is managed in a manner that conserves natural resources and is protective of human health and the environment. This includes a prohibition on landfill disposal of e-waste, prevention of e-waste export to third world countries, and requirements that resellers and refurbishers include take-back provisions for their products.

28-5.4. Excluded Items. Excluded items are materials that may not be sold through a QRP. These materials are listed in reference (m).

28-5.5. Integrated Solid Waste Management Plan. An ISWMP is a comprehensive study and plan for SW management and diversion.

28-5.6. Qualified Recycling Program. A QRP is a recycling operation authorized to retain proceeds from the sale of recyclable materials originally obtained with appropriated funds.

28-5.7. Qualified Recycling Program Committee. A QRP committee is a committee established by the CO of the Navy installation that makes recommendations regarding approval of the QRP FY budget, capital expenditures for equipment, and recycling infrastructure; improvements and corrective actions based on financial and environmental compliance audits and internal monitoring and reviews; and disposition of excess recycling funds, if any. Membership includes, but is not limited to, the installation QRP manager, installation executive officer, and

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representatives from the comptroller's office; major installation commands and units; facilities and public works; environmental; safety; and morale, welfare, and recreation.

28-5.8. Recyclable Material. A recyclable material is a material that can be transformed into a new, useable product through the process of recycling.

28-5.9. Recycling. Recycling is the result of a series of activities by which materials that would become or otherwise remain waste, are diverted from the solid waste stream by collection, separation, and processing, and are used as raw materials in the manufacture of goods sold or distributed in commerce; or the reuse of such materials as substitutes for goods made of virgin materials. For purposes of a QRP, scrap metal is a recyclable material.

28-5.10. Resource Recovery. Resource recovery is the recovery of materials or energy from SW.

28-5.11. Solid Waste. Per reference (z), SW is any garbage, refuse, or sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but not including solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under reference (aa), or source, special nuclear, or byproduct material as defined by reference (bb).

28-5.12. Source Reduction. Source reduction is reducing, at the point of introduction into the process, the volume or weight of material used before the products are purchased, used, or discarded. This includes reuse, sale, transfer, or donation of materials, items, or products prior to recycling or disposal.

CHAPTER 34

OVERSEAS ENVIRONMENTAL COMPLIANCE ASHORE

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34-1 Scope. This chapter provides environmental guidance for Navy installations outside the United States, its territories, and possessions, but not to ships, aircraft, and operational and training deployments outside the United States.

34-1.1. Related Chapters. There are several related chapters which are identified in the requirements section. Chapters referenced are chapter 3 (Environmental Readiness Training), chapter 10 (Environmental Planning Under the National Environmental Policy Act and Executive Order 12114), chapter 12 (Natural Resources Conservation), chapter 13 (Cultural Resources Compliance and Management), chapter 17 (Environmental Management Systems), chapter 18 (Environmental Compliance Audits Ashore), chapter 19 (Processing Notices of Violation Under Environmental Laws and Regulations), chapter 20 (Clean Water Ashore), chapter 21 (Safe Drinking Water Act Compliance Ashore), chapter 23 (Hazardous Material Management Ashore), chapter 24 (Pesticide Compliance Ashore), chapter 25 (Toxic Substances Control Act), chapter 26 (Procedures for Implementing the Environmental Planning and Community Right-to-Know Act), chapter 27 (Hazardous Waste Management Ashore), chapter 28 (Solid Waste Management and Resource Recovery Ashore), chapter 29 (Low-Level Radioactive Waste Disposal), chapter 30 (Oil Management Ashore), chapter 31 (Storage Tanks), chapter 39 (Oil and Hazardous Substance Spill Preparedness and Response), and chapter 42 (Environmental Restoration).

34-1.2. References

- (a) DoD Instruction 4715.05 of 01 November 2013
- (b) E.O. 12344, Naval Nuclear Propulsion Program
- (c) 42 U.S.C. §7158
- (d) Final Governing Standards (FGS) for each country where the Undersecretary of Defense, Acquisition, Technology and Logistics (USD(AT&L)) has directed FGS establishment (NOTAL)

(e) DoD 4715.05-G, DoD Overseas Environmental Baseline Guidance Document, May 2007

(f) E.O. 12088

(g) OPNAVINST S5510.155C (NOTAL)

(h) E.O. 12114

(i) DoD Directive 6050.7 of 31 March 1979

(j) E.O. 13423

(k) E.O. 13514

(l) OSD Memorandum of 3 Jul 2003, DoD Policy on Drinking Water Vulnerability Assessments and Emergency Response Plans

(m) DoD Instruction 4715.08 of 01 November 2013

34-1.3. Applicability

a. The policies and procedures in this chapter apply to Navy shore activities, facilities, and installations located outside the United States, its territories, and possessions. Applicability is limited to shore activities, facilities, and installations provided by the United States and under the jurisdiction of the Navy.

b. The policies and procedures in this manual do not apply where excluded under paragraph 2.a.(2) of reference (a); or to U.S. military ship and aircraft operations governed by other Department of Defense (DoD) policies and directives and applicable international agreements; facilities and activities covered under reference (b) and the Naval Nuclear Propulsion Program, and conducted under reference (c); and to facilities located in Antarctica.

34-2 Legislation

a. The following legislation contains provisions that pertain to overseas Navy commands as detailed in the scope:

- (1) National Historic Preservation Act, and
- (2) Toxic Substances Control Act.

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b. A summary of this legislation is included in appendix A (Laws and Regulations).

34-3 Requirements. Navy shore activities, facilities, and installations provided by the United States and under the jurisdiction of the Navy in foreign nations will comply with applicable country-specific final governing standards (FGS) (reference (d)). Where FGS have not been issued, Navy installations will comply with reference (e), host nation substantive pollution control laws of general applicability (as required by reference (f)), U.S. law with extraterritorial effect, and applicable treaties (including the status of forces agreement (SOFA) and bilateral agreements). Reference (f) requires, in part, the head of each executive agency constructing or operating Federal facilities outside the United States ensure such construction or operation complies with environmental pollution control standards of general applicability in the host nation or jurisdiction.

34-3.1. Funding of Capital Improvements for Environmental Compliance at Overseas Installations. When capital improvements are required at overseas installations or facilities to comply with either the FGS (reference (d)) or references (e) and (f), as applicable, funding decisions shall be based on a number of considerations including which country provided the facilities in question and provisions of the pertinent SOFA and bilateral agreements. Unless otherwise provided in the pertinent SOFA and bilateral agreements, the host nation is expected to fund environmental compliance projects at facilities the host nation provides. After consultation or negotiation with the host nation, funding questions may be resolved in a number of ways including the following:

a. Pollution abatement improvements may be accomplished as a result of inclusion in bilateral or multilateral negotiations on programs not directly involving environmental compliance;

b. In some cases, host nation provided facilities have been significantly modified by the United States to meet operational requirements. When capital improvements are required to meet the environmental standards of general applicability in the host nation or jurisdiction, Navy may negotiate shared contributions for such improvements. Shared contributions may be done, after consultation with the ambassador, when it is in the best interest of Navy and does not establish a precedent. The contribution should normally be no more than the proportion of modification attributable to the United States. Project funding request

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documents shall indicate the results of negotiations to include the basis for determination of the U.S. share; or

c. If the host nation declines to provide funds for required capital improvements or if negotiations with the host country for shared contributions are unsuccessful, Navy may program for required pollution control capital improvement projects when it is in the best interest of Navy and does not establish precedent. Project funding request documents shall indicate the circumstances under which the projects are submitted.

34-3.2. Facility Visits and Inspections. Federal law and executive orders (E.O.) on information and physical security matters, as implemented in Navy regulations, SOFA, and bilateral agreements, shall govern access of host nation environmental officials to U.S. controlled fixed facilities.

a. Sovereign Immunity Policy. U.S. military aircraft, warships, and naval auxiliaries (including Navy vessels and afloat prepositioned force ships) enjoy sovereign immunity from interference by foreign governmental authorities. Foreign officials shall not be allowed access to military aircraft, warships, or naval auxiliaries for purposes of environmental inspections or examination. Commanding officers (CO), masters, and aircraft commanders may certify compliance with host nation environmental requirements which may include a general description of measures taken to comply with environmental requirements. At the discretion of the CO, master, or aircraft commander, foreign authorities may be received aboard for the purpose of accepting the certification of compliance, but under no circumstances may they be permitted to exercise governmental authority, nor may they inspect military aircraft, warships, or naval auxiliaries or act as an observer while U.S. personnel conduct such inspections.

b. Pre-Establishment of Procedures for Access to Navy Facilities and Installations. U.S. region, installation, and facility commanders shall consult with legal counsel, U.S. embassy officials, the DoD lead environmental component (LEC) for the host nation, or with the combatant commander where no LEC has been appointed, to pre-establish procedures for access by host nation officials to Navy facilities and installations. These procedures shall comply with the applicable SOFA and bilateral agreements. Since most U.S. facilities are tenants of host nation military installations, host nation authorities will control access to the host nation installation with COs of U.S. tenant facilities controlling access to U.S. facilities.

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Commanders of U.S. facilities shall comply with access procedures so established.

c. Additional Access Requests. Where host nation official's access request is not covered by the facility or installation's pre-established access procedures, the U.S. installation or facility commander shall immediately notify the Navy component commander in theater, the LEC (if applicable), and the Deputy Chief of Naval Operations for Fleet Readiness and Logistics (CNO (N4)). The notice shall include the identity of the host nation authority needing access, the extent to which the host nation authority requesting access is delegated national authority for environmental regulation, the extent of access requested, the date for which access is requested, an explanation why established access procedures (if applicable) are insufficient, the extent to which granting the request would establish precedent, and the commander's recommendation whether providing access would be in the best interest of the United States. Unless otherwise directed, the installation commander may permit access after completing consultation with the LEC, component commander, and CNO (N4), or 3 working days after providing notification, whichever is earlier. If access is denied, the U.S. installation commander shall notify the same parties and shall ensure the chief of mission with the U.S. ambassador to the host nation has been notified as well.

d. Access to Propulsion Plant Spaces or Nuclear Propulsion Information. Access by foreign officials to propulsion plant spaces of nuclear powered ships or to naval nuclear propulsion information is governed by reference (g) and is not authorized without approval by Director, Naval Nuclear Propulsion Program.

34-3.3. Notices of Violation. For Navy installations outside the United States, its territories, and possessions, a notice from regulatory authorities that the installation has violated an applicable environmental standard may take a number of different forms. To be considered an NOV, the notice should cite the relevant standard or criteria to be met and request the installation take corrective action. An NOV does not include warning letters that do not cite a violation of specific environmental law or regulation, informal notices of deficiencies, or notices of deficiencies to permit applications. Warning letters or similarly titled formal written notifications from authorized regulators that do cite violations with environmental laws, standards, and regulations are considered NOV's. One written notice, regardless of the number of individual violations, findings, or citations listed in it, counts as one

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NOV if all violations cited relate to a single environmental media. If the NOV cites violations in more than one environmental media area (e.g., air, water, hazardous waste, drinking water), then it counts as multiple NOVs, one under each of the applicable media area. Items found to be out of compliance during an internal or other DoD component review, or a compliance review or audit, are not NOVs (i.e., are not included in the definition of NOV). Upon receipt of an NOV as defined in this section, installations shall follow the procedures set forth in chapter 19 (Processing Notices of Violation Under Environmental Laws and Regulations).

34-3.4. Mobile Sources. Reference (d) shall govern the operation and maintenance of mobile sources based in a host nation where such provisions have been issued, except for vessels and aircraft. If no FGS has been issued, the operation and maintenance of mobile sources, with the exception of aircraft and vessels, based in a host country shall be governed by applicable provisions of the SOFA and bilateral agreements, and references (e) and (f) per reference (a). In particular, reference (f) requires compliance with substantive host nation pollution control laws of general applicability. In most instances, the relevant host nation pollution control laws shall be the pollution control standards observed by the host nation's military forces for similar vehicles. Except for sovereign immune vessels and aircraft and unless otherwise provided in the SOFA and bilateral agreements, transient mobile sources or those sources temporarily within a foreign jurisdiction are subject to the host country's standards for the terms and conditions set forth in the visit clearance. Although not subject to enforcement by the host nation, sovereign immune vessels and aircraft shall operate under the environmental protection provisions of their visit clearance. Where no specific environmental protection provisions are included in the visit clearance, sovereign immune vessels and aircraft shall follow environmental protection standards used by the host nation's military forces to the extent practical.

34-3.5. Waivers of Overseas Environmental Standards at Naval Installations

a. A U.S. installation commander should seek a waiver from standards in reference (d), or when reference (d) has not been issued, from reference (e), host nation laws of general applicability (as required by reference (f)), and applicable treaties (including SOFAs and bilateral agreements) if compliance with that particular standard would:

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(1) Seriously impair its mission,

(2) Adversely affect relations with the host nation

(3) Require substantial expenditure of funds for physical improvements at an installation for which public notification for return has been made, or

(4) Apply to an installation that has been identified for closure or realignment and will no longer be subject to the FGS requirement upon closure or realignment.

b. Waiver requests shall include budget submitting office (BSO) endorsement prior to processing via procedures outlined in reference (a). Navy policy is to minimize requests for waivers and limit the duration of waivers. Requests for waivers are appropriate, for example, where the cost of the project to achieve compliance at an installation slated for closure is grossly disproportionate to the period during which environmental benefits would be derived from the project. Where this manual or instructions by Navy component commanders require measures more protective than the applicable FGS, COs shall request a waiver from the LEC before requesting project funding.

c. Waiver requests will not be granted if the waiver would result in a breach of applicable U.S. law with extraterritorial effect or breach of an applicable international agreement.

34-3.6. Environmental Planning. The National Environmental Policy Act does not apply overseas. Navy activities shall comply with the applicable requirements of references (h) and (i) that address environmental effects abroad of major federal actions. Refer to chapter 10 (Environmental Planning Under the National Environmental Policy Act and Executive Order 12114) for applicable environmental planning requirements.

34-3.7. Environmental Management Systems. Navy environmental management system (EMS) appropriate facilities shall implement a comprehensive EMS, including pollution prevention and green procurement elements, per chapter 17 (Environmental Management Systems).

34-3.8. Emergency Planning and Community Right-to-Know Act. References (j) and (k) require Federal agencies to comply with the Emergency Planning and Community Right-to-Know Act (EPCRA). These requirements apply to federal facilities in any U.S. state,

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District of Columbia, Commonwealth of Puerto Rico, Guam, American Samoa, U.S. Virgin Islands, Northern Mariana Islands, and any other territory or possession over which the United States has jurisdiction. EPCRA does not impose any requirements on Navy shore installation operations in foreign countries or directly upon ships or aircraft.

34-3.9. Hazardous Materials Management. Navy activities shall manage hazardous materials per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). In addition, activities shall implement the Consolidated Hazardous Material Reutilization and Inventory Management Program in the same manner and to the same extent as that delineated in chapter 23 (Hazardous Materials Management Ashore).

34-3.10. Hazardous Waste Management Ashore. Navy activities shall manage their hazardous waste (HW) per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). Refer to chapter 29 (Low-Level Radioactive Waste Disposal Program) for policy on mixed waste. Waste that is considered hazardous under reference (d) or reference (e) will not be disposed of in the host nation without an agreement as described in Enclosure (3) of reference (a).

34-3.11. Clean Air Ashore. Navy activities shall manage their air programs per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.12. Ozone-Depleting Substances. Navy activities shall manage their ozone-depleting substances as directed in chapter 22 (Clean Air Ashore) and per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

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34-3.13. Polychlorinated Biphenyls (PCBs) Management Ashore.

Navy activities shall manage their PCBs per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.14. Radon. Navy activities shall manage their radon program per the Navy Radon Assessment and Mitigation Program as outlined in chapter 25 (Toxic Substances Control Act).

34-3.15. Water Programs Ashore

a. Navy activities shall manage their water programs per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

b. Commander, Navy Installations Command (CNIC) serves as executive agent for drinking water quality matters for all Navy facilities and installations worldwide. The executive agent responsibilities are outlined in section 21-3.1 and are applicable worldwide.

34-3.16. Drinking Water

a. Navy activities shall manage their drinking water systems for human consumption as defined in chapter 21 (Safe Drinking Water Act Compliance Ashore) per reference (d) and provide drinking water that meets or exceeds U.S. water quality standards. When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). In addition, Navy activities shall monitor for lead in priority areas as specified in section 21-3.3.c.2. All non-continental U.S. water systems serving greater than 25 DoD consumers shall develop a water system vulnerability assessment (WSVA) and emergency response plan (ERP) update (if required) for internal use only (reference (1)).

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b. U.S. Navy overseas installation water systems, including leased facilities (including Navy housing) or under a U.S. Navy base operating support contract shall be subject to oversight by regional water quality boards (RWQB) and must receive a certificate to operate (CTO) in accordance with requirements established by the executive agent for drinking water. All drinking water treatment and distribution system operators shall be trained per references (d) or (e), as appropriate.

c. All Navy installations including outlying facilities and leased government properties (including Navy housing) shall develop and provide a copy of their water quality consumer confidence reports to the regional water quality board. Copies of public notification reports shall also be provided when applicable.

34-3.17. Oil Management. Navy activities shall manage their oily wastes and waste oils per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.18. Oil and Hazardous Substances Spills and Contingency Planning. Navy activities shall manage oil and hazardous substance spills and contingency planning per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). Navy shore commands shall implement the requirements of chapter 39 (Oil and Hazardous Substance Spill Preparedness and Response) regarding internal reporting, drills, and exercises.

34-3.19. Pesticide Compliance Ashore. Navy activities shall manage their pesticides per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). Activities responsible for pesticide application shall develop integrated pest management plans and ensure the program addresses pesticide applicator certification and re-certification training, pesticide storage, handling and

disposal practices, and pest management operations recordkeeping and reporting.

34-3.20. Solid Waste Management and Resource Recovery Ashore. Navy activities shall ensure compliance with solid waste standards per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). In addition, integrated solid waste management requirements, including those pertaining to recycling and qualified recycling programs in chapter 28 (Solid Waste Management and Resource Recovery Ashore), apply worldwide.

34-3.21. Low-Level Radioactive Waste. Navy activities shall manage their low-level radioactive waste per chapter 29 (Low-Level Radioactive Waste Disposal Program).

34-3.22. Cleanup and Restoration. The Installation Restoration Program is limited to the United States, its territories, and possessions and does not apply to foreign countries. However, current and past DoD activities can result in the need for emergent environmental cleanup and restoration overseas. The decision to conduct and execute cleanup actions shall comply with the provisions of reference (m).

34-3.23. Storage Tanks. Navy activities shall manage their above and underground storage tanks per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.24. Environmental Compliance Audits Ashore. Overseas installations shall implement an internal compliance assessment program and be subject to external compliance assessments per chapter 18 (Environmental Compliance Audits Ashore) and reference (a). Internal and external environmental audit checklists shall be derived from the applicable FGS. Checklists are required to be developed into official forms. Prior to the establishment of the FGS, audit criteria shall be based on reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, applicable treaties (including SOFAs and bilateral agreements), and applicable provisions of this manual.

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34-3.25. Natural Resources Management. Navy activities shall program, budget for, and ensure compliance with reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). In addition, natural resources managers may use applicable elements from chapter 12 (Natural Resources Conservation) as a framework for natural resources management, subject to concurrence by the DoD LEC. Integrated natural resource management plans at installations outside the United States are not typically subject to E.O. 12114 analyses because they do not result in significant harm to the host nation. The decision not to perform E.O. 12114 analysis shall be documented in a record of negative decision per chapter 10 (Environmental Planning Under the National Environmental Policy Act and Executive Order 12114).

34-3.26. Historic and Archeological Resources Protection. Navy activities shall manage their historic and archeological resource management program per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.27. Training Requirements. Navy activities shall comply with the training measures outlined in chapter 3 (Environmental Readiness Training) and other chapters as applicable. Navy commands shall comply with the training requirements per reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements).

34-3.28. Lead Environmental Component. LECs are responsible for environmental matters in foreign countries where DoD installations are located and where USD (AT&L) determines that DoD presence justifies establishment of FGS. Specific LEC responsibilities are delineated in reference (a). Heads of military departments designated as LECs normally delegate LEC authority to the theater component commanders after coordination with the relevant combatant commander. Note that due to the unique construct and influence of the European Union (EU), the

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Commander, USEUCOM, is designated as the DoD Theater Environmental Coordinator (TEC) for Europe. As such, the Commander provides specific oversight to ensure consistent application of this instruction at installations in host-nation countries within the EU and geographically located within the USEUCOM area of responsibility.

34-4 Responsibilities

34-4.1. The Office of the Chief of Naval Operations, Energy and Environmental Readiness Division (OPNAV (N45)) shall:

a. Ensure BSOs allocate the resources required to achieve and maintain compliance with reference (d). When reference (d) has not been issued, Navy facilities and installations will comply with reference (e), host nation laws of general applicability (as requested by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). Where Navy has been delegated by DoD as the LEC per references (a) and (m), ensure BSOs allocate the resources required to execute these responsibilities; and

b. Provide policy guidance needed to establish and maintain a program for the management of environmental concerns overseas.

34-4.2 CNIC shall serve as executive agent for drinking water quality matters for all Navy shore facilities and installations worldwide per sections 21-3.1 and 21-4.2.

34-4.3. BSOs shall:

a. Ensure compliance with reference (d). When reference (d) has not been issued, ensure compliance with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements);

b. Conduct (or oversee the conduct of) environmental compliance audits at overseas installations to ensure compliance with reference (d). When reference (d) has not been issued, conduct EQAs to ensure compliance with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). EQAs shall be conducted per the requirements of reference (a) and chapter 18 (Environmental Compliance Audits Ashore);

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c. Program and budget for environmental compliance projects;

d. Ensure contracts for services or construction where performance takes place outside the United States and DoD contracts for the disposal of HW include provisions requiring contractors to comply with reference (d). When reference (d) has not been issued, contractors shall be required to comply with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements). The BSO shall also ensure contracts are administered to enforce such compliance;

e. Ensure host-tenant agreements are per, and address compliance with, reference (d). When reference (d) has not been issued, host-tenant agreements will address compliance with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements);

f. Communicate with LECs regarding the compliance status of activities or installations, waiver requests, proposed host nation regulations, and environmental issues impacting their installations and commands; and

g. In consultation with Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) and OPNAV (N45), endorse waiver requests from Navy activities or installations per section 34-3.4.

h. Provide to CNIC any information needed for the annual drinking water quality report to VCNO required by section 21-3.1 and section 21-4.2.

34-4.4. COMNAVFACENGCOM shall:

a. Support CNIC on all aspects of drinking water system management per section 21-4.3;

b. Develop standard processes for issuance of consumer confidence reports to Navy personnel at overseas installations; and

c. In consultation with Chief, Bureau of Medicine and Surgery, provide independent oversight of RWQBs.

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34-4.5. Navy components, when delegated authority to act as LECs, shall execute the LEC responsibilities assigned in reference (a) for their assigned area of responsibility. Note: In the absence of formal diplomatic relations (e.g., Cuba), the requirement to consult with the host nation in development of FGS is waived.

34-4.6. Region commanders and installation and facility COs shall:

a. Comply with reference (d). When reference (d) has not been issued, comply with reference (e), host nation laws of general applicability (as required by reference (f)), U.S. laws with extraterritorial effect, and applicable treaties (including SOFAs and bilateral agreements);

b. Develop and conduct training and education programs to instruct required personnel in the environmental aspects of their job;

c. Perform and document internal installation environmental compliance audits annually to determine the overall compliance assessment status of the installation or facility, and support the performance of, and corrective actions required by, external environmental compliance audits;

d. Communicate following the Navy chain of command with the Navy region commander, if present, on the LECs environmental issues; and

e. Ensure their installations provide drinking water that meets or exceeds U.S. water quality standards and sign and issue CTOs for installations in their area of responsibility.

34-4.7 BUMED shall:

a. Establish and publish appropriate medical surveillance guidance for overseas Navy water systems;

b. Provide consultative services to CNIC and Navy commands for drinking water quality per section 21-4.4.b and 21-4.4.c;

c. Provide public health advice to Navy shore installations and facilities outside the U.S. in carrying out their responsibilities for drinking water quality and distribution;

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d. In consultation with COMNAVFACENGCOM, provide independent oversight of RWQBs.

34-5 Definitions

34-5.1. Department of Defense Lead Environmental Component. The DoD LEC is the secretary of a military department, combatant commander, or subunified commander specifically designated as described in reference (a). The DoD LEC executes responsibilities prescribed in Enclosure (2) of reference (a) associated with DoD installations within a specified foreign nation. LECs are responsible for environmental matters in foreign countries where DoD installations are located and where DUSD(I&E) determines that DoD presence justifies establishment of FGS. Secretaries of military departments designated as LECs may delegate LEC responsibilities through the chain of command to an appropriate general-level or flag-level commander. The LEC establishes FGS for DoD installations within its geographic area of responsibility and performs other functions per reference (a).

34-5.2. Drinking Water System. An assemblage of natural and or man-made infrastructure by which water is captured, collected, stored, treated, and delivered to end users. Components of drinking water systems include raw water supplies (e.g., reservoirs, lakes, rivers, and groundwater), water purification facilities, water storage facilities, water pressurization components, and distribution piping networks.

34-5.3. Environment. Environment refers to the natural and physical environment and excludes social, economic, or other environments.

34-5.4. Final Governing Standards. A comprehensive set of country-specific substantive environmental provisions; typically technical limitations on effluent, discharges, etc., or specific management practices developed in accordance with reference (a). FGS are developed using the Overseas Environmental Baseline Guidance Document (OEBGD) unless the OEBGD is inconsistent with applicable host nation environmental standards or standards under applicable international agreements and these other applicable standards provide more protection to human health and the environment. In the case of inconsistency, the more protective standard is normally used to establish the FGS unless a specific international agreement with the host nation establishes a different standard applicable to U.S. installations and commands. The DUSD(I&E) maintains a list of countries requiring FGS. (See

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the appendix to enclosure 3 of reference (a) for the list of countries requiring FGS and the corresponding LECs).

34-5.5. Foreign Nation. A foreign nation is a geographic area (i.e., land, water, airspace) under the territorial jurisdiction of a government other than the United States, or a geographic area under the territorial jurisdiction of the United States alone, or jointly with any other government, by virtue of military occupation.

34-5.6. Navy Facilities and Installations. For determining overseas environmental compliance requirements, naval facilities and installations are real property under the control of or used by U.S. Navy, including tenant facilities and installations on host nation installations, non-contiguous leased portions such as military housing and family support activities, and non-contiguous installations, piers, and ports operated under the auspices of the North Atlantic Treaty Organization by the host nation.

34-5.7. Overseas Environmental Baseline Guidance Document. The OEBGD is a current compendium of criteria based on consideration of laws generally applicable to similarly-situated DoD installations within the United States designated to protect the environment at DoD installations outside U.S. territory.

34-5.8. United States. United States means all states, territories, and possessions of the United States and all waters and airspace of which the natural resources are under the exclusive management authority of the United States.

CHAPTER 39

OIL AND HAZARDOUS SUBSTANCE SPILL PREPAREDNESS AND RESPONSE

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39-1 Scope. This chapter identifies requirements to prepare for and respond to oil and hazardous substance (OHS) spills from Navy vessels and shore facilities worldwide and summarizes Navy planning and response requirements for both Navy and non-Navy OHS spills.

39-1.1. Related Chapters. Chapter 20 (Clean Water Ashore) identifies the requirements and responsibilities for the control and prevention of water pollution. Chapter 23 (Hazardous Materials Management Ashore) describes the comprehensive management of hazardous material (HM). Chapter 27 (Hazardous Waste Management Ashore) describes the comprehensive management of hazardous waste (HW). Chapter 30 (Oil Management Ashore) discusses oil management at shore facilities. Chapters 31 (Storage Tanks) and 35 (Environmental Compliance Afloat) discuss the prevention and minimization of OHS pollution from storage tanks at shore facilities and OHS management aboard ships, respectively. Chapter 34 (Overseas Environmental Compliance

Ashore) covers Navy policy for overseas activities and chapter 41 (Natural Resource Damage) identifies Navy responsibility with respect to natural resource damages after an OHS spill incident.

39-1.2. References.

- (a) 33 U.S.C. §2701
- (b) 40 CFR 300
- (c) 40 CFR 260-282
- (d) 40 CFR 112
- (e) 33 CFR 154
- (f) 30 CFR 254
- (g) 49 CFR 194
- (h) 49 CFR 195
- (i) 29 CFR 1910.120
- (j) 61 FR 28642
- (k) DoD 4715.05-G, Overseas Environmental Baseline Guidance Document, May 2007
- (l) NAVSEA S9593-FF-MMA-010, U.S. Navy Shipboard Oil and Hazardous Substance Spill Contingency Plan Guide
- (m) Department of Homeland Security, National Response Framework, January 2008
- (n) OPNAVINST 3440.17, Navy Installation Emergency Management Program
- (o) Memorandum of Agreement (MOA) Between Department of Defense and Department of Transportation on the Administration of the Ready Reserve Force, 28 Jan 2009 (NOTAL)
- (p) 40 CFR 117, 302, and 355
- (q) OPNAVINST F3100.6J, Special Incident Reporting (OPREP 3, Navy Blue and Unit SITREP) Procedures (NOTAL)

(r) 29 CFR 1910.119

(s) OPNAVINST 5100.19E, Navy Safety and Occupational Health (SOH) Program Manual for Forces Afloat

(t) OPNAVINST 5100.23G, Navy Safety and Occupational Health (SOH) Program Manual

(u) Homeland Security Presidential Directive-5 of 23 Feb 2003

(v) 33 U.S.C. §1321 and §1322

(w) P.L. 95-604, Uranium Mill Tailings Radiation Control Act of 1978

(x) 33 U.S.C. §1501 et seq.

(y) Presidential Proclamation 5928 of December 27, 1988

39-1.3. Applicability. Navy shore facilities, both in the continental United States and overseas, are subject to a wide array of OHS planning, training, exercise, reporting, and response requirements. The specific Federal, State, and local laws and regulations that apply are dependent on factors such as facility's location, nature of operations, and whether certain criteria and threshold requirements are met. Federal laws applicable to OHS preparedness and response include the Clean Water Act (CWA) and Oil Pollution Act of 1990 (OPA 90). This chapter explains Navy-specific shipboard preparedness and response requirements applicable to Navy vessels, which are exempt from corresponding provisions of OPA 90 because the definition of "vessel" at paragraph 29 of reference (a) specifically excludes public vessels.

39-2 Legislation

a. The following legislation contains provisions that pertain to OHS spill preparedness and response:

(1) Clean Air Act (CAA);

(2) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);

(3) CWA;

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(4) Emergency Planning and Community Right-to-Know Act (EPCRA);

(5) Occupational Safety and Health Act;

(6) OPA 90; and

(7) Resource Conservation and Recovery Act (RCRA).

b. A summary of this legislation is included in appendix A (Laws and Regulations).

39-3 Requirements

a. Environmental Protection Agency (EPA); Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA); U.S. Coast Guard (USCG); Bureau of Ocean Energy Management, Regulation and Enforcement (BOEM,R&E); and Occupational Safety and Health Administration (OSHA) all regulate portions of OHS preparedness and response. Navy facilities fall under EPA and or USCG jurisdictions, but all facilities should carefully evaluate their responsibility to meet other regulatory requirements.

b. In addition, state programs requiring OHS spill prevention, preparedness, and response vary widely. All states require notification of state and local authorities of OHS spills. Certain states, and coastal states in particular, have stringent requirements for vessel and facility spill response plans and prevention measures that exceed Federal standards. Department of Defense (DoD) facilities, including Navy facilities, are subject to state and local facility prevention and response planning requirements. Public vessels, including military vessels, are exempt from most state requirements. Some facilities are required to develop and submit to EPA a risk management plan (RMP) for EPA's regulated substances under CAA. Refer to section 22-3.3.b(3) for RMP requirements under CAA regulations.

39-3.1. Response Personnel

a. The federal on-scene coordinator (FOSC) is the Federal official predesignated by EPA or USCG to coordinate and direct Federal responses under reference (b). In the case of Navy hazardous substance (HS) releases on or solely from Navy facilities, the Navy on-scene coordinator (NOSC) is the Navy official predesignated as the FOSC. The NOSC coordinates Navy

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OHS spill contingency planning and directs Navy OHS spill response efforts in a pre-assigned area. NOSCs are pre-designated by the cognizant naval forces commanders or Commander, Navy Installations Command (CNIC). The naval forces commanders are U.S. Fleet Forces Command, U.S. Pacific Fleet, U.S. Naval Forces Europe, U.S. Naval Forces Africa, U.S. Naval Forces Southern Command, and U.S. Naval Forces Central Command. The NOSC also acts as the incident commander for spills which exceed the response capability or extend beyond the fenceline of a facility located within the NOSC area of responsibility (AOR). The NOSC may designate a qualified individual (QI) who meets the qualifications of section 39-5.15 to implement a NOSC OHS regional response plan and manage an oil spill incident.

b. The facility incident commander (FIC) designations are based on OHS spill risk and response capability of the command to ensure rapid, effective response to OHS spills within the assigned area. The FIC may designate a QI to develop and implement the facility response plan (FRP) and manage an oil spill incident. The FIC also has authority to appoint appropriate staff to serve as incident commander during a response. The title of FIC is retained by the commanding officer (CO) and may not be delegated.

39-3.2. Planning. All Navy facilities shall maintain contingency plans to combat releases of HS or discharges of oil and minimize hazards to human health and the environment. These plans shall provide information on facility emergency equipment, evacuation, and coordination (reference (c)). Depending on a facility's size and the nature of its operations, it may come under the jurisdiction of several Federal, State, and local contingency planning laws and regulations. Under some of these laws and regulations, contingency plans require regulatory approval. Facilities shall review appropriate regulations to determine if they meet the criteria to prepare and submit plans. Activities must submit a copy of these plans to all local police and fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services. At a minimum, each plan shall be reviewed and updated annually. Depending on personnel turnover rate, the responsibility and notification sections shall be updated at least quarterly. Each plan shall be updated and resubmitted as required by regulations or, at a minimum, every 5 years or after any major spill event.

a. Facility Plans. All Navy facilities shall develop either an FRP or spill contingency plan (SCP), depending upon regulatory

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requirements, size, and location of the facility. Facilities shall report, via the NOSC, the status of their plans through use of a Web-based database maintained by Commander, Naval Sea Systems Command (COMNAVSEASYS COM) to CNIC annually.

(1) Facility Response Plans. Facilities that store, transport, or handle oil and meet the specific threshold requirements of any of the OPA 90 regulations (references (d) through (g)) must submit an FRP to the appropriate regulatory agency (i.e., EPA; USCG; BOEM,R&E; Bureau of Ocean Energy Management, Regulation and Enforcement; or PHMSA). Each agency has established criteria that define which facilities fit this description. Table 39-1 shows a brief description of these criteria. The actual regulations shall be reviewed to determine applicability.

Table 39-1. Facility Criteria

Facility Type	FRP Threshold Requirement	Regulatory Agency	Citation
Non-transportation-related onshore facilities	<p>(1) The facility, because of its location, could be reasonably expected to cause "substantial harm" to the environment;</p> <p>(2) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or</p> <p>(3) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:</p> <p>(a) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;</p> <p>(b) The facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments;</p> <p>(c) The facility is located at a distance such that a discharge from the facility would shut down</p>	EPA	Reference (d)

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Facility Type	FRP Threshold Requirement	Regulatory Agency	Citation
	<p>a public drinking water intake; or</p> <p>(d) The facility has had a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years.</p>		
Marine transportation-related (MTR) facilities	<p>(1) The facility, because of its location, could be reasonably expected to cause "substantial harm" to the environment;</p> <p>(2) Fixed MTR onshore facilities capable of transferring oil to or from a vessel with a capacity of 250 barrels or more;</p> <p>(3) Mobile MTR facilities used or intended to be used to transfer oil to or from a vessel with a capacity of 250 barrels or more; and</p> <p>(4) Those MTR facilities specifically designated as substantial harm facilities by the captain of the port.</p>	BOEM	Reference (e)
Non-transportation-related facilities; Offshore platforms and pipelines	Each owner or operator of an oil handling, storage, or transportation facility, located seaward of the coastline, must submit a spill response plan to BOEM,R&E for approval.	BOEM	Reference (f)
Onshore pipelines	<p>Each operator of an onshore pipeline facility shall prepare a response plan and submit it to PHMSA.</p> <p>Note: PHMSA allows numerous exceptions to this rule based on factors such as pipe size, operating pressure, age, and construction type. Consult reference (g) for specific criteria.</p>	*PHMSA	Reference (g)
<p>*Navy facilities with pipelines that leave the facility or with mobile sources may fall under PHMSA's jurisdiction. Pipelines that transport fuel off facility grounds must comply with the safety standards and reporting requirements of reference (h).</p>			

(a) Facilities meeting the criteria for more than one type of facility are considered "complex facilities" and must submit an FRP to each Federal agency with jurisdiction, with a maximum of one per facility. While the requirements for the FRP

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vary widely depending on the type of facility, certain essential elements are common to all plans, including:

1. Designation of an individual who can be reached on a 24-hour basis and has the authority to take necessary response action;

2. An emergency section of the plan that provides concise response direction;

3. Extensive drills and exercises with specified documentation and recordkeeping;

4. A provision for regular update and review of FRPs; and

5. Provisions for responding to spills up to and including worst case discharge (WCD).

(b) "Substantial harm" facilities shall submit FRPs to the relevant regulatory agency for information; "significant and substantial harm" facilities shall submit FRPs to the appropriate regulatory agency for review and approval.

(c) Navy barges are considered "public vessels" and, although not required to have vessel response plans, should be addressed in response plans. Facilities owning barges that are used only at that facility to store, transfer, or handle oil for that facility should include these barges in their response plans.

(d) Facilities may rely on their NOSC for WCD response, and FRPs submitted to regulators may reflect this fact. A facility's FRP must include the NOSC as part of the spill management team (SMT) for WCDs in order for the facility to receive Preparedness for Response Exercise Program (PREP) credit when the NOSC responds to a facility incident or conducts WCD exercises.

(2) Spill Contingency Plans. Navy facilities storing petroleum or HS and not meeting federal requirements for preparing an FRP shall maintain a SCP. SCPs should be tailored to the specific size and operations of the facility. At small facilities, the SCP must, at a minimum, be sufficient to protect employee safety and allow the facility to quickly contact external spill responders, the NOSC, and the facility's chain of command. At facilities using their own personnel for emergency

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spill responders, the SCP must address all of the emergency response plan elements of OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations in part (q) of reference (i). In most cases, SCPs do not need to be submitted for agency approval; however, such plans should be readily available for agency review if requested.

b. Integrated Contingency Plan

(1) A facility may choose to develop an integrated contingency plan (ICP) per reference (j). This is not an additional plan. The guidance was intended for facilities that wanted to combine different FRP requirements found in various EPA, Department of Transportation, USCG, and OSHA regulations into a single response document. ICP development may be beneficial for those facilities that need to meet multiple spill contingency regulatory requirements from various Federal agencies. ICPs may also be used in locations where facilities share response resources or that are in close proximity. Areas with a high concentration of Navy facilities may benefit from having a single plan with appendices that cover each facility.

(2) An ICP is not a suitable solution for all cases. The added complexity and potential cost of maintenance should be considered when evaluating the appropriateness of this option. Consultation with regulators regarding acceptance of such an arrangement shall be conducted prior to combining plans into a single plan.

c. NOSC Plans. NOSC plans, in combination with facility FRPs, must provide sufficient detail to ensure Navy can respond to oil spills up to the WCD and to spills beyond facility boundaries. For spills beyond their capability, facilities may rely on the NOSC for additional resources. Delineation of responsibility between fleet and shoreside NOSCs shall be clear. NOSC plans shall be signed by the NOSC (typically a flag officer) to ensure management endorsement and awareness, and reviewed and maintained for currency annually, with notification sections validated quarterly. They shall receive a thorough review and update, including a new signature, every 5 years. Status of shoreside NOSC plans shall be forwarded by assigned NOSCs annually to CNIC and status of fleetside NOSC plans shall be forwarded by assigned NOSCs annually to COMNAVSEASYS COM through use of a Web-based database maintained by COMNAVSEASYS COM.

(1) Shoreside NOSC Plans

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(a) The shoreside NOSC plan shall be a comprehensive response plan, similar to an FRP, but more general in nature. It shall cover notifications, responsibilities, initial actions, resources, sensitive area prioritization, disposal, or natural resource damages, and address WCD scenarios and the WCD support required by the facility within the NOSC's AOR, as well as scenarios that occur beyond facility boundaries.

(b) These plans shall be consistent and aligned with area contingency plans (ACP) and NOSC plans for adjacent AORs (shoreside and fleet). Delineation of responsibility between shoreside and fleet NOSCs shall be clear. Overseas shoreside NOSC plans shall also include information regarding host nation assistance and requirements.

(2) Fleet NOSC Plans. Fleet NOSCs are required to develop contingency plans to combat Navy ship OHS spills that occur outside the AORs of shoreside NOSCs. As fleet units typically have minimal response assets, fleet NOSC plans shall focus on assigned responsibilities, notifications, and initial actions. Information regarding foreign nations within an assigned AOR that may be affected by Navy spills shall be included. Plan coverage shall provide for all Navy vessels (including Commander, Military Sealift Command (COMSC) and U.S. Maritime Administration (MARAD)) regardless of fleet operational control within their AOR. Supervisor of Salvage and Diving (SUPSALV) shall provide assistance to fleet commanders or their designees in preparing the plans. These plans shall be consistent and aligned with shoreside NOSC plans within the AOR.

d. Spill Prevention, Control, and Reporting Plans. Overseas facilities are governed by both DoD guidance and applicable local laws and regulations and shall develop and maintain a spill prevention, control, and reporting (SPCR) plan per the final governing standard (FGS) for the country where the facility is located. If an FGS does not exist for a particular country, the plan shall be developed per reference (k). The plan shall contain similar information to spill prevention, control, and countermeasure (SPCC) plans; SCPs; or FRPs such as necessary notifications, emergency procedures, response assets, and sensitive areas.

e. Shipboard SCP. Each Navy and COMSC ship shall develop a contingency plan to respond to oil spills. COMNAVSEASYSOM will provide a sample of a shipboard oil spill contingency plan (SOSCP) format (reference (l)). Ships may consolidate the SOSCP with the HM SCP, but this combined plan shall address the unique

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procedures for spills over the side and use of the oil spill response kit. The plan(s) shall contain procedures for reporting, containment, control, recovery, and disposal of spilled material, protective clothing, and spill cleanup materials; information sources for oil and HM; and names and telephone numbers of fleet as well as shoreside NOSC's. The plan(s) shall be reviewed and updated annually to ensure consistency with current ship conditions and policies and shall contain up-to-date NOSC contact information to ensure appropriate notification of spills. Although neither USCG nor state officials have authority to require preparation of public vessel OHS SCPs, Navy will provide Navy ship SCPs to USCG and state officials upon request to promote strong, cooperative relationships with the local community. Shipboard OHS spill response policy guidance is found in chapter 35 (Environmental Compliance Afloat).

f. Non-Navy Ports Planning. Navy vessels (including COMSC vessels regardless of operating condition (OPCON) and MARAD vessels as assigned) calling on non-Navy ports shall arrange through logistics requirements, contract, or other means for necessary spill preparedness consistent with generally accepted industry standards and practices for operating within the port in question. NOSC's shall provide assistance as needed to determine necessary preparedness measures for situations which could potentially arise during vessel operations in a non-Navy port called upon by the U.S. Navy, U.S. Naval Ship (USNS), or MARAD vessels in their respective AORs. Preparedness measures shall address all accepted operations (e.g., fueling) and shall include meeting all criteria set forth in the Overseas Environmental Baseline Guidance Document (OEBGD), FGS, and respective NOSC plans.

g. Emergency Management Plans. Facility commanders and NOSC's shall coordinate planning activities with emergency management (EM) functions as appropriate. OHS plan information should either be incorporated or referenced in EM plans as part of the national policy outlined in references (b) and (m) and the Navy's overall EM approach (reference (n)) to ensure efficient use of resources, minimal duplication of effort, and maximum readiness.

h. Other Planning Considerations. Facilities may be subject to additional HS contingency planning laws and regulations including RCRA, EPCRA, and CAA. Additionally, state and local jurisdictions may have planning requirements. Facilities shall

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review the requirements for the area in which they are located and develop and submit plans accordingly.

(1) SUPSALV is designated as the Navy's corporate oil spill response organization and shall maintain and operate oil discharge containment and recovery equipment with the requisite knowledge and expertise to support large spill response operations. Facilities shall consider these assets when planning WCD response. SUPSALV oil spill response equipment is procured, maintained, and exercised to comply with USCG oil spill response organization guidelines and meets WCD requirements for most facility and ship scenarios, especially in the United States. Planners should contact SUPSALV directly for specifics on capabilities and response timelines.

(2) In addition to response assets available from local Navy activities, commercial oil pollution response assets, available through basic ordering agreements (BOA) pre-negotiated by USCG, may be a CO's best means of meeting the response requirements of more significant spill scenarios by augmenting a facility's equipment and personnel resources. Planning efforts should consider these assets and, where appropriate, include them in response plans. NOSC's should validate that USCG BOAs can be implemented within their respective regions under existing USCG BOA contracts prior to an emergency. Access to BOAs is managed by Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM).

(3) Membership in oil spill cooperatives potentially exposes Navy to the risk of significant liability. Accordingly, Navy activities considering membership in an oil spill cooperative shall forward a request to participate to the Office of the Chief of Naval Operations, Energy and Environmental Readiness Division (OPNAV (N45)) via their chain of command.

(4) Protective booming strategies shall be developed where feasible and implemented for petroleum, oils, and lubricant transfer operations when any of the following conditions exist:

(a) Protective booming is required by law or regulation;

(b) The nature or volumes of fuels to be transferred is of sufficient magnitude that prudent operational risk management indicates protective booming is required;

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(c) Environmentally sensitive areas are likely to be negatively impacted in the event of a spill; or

(d) Potential spills could generate significant negative public perception or so adversely affect political relations with a host nation or local jurisdiction that continued port access may be jeopardized.

39-3.3. Training Requirements. All Navy facilities that store oil or HS in regulated quantities shall ensure personnel are trained to combat discharges of HS or oil and perform response duties as defined in the facility's plans, while maintaining safety as the number one priority. Facility COs and NOSCs shall coordinate training activities with EM and other training as much as possible. OHS training elements should be incorporated into EM training and OHS personnel shall, where possible, take advantage of applicable courses under the EM program. Naval Safety and Environmental Training Center (NAVSAFENVTRACEN) manages a number of courses applicable to spill response techniques, spill management, and response worker health and safety.

a. FRP Training

(1) EPA; USCG; BOEM,R&E; and PHMSA (references (d) through (g)) require applicable facilities to conduct training as part of their FRP requirements. The training requirements are very general in nature and do not include specific performance targets, frequency, or other measurable criteria. However, personnel must be trained to perform assigned duties.

(2) Navy facilities owning and maintaining spill response equipment will act as the first responder to a Navy oil spill. As such, Navy personnel must be trained on the safe use of this equipment and in effective response techniques. Typically, this training should be received annually, but depending on the level of expertise of the facility response team (FRT), the amount of personnel turnover, the number of actual deployments, and other factors, training may be received at an interval not to exceed once every 2 years. NAVSAFENVTRACEN offers courses in FRT operations.

b. OSHA Training. OSHA requires HAZWOPER training including identification of hazards, use of personal protective equipment, and other safety-related measures for all emergency response personnel before they are permitted to engage in emergency response operations. Navy personnel assigned response duties

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shall receive this training commensurate with responsibilities. It must be completed prior to a spill event to avoid any delays in response. Sections (e)(3) and (4) of reference (i) list required training, but are written for uncontrolled HW sites. Additional guidance is available from OSHA that addresses the applicability of these regulations to oil spill response training in more detail. OSHA requires this training be updated annually. NAVSAFENVTRACEN offers HAZWOPER courses. Depending on the nature of the position or expected responsibilities of the individual, incident management training may also be required.

c. National Incident Management System Training

(1) It is Navy policy to comply with reference (m) regarding National Incident Management System (NIMS) training and incident command system (ICS) training. NIMS sets forth the requirement for hazard incident preparedness activities, including implementing an ICS for managing incident response. ICS is an effective crisis management system and has been proven for OHS spill response. Training defines NIMS operations and ICS roles and responsibilities. Various levels of training are required, depending on assigned responsibilities (references (b), (k), and (m)).

(2) All personnel assigned to an SMT shall receive an appropriate level of ICS training. Facility commanders and NOSC's shall determine the expected level of participation of SMT members and provide an appropriate level of ICS training. NAVSAFENVTRACEN offers courses in ICS.

d. General Training. It is imperative NOSC management have an understanding of environmental issues beyond OHS response and OSHA concerns. Awareness training, such as general environmental and spill management, may be necessary to ensure NOSC's are fully capable of understanding the issues and problems that may arise surrounding OHS spill, response, mitigation, and management.

39-3.4. Exercises. CWA, as amended by OPA 90, requires facilities to train and exercise to be prepared to respond to oil spills.

a. National PREP. National PREP describes various types of exercises and the frequency of performance for each type. Exercises are conducted so all plan components are tested at least once every 3 years. OPA 90 and its implementing regulations require that employees responsible for conducting spill response receive proper training to accomplish these tasks.

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The four Federal agencies that have issued implementing regulations under OPA 90 (i.e., USCG; EPA; BOEM,R&E; and PHSMA) developed exercise guidelines to establish a workable exercise program that meets the intent of OPA 90. Complex facilities utilizing PREP to meet OPA 90 exercise requirements need only to conduct one exercise to fully meet the requirements of all regulating agencies for that particular type of exercise. PREP outlines the following exercises:

(1) QI notification exercises are conducted to ensure the QI can be reached in an emergency to carry out his or her required duties. Each facility shall conduct one of these exercises each calendar quarter;

(2) Emergency procedure exercises are performed to ensure personnel are capable of conducting the initial actions necessary to mitigate the effects of a spill. This type of exercise is considered by regulators to be optional for facilities. However, these exercises should be conducted as necessary to ensure personnel are capable of performing these tasks. Additionally, this exercise can be performed to satisfy the requirements for an unannounced exercise (see below);

(3) SMT tabletop exercises are conducted to ensure SMTs are familiar with the contingency plan and individual responsibilities assigned by the plan and able to use it effectively to conduct a spill response. Facilities shall conduct one tabletop exercise annually;

(4) Equipment deployment exercises ensure personnel who would normally deploy and operate or supervise the operation of response equipment are capable of doing so. They also ensure equipment is in good working order. Facilities that maintain response equipment shall conduct this type of exercise semi-annually;

(5) Unannounced exercises require one of the emergency procedure exercises, tabletop exercises, or equipment deployment exercises be conducted without providing the participants with prior knowledge of the exercise. Facilities shall make one emergency procedure, tabletop exercise, or equipment deployment exercise unannounced each calendar year;

(6) WCD exercises should be conducted annually in each 3-year cycle in the facility's SMT tabletop exercise schedule. This is not an additional exercise, but serves as the SMT tabletop for that year; and

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(7) Area exercises are designed to test the entire response community and may be led by regulators or planholders. Navy facilities that participate in area exercises shall document their participation in their spill response plans to receive proper credit.

b. Facility Requirements. Facility commanders and SPCC and FRP planholders of both OPA 90 and non-OPA 90 SPCC-regulated facilities shall forward an annual report to the NOSC indicating intended 3-year exercise schedule and previous year accomplishments through use of the Web-based database maintained by COMNAVSEASYS COM on a near real-time basis. As much as possible, facility SMT personnel shall participate in NOSC or area exercises. Navy facilities that participate in these exercises shall document their participation to receive proper credit. NOSCs shall review the annual reports and forward to CNIC.

(1) OPA 90 Facilities. OPA 90 regulated facilities shall follow the PREP guidelines to accomplish exercise requirements. Facilities shall document exercise accomplishments per PREP guidelines and the appropriate regulating agency(ies) to ensure exercise credit is received. Where possible, credit should be taken for actual spill responses conducted and for operations conducted during training evolutions. Facilities may take PREP credit for completing a WCD exercise when an NOSC conducts an exercise of this type. However, the facility's FRP must name the NOSC as part of the WCD SMT and the exercise must be similar in scope to the facility's FRP WCD requirements. Navy facilities should coordinate these exercises with the NOSC and participate when possible to minimize cost. Additionally, facility commanders and NOSCs shall coordinate exercises with EM exercises as much as possible. OHS information should be incorporated into EM exercise scenarios and OHS personnel shall participate in EM exercises where applicable. Prior to any EM exercise involving an OHS incident, EM personnel must receive proper training on S-191 (Command Post or EOC) to understand their role under NIMS ICS and understand the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

(2) Non-OPA 90 Facilities. Non-OPA 90 regulated facilities shall develop an exercise program commensurate with facility complexity and risk that ensures planning documents are adequate for response and personnel assigned have the necessary skills to respond. These programs shall follow the principles of the PREP guidelines in terms of exercise type and frequency.

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Exercise scope shall be appropriate for the level of complexity and risk at the facility. Exercise accomplishments shall be documented. Actual spill responses and training evolutions may serve to meet the intent of exercises and the exercise schedule should be adjusted to reflect these evolutions. To minimize cost, facilities should coordinate with neighboring installations, NOSCs, and the community when possible.

c. NOSC Exercise Requirements

(1) Shoreside NOSCs. Navy's tiered response system may utilize the NOSC SMTs for response to WCDs. NOSCs in themselves are not regulated under OPA 90. However, some FRPs must rely on the NOSC for WCD support. Therefore, NOSCs shall conduct an SMT tabletop exercise annually. Once in each 3-year period, the tabletop exercise shall include a WCD scenario. NOSCs shall ensure familiarity with the spill scenarios of Navy vessels, all FRPs, SCPs, and SPCRs within their AOR. Where possible, NOSC SMT personnel should be included in facility SMTs to assist the NOSC in providing WCD SMT support for the regulatory requirements of the FRP. NOSCs shall ensure the WCD scenario involves core components of fleet units, FRPs, SCPs, and SPCRs and includes interaction between the NOSC and FIC SMTs. NOSCs shall forward an annual report to CNIC indicating intended 3-year exercise schedule and previous year accomplishments for all facilities in the assigned AOR, as well as for NOSC exercises.

(2) Fleet NOSCs. Fleet NOSCs shall conduct annual SMT exercises to ensure planning documents are adequate for response and personnel assigned have the necessary skills to respond. As much as possible, fleet NOSCs shall coordinate exercises with shoreside NOSCs to minimize costs. NOSCs shall forward an annual report to COMNAVSEASYS COM indicating intended 3-year exercise schedule and previous year accomplishments through the use of the Web-based database maintained by COMNAVSEASYS COM on a near real-time basis.

d. Equipment. Navy spill response equipment shall be drilled and exercised per the designated exercise program (PREP or otherwise) to allow activities listing Navy spill response equipment in their plans to take credit accordingly.

39-3.5. Spill Response. Navy shall respond to Navy OHS spill incidents in such a manner as to retain control of the response and undertake immediate, direct action to minimize the effect of a Navy OHS spill upon the environment. The Navy's OHS Pollution Contingency Planning and Response Organization executes this

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policy. This organization uses existing chains of command and regional coordination authorities to satisfy the requirements and intent of applicable statutes and regulations.

a. OHS Spill Response. Reference (b) describes the roles and responsibilities of DoD in responding to DoD OHS spills. In response to spills:

(1) In the event of an OHS spill from a Navy facility or vessel, Navy will always assume initial responsibility for cleanup;

(2) In the case of an HS release that is on, or the sole source of the release is from, any facility or vessel under the Navy's control, the NOSC assumes the role of the FOSC. As the FOSC, the NOSC will direct the federal response effort, including coordination with the area coordinators and other Federal, State, and local authorities; and

(3) Depending upon the location of the oil spill, EPA or USCG assumes the role of the FOSC. Typically, the EPA or the USCG FOSC will monitor Navy's response effort and advise appropriate action if necessary. The FIC or NOSC shall take all appropriate measures to ensure they maintain control of the OHS incident. If the EPA or the USCG FOSC determines Navy's response is inadequate or inappropriate, then the FOSC has the authority to assume command of response efforts. In the case EPA or USCG assumes command of response efforts, COs and masters of public vessels remain in command of their vessels and personnel.

b. Salvage Related Spills. Navy shall direct response efforts to pollution incidents resulting from Navy vessel casualties such as grounding and collision. Fleet salvage forces shall take all reasonable precautions to reduce the threat of OHS pollution during salvage operations.

c. Collision Spills. Navy will provide immediate spill response assistance, regardless of fault, where a collision between a Navy vessel and non-Navy vessel or structure results in an OHS spill from the non-Navy vessel. In such situations, the numbered fleet commander shall report the spill, monitor the situation, and offer appropriate support to the stricken vessel.

d. Sunken Navy Vessels Oil Spills. Navy retains title to a number of vessels sunk while in Navy service due to armed conflicts, acts of God, or other reasons. Navy response to oil spills from such vessels or oil spills that are reported to be

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from such vessels shall be conducted per the procedures in chapter 40 (Sunken Navy Vessels).

e. COMSC Spills. Navy will manage response to OHS spills from vessels owned, operated, or chartered by COMSC as follows:

(1) Any vessel carrying the designation of USNS is a public vessel of the United States. The NOSC and other Navy shore facilities will respond to an OHS spill from a USNS vessel just as it would a spill from any other Navy vessel;

(2) Vessels of the Department of Transportation's MARAD Ready Reserve Force (RRF) may be activated to meet sealift requirements identified by U.S. Transportation Command. Operation of MARAD RRF vessels is governed by reference (o). RRF vessels are managed by various commercial ship managers. Administrative control of RRF vessels remains a MARAD responsibility at all times, including activation, crewing, training, logistical support, maintenance, and repair. OPCON of activated vessels tendered to DoD will be exercised by COMSC. MARAD will provide oil spill liability insurance coverage for RRF vessels under COMSC OPCON and will manage oil spill response for those vessels while under COMSC OPCON. MARAD will pay any deductibles for their insurance policy. COMSC, or the NOSC for oil spill response, reserves the right to manage the spill response as incident (or unified) commanders, provided they expressly relieve the MARAD of management and liability responsibility during a spill incident. In such cases, MARAD will continue its insurance coverage as a potential financial and management resource;

(3) Vessels under bareboat charter (or long-term build-to-charter lease) to COMSC and operated by COMSC exclusively for the benefit of the United States are public vessels of the United States for the purposes of this manual. The NOSC and other Navy shore activities will respond to an OHS spill from such a vessel just as it would a spill from any other Navy vessel; and

(4) Commercial vessels under time or voyage charter to MSC are not considered public vessels under applicable U.S. law, and are subject to federal pollution prevention and control regulations which derive their authority from reference (a) and CWA OHS provisions. Such time and voyage chartered vessels will manage their own spill response per their OHS SCPs. Under international law, such vessels are entitled to sovereign immunity and are not subject to regulation by foreign nations.

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f. Non-Navy Spills (other DoD). The FOSC may request Navy response assistance for non-Navy spills. Navy will respond to such requests under the terms and conditions of references (b) and (m) and Navy's SUPSALV and USCG Interagency Agreement for Pollution Response. In the case of large marine oil discharges, requests for Navy assistance from the Defense Logistics Agency, Marine Corps, or other DoD components are particularly likely. Navy response to such requests shall be consistent with procedures established by DoD and any applicable inter-Service agreement.

g. Non-DoD Spills. As one of 16 Federal agencies comprising the national response team (NRT), the federal response organization tasked with coordinating OHS spill response and contingency planning efforts, DoD and its component services must, upon request of the FOSC, provide any response assistance they can for non-DoD spills, insofar as such assistance would not impair DoD mission readiness. To facilitate mobilization and funding of SUPSALV equipment and personnel for a non-DoD spill, SUPSALV and USCG have established an interagency agreement for pollution response.

h. SUPSALV Assistance. In the case of a large or salvage-related pollution incident or an OHS spill that exceeds local capabilities, the NOSC shall consider activating SUPSALV personnel, equipment, and expertise. SUPSALV is one of several national special teams named in the NCP as available to provide assistance to the FOSC (reference (b)).

i. Basic Ordering Agreements. If a spill exceeds a facility's response capabilities and BOA resources are needed, the CO should request assistance from the NOSC and the NOSC should contact COMNAVFACENGCOM to request BOA activation. When engaging commercial spill response assets, Navy commands shall carefully assess and monitor legal, financial, and technical factors.

39-3.6. Reporting. Navy vessels and shore activities in the United States shall report OHS spills immediately upon discovery per section 39-3.6.a to the National Response Center (NRC) at 1-800-424-8802 or (202) 267-2675. NRC is the 24-hour OHS spill notification center, located at USCG Headquarters in Washington, D.C. It is the single Federal notification point (outside the Navy chain of command) for emergency spill response and is responsible for notifying the predesignated FOSC of reported OHS pollution incidents. Activities shall not delay NRC notification to obtain more detailed information about the incident.

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Immediate voice notification to the NRC fulfills all Federal notification requirements. If reporting activities cannot reach the NRC by voice on the first attempt, they shall immediately notify the nearest EPA office or USCG station. Reporting to EPA or USCG does not relieve the spiller of the responsibility to report to NRC.

a. Reporting Requirements

(1) National Response Center

(a) Navy commands shall report any spills or discharges to NRC which meet or exceed the amounts described below:

1. Any discharge of oil in quantities that may be harmful to the environment; defined by CWA regulations as a discharge which causes a film or sheen upon, or discoloration of, the surface of navigable water or adjoining shorelines; or causes a sludge or emulsion to be deposited beneath the surface of navigable water or upon adjoining shorelines;

2. No report is needed for discharges from properly functioning vessel engines, or discharges verified by monitoring equipment to contain less than 15 parts per million (ppm) oil, regardless of the presence of sheen. These discharges have been determined not to be harmful and therefore are exempted from the reporting requirements;

3. Any discharge of oil that threatens to reach the navigable waters of the United States; and

4. Any release of an HS in the United States, its territories, possessions, or navigable waters in excess of quantities proscribed by reference (p).

(b) When in doubt, Navy personnel shall be mindful of environmental stewardship responsibilities and report.

(2) Vessels. While public vessels are generally exempt from State and Federal reporting requirements, COs and masters of Navy vessels shall immediately report the fact and nature of an OHS spill from their vessels per chapter 35 (Environmental Compliance Afloat) and ensure naval messages are sent per appendix C (Message Formats). COs and masters of Navy vessels shall:

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(a) For spills between 0 and 12 nautical miles (NM) from the U.S. coast, report the spills to NRC and the chain of command, and notify the shoreside NOSC or cognizant facility CO by the most expeditious means possible. Facility COs or shoreside NOSCs shall implement the applicable NOSC plan;

(b) For spills outside 12 NM from the U.S. coast, report the spills to the chain of command and the fleet NOSC. The fleet NOSC shall report spills occurring within 200 NM of the U.S. coast to the NRC within 24 hours of receiving the initial report from the spilling vessel and implement the applicable fleet NOSC plan; and

(c) For spills in foreign ports, immediately notify the chain of command and the appropriate NOSC.

(3) Hazardous and Extremely Hazardous Substances. In addition to the reporting requirements set forth above, EPCRA and chapter 26 (Procedures for Implementing the Emergency Planning and Community Right-to-Know Act) require all activities to report to the state emergency response commission and local emergency planning committee any release of a reportable quantity of an HS or an extremely hazardous substance (EHS) that crosses the facility boundary or escapes into the atmosphere.

(4) Internal Navy. COs shall immediately report the fact and nature of an OHS spill from Navy vessels or facilities in any location worldwide that meets the following criteria:

(a) Any OHS spill reported to the NRC, state, or local authorities;

(b) Any discharge of oil in quantities that may be harmful to the environment; defined by CWA regulations as a discharge which causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines; or causes a sludge or emulsion to be deposited beneath the surface of navigable water or upon adjoining shorelines;

(c) No report is needed for discharges from properly functioning vessel engines, or discharges verified by monitoring equipment to contain less than 15 ppm oil, regardless of the presence of sheen. These discharges have been determined not to be harmful and therefore are exempted from the reporting requirements; and

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(d) Any OHS spills that may endanger critical water areas, have the potential to generate public concern, become the focus of an enforcement action, or pose a threat to public health or welfare that warrants an operations event and incident report (OPREP 3) as prescribed by reference (q).

b. Reporting Procedures

(1) Reports shall be made through the chain of command and NOSC as follows:

(a) By voice immediately upon discovering the spill;

(b) By official Navy message in the format provided in appendix C (Message Formats) as soon as practicable; and

(c) By updated message as soon as the reporting activity becomes aware of new information concerning the origin, quantity, type, operation under way, root cause, or lessons learned of the spill. Similarly, if the final estimate of the amount released differs substantially from the amount initially reported, the reporting activity must send an updated message to all action and info addresses on the original spill message.

(2) Note: If NRC or state or local authorities are called, or if in doubt, send a Navy message. Sending an OPREP 3, situation report, or other message does not substitute for the requirement to submit the OHS message detailed in appendix C (Message Formats).

c. Message Formats for Oil Spill and HS Release Reports. Appendix C (Message Formats) outlines a format for reporting oil discharges and HS releases to the Navy chain of command.

d. Excess Navy Property. Caretakers shall continue to report OHS spills from excess Navy property until management and control is passed to local reuse authorities.

e. Sheen Sightings. Responsible environmental stewardship and longstanding maritime tradition require COs report to proper authorities any oil on the water's surface discovered in the course of daily operation whether at sea or in port and whether attributable to Navy sources or not. Accordingly, COs shall submit voice and Navy message reports to appropriate Federal, State, local, and military authorities for any oil sheen discovered by naval personnel – even if the cause or source of the spill is unknown. Such reports, however, should not

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speculate as to cause or source and clearly indicate a responsible party cannot be identified from currently available information. No report is needed for discharges from properly functioning vessel engines, or discharges verified by monitoring equipment to contain less than 15 ppm oil, regardless of the presence of sheen. These discharges have been determined not to be harmful and therefore are exempted from the reporting requirements.

f. Penalties. Federal law provides criminal penalties for failure to report OHS spills. In addition, State and local jurisdictions may impose reporting requirements that differ from Federal requirements. Facilities must be aware of the reporting thresholds for the state and local area. This may be particularly true for oil spills that do not reach or threaten to reach navigable waterways.

g. Reporting OHS Spills Outside the United States. When reporting OHS spills outside the United States, facility commanders should refer to the appropriate NOSC plan, FGSs and subsequent SPCR plans for host nation reporting requirements. COs and masters of Navy vessels shall follow policy as described in chapter 35 (Environmental Compliance Afloat).

39-3.7. Natural Resources Trusteeship. NCP regulations assign roles and responsibilities to certain Federal and State agencies to provide for efficient, coordinated, and effective action to minimize damage from oil discharges and HS releases and protect natural resources held in trust for the public (reference (b)). These trustees act on behalf of the public to assess damages and to develop and implement a plan for restoration, rehabilitation, replacement, or acquisition of the equivalent of the natural resources injured, lost, or destroyed as a result of a discharge of oil. After an OHS spill incident, the Secretary of Defense is responsible for protecting natural resources within Navy management and control. For additional discussions of trustee responsibilities and natural resource damage assessment procedures, refer to chapter 41 (Natural Resource Damage).

39-3.8. Health and Safety. The health and safety of Navy personnel and the public shall be the highest priority of all Navy OHS spill response operations. Responders shall comply with all requirements of references (i), (r), (s), and (t), including establishment of a process safety management program to prevent or mitigate catastrophic chemical workplace emergencies and the requirement for employers to have an emergency action plan. In addition, Navy facilities may incorporate HS planning into FRPs

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or SCPs. Regardless of whether HS planning is included in these plans or a separate planning document, Navy facilities shall ensure HS planning is accomplished.

39-3.9. Navy Web Site Reporting. COMNAVSEASYSYSCOM maintains a Web site to coordinate the NOSC review of OHS spill messages for spills within their AOR. NOSCs should validate the reported data on the OHS spill database Web site (refer to appendix E (Web Sites) for Web site address).

39-4 Responsibilities

39-4.1. Naval forces commanders shall:

a. Develop and periodically update an area-wide OHS spill contingency planning instruction specifying NOSC responsibilities for OHS spill contingency planning and response in the AOR and request technical assistance from COMNAVSEASYSYSCOM and COMNAVFACENCOM, as needed;

b. Establish contingency planning and response policies in their areas consistent with this manual;

c. Establish a spill response training program consistent with this chapter and regulatory requirements and request assistance from COMNAVSEASYSYSCOM and COMNAVFACENCOM, as needed; and

d. Pre-designate NOSCs to plan for and direct response efforts to OHS spills throughout their AORs.

39-4.2. Budget submitting offices (BSO) shall:

a. Fund OHS spill response expenditures beyond the capability of the Navy subordinate activity ultimately responsible for the cost of spill cleanup from existing funds;

b. Ensure all staff personnel under their command who have responsibilities in this chapter (including but not limited to safety, public affairs, logistics, legal, comptroller, security, communications, and transportation) receive the general overview spill response training per section 39-3.3 and introductory or executive overview training in emergency response management and become familiar with the provisions of this chapter; and

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c. Ensure facilities fully comply with Federal, State, international, and foreign laws and regulations for spill prevention, preparedness, and response.

39-4.3. Commander, Navy Installations Command (CNIC) shall:

a. Identify and fund shoreside oil spill preparedness and response preparedness requirements;

b. Provide oversight of shoreside NOSC's ensuring all required training, drill, and exercise requirements are met and appropriately documented;

c. Provide oversight of shore installation and facility OHS contingency planning and response requirements ensuring all required training, drill, and exercise requirements are met and appropriately documented;

d. Obtain status of shoreside NOSC and facility plans, exercise accomplishments and requirements, and equipment readiness and provide information to OPNAV (N45) and COMNAVSEASYS COM with an assessment of overall shoreside Navy preparedness to respond to OHS spills worldwide;

e. Integrate OHS spill preparedness and response program requirements into the Navy Shore Installation Emergency Management Program; and

f. Develop and establish a spill response training program policy guidance ensuring all assigned staff personnel who have responsibilities under this chapter (including but not limited to safety, public affairs, logistics, legal, comptroller, security, communications, and transportation) receive general overview spill response training per section 39-3.3 and introductory or executive overview training in emergency response management and become familiar with the provisions of this chapter and request technical assistance from COMNAVSEASYS COM and COMNAVFACECOM, as needed.

39-4.4. COMNAVSEASYS COM shall:

a. As requested by naval forces commanders, provide technical assistance in the development and update of the area-wide OHS spill contingency planning and response instructions;

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- b. Assist fleet NOSCs in the development and updating of NOSC plans with guidance about current worldwide regulatory compliance and in worst case spill scenario planning;
- c. Assist COMNAVFACENGCOM in the development and updating of shoreside NOSC plans to include vessel spills and worst case spill scenario planning;
- d. Develop, issue, and maintain an SOSCP guide;
- e. Maintain a list of current NOSC contact information and provide to ships upon request;
- f. Collect status of fleet and shore NOSC plans, exercise accomplishments and requirements, and equipment readiness;
- g. Collect status of shoreside NOSC plans, exercise accomplishments and requirements, and equipment readiness via CNIC;
- h. Provide OPNAV (N45) with an annual readiness assessment of Navy's spill response program based upon fleet NOSC contingency plan status, CNIC NOSC input, results of training exercises, and OHS spill reports;
- i. Determine requirements for, as well as budget for and obtain investment category equipment for, major and salvage-related spill response;
- j. Ensure sufficient expertise exists to operate Navy's equipment inventory for major and offshore spill events and that equipment is available for immediate response;
- k. As requested, support COMNAVFACENGCOM by providing technical advice to OPNAV (N45) in review of requests by Navy shore commands to participate in spill cooperatives;
- l. Provide a Web-based mechanism for the reporting of lessons learned from major drills, exercises, and spill events;
- m. As requested, assist NAVSAFENVTRACEN with development of technical content of associated training courses;
- n. Upon request and as resources allow, assist NOSCs in meeting WCD exercise requirements for testing and exercising Navy capabilities to respond up to worst case spill scenarios;

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o. Upon request and as resources allow, assist fleet NOSC's in meeting exercise requirements;

p. Upon request and as resources allow, support fleet commanders in execution of various OHS exercises and drills under the overall requirements of the fleet NOSC plans;

q. Ensure Navy's equipment inventory for major and offshore spill events is drilled and exercised per this manual;

r. Notify all Navy regions within the United States indicating the status of these drills and exercises so the regions may take credit for readiness, when appropriate;

s. Maintain a Navywide OHS spill report database and provide Navy periodic and annual reports of OHS release to OPNAV (N45);

t. Assist NOSC's in major OHS pollution response issues as they arise and in decision-making for major or offshore and salvage-related response operations;

u. Provide expertise and equipment at the request of the NOSC for spills exceeding local capability including WCD, offshore, or salvage-related OHS pollution incidents;

v. Provide advice, personnel, and equipment, as appropriate, for joint salvage and pollution operations; and

w. Coordinate with Navy's EM program while carrying out responsibilities under this chapter.

39-4.5. COMNAVFACENGCOM shall:

a. Provide primary support to CNIC to prepare response planning guidance covering the determination and evaluation of response resources for FRPs, spill response equipment planning levels and criteria, and a standardized methodology for calculating equipment requirements and converting plan recovery requirements into spill response equipment types and quantities;

b. Maintain technical, legal, and logistic expertise in the OHS Spill Response Regulatory Program arena and stay abreast of planning developments and changing guidance to provide facilities with accurate up-to-date OHS spill response planning compliance guidance;

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c. Assist shoreside COs with the development of OHS spill contingency and response plans by preparing and maintaining guidance that includes minimum content requirements and essential elements for compliance with current regulations;

d. Assist shoreside NOSC in the development and updating of shoreside NOSC plans to include coordinating with COMNAVSEASYS COM for vessel spills and worst case spill scenario planning;

e. Determine requirements for, as well as budget for and obtain, investment category equipment for inland water and harbor oil discharge control;

f. As requested, provide technical advice to OPNAV (N45) in review of requests by Navy shore commands to participate in spill cooperatives;

g. Provide technical assistance and advise CNIC and other BSOs, as requested;

h. As requested, assist NOSC in the determination of emergency response training needs;

i. As requested by NAVSAFENVTRACEN, provide assistance in the development of technical content for training curricula and courses;

j. Assist shoreside NOSC and facilities in meeting exercise requirements;

k. Coordinate Navy access to USCG BOAs for response to spills beyond the capability of the facility; and

l. Coordinate with Navy's EM program while carrying out responsibilities under this chapter.

39-4.6. NAVSAFENVTRACEN shall:

a. Develop curricula and delivery mechanisms for comprehensive courses of instruction that meet training requirements as referenced in chapter 3 (Environmental Readiness Training) and request assistance from COMNAVFACECOM and COMNAVSEASYS COM in development of technical content of associated training and courses, as applicable; and

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b. Deliver training necessary to meet the requirements of this chapter or as negotiated with sponsors of environmental training.

39-4.7. Fleet NOSCs shall:

a. Develop area-wide fleet NOSC plans per naval forces commander's instructions, coordinate these plans with adjacent shoreside NOSCs, and request assistance from COMNAVSEASYS COM as needed;

b. Coordinate fleet planning and operations and ensure Navy senior officer present afloat (SOPA) instructions contain guidance for fleet OHS spill response consistent with the shoreside NOSC plans;

c. Ensure response plans are approved and signed;

d. Review NOSC plan at least annually and make necessary changes, validate notifications quarterly, and conduct a complete review and submit for signature at least every 5 years;

e. Ensure all staff with OHS response responsibilities are properly trained and maintain their competencies;

f. Conduct spill response exercises to test the validity and effectiveness of the NOSC plan;

g. Promptly notify Federal, State, regional, local, or foreign governments when required. For a vessel spill that produces a visible sheen between 12 NM and 200 NM from the United States, the NOSC shall report the spill to NRC at 1-800-424-8802 or (202) 267-2675 within 24 hours of receiving the initial report from the spilling vessel;

h. Coordinate review of OHS spill messages for spills within the AOR, and validate reported data on the COMNAVSEASYS COM-maintained OHS spill database Web site;

i. At least annually, provide COMNAVSEASYS COM with a status of the NOSC plans and exercises, including accomplishments, upcoming exercises, or plan reviews or revisions through the use of a Web-based database maintained by COMNAVSEASYS COM on a near real-time basis;

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j. Ensure operation orders and instructions containing guidance or policy for fleet OHS pollution response are consistent with fleet NOSC plans and SOPA instructions;

k. Direct response operations and coordinate closely with ongoing fleet salvage operations and request support from COMNAVSEASYSKOM, as needed;

l. Ensure the health and safety of response personnel at any point during on-scene response;

m. Provide coordination and direction for the cleanup of OHS spills from Navy ships outside 12 NM unless otherwise directed by the naval forces commander; and

n. Coordinate with Navy's EM program while carrying out responsibilities under this chapter.

39-4.8. Shoreside NOSC (in U.S. areas) shall:

a. Ensure Navy facilities within assigned AOR can control, contain, and cleanup OHS spills, and evaluate impacts to natural resources;

b. Serve as the FOSC under reference (b) for HS releases when the release is on, or the sole source of the release is from, Navy facilities or vessels within assigned geographic boundaries;

c. Consistent with the cognizant naval forces commander's instructions, develop area-wide NOSC plans, and coordinate the development of the plans with the applicable regional contingency plans (RCP) and ACPs;

d. Ensure an appropriate plan(s) covers all facilities and vessels within their AOR and request assistance from COMNAVFACENGCOM, as needed;

e. Coordinate with other DoD component oil spill contingency (OSC) plans, including Marine Corps plans, to the extent specified by DoD or as required by any Navy or DoD component inter-Service agreement;

f. Maintain the NOSC plan for currency on an annual basis, validate notifications quarterly, conduct a complete review and update of the NOSC plan (including any changes resulting from a

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review of SPCR plan changes within the AOR), and submit it for signature at least every 5 years;

g. Coordinate shoreside NOSC plans with fleet planning and operations;

h. Establish a spill response training program consistent with this chapter and regulatory requirements and ensure all staff with OHS response responsibilities are properly trained and maintain their competencies;

i. Coordinate planning efforts for WCD exercises at facilities within the assigned AOR;

j. Thoroughly review and approve Annual Allowance Requirements Requests (A2R2) from each facility within the assigned AOR, forward a consolidated and prioritized request list to COMNAVFACENGCOM, and coordinate an exercise schedule for all facilities in the NOSC's AOR to affect cost savings and ensure uniformity and effectiveness of the exercises;

k. Accomplish all required exercises and conduct combined exercises, whenever appropriate, to reduce costs and document exercise credit for SMT partnership training conducted jointly or as a single SMT within and serving a specific geographic area;

l. Coordinate with COMNAVSEASYSCOM to ensure facilities within the NOSC's AOR receive credit for oil spill removal organization drills and exercises conducted within the response area;

m. Promptly notify Federal, State, regional, and local authorities of spills in their AOR, per all Navy, Federal, State, and local OHS spill notification procedures;

n. Coordinate review of OHS spill messages, NRC reports, and local reports for spills within their AOR and validate reported data on the COMNAVSEASYSCOM-maintained OHS spill database Web site;

o. At least annually, provide CNIC with a status of plans and exercises for all facilities within assigned AOR including accomplishments and upcoming exercises or plan reviews or revisions through the use of a Web-based database maintained by COMNAVSEASYSCOM on a near real-time basis;

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- p. Coordinate response operations with adjacent NOSCs, including fleet NOSCs, for Navy OHS spills that may have an impact on more than one NOSC region;
- q. Ensure the health and safety of response personnel at any point during on-scene response;
- r. Coordinate response operations with the DoD representative to the regional response team (RRT);
- s. Direct and coordinate response operations closely with ongoing fleet salvage operations;
- t. As needed, coordinate SUPSALV response assistance for spills beyond local capability including incorporation of WCD response into the NOSC plans;
- u. Direct all major response efforts for Navy OHS spills within assigned shoreside boundaries, including coastal areas out to the 12 NM zone unless otherwise instructed by the naval forces commander;
- v. Coordinate with Navy's EM program while carrying out responsibilities under this chapter;
- w. At least annually, provide COMNAVSEASYSYSCOM with a status of the NOSC plans and exercises, including accomplishments, upcoming exercises, or plan reviews or revisions; and
- x. Review RMPs developed per chapter 22 (Clean Air Ashore) for accidental releases of EPA HS regulated under CAA.

39-4.9. Shoreside NOSC (in foreign areas) shall:

- a. Ensure Navy facilities within assigned AOR can control, contain, and cleanup OHS spills, and evaluate impacts to natural resources;
- b. Develop overseas NOSC plans, consistent with the cognizant naval forces commander's instructions, FGS, and OEGBD, and coordinate the development of these plans with applicable host nations;
- c. Ensure an appropriate NOSC plan(s) covers all facilities and vessels within their AOR and request assistance from COMNAVFACENGCOCOM, as needed;

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d. Coordinate with other DoD component OSC plans, including Marine Corps plans, to the extent specified by DoD, or as required by any Navy or DoD component inter-Service agreement;

e. Maintain the NOSC plan for currency on an annual basis, validate notifications quarterly, conduct a complete review, update the NOSC plan (including any changes resulting from a review of such changes within the AOR), and submit for signature at least every 5 years;

f. Coordinate shoreside NOSC plans with fleet planning and operations;

g. Establish a spill response training program consistent with this chapter and regulatory requirements and ensure all staff with OHS response responsibilities are properly trained and maintain their competencies;

h. Coordinate planning efforts for WCD exercises for facilities within assigned AOR;

i. Thoroughly review and approve A2R2 requests from facilities within assigned AOR and forward a consolidated and prioritized request list to COMNAVFACENGCOM;

j. Coordinate an exercise schedule for all facilities under the NOSC's AOR to affect cost savings and ensure uniformity and effectiveness of the exercises;

k. Accomplish all required exercises and conduct combined exercises whenever appropriate to reduce costs;

l. Promptly notify foreign country authorities of spills per foreign country notification requirements and within the guidelines established by the OEBGD and applicable FGS;

m. Coordinate review of OHS spill messages for spills within their AOR and validate reported data on the COMNAVSEASYSCOM-maintained OHS spill database Web site;

n. At least annually, provide CNIC with a status of plans and exercises for all facilities within their AOR including accomplishments and upcoming exercises or plan reviews or revisions of NOSC plans and exercises through the use of a Web-based database maintained by COMNAVSEASYSCOM on a near real-time basis;

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o. Oversee response operations for Navy OHS spills within assigned areas and coordinate response operations with adjacent NOSCs and with applicable foreign nation agencies;

p. Ensure the health and safety of response personnel at any point during on-scene responses;

q. Pre-assign geographic areas for response by Navy shore facilities;

r. As appropriate with host nation agreements, mitigate OHS spills from Navy vessels and activities and reimburse other commands that provide assistance;

s. As needed, coordinate SUPSALV response assistance for spills beyond local capability including incorporation of WCD response into the NOSC plans;

t. Direct all major response efforts for Navy OHS spills within assigned shoreside boundaries, including coastal areas out to the 12 NM zone unless otherwise instructed by the naval forces commander; and

u. Coordinate with Navy's EM program while carrying out responsibilities under this chapter.

39-4.10. Shoreside COs shall:

a. Develop, annually review, and periodically update FRPs, SCPs, or SPCR plans per this chapter, OEBCD, or applicable FGS and coordinate these plans with the NOSC plans;

b. Review FRPs or SCPs for consistency with appropriate state and local environmental and emergency planning authorities;

c. Provide the NOSC with WCD scenarios from completed FRPs or SCPs so these may be incorporated into the NOSC plans;

d. At least annually, provide the NOSC with the status of plans and exercises including accomplishments and upcoming exercises or plan reviews or revisions;

e. Maintain the readiness of the Navy spill response personnel and equipment assigned to the facility;

f. Forward completed A2R2 requests to the NOSC;

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- g. Properly train assigned staff responsible for OHS response;
- h. Tailor training curricula to include state and local emergency response laws and regulations;
- i. Maintain training records and documentation as required by Federal, State, and local regulations;
- j. Accomplish all required exercises and support the regional SMT when requested by the NOSC;
- k. Incorporate drill and exercise requirements into routine business or other emergency drills wherever practicable;
- l. Make all required Federal, State, and local notifications for Navy OHS spills and make Navy chain of command notifications up to the NOSC level;
- m. Oversee response efforts for Navy OHS spills as the FIC within pre-assigned areas until response is completed or relieved by the NOSC. If requested by the NOSC, oversee response efforts outside the facility's boundaries until relieved by the NOSC;
- n. Mitigate OHS spills from vessels and activities and reimburse other commands that provide assistance when appropriate; and
- o. Coordinate with Navy's EM program while carrying out responsibilities under this chapter.

39-5 Definitions

39-5.1. Area Committees. Area committees are the Federal, State, and local agencies that cooperate to prepare an area contingency plan and work with Federal, State, and local officials to pre-plan joint response efforts.

39-5.2. Area Contingency Plan. An ACP is a plan prepared by the area committee to respond to worst case OHS spill scenarios which identifies equipment and personnel available for such response activities. The ACP also identifies and prioritizes sensitive areas and natural resources, identifies strategies for their protection, and pre-approves specific countermeasures and removal actions within the planning area.

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39-5.3. Complex Facility. A complex facility is a facility that possesses a combination of transportation-related and non-transportation-related components subject to the jurisdiction of more than one Federal agency under part 311, paragraph (j) of reference (b).

39-5.4. Discharge. Discharge includes any spilling, substantial threat of spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil. It excludes:

- a. Discharges permitted under CWA;
- b. Discharges resulting from circumstances identified, reviewed, and made a part of the public record regarding a permit issued or modified under CWA, and subject to a condition in such permit; and
- c. Continuous or anticipated intermittent discharges from a point source identified in a permit or permit application under CWA and caused by events occurring within the scope of a relevant operating or treatment system.

39-5.5. Facility. A facility is any structure, group of structures, equipment, or device (other than a vessel) used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting OHS. This term includes any motor vehicle, rolling stock, or pipeline used for one or more of these purposes.

39-5.6. Facility Response Plan. An FRP is a plan of action for facility spill scenarios required for facilities that meet the threshold requirements of the OPA 90 regulations. These plans, which should be coordinated with the local ACP and NOSC OHS plan, identify notification procedures, response and cleanup capabilities, response management organization, environmentally sensitive areas, natural resource protection strategies, and measures to protect human health and safety.

39-5.7. Final Governing Standards. An FGS is a comprehensive set of country-specific substantive environmental provisions containing environmental compliance criteria applicable at DoD installations overseas. FGSs are generally based on the more protective requirements of the OEBGD, host nation or European Union environmental laws and regulations, and applicable international agreements.

39-5.8. Hazardous Substance. An HS is:

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- a. Any substance so designated by CWA;
- b. Any element, compound, mixture, solution, or substance so designated by CERCLA;
- c. Any solid waste having the characteristics identified under or listed pursuant to the Solid Waste Disposal Act but not including any waste suspended by an Act of Congress;
- d. Any hazardous air pollutant listed under CAA;
- e. Any imminently hazardous chemical substance or mixture upon which EPA has regulated under the Toxic Substances Control Act; however;
- f. The term does not include:
 - (1) Petroleum, crude oil, any refined product (such as gasoline, diesel, or fuel oil), or synthetic oil not otherwise specifically listed or designated as a hazardous substance under CERCLA, CWA, or Safe Drinking Water Act;
 - (2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures thereof);
 - (3) Sewage or sewage and water mix, aqueous film forming foam; or
 - (4) Other substances not specifically designated by the laws cited above.

39-5.9. Incident Command System. An ICS is an emergency response structure that defines roles and responsibilities to be used during crisis response or planning. The ICS consists of an individual in charge of the incident and four functional groups (operations, logistics, planning, and finance and administration) that support the incident. During major incidents, including OHS spills, Federal agencies establish an ICS under the National Response System. State agencies may also establish an ICS. An ICS becomes a "unified command system" when the party responsible for the spill works jointly with State and Federal agencies. Where the Navy is potentially responsible, the Navy's designated incident commander, the state on-scene coordinators, and the FOSC make up the unified command. Reference (u) mandates the use of NIMS for all federal crisis response. ICS forms a part of the NIMS.

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39-5.10. National Incident Management System. NIMS is a standardized approach to all hazards incident management and response, which includes OHS spills. Implemented by the Department of Homeland Security in March 2004, it provides a consistent nationwide approach for Federal, State, local, and tribal governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

39-5.11. National Oil and Hazardous Substances Pollution Contingency Plan. Per reference (b), the NCP is the legal framework for Federal government OHS pollution contingency planning and response above the facility level. The NCP describes the RRT and the NRC and designates the roles and responsibilities of DoD in national OHS spill response planning.

39-5.12. Navigable Waters

a. "Navigable waters" or "navigable waters of the United States" means, except where Congress has designed them not to be navigable waters of the United States:

(1) Territorial seas of the United States;

(2) Internal waters of the United States that are subject to tidal influence; and

(3) Internal waters not subject to tidal influence that:

(a) Are or have been used, or are or have been susceptible to use, by themselves in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage, or

(b) A governmental or non-governmental body, having expertise in waterway improvement, determines to be capable of improvement at a reasonable cost (a favorable balance between cost and need) to provide, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce.

b. Navigable waters of the United States and navigable waters, as used in reference (v), mean:

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(1) Navigable waters of the United States as defined in paragraph (a) of this section and all waters within the U.S. tributary thereto; and

(2) Other waters over which the Federal government may exercise constitutional authority.

39-5.13. Oil. Oil is any animal, vegetable, synthetic, or petroleum-based oil of any kind or in any form, including, but not limited to, fuel oil, sludge, oil refuse, oil mixed with wastes other than dredge spoils and refined products such as gasoline, diesel, jet fuel, cooking oil, and synthetic, hydraulic, and lube oils.

39-5.14. Public Vessel. A public vessel is owned (or bareboat chartered) and operated by the United States, or by a state or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

39-5.15. Qualified Individual

a. A QI is the individual identified in spill response plans (such as the FRP or NOSC plan) who:

(1) Is available on a 24-hour basis and able to arrive at the facility in a reasonable time;

(2) Is familiar with the implementation of the plan;

(3) Is trained in the responsibilities of the QI under the plan;

(4) Has authority to activate the OHS spill response organization;

(5) Has authority to direct the obligation of funds required to carry out response activities; and

(6) Will act as a liaison with the predesignated FOSC.

b. NOSCs and facility commanders are assigned these responsibilities but may delegate QI responsibility to trained personnel in their respective plans.

39-5.16. Regional Contingency Plans. RCPs are developed by the RRT to assist the FOSC in the event that an incident exceeds the response capabilities identified in the ACP. Among other things,

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the RCP sets forth criteria for issues such as the use of alternative response techniques (such as dispersants and in-situ burning).

39-5.17. Regional Response Team. The RRT is the federal response network under the NRT, consisting of representatives from regional, Federal, and State agencies. There are 13 RRTs, one for each of the 10 standard Federal regions and one each for Alaska, Oceania (Hawaii and the U.S. Pacific islands), and U.S. Caribbean Islands. DoD is a member of each RRT and assigns an executive agent from one of the services to each RRT. Navy represents DoD at RRT regions I, III, and IX.

39-5.18. Release. A release is any spilling or substantial threat of spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any HS (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any HS, pollutant, or contaminant). The term "release" excludes:

- a. Any spilling, leaking, etc. that results in exposure to persons solely within a work place;
- b. Emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine;
- c. Spilling, leaking, etc. of source, byproduct, or special nuclear material from a nuclear incident subject to the jurisdiction of the Nuclear Regulatory Commission, or any spilling, leaking, etc. of source, byproduct, or special nuclear material from any processing site designated under reference (w); and
- d. The normal application of fertilizer or insecticides, herbicides, rodenticides, fungicides, biocides, and other pesticide products whose registration and use is managed by the Federal Insecticide Fungicide and Rodenticide Act.

39-5.19. Reportable Quantity. A reportable quantity is a release of a CERCLA or EPCRA listed HS or EHS exceeding the threshold planning quantity (TPQ) for reporting the substance (reference (p)). HS or EHS releases that equal or exceed these TPQs must be reported to Federal, State, and local authorities immediately upon discovery.

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39-5.20. Responsible Party. The responsible party is the person or persons who have caused, or could potentially cause, a HS release or oil discharge, including the following categories:

a. Vessels: Any person owning, operating, or bareboat chartering a vessel, other than a public vessel;

b. Onshore Facilities (other than a pipeline): Any person owning or operating the facility, except where possession and right to use the property has been transferred to another person by lease, assignment, or permit; and

c. Offshore Facilities (other than a pipeline or a deepwater port licensed under reference (x)): The lessee or permit holder of the area in which the facility is located or the holder of a right of use or easement granted under applicable state law.

39-5.21. Significant and Substantial Harm. Under OPA 90 regulations, EPA; USCG, Minerals Management Service; and PHMSA can identify certain facilities as being able to cause "significant and substantial" harm to the environment upon a release of oil. Regulators base their determinations on factors similar to the criteria to determine "substantial harm" as well as the age of tanks, proximity to navigable waters, and spill frequency. Facilities identified as being able to cause "significant and substantial harm" must have their FRP submitted to the applicable regulators.

39-5.22. Spill. The term "spill" is used to include both releases of HS and discharges of oil.

39-5.23. Spill Contingency Plan. An SCP is a plan of action for facility spill scenarios which identifies, among other items, notification and response procedures. An SCP is used by facilities that are not required to meet the OPA 90 threshold requirements for FRP development. The magnitude and scope of the SCP is commensurate with storage capacity, facility operations, and spill risks. It should address OHS issues.

39-5.24. Substantial Harm. A "substantial harm" facility is one that could reasonably be expected to cause harm to the environment by discharging oil into or on navigable waters.

39-5.25. Sunken Navy Vessel. A sunken Navy vessel is an older, historic vessel that has been sunk due to armed conflict, acts of God, or other reason. Navy retains title over these vessels wherever located.

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39-5.26. Territorial Sea. For purposes of CWA jurisdiction, territorial sea means the belt of seas measured from the ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit on inland waters, and extending seaward a distance of 3 miles. Per reference (y), the United States declared a 12 NM territorial sea for international law purposes. The territorial sea is thus considered 12 NM for the purposes of interpreting international law, and for any other treaty, statute, or regulation, or amendment thereto, interpreted by USCG as incorporating the definition of territorial sea as being 12 NM wide, adjacent to the coast of the United States and seaward of the territorial sea baseline.

39-5.27. United States. The United States is comprised of the 50 states, District of Columbia, Commonwealth of Puerto Rico, Commonwealth of the Northern Mariana Islands, Guam, American Samoa, U.S. Virgin Islands, and any other territory or possession over which the United States has jurisdiction.

39-5.28. Vessel. A vessel is every type of watercraft or other artificial conveyance used, or capable of being used, as a means of transportation upon the navigable waters of the United States.

39-5.29. Worst Case Discharge. A WCD is the largest foreseeable discharge in adverse weather conditions. For specific information on calculating WCD, consult references (d), (e), (f), or (g).

CHAPTER 42

ENVIRONMENTAL RESTORATION

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42-1 Scope. This chapter discusses Navy's Environmental Restoration (ER) Program which includes two components, the Installation Restoration Program (IRP) and the Munitions Response Program (MRP). The purpose of the IRP is to identify, investigate, and cleanup or control releases of hazardous substances (HS), pollutants, and contaminants from past waste disposal operations at Navy commands. The purpose of the MRP is to address environmental and safety hazards from munitions and explosives of concern (MEC) and munitions constituents (MC) used or released on-site from past operations and activities. All IRP requirements identified in this chapter also apply to the MRP. However, there are some MRP requirements that do not apply to installation restoration (IR) and, as such, are identified in section 42-3.28.

42-1.1. Related Chapters. Chapter 15 (Operational Range Assessments), chapter 20 (Clean Water Ashore), chapter 21 (Safe Drinking Water Act Compliance Ashore), and chapter 27 (Hazardous Waste Management Ashore) provide information relevant to the ER Program.

42-1.2. References

(a) DoD Manual 4715.20, Defense Environmental Restoration Program (DERP) Management, March 2012

(b) DoD Instruction 4715.7 of 22 April 1996

(c) 40 CFR 300

(d) 42 U.S.C. §9601-9675

(e) E.O. 12580, Superfund Implementation, as amended

(f) Department of the Navy, Environmental Restoration Program Manual, August 2006

(g) OASN(I&E) Memorandum of 26 Oct 1995, Department of the Navy Environmental Policy Memorandum 95-04, Guidance for Environmental Restoration Program at Active Bases

(h) CNO ltr 5090 Ser N45/5U901466 of 15 Nov 05

- (i) CNO ltr 5090 Ser N453E/1U595846 of 21 Dec 01
- (j) CNO ltr 5090 Ser N453/8U158104 of 29 Apr 08
- (k) CNO ltr 5090 Ser N45C/N4U732212 of 30 Jan 04
- (l) 29 CFR 1910.120
- (m) Naval Sea Systems Command OP-5, Volume 1, Seventh Revision, Ammunitions and Explosive Safety Ashore, (NOTAL)
- (n) CNO ltr 5090 Ser N453/11U158119 of 7 Jun 11
- (o) CNO ltr 5090 Ser 453C/4U596021 of 9 Feb 94
- (p) 10 U.S.C. §2705(e)
- (q) OPNAV ltr 5090 Ser N453/10U158072 of 18 Feb 10
- (r) ASN(EI&E) Memorandum of 28 Jan 2002, Department of the Navy Policy Memorandum 02-01, Third Party Sites and Affirmative CERCLA Claims
- (s) DON Environmental Policy Memorandum 06-06 of 5 Jul 2006, Streamlined Environmental Procedures Applicable to Non-BRAC Real Estate Action
- (t) 10 U.S.C. §2710
- (u) 32 CFR 179
- (v) CNO ltr 5090 Ser N45C/6U838171 of 3 Aug 06

42-1.3. Applicability. Reference (a) describes ER Program eligibility requirements and eliminates certain eligibility cutoff dates previously in effect. Therefore, IR sites where releases occurred after 17 October 1986 and MR sites where releases occurred after 30 September 2000 are now eligible for inclusion in the ER Program. Per reference (b), the ER Program is limited to installations within the United States and its territories and possessions, and does not apply in foreign countries.

42-2 Legislation

a. The following legislation contains provisions that pertain to restoration of Department of Defense (DoD) facilities:

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(1) Community Environmental Response Facilitation Act (CERFA);

(2) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);

(3) Resource Conservation and Recovery Act (RCRA); and

(4) Superfund Amendments and Reauthorization Act (SARA).

b. A summary of this legislation is included in appendix A (Laws and Regulations).

42-3 Requirements

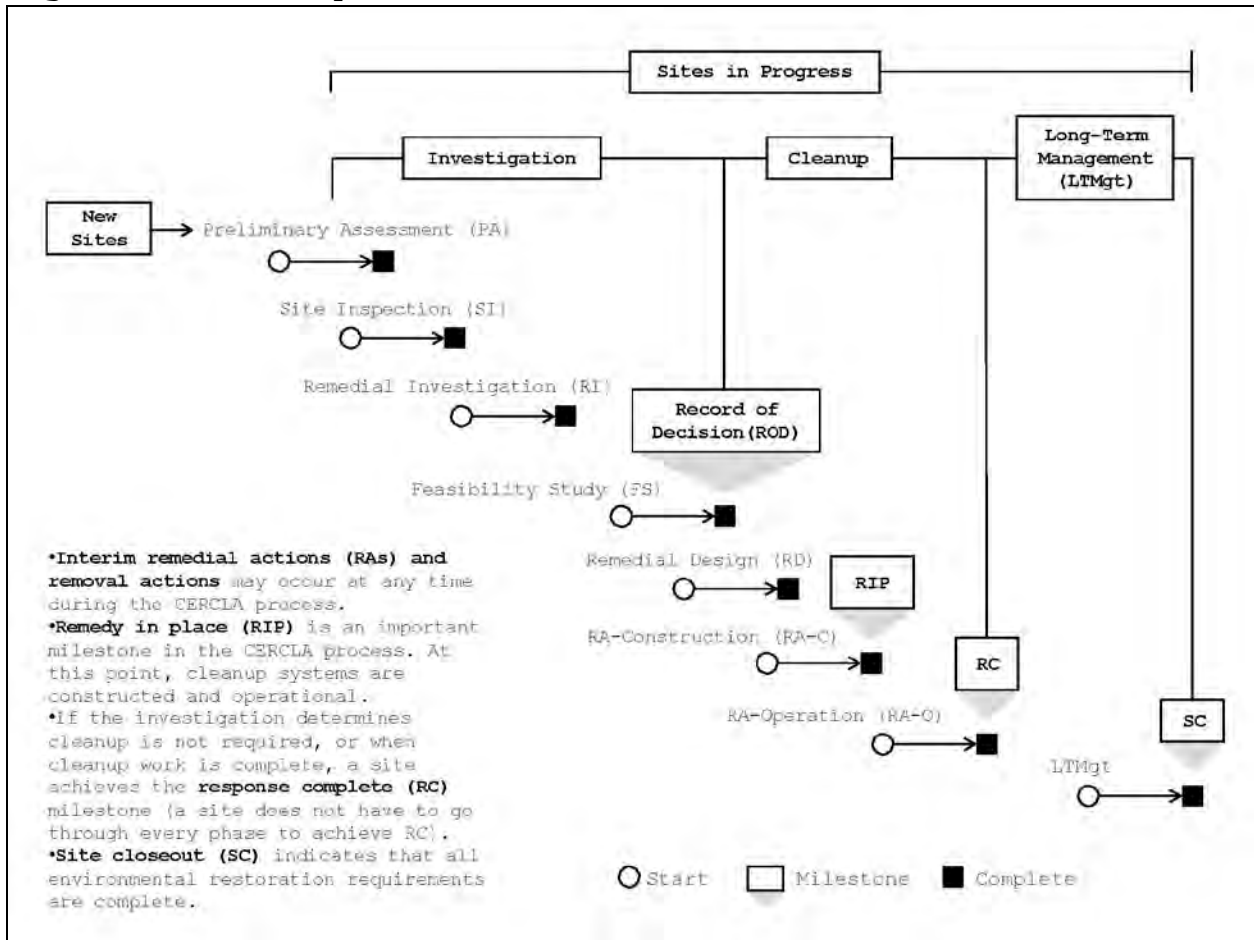
42-3.1. Environmental Restoration Process

a. Department of the Navy (DON) is the lead agency for conducting response actions at Navy IR and MR sites following the provisions of references (c), (d), and (e). Although CERCLA is the preferred process for conducting response actions, the Environmental Protection Agency (EPA) and states also have authority to impose corrective action under RCRA. During all phases of the CERCLA program, Navy should attempt to incorporate the regulator's substantive requirements to the maximum extent possible and resolve any issues in a manner consistent with both parties' delegated authorities. Additional information is provided in reference (f).

b. The National Oil and Hazardous Substances Contingency Plan (NCP) established by reference (c) sets forth general procedures for initiating and carrying out the remedial process under the ER Program. Navy shall follow EPA guidance in determining reasonable interpretation and application of the NCP regulations. The phases and milestones for implementing the cleanup process are shown in figure 42.1 and described in sections 42-3.3.a through q. Additional information on the cleanup process can be found in reference (f).

c. Navy shall comply with all applicable requirements of CERCLA, SARA, and RCRA in carrying out actions under its ER Program using terminology consistent with that used in the relevant legislation. Navy shall not adopt any guidelines or rules inconsistent with EPA's guidelines and rules.

Figure 42-1. Navy ER Process



d. The Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) Base Realignment and Closure (BRAC) Program Management Office (PMO) administers the BRAC ER Program. Generally, all policies that apply to active installation sites also apply to BRAC response actions.

42-3.2. Funding. Congress provides funding for ER Program response actions through an Environmental Restoration, Navy (ER,N) account for active installations and the BRAC account for installations sites designated for closure. Per reference (g), it is DON policy to use ER,N or BRAC accounts as the exclusive source of funding for ER Program execution. Other types of funding are not authorized as a substitute or supplement for ER,N and BRAC funds except where the work is within the scope of the military construction (MILCON) or operations and maintenance (O&M), Navy-funded construction projects.

a. ER,N funds can be used for RCRA corrective action for past releases of hazardous waste (HW) at permitted facilities, or

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facilities seeking permits, if these are the same types of releases covered by the ER Program (reference (g)). Although CERCLA contains a petroleum exclusion, releases of petroleum, oils, and lubricants (POL) are eligible for ER,N funding under RCRA or other applicable authorities consistent with the Defense Environmental Restoration Program (DERP).

b. Depending on the timing of the spills or leaks involved, Defense Logistics Agency and Defense Energy Support Center (DLA and DESC) will fund remediation costs associated with MILCON projects for POL facilities on Navy installations. Reference (h) provides that DLA and DESC will fund remediation of contamination that occurred after DLA capitalized the existing Navy facility, generally either 1 October 1992 or 1 October 1995. Contamination resulting from leaking or spilling that occurred prior to DLA capitalization remains Navy's responsibility and is eligible for ER,N funding.

c. Per section 4.4 of reference (a), immediate or short-term response actions required to limit or mitigate a spill or release caused by current operations are not addressed by the ER Program and must be funded by installation O&M accounts. However, any required long-term RAs to address spill residuals are covered by the ER Program.

d. DON uses the Defense and State Memorandum of Agreement Program or Navy Cost Reimbursement Cooperative Agreement Program to provide funds to state regulatory agencies for ER Program oversight costs. Reference (f) includes additional information on these programs.

e. In exceptional circumstances, certain other issues, such as off-base contamination at third party sites, may be eligible for funding after consultation with the Office of the Chief of Naval Operations, Energy and Environmental Readiness Division (OPNAV (N45)).

42-3.3. Cleanup Process

a. General Procedures. The NCP sets forth general procedures for initiating and carrying out the remedial process under the ER Program. The phases and milestones for implementing the cleanup process are shown in figure 42.1 and described in the following sections. Additional information on the cleanup process can be found in reference (f).

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b. Review and Negotiation. EPA, appropriate state and local officials, and the public must have an opportunity to review and comment on assessments, studies, and proposals for removal or RAs. In addition, Navy shall negotiate schedules and procedures with state and federal regulators early in the study process. For national priorities list (NPL) sites, EPA is the lead regulator while the state is the lead regulator for non-NPL sites. Failure to meet approved regulatory schedules under both scenarios could lead to fines and penalties.

c. MRP Response Actions. MRP response actions also follow the CERCLA process. In most cases, sites known or suspected to contain MEC or MC should not be released from Navy control until munitions response (MR) actions consistent with the reasonably anticipated land use are completed per a DoD Explosive Safety Board (DDESB) approved explosive safety submission (ESS).

d. Knowledge of a Release. The commanding officer (CO) of the Navy installation must immediately report a release of a reportable quantity of HS to the National Response Center (NRC) at 800-424-8802 per CERCLA Section 103(a). The reportable quantities can be found in section 9603, paragraph a of reference (d). If notification to the NRC is not practical, the U.S. Coast Guard on-scene coordinator (OSC) or EPA regional OSC should be notified. The appropriate Federal, State, and local regulatory agencies must also be notified of the release.

e. Discovery and Notification. Reference (c) requires the immediate notification to regulatory agencies upon the discovery of HS, hazardous constituents, MEC, or MC that has been released to the environment.

f. Federal Agency HW Compliance Docket. EPA established a Federal Agency HW Compliance Docket that contains information on federal facilities that manage HW or from which a reportable quantity of HS have been released. A list of the facilities is published in the Federal Register. The docket is updated every 6 months through a process that involves collaboration between EPA, lead Federal agency, states, and tribes as necessary to ensure sites are properly listed. Navy shall submit a PA or SI, as appropriate, including sufficient information for preparing a hazard ranking system scoring package to EPA for each listed site within a reasonable timeframe.

g. Preliminary Assessment and Site Inspection

(1) The PA phase identifies potentially contaminated

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sites based mostly on review of existing information on disposal practices on the installation. The SI phase will include limited field data. At the conclusion of the PA or SI phase, sites are either determined to have no further action (NFA) or they will move forward in the cleanup process. The site designated NFA may be included in a ROD if acceptable to all stakeholders.

(2) An NFA determination is appropriate when, based on the historical and physical evidence collected, it is determined that either no HS, pollutants, or contaminants that are the responsibility of DON are present at the site, or no releases of HS, pollutants, or contaminants that are the responsibility of DON are present at the site at concentrations that pose a significant threat to public health or the environment.

h. Remedial Investigation and Feasibility Study

(1) The RI phase includes a sampling and analysis program that is adequate to determine the nature and extent of contamination and baseline human health and ecological risk assessments (ERA). If it is determined that RA is necessary, a FS is conducted which includes an initial screening and a detailed evaluation of remedial alternatives. Sites may also be designated as NFA at the RI/FS phase if it is determined that they do not pose an unacceptable risk to human health and the environment. The NFA will be documented in a ROD.

(2) Per reference (i), if there are any natural resources potentially impacted by Navy releases of HS, the injury to natural resources shall be investigated during the ERA process in the RI phase. Natural resources trustees (NRT) shall be consulted as appropriate during the ERA. To the extent practicable, a response alternative that addresses and minimizes the natural resources injury (NRI) shall be selected during the FS. NRI, the actual harm or injury to a natural resource, is separate and distinct from natural resource damage (NRD). NRD, the monetary value assessed for the injury, is addressed in section 42-3.5.

i. Proposed Plan. At the conclusion of the RI/FS phase, the preferred alternative is identified in a proposed plan. To be consistent with the NCP, the selected remedy must be protective of human health and the environment, attain all state and Federal applicable or relevant and appropriate requirements (ARAR) for that site, be cost-effective, and use permanent treatment technologies or resource recovery technologies to the maximum extent practicable. This document is made available for public

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and regulatory review. A responsiveness summary addressing all stakeholder issues is then prepared by DON at the end of the comment period.

j. ROD and Other Decision Document

(1) The ROD or other decision document (DD) is a formal decision document that describes the remedy selection process and the pertinent features of the RA. A ROD is prepared for NPL sites while a DD is prepared for non-NPL sites. The ROD must document any significant changes from the proposed plan and respond to all comments, written and oral, received during the comment period.

(2) COMNAVFACENGCOM shall provide a draft ROD or DD and a recommendation of action to the CO of the Navy installation or COMNAVFACENGCOM BRAC PMO, as appropriate. If the CO or COMNAVFACENGCOM BRAC PMO concurs with the proposed ROD or DD, then he or she shall sign it. If the CO or COMNAVFACENGCOM BRAC PMO disagrees or has questions on the document, he or she shall present the issues to COMNAVFACENGCOM for discussion and resolution. For NPL sites, the CO or COMNAVFACENGCOM BRAC PMO forwards the ROD to the EPA regional office for concurrence. As required under CERCLA Section 117(b), Navy must publish notice of the final ROD and make it available to the public in the administrative record (AR) before adopting any plan for RA.

(3) Although a ROD is not required under reference (d) at non-NPL sites, a DD shall still be prepared and submitted for regulatory agency review. Where such requirements apply, COMNAVFACENGCOM shall prepare a DD for submittal by the installation. If the state remediation law contains no specific requirements for decision documentation, COMNAVFACENGCOM shall prepare a DD that contains the elements of a ROD. If the CO or COMNAVFACENGCOM BRAC PMO concurs with the DD, he or she shall sign and forward the DD to the state with a copy to EPA.

k. Remedial Design. After the ROD is signed, Navy will initiate the RD for the selected remedy. This phase involves the preparation of detailed design of the proposed RA selected in the ROD or DD.

l. RA - Construction. The designated remedial system is constructed at the site during this phase. The RA commences after completion of the RD with the execution of the RD by in-house forces or the award of a contract to construct or implement the selected alternative.

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m. Remedy in Place. This milestone in the cleanup process is achieved when the construction of the long-term remedy is complete and the remedy is operating as planned. Determination of achieving the RIP milestone is a Navy decision and regulatory concurrence for this milestone is not needed.

n. RA - Operation. This phase involves the operation, maintenance, and monitoring actions for the remediation system and site. Periodic monitoring reports are prepared during this phase to document the performance of the remediation system.

o. Response Complete. This milestone signifies the cleanup objectives have been met per the ROD or DD. Navy will prepare an RA completion report (RACR) when all RA objectives have been met and the site is protective of human health and the environment. Navy should seek written EPA and state concurrence on the RACR. A final RACR should be prepared once the RA objectives have been met at the last site or operable unit (OU) of an installation. The final RACR should provide a summary and reference for all the previous RACRs and for any NFA ROD(s) for the installation. The individual RACRs or final RACR for an installation provides the basis for partial or full deletion from the NPL.

p. Long-Term Management. Following RC, this phase might be required to monitor the long-term effectiveness of the remedy. This phase is required at sites where HS, pollutants, contaminants, MECs, or MCs remain on a site after RC, and are above levels that allow for unlimited use or unrestricted exposure. Activities conducted during this phase may include long-term monitoring, implementing or managing land use controls (LUC), maintaining a containment cap, and preparing 5-year review reports. The start of construction acts as the trigger date for the 5-year review process for sites that require an RA-C phase. For remedies that require an RA-O phase (e.g., monitored natural attenuation or institutional controls), the remedy start date and trigger date is the ROD signature date.

q. Site Closeout. This milestone signifies Navy has completed active management and monitoring, the remedy is protective of human health and the environment, no restrictions on future land use are needed, and no additional ER,N or BRAC funds are expected to be expended at the site. However, some sites will achieve protectiveness of human health and the environment while never achieving the SC milestone. These include sites where contaminants are left in place, such as landfills, and require future funding to ensure the

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protectiveness of the remedy. The SC milestone can occur at any stage of the restoration process including PA, SI, removal actions, RI/FS, RA-O, or LTMgt phases.

42-3.4. Vapor Intrusion

a. The vapor intrusion (VI) pathway shall be evaluated at Navy ER Program eligible sites contaminated with a chemical compound or compounds that is or are sufficiently volatile to pose an unacceptable VI risk into overlying or nearby existing structures and that meet certain conditions specified in section 6c(1) of reference (a). The VI pathway evaluation can be made at any point in the response process (e.g., investigations, remediation, 5-year reviews) and shall be conducted per references (a) and (j).

b. All VI pathway investigations and response actions shall be consistent with the Navy's policy on background chemical levels (reference (k)) to include establishing and eliminating background chemicals as contaminants of potential concern during the screening steps of an investigation. ER,N or BRAC funds shall not be used to address indoor air contamination due to background or operational sources.

c. Screening tools such as mathematical models may be used to indicate whether a detailed VI pathway investigation and site-specific risk assessment are warranted. When a site-specific risk assessment indicates an unacceptable risk to human health due to a release to the environment that is the responsibility of the Navy, appropriate response actions shall be conducted in any impacted existing structures. Risk-based methodologies, including the use of site-specific exposure scenarios, will be used to evaluate the VI pathway for all residential and commercial settings. When applicable, Occupational Safety and Health Administration (OSHA) standards and workplace requirements will be considered and appropriately incorporated when evaluating potential exposures related to the VI pathway for industrial settings. When there are no existing structures overlying or near a potential VI pathway, the potential VI risk shall be documented and the appropriate notices provided per section 6c(4) of reference (a).

d. When response actions are warranted, the selected remedy must be protective of human health in existing buildings and allow for continued land use at active installations. To the extent practicable, the remedy should also be appropriate for the reasonably anticipated future land use at BRAC installations.

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e. Pursuant to CERCLA Section 120(h), in cases where the Navy has conveyed property, the Navy will only become re-involved at the site if the current land owner or regulatory agency demonstrates the existence of a complete VI pathway from a former Navy ER source area. For the Navy to become re-involved at the site and take action, the incremental risk must be above risk-based levels, or OSHA standards where appropriate, based either upon existing Navy land use at the time of transfer or according to Navy imposed LUCs on the property.

42-3.5. Natural Resource Damage and Natural Resource Damage Assessment. Per reference (i), ER,N and BRAC funds are used to evaluate and remediate sites that have been contaminated by past Navy releases of CERCLA HS. Paying NRD and conducting NRD assessments (NRDA) are not ER,N or BRAC funding eligible. Damages are assessed on the injury to the natural resource by the NRTs. NRD can only be recovered by the NRTs and must be obtained using the legal system. For Navy purposes, NRD is a claim against the U.S. government for natural resources injured by Navy. The Department of Justice (DOJ) Judgment Fund typically represents Navy in the defense of such NRD claims. For further information on NRD and NRDA, refer to chapter 41 (Natural Resource Damage).

42-3.6. Emergency Response

a. Under references (c), (e), and CERCLA Section 104, DON has the authority to respond to emergency situations (i.e., those circumstances that may immediately endanger human life, health, or the environment) where the release or threatened release is on, or the sole source of the release is from, a Navy facility. If a site appears to be causing an emergency situation, Navy is responsible for taking appropriate action to protect the public and the environment from the threat.

b. In situations where prompt action is required to address releases or threatened release, the NCP allows for the implementation of a removal action to be performed in an expedited manner. EPA categorizes removal actions in three ways; emergency removal actions, time critical removal actions, and non-time critical removal actions. These categories are based on the type of situation, the urgency of the threat of the release, and the subsequent timeframe in which the action shall be initiated. A removal action could be either the final remedy or an interim action, followed by a longer-term RA as the final remedy.

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42-3.7. Interagency Agreement and Federal Facility Agreement.

CERCLA requires Federal agencies to enter into an interagency agreement (IAG) with EPA within 180 days after completion of each RI/FS for a NPL site. The IAG addresses the expeditious completion of all necessary RAs. To expedite the entire cleanup process, DON shall enter into a federal facility agreement (FFA) with EPA at NPL sites as early as possible after identifying the requirement for an RI/FS. The purpose of an FFA is to define the procedural framework and schedule for developing, implementing, and monitoring response actions at the site earlier in the process than an IAG. An FFA becomes an IAG for an OU or site cleanup at an installation once the ROD is signed and new schedules are negotiated for the actual RA. After negotiations with the regulators, FFAs shall be forwarded with appropriate endorsements via the chain of command and OPNAV (N45) to the Deputy Assistant Secretary of the Navy (Environment) (DASN(E)) for signature. For non-NPL sites, a federal facility state remediation agreement may be signed but is not required.

42-3.8. National Priorities List Delisting. EPA may delete a site or re-categorize it on the NPL where no further response is appropriate. EPA, in consultation with the state, will determine whether the NPL site has met the requirements and, if it has, will prepare a notice of intent to delete. Usually, all sites within a federal installation must have achieved RC before delisting from the NPL, although partial delisting are possible.

42-3.9. Administrative Record

a. The NCP requires the establishment of an AR for all cleanup sites under the authority of the NCP. The AR contains those documents which form the basis for selection of a response action. Navy must establish an AR and make it available to the public at the start of the RI for RAs, or at the time of the engineering evaluation and cost analysis for removal actions. The AR shall be initiated as soon as the SI shows the program will move into the RI/FS phase.

b. A copy of the AR will be placed in an information repository that is available to the public at or near the site. The information repository is a location where current information, technical reports, and reference materials including site-related documents that may or may not be suitable for inclusion in the AR file are housed. A notice of the availability is part of the record. The AR is a CERCLA requirement. Although not required where Navy conducts cleanup

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actions under RCRA corrective action authority, an AR shall be maintained at all cleanup sites, including RCRA sites. Subpart I of reference (b) and reference (f) include additional information on recordkeeping.

42-3.10. Retention of Records. CERCLA requires that any person responsible for providing notification of known, suspected, or likely releases retain records of the facility and the HS release for 50 years. For installations on the NPL, the trigger is the date the installation NPL de-listing announcement appears in the Federal Register. For non-NPL installations, the trigger is the date the NFA or facility closeout document is finalized. The records include information on the location, title, and condition of the facility and the identity, characteristics, quantity, origin, or condition (including containerization and previous treatment) of any HS contained or deposited on the facility. It is unlawful to destroy, mutilate, conceal, or falsify such records.

42-3.11. Protection of Health and Safety. Response actions under the NCP must comply with the provisions for health and safety protection for workers engaged in HW operations, found in reference (l). Additional safety concerns are required under the MRP and for any incidental MEC or MC found at IR sites per reference (m).

42-3.12. Five-Year Reviews

a. If an RA results in HS, pollutants, or contaminants, including MEC and MC, remaining at the site above levels that allow for unlimited use and unrestricted exposure, the remedy must be reviewed no less than every 5 years thereafter per reference (n).

b. With respect to MEC or MC, Navy will evaluate MR sites that cannot achieve unrestricted land use. The continued protectiveness of the remedy will be verified and the efficacy and cost-benefit of new technology application will be evaluated. This evaluation includes a determination whether the new technology will reduce life-cycle management costs sufficiently to justify additional MR actions.

42-3.13. Public Health Assessment. Agency for Toxic Substances and Disease Registry (ATSDR) must perform a public health assessment for each facility listed or proposed for inclusion on the NPL. ATSDR will perform the assessment using available information from IR studies and from site visits. Navy shall

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coordinate with ATSDR concerning public health assessments by ensuring ATSDR is aware of new NPL listings.

42-3.14. Fines and Penalties. The installation shall not pay fines and penalties assessed concerning ER work that is currently ER,N funded, or planned for future ER,N funding, out of installation operating accounts. Upon receipt of a notice of violation or non-compliance that proposes to assess a fine or penalty relating to work that is ER,N eligible, and thus under the cognizance of COMNAVFACENGCOM, the installation shall immediately forward the notice to COMNAVFACENGCOM for action. Installations shall pay fines and penalties related to ongoing HW operations (actions that are not eligible for ER,N funding) from the installation's operating account. Any fines or penalties assessed against BRAC sites shall immediately be forwarded to the COMNAVFACENGCOM BRAC PMO for action.

42-3.15. Public Participation. The function of public participation activities is to inform the community of planned and ongoing activities, give them an opportunity to comment on and provide input on technical decisions, and allow them to address environmental concerns as early as possible during the remedial process. Opportunities for public participation begin at initiation of the ER process and continue through cleanup. Navy public participation requirements, described in detail in reference (f), are more comprehensive than the NCP.

42-3.16. Restoration Advisory Board

a. Navy policy, per references (a) and (o), is to have a restoration advisory board (RAB) at all installations with cleanup programs. However, community interest is a condition to establish and maintain a RAB. If the community does not display an interest in establishing or maintaining a RAB, Navy shall note this and re-investigate community interest in the RAB every 5 years until SC per reference (a).

b. By increasing the diversity and number of community representatives, establishing a community co-chair, and opening meetings to the public, RABs shall ensure all stakeholders have an increased opportunity to actively participate in the timely review of ER documents and plans and to present various points of view for careful consideration. At base closure installations, RABs serve to help facilitate accelerated cleanup and property transfer. RABs shall not make decisions on ER activities as a group, but shall provide information, suggestions, and community input for use by Navy in making decisions on actions concerning

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releases or threatened releases. ER,N or BRAC funding, as appropriate, is used for RAB support.

42-3.17. Technical Assistance for Public Participation. Opportunities for technical assistance through DoD's Technical Assistance for Public Participation (TAPP) Program are made available to community members of RABs per reference (p). TAPP provides funding for RABs to buy independent (third party) technical expertise that may assist them in understanding or evaluating technical documents, concepts, or other information related to the restoration activity. Community members of a RAB may ask the CO or appropriate DoD official for assistance. All TAPP requests are approved by the installation CO for eligibility. Reference (f) contains additional information on the TAPP Program.

42-3.18. Regulatory Coordination. CERCLA exempts actions occurring entirely on-site that are consistent with CERCLA Section 121 from obtaining Federal, State, or local permits. However, substantive requirements must be followed and therefore interagency coordination is often required to ensure consistency with ARARs or other environmental laws. To assist in this interaction, early involvement of other Navy specialists, including natural and cultural resources personnel, is required to ensure identification and completion of the Endangered Species Act Section 7 consultations, National Historic Preservation Act Section 106 consultations, and related requirements. These requirements may occur at any phase of an ER Program investigation including PA, SI, RI/FS, removal action, interim action, or RA. ER Program actions that follow the NCP and fulfill public participation requirements are deemed to have complied with the National Environmental Policy Act.

42-3.19. Cleanup Management Review. The cleanup management review is conducted annually by the Deputy Under Secretary of Defense (Installations and Environment) (DUSD(I&E)). The purpose of the review is to provide oversight, share information, and conduct a detailed assessment of DoD component efforts to implement the DERP. This review is a critical mechanism to ensure the cleanup program is moving toward completion per departmental policy, guidance, and program goals.

42-3.20. Construction Projects on Contaminated Sites. Installations shall make every effort to avoid construction projects on contaminated sites. However, there may be times during planning for a project, or after the project commences,

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when contamination is discovered. In such instances, the following applies:

a. If an installation discovers contamination during the planning stage, COMNAVFACENGCOM may investigate to determine if the site can be cleaned up following ER procedures using ER,N funds. However, the SI and cleanup actions must compete with other ER sites based on relative risk ranking. In most cases, this will take several years and the site may not be available in time for the project; and

b. If contamination is discovered during construction and it is ER eligible, COMNAVFACENGCOM can carry out the SI and cleanup actions using ER,N funds. However, the site will compete with other sites based on relative risk ranking. If funding is not available in time to meet the construction schedule, the installation may use project funds to investigate and cleanup the site. If neither ER,N nor project funding is available in time to meet the construction schedule, the installation must stop the project altogether or re-site it. An installation does not have an option to pay for any ER eligible work with installation operation and maintenance, Navy (O&M,N) funds except to accomplish ER eligible work within the scope of an O&M,N funded construction project.

42-3.21. Radiological Concerns

a. Any radioactivity present at DON installations may be broadly characterized as Naval Nuclear Propulsion Program (NNPP) radioactive material (NRAM) or general radioactive material (G-RAM). NRAM refers to radioactive material used by, or under the cognizance of, NNPP and is not addressed in this policy. G-RAM is DON radioactive material that is not used by, controlled by, or associated with the NNPP.

b. Investigation and cleanup of G-RAM is technically challenging and requires specialized knowledge and expertise. G-RAM management entails overlapping Federal and State regulatory authority, including some exercised by DON. Additional information on activities involving G-RAM on ER Program sites can be found in references (f) and (q).

42-3.22. Formerly Used Defense Sites. The U.S. Army Corps of Engineers (USACE) is responsible for the Formerly Used Defense Sites (FUDS) Program. The Navy's responsibility for FUDS that were formerly Navy sites is informational only. Should local interest arise, Navy installations, in consultation with

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COMNAVFACENGCOM, should pass questions regarding the status of FUDS sites to appropriate USACE officials. In special circumstances, USACE can grant authority for Navy to address FUDS located on property formerly owned or operated by Navy. This requires OPNAV (N45) concurrence.

42-3.23. Training Requirements

a. Personnel involved in the ER Program shall obtain the appropriate, job-specific training to effectively perform their assigned tasks. ER Program staff must acquire knowledge and skills in several categories including health and safety, technical, regulatory, and contract administration to ensure effective ER Program implementation.

b. OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) rules (reference (1)) require HW site training. All Navy and contractor employees working on-site exposed to HS and health or safety hazards, and supervisors and management personnel responsible for the site, must receive training before they are permitted to engage in cleanup operations. These requirements are summarized below.

(1) All employees exposed to HW, health hazards, or safety hazards shall have 40 hours of off-site instruction and 3 days of field experience. Training shall be as practical as possible and include hands-on use of equipment and exercises designed to demonstrate and practice classroom instruction;

(2) On-site management personnel and supervisors of personnel engaged in HW operations must receive training equal to the above, plus 8 additional hours on managing such operations;

(3) Navy shall provide employees and managers with 8 hours of refresher training annually; and

(4) All personnel authorized for access to MR sites must be appropriately trained on MEC and MC health risks and explosives safety hazards.

c. The Naval Civil Engineer Corps Officers School (CECOS) (refer to appendix E (Web Sites) for Web site address) is the primary source for Navy ER Program training and provides course descriptions and registration information. The following 8-hour HAZWOPER course is available through CECOS and, although the 40-hour HAZWOPER course is no longer offered by the Navy, the following 40-hour course is available through EPA via the

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Training Exchange Web site (refer to appendix E (Web Sites) for Web site address) or through various private vendors:

(1) 40-hour HAZWOPER, and

(2) 8-hour HAZWOPER for Uncontrolled Hazardous Waste Site Workers - Refresher (A-4A-0074).

d. Although each COMNAVFACENGCOM field engineering command is responsible for establishing specific training plans for its remedial project managers (RPM) and technical support staff, the following CECOS and non-Navy Inter-Service Environmental Education Review Board courses are recommended to fulfill technical and regulatory competencies needed in the ER Program:

(1) Basic Environmental Law (A-4A-0058);

(2) Navy Environmental Restoration Program (A-4A-0069);

(3) Environmental Background Analysis (A-4A-0092);

(4) Human Health Risk Assessment (A-4A-0078);

(5) Munitions Response Site Management (A-4A-0093);

(6) Uniform Federal Policy for Quality Assurance Project Plans (A-4A-0095);

(7) Ecological Risk Assessment (A-4A-0081);

(8) Environmental Negotiation Workshop (A-4A-0067);

(9) Health and Environmental Risk Communication Workshop (A-4A-0072);

(10) Environmental Sampling Design and Data Quality Assurance (Air Force Institute of Technology) (WENV 441);

(11) Optimizing Remedy Selection and the Site Closeout Process (A-4A-0089); and

(12) Environmental Geographic Information Systems (GIS)/Geostatistics (A-4A-0084).

e. Additional courses may be required for personnel working in the ER Program depending on duties and responsibilities. The

following CECOS courses are also available for supplemental training:

- (1) Advanced Environmental Law (A-4A-0068);
- (2) Advanced Health and Environmental Risk Communication;
- (3) Environmental Protection (A-4A-0036);
- (4) Environmental Quality Sampling (A-4A-0026); and
- (5) Introduction to Hazardous Waste Generation and Handling (A-493-0080).

f. In addition to the technical training described above, ER personnel also must have a strong foundation in contract administration. The Naval Facilities Acquisition Center for Training provides the following procurement training relevant to the acquisition process for the ER Program:

- (1) Contracting Officer Representative (CTC-342);
 - (2) Architect-Engineer Fixed Price Contracting (CTC-466);
- and
- (3) Environmental Contracting (CTC-423).

g. ER Program personnel should have an individual training plan that is directly related to their current duties and needed competencies. Further training information including other organizations that provide training relevant to the Navy ER Program is available in reference (f).

42-3.24. Remedy Optimization and Green and Sustainable Remediation. Navy shall continue to identify and implement remedy optimizations and green and sustainable remediation practices using ER,N funds at sites that require future funding per reference (a). Once a response action at the ER site has been completed to the level agreed to in the ROD and the current remedy remains protective, Navy will not fund or conduct additional ER actions, including remedy optimization and green and sustainable remediation activities, solely to accommodate a change in land use not reasonably anticipated at the time of remedy selection.

42-3.25. Navy as Potentially Responsible Party

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a. Navy has historically contracted with private companies to transport and dispose of HW generated at its installations. There may be instances where the disposal sites selected by contractors are themselves threatening or contaminating the environment and need to be investigated and subsequently remediated. Because such sites were never owned or controlled by Navy, they are referred to as "third party" sites, for which specific funding and liability resolution policies apply. Reference (r) provides that ER,N funding is not available for remediation expenses, settlements, or judgments at third party sites. Remediation expenses are to be provided through settlements negotiated by the DOJ and paid through the Judgment Fund. However, Navy may use ER,N funding for specified expenses prior to determination or acknowledgement of liability such as attendance at potentially responsible party (PRP) meetings and pre-litigation case evaluation expenses.

b. Upon receipt of a formal notice from EPA or state or local authorities that a Navy installation is involved in a site as a PRP, the installation shall notify, by message, its chain of command; the regional environmental coordinator; COMNAVFACENGCOM headquarters; cognizant COMNAVFACENGCOM Facilities Engineering Command (FEC); Office of the Assistant General Counsel (Energy, Installations, and Environment) (OAGC)(EI&E); Office of the General Counsel (OGC), Litigation Office; and OPNAV (N45). The message shall describe the salient points of the formal notice. Simultaneously, the installation will mail a copy of the formal notice and other appropriate documents to the same addressees. COMNAVFACENGCOM shall take the lead role in negotiations. Any communication acknowledging possible Navy involvement in a particular site shall be coordinated with the OGC Litigation Office.

42-3.26. Government-Owned, Contractor-Operated Facility. Navy's liability and responsibility for cleanup of sites at government-owned, contractor-operated (GOCO) facilities arise from its status as owner of the facility. Past and present contractors share this liability since they are operators or generators at these facilities. Absent special contractual provisions to the contrary, Navy policy is to require GOCO contractors to pay for all cleanup costs associated with their operation of Navy facilities.

42-3.27. Real Property Transactions and Management. ER issues in Navy property transfers including BRAC and non-BRAC transfers to both Federal and non-Federal entities shall be conducted per reference (a).

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a. BRAC Installations

(1) As Navy installations are closed and realigned, ER Program efforts must continue. Navy shall identify ER Program requirements and complete them per CERCLA, SARA, CERFA, and the NCP. Congress has established guidelines for funding the necessary investigations and cleanups and has similarly established a specific fund account for ER Program work at BRAC installations.

(2) CERFA requires all Federal agencies entering into a contract for the sale or other transfer of real property include a notice that identifies whether HS were released or disposed of on the property. This notice must identify the type and quantity of such HS and the time at which such storage, release, or disposal took place.

(3) CERFA expanded CERCLA Section 120(h) to require that, before termination of federal activities on any real property owned by the government and subject to base closure, the head of the agency with jurisdiction over the property must identify the real property on which no HS and no petroleum products or their derivatives were known to have been released or disposed of. Navy will identify uncontaminated property based on an investigation of the real property and preparation of an environmental baseline survey. It must obtain concurrence with the identification from EPA for NPL sites. For non-NPL sites, Navy must provide the state 60 days for review and comment. If Navy receives no comments, it may deem concurrence.

b. Non-BRAC Installations or Property. Navy shall consider the ER Program ramifications before any real property transactions and as part of all land management decisions.

(1) Acquisition. Navy does not acquire known contaminated property without careful consideration of the cleanup liability involved. Navy should acquire contaminated property only in cases of the most critical operational necessity, and only with OPNAV (N45) approval to ensure insertion of incurred cleanup liabilities into the ER Program.

(a) From Other DoD Services or Federal Agencies. For inter-Service transfers of property, DoD policy requires that a service acquiring known contaminated real property will normally assume the responsibility for managing restoration actions at the property. However, Navy policy is to try to negotiate a transfer

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agreement that leaves funding and management of restoration actions of the property with the transferring service. In either case, transfer agreements must clearly assign continuing responsibility for cleanup after the transfer. Where Navy assumes funding and management of restoration activities, the transferring service is responsible for providing Navy with all reports and a history of restoration actions taken prior to property transfer. If appropriate, the transferring service will also be responsible for transferring the cleanup funding as planned for the property in the Future Years Defense Program. For transfers of property from another Federal agency, Navy will not accept property from a non-DoD Federal agency unless the agency certifies it has met the requirements of CERCLA Section 120(h) and provides supporting reports and documentation.

(b) From Private Parties. Acquisition of contaminated property from private parties is not encouraged. Where such acquisition is operationally necessary, Navy should negotiate cleanup costs as an offset to the purchase price. Navy must carefully balance operational requirements for the property against any associated cleanup liability.

(2) Lease, Transfer, or Disposal of Property. For non-BRAC property, Navy shall prepare an environmental condition of property (ECP) for all leases, easements, transfers, and disposals of real property per reference (s). Where appropriate, an ECP should be prepared for other actions involving the use of real property (e.g., licenses), depending on such factors as proposed use, the term of use, and presence of any contaminants on the property. In the preparation of these documents, Navy shall consult with Federal, State, and local regulators as necessary and appropriate (e.g., EPA should be consulted if the parcel involved is part of a NPL site).

(3) Non-BRAC Disposal of Contaminated Navy Property. Navy shall cleanup contamination on Navy property scheduled for non-BRAC disposal using ER,N funds following the normal ER,N prioritization process of worst-first/risk management. ER,N-funded cleanup activities will not be accelerated solely to accommodate the property disposal schedule.

42-3.28. MRP-Specific Requirements. The following requirements and policy guidance apply only to the MRP. Reference (f) includes a discussion of the distinction between MR and IR sites.

a. Explosives Safety and Chemical Warfare Material Hazards. MR sites present the potential for explosives hazards; therefore,

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explosives safety procedures and requirements must be followed during all phases of site response activities. In addition, unique hazards from chemical warfare materials may be present on some sites. Army is the executive agent for handling chemical warfare responses and should be consulted for technical assistance. Sites known or suspected to contain chemical warfare materials should be immediately reported to the Naval Ordnance Safety and Security Activity (NOSSA) who will coordinate Army assistance, as required.

(1) An ESS (or a request for determination that an ESS is not required) must be prepared for review and approval by NOSSA prior to conducting any MR actions that include explosive storage, intentional physical contact with MEC, or any intrusive or ground disturbing activities in the areas known or suspected to contain MEC or MC.

(2) Installations shall prohibit and prevent unauthorized access as well as limit access to MR sites by authorizing personnel entry to Navy property only after full consideration of the type, amount, and location of MEC or MC present and the MRP planned activities.

b. Inventory. Reference (t) requires DoD and its components develop and maintain an inventory of sites known or suspected to contain unexploded ordnance, discarded military munitions, and munitions constituents. This inventory of MR sites is updated annually, provided to DUSD(I&E), and shared with public stakeholders and regulators to ensure all MR sites are identified.

c. Eligibility Considerations

(1) Eligible Response Activities. Activities (i.e., identification, investigation, removal actions, RAs, or a combination of removal and RAs) to address MEC and MC under the MRP can be conducted where sites or areas of concern (AOC) are known or suspected to contain MEC and MC that are located at:

(a) Former ranges and disposal sites at active, BRAC, and non-BRAC closure installations; and

(b) Shallow water areas where munitions releases are known or suspected to have occurred, where Navy actions were responsible for the release, and where the site or AOC is not:

1. Part of, or associated with, a designated

operational range;

2. A designated water disposal site;
3. A FUDS;
4. A result of combat operations;
5. A maritime wreck; or
6. An artificial reef.

(c) If an eligible munitions response site (MRS) encompasses water, the MRS-specific evaluation of explosive hazards and human health risk associated with munitions underwater should consider munitions at depths greater than 120 feet (the maximum depth to which most recreational divers may descend) to have a physical constraint equivalent to a barrier that prevents direct access and to be beyond potential human exposure.

(2) Ineligible Response Activities. The following are not eligible for inclusion in the MRP:

(a) Operational ranges which are covered by the Range Sustainability Environmental Program Assessment Implementation Policy;

(b) An active munitions demilitarization facility;

(c) A site that is currently being addressed as part of the IRP;

(d) Indoor firing ranges;

(e) MEC and MC sources that are incidental to an IRP cleanup; or

(f) Response to address releases solely the result of an act of war. When the act of war ineligibility provision pursuant to CERCLA Section 9607(b)(2) is being considered, the issue shall be elevated to the DUSD(I&E) for approval before proceeding with the exclusion per reference (a).

(3) Military Munitions Burial Sites. Although reference (a) prohibits burial of unused munitions as a means of disposal, OPNAV (N45) should be consulted for specific guidance on any past

military munitions burial sites located on an operational range.

d. Site Priority Considerations

(1) Using reference (u), Navy shall assign a priority to each MR site in the inventory. The munitions response site prioritization protocol (MRSPP) process requires consultation with Federal agencies, Indian tribes, states, and public stakeholders. Site priorities will be reviewed annually and updated based on new information and site conditions. An independent quality assurance (QA) panel shall be established to review all prioritization decisions to ensure consistent and appropriate application of the MRSPP.

(2) In consultation with appropriate regulators and public stakeholders, Navy will apply the MRSPP to all MR sites to determine a priority for each site in the inventory. Sufficient data to apply one or more of the three MRSPP hazard evaluation modules may not be available until after completion of a PA or SI. However, an MR site must be prioritized as soon as sufficient information is available to evaluate at least one of the three modules that comprise the MRSPP. The module producing the highest hazard ranking will determine the overall site priority. The site priority may change when additional data are collected and all three modules are evaluated. Module(s) for which there are insufficient data will be assigned a status of "evaluation pending." Documentation of scores and any adjustments shall be included in the AR.

(3) MRSPP should be applied as MRP sites are added to the inventory. Each site priority must be reviewed at least annually and the protocol reapplied as necessary to reflect new information. Reapplication of the protocol is required under the following circumstances:

(a) Upon completion of a response action that changes MR site conditions in a manner that could affect the evaluation under the protocol;

(b) To update or validate a previous evaluation at a MR site when new information is available;

(c) To update or validate the priority assigned where that priority has been previously assigned based on evaluation of only one or two of the three evaluation modules; or

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(d) To categorize an MR site previously classified as "evaluation pending."

e. Quality Assurance. An independent MRSPP QA panel will be established per reference (v). The panel shall review all prioritization decisions to ensure appropriate and consistent application of the MRSPP. The MRSPP QA panel may adjust an MR site priority; however, they must provide rationale for the change with feedback to the RPM. The RPM shall solicit comments on any changes to the site priority from appropriate regulators and public stakeholders involved in determining the original priority, include all comments in the AR, and provide changes in priority to DUSD(I&E).

f. Sequencing. Sequencing of sites shall be developed in consultation with appropriate regulators and stakeholders. Typically, higher priority sites are addressed before lower priority sites. If sequencing results in a lower priority site being addressed before a higher priority site, Navy shall provide specific justification for this action. Information that influences the sequencing of a site shall be included in the AR and the information repository.

42-3.29. Program Goals

a. Office of the Secretary of Defense (OSD) has established specific program goals to enable each DoD component to properly plan, program, and budget for future year execution and to ensure all legal requirements are fulfilled. Reference (a) established that 100 percent of all IR sites will achieve RIP or RC by the end of fiscal year (FY) 2014.

b. In addition, reference (a) established that 100 percent of all MR Sites will achieve RIP or RC by the end of FY 2020 and set the following RC goals for the IR and MR Programs, including any newly qualified sites that resulted from rescinding prior program eligibility cutoff dates as described in reference (a):

(1) 90 percent of all IR and MR sites at active installations will achieve RC by the end of FY 2018, and

(2) 95 percent of all IR and MR sites at active installations will achieve RC by the end of FY 2021.

42-4 Responsibilities

42-4.1. OPNAV (N45) shall serve as the ER resource and

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assessment sponsor, overall Navy program manager, and Navy advisor in matters related to the ER Program, including, but not limited to:

- a. Developing overarching programmatic ER policy guidance;
- b. Providing oversight of COMNAVFACENGCOM for the execution of the ER Program;
- c. Coordinating the ER Program requirements with, and providing support to, (DASN(E));
- d. Coordinating all docket listings with the appropriate EPA headquarters and regional docket coordinators with the assistance of COMNAVFACENGCOM and installation personnel;
- e. Reviewing and forwarding FFAs to DASN(E) for signature;
- f. Reviewing and signing federal facility state remediation agreements (FFSRA);
- g. Coordinating with other military service headquarters and OSD with respect to the ER Program;
- h. Serving as chair of the MRSPP QA panel;
- i. Serving as the advisor for DON in matters related to the ER Program cleanup of G-RAM; and
- j. Reviewing waiver requests to TAPP funding limits.

42-4.2. Budget submitting offices (BSO) other than COMNAVFACENGCOM shall:

- a. Pass ER Program information and guidance to their installations;
- b. Ensure installations with ER Program sites meet public participation and other legal requirements;
- c. Ensure subordinate installations fulfill their responsibilities under Navy's ER Program and appoint an ER coordinator, as necessary;
- d. Ensure subordinate commands review all facility site proposals against the requirements of the ER Program, especially

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where an ER DD has identified or put in place land use restrictions; and

e. Obtain OPNAV (N45) approval before acquiring known contaminated property from another DoD component, other Federal agency, or private party.

42-4.3. COMNAVFACENGCOM shall:

a. Program manage and execute the ER Program for OPNAV (N45);

b. Develop ER Program technically oriented policy guidance as directed by OPNAV (N45). Also provide site-specific technical, progress, and budgeting information to satisfy program reporting requirements;

c. Develop and support ER,N resource requests and manage funds allocated for program execution;

d. Resolve issues and problems associated with ER Program conduct and raise issues and problems to OPNAV (N45) where clarification of policy is necessary;

e. Provide technical and financial oversight during project performance;

f. Respond to emergency situations at ER sites through the geographical FEC using ER,N or BRAC funds as appropriate;

g. Assist the coordination of all docket listings;

h. Update the ER database at least semi-annually;

i. Track project progress to meet schedule requirements;

j. Assist the CO of the Navy installation in establishing a proactive public information program, including a formal community relations plan (CRP) for both NPL and non-NPL installations;

k. Be responsible for implementing the RAB;

l. Develop and implement an LTMgt plan that identifies the specific requirements for each site;

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m. Ensure the requirements for protecting site worker health and safety are developed and enforced;

n. Ensure COMNAVFACENGCOM FECs coordinate the ER Program with installation COs and the BRAC PMO, as necessary;

o. Perform ER studies and RA projects and prepare SC documentation by contract, in-house effort, or combination;

p. Prepare and submit ESSs and other explosives safety documentation;

q. Coordinate with NOSSA to schedule explosive safety audits of MR projects;

r. Identify and train ER Program staff;

s. Negotiate FFAs or FFSRAs on behalf of DON. Forward draft final FFAs to OPNAV (N45) for review and submission to DASN(E) for signature. Forward draft final FFSRAs to OPNAV (N45) for signature. When substantial changes to model language or policy are contemplated, the changes should be referred to OAGC(EI&E) and OPNAV (N45) as early as possible;

t. With respect to PRPs, participate in remediation planning meetings with other PRPs and agencies, forward proposed remediation agreements to OPNAV (N45) and OGC for review and comment, sign and administer the agreements, and disseminate information to all interested parties at all stages of the process;

u. Represent Navy in matters relating to the assessment of fines or penalties associated with ER Programs;

v. Develop and perform site-specific projects to assess and control contamination from past HW disposal and MEC and MC sites;

w. Ensure ER work plans and ERAs are reviewed by health and safety and natural resources professionals familiar with the site;

x. Coordinate, at all stages, with COs, BRAC PMOs, and regulatory agencies;

y. Prepare project plans, reports, and contract documents; coordinate review and comments; and distribute final documents to the appropriate installation for CO signature, as necessary;

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z. Prepare the ROD or DD and forward to the CO of the Navy installation with a recommended alternative;

aa. Maintain AR files and distribute copies as required;

bb. Provide ER study results to installation planning, real estate, and natural resources personnel;

cc. Work with acquisition project managers to ensure HS, MEC, and MC site conditions are taken into account before project decisions are finalized;

dd. Validate installation facility planning proposals against ER Program site installation or land use restrictions;

ee. Participate as member of the MRSPP QA Panel;

ff. Ensure ER response actions addressing CERCLA-listed G-RAM at active installations and BRAC sites work with Naval Sea Systems Command Detachment, Radiological Affairs Support Office (NAVSEADET RASO) to evaluate and select appropriate response actions;

gg. Prepare 5-year reviews of completed remedies for COs of Navy installations, FEC COs, or BRAC environmental coordinator signature, as appropriate;

hh. Develop ER Program cost and budget estimates to establish funding requirements for the DON planning, programming, and budgeting process; and

ii. Prepare and issue ER Program manuals and procedures (e.g., NERP Manual, optimization procedures) as necessary and required to enable effective implementation of DoD or DON policy by COMNAVFACENGCOM FECs.

42-4.4. Chief, Bureau of Medicine and Surgery (BUMED) (through the Navy and Marine Corps Public Health Center) shall:

a. Coordinate with ATSDR concerning ATSDR's legally mandated health related activities, including public health assessments, public health consultations, health surveys and investigations, toxicology databases, emergency response, and health education;

b. Review public health assessments, consultations, surveys, and DoD-specific toxicological profiles;

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c. Provide health and medical related support to DON ER Program for risk assessments and other cleanup program documents including work plans, sampling plans, RI/FS documents, quality assurance plans, and health and safety plans as requested by COMNAVFACENGCOM;

d. Provide technical support for risk communication, risk assessment, health and safety, MR, and other health related training courses;

e. Conduct human health risk assessments, as required;

f. Provide assistance in developing ARARs for cleanup program activities; and

g. Assist COMNAVFACENGCOM and installations in preparing for public meetings and respond to community concerns regarding health and safety aspects of projects.

42-4.5. COs of active Navy installations shall:

a. Notify Federal, State, and local officials and the chain of command upon discovery of a release of HW, MEC, or MC;

b. Assist in coordinating all docket listings;

c. Provide logistic support for ER projects at their installation including support for periodic meetings with the RAB on ER Program sites;

d. Provide necessary review and comment on ER plans of action, reports, etc., to the cognizant COMNAVFACENGCOM FEC;

e. Prepare and implement a public participation program, including a CRP, for ER sites. Consult with COMNAVFACENGCOM. Place appropriate information in the information repository;

f. Appoint a contact or spokesperson for community relations activities that shall be responsible for receiving all inquiries and releasing information concerning the installation's ER Program. This may be the DON public affairs officer or RPM;

g. Forward, or authorize COMNAVFACENGCOM to forward, all final primary documents to EPA and state regulatory agencies prior to deadlines in either FFAs or state agreements and orders;

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h. In conjunction with the COMNAVFACENGCOM FEC, select the remedy and sign the decision documents for all ER Program sites;

i. Ensure installation OM,N funds are not used to perform work eligible for ER,N funding;

j. Notify appropriate commands of any EPA or state notice of PRP action and support PRP response;

k. Consider ER Program site conditions or land use restrictions before land use planning, development, or operation, especially for MILCON and special projects;

l. Ensure the shore facilities planning process incorporates a review of the ER efforts being done at the installation;

m. Establish, in coordination with affected parties (e.g., the current owner or tenant; in the case of BRAC property, the prospective transferee), clearly defined and enforceable LUCs when appropriate;

n. Implement LUCs through established real estate and land use management mechanisms and ensure LUCs remain effective; and

o. Review and sign 5-year review reports prepared by COMNAVFACENGCOM.

42-4.6. NOSSA shall:

a. Provide an explosives safety oversight role in the MR Program and at any IRP sites where MEC or MC has been identified;

b. Maintain an archive of MR site-related documents;

c. Review MR notification reports;

d. Review and approve ESSs prepared by COMNAVFACENGCOM FEC and submit the approved ESSs to DDESB;

e. Review after action reports and submit to DDESB, as appropriate;

f. Review explosive mishaps reports and explosive ordnance disposal incident reports;

g. Conduct audits to ensure compliance with explosives safety requirements at MR sites;

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h. Provide formal verification that the final response action was completed per approved explosives safety related requirements;

i. Provide explosives safety oversight for all MR actions with BSOs, COMNAVFACENGCOM, BRAC PMO, installations, and activities; and

j. Review proposed language for deeds, activity master plans, or other LUCs in collaboration with BSOs, COMNAVFACENGCOM, installations, and activities, with respect to explosive safety requirements.

42-4.7. NAVSEADET RASO shall:

a. Provide technical and policy assistance and support to Navy personnel (COMNAVFACENGCOM RPMs at active installations and BRAC PMO environmental coordinators at BRAC installations) authorized to select CERCLA response actions addressing CERCLA-listed G-RAM;

b. Assist COMNAVFACENGCOM and BRAC PMO in the evaluation and selection of appropriate ER response actions;

c. Perform on-site evaluations of work efforts and make available written notification of significant findings to the RPM to assess technical compliance with work documents; Federal, State, and local regulations; radiological controls; and health physics practices. During these evaluations, NAVSEADET RASO personnel may take confirmatory surveys or samples, and observe field work, but will not participate in field activities;

d. Recommend work stoppages to BRAC PMO or COMNAVFACENGCOM as a result of unsafe work practices in the field or unsatisfactory findings during evaluations of G-RAM work practices. Should work stoppages occur, review and concur on corrective actions prior to resumption of field activities;

e. Participate in the drafting and technical review process for documents involving G-RAM issues or radiologically-impacted sites. These documents include but are not limited to CERCLA and RCRA documents, historical radiological assessments, contractor field work documents, and presentations pertinent to G-RAM aspects of the ER Program; and

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f. Investigate radiological incidents involving G-RAM in the ER Program upon notification.

42-5 Definitions

42-5.1. After Action Report. An after action report is a document required to be submitted to NOSSA within 6 months of completion of an MR. It documents that the explosives safety aspects of the response have been completed as outlined in the approved ESS and addresses the MECs found, effectiveness of the response techniques, any LUCs, LTMgt provisions for the residual risk, and other pertinent information.

42-5.2. Discarded Military Munitions. Discarded military munitions have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of consistent with applicable environmental law and regulations.

42-5.3. Ecological Risk Assessment. An ERA is an evaluation of whether adverse ecological effects could occur or have occurred from exposure to one or more stressors.

42-5.4. Environmental Restoration, Navy. SARA Section 211 established the Defense Environmental Restoration Account (DERA) to pay the cost of DoD responses to cleanup HS sites. Funds from DERA were transferred to the ER,N account for uses consistent with DERP.

42-5.5. Federal Facility Agreement. An FFA is a negotiated legal agreement between DON and EPA governing CERCLA and RCRA administrative process for cleanup at NPL sites. The provisions of these agreements are factors in setting project execution priorities through risk management and are tools for formalizing commitments, making selection of RA less adversarial. States may participate in the FFA at their discretion.

42-5.6. Federal Facility State Remediation Agreement. An FFSRA is a negotiated agreement governing the CERCLA and RCRA administrative process for cleanup at non-NPL sites. As with FFAs, provisions of FFSRAs are factors in setting project execution priorities through risk management and are tools for formalizing commitments, making selection of RA less adversarial.

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42-5.7. General Radioactive Material. G-RAM is Navy radioactive material, (e.g., byproduct, source, and special nuclear materials; naturally occurring radioactive materials; technologically enhanced naturally occurring radioactive materials; and naturally occurring and accelerator-produced radioactive materials) not used by, controlled by, or associated with the NNPP.

42-5.8. Hazardous Substance. For purposes of the IRP, HS is as defined in CERCLA Section 101(14). This includes materials that, because of their quantity, concentration, or physical, chemical or infectious characteristics, may pose a hazard to human health or the environment when released or spilled.

42-5.9. Historical Radiological Assessment. A historical radiological assessment is a document prepared to describe the radiological history of a site and designate radiologically-impacted areas.

42-5.10. Industrial Settings. Industrial settings are facilities where one or more chemical compounds are used or stored as part of the business operation of the facility, such as plating facilities, maintenance shops, manufacturing facilities, hangars, and welding shops. An office within an industrial setting, such as a foreman's office in a plating shop, is also considered to be part of the industrial area.

42-5.11. Installation. An installation is the real property owned, formerly owned, or leased by Navy, including a main base and any associated contiguous real properties identified by the same real property number.

42-5.12. Land Use Controls. LUCs include engineering controls (EC) and institutional controls (IC). ECs are remedies to contain or reduce contamination, or physical barriers intended to limit access to property. ECs may include fences, signs, guards, landfill caps, provision of potable water, slurry walls, sheet pile, and monitoring wells. ICs are actions, such as legal controls, that help minimize the potential for human exposure to contamination by ensuring appropriate land or resource use. ICs include easements, deed restrictions, zoning, and permits.

42-5.13. Long-Term Management. LTMgt is the period of site management (e.g., maintenance, monitoring, recordkeeping, 5-year reviews) initiated after the RA objectives have been met, but HS, pollutants, or contaminants, including MECs and MCs, remain on-

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site and are above levels that would allow for unlimited use and unrestricted exposure.

42-5.14. Military Munitions. Military munitions are all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DoD, U.S. Coast Guard, Department of Energy, and National Guard. The term includes confined gaseous, liquid, and solid propellants; explosives, pyrotechnics, chemical and riot control agents; smokes and incendiaries, including bulk explosives and chemical warfare agents; chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges; and devices and components thereof. The term does not include wholly inert items, improvised explosive devices, nuclear weapons, nuclear devices, and nuclear components, except the term does include non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed.

42-5.15. Military Munitions Burial Site. A military munitions burial site is a site where military munitions were intentionally buried, with the intent to abandon or discard. This term includes burial sites used to dispose of military munitions in a manner consistent with applicable environmental laws and regulations or the national practice at the time of burial. It does not include sites where munitions were intentionally covered with earth during authorized destruction by detonation, or where in-situ capping is implemented as an engineered remedy under an authorized response action.

42-5.16. Munitions and Explosives of Concern. MECs include unexploded ordnance, discarded military munitions, and munitions constituents in high enough concentrations as to present an explosive hazard.

42-5.17. Munitions Constituents. MCs are any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions.

42-5.18. Munitions Response. MR actions include investigation, removal, and RAs to address the explosives safety, human health,

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or environmental risks presented by unexploded ordnance, discarded military munitions, or munitions constituents.

42-5.19. Munitions Response Site. A MRS is a discrete location known or suspected to contain unexploded ordnance, discarded military munitions, or MCs. Examples include former ranges, munitions burial areas, and explosive processing facilities. The term does not include any operational range, operating storage or manufacturing facility, or facility that is used for or was permitted for the treatment or disposal of military munitions.

42-5.20. National Priorities List. The NPL is EPA's list of the nation's highest priority sites that need to be cleaned up. EPA bases a site's inclusion on the list on its threat to public health, welfare, or the environment using the hazard ranking system. Sites receiving scores above 28.5 are added to the NPL.

42-5.21. Natural Resource Damage. NRD is the amount of money sought by the NRT as compensation for injury, destruction, or loss of natural resources as set forth in CERCLA Section 107(a) or 111(b).

42-5.22. Natural Resource Damage Assessment. NRDA is the process of collecting, compiling, and analyzing information, statistics, or data through prescribed methodologies to determine damages for injuries to natural resources.

42-5.23. Natural Resources Injury. NRI is a measurable adverse change, either long- or short-term, in the chemical or physical quality of the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a HS. The aspects of injury could be determined during the site's ERA.

42-5.24. Natural Resources Trustee. An NRT is any Federal natural resources management agency designated in the NCP and any State agency designated by the governor of each state pursuant to CERCLA Section 107(f)(2)(B).

42-5.25. Naval Nuclear Propulsion Program Radioactive Material. NRAM is radioactive material used by, controlled by, or associated with the NNPP.

42-5.26. Preliminary Assessment. A PA is a review of existing site information to determine if a release may require additional investigation or action; it may include on-site reconnaissance, if appropriate.

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42-5.27. Public Health Assessment. A public health assessment is the evaluation of data and information on the release of HS into the environment to assess any current or future impact on public health, develop health advisories or other recommendations, and identify studies or actions needed to evaluate and mitigate or prevent human health effects. A public health assessment is only required for NPL sites.

42-5.28. Radiologically-Impacted Site. A radiologically-impacted area is an outdoor area, building, or underground system (i.e., sewer) that has a potential of being affected by use of G-RAM or has been determined to be contaminated by G-RAM.

42-5.29. Record of Decision. A ROD is the official term used by CERCLA and the NCP for the documentation of a final remedial response action decision at a NPL site. It describes the remedy selection process and the remedy method selected. For non-NPL sites, the term "DD" is used. The DD is developed in the manner as a ROD.

42-5.30. Release. As defined by CERCLA Section 101(22), release means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any HS or pollutant or contaminant). The term excludes any release that results in exposure to persons solely within a workplace, or with respect to a claim that such persons may assert against the employer of such persons, emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine; release of source, byproduct, or special nuclear material from a nuclear incident or any processing site, under conditions specified in reference (c); and the normal application of fertilizer. For purposes of the NCP, release also means threat of release.

42-5.31. Remedial Action. An RA is an action consistent with permanent remedy taken instead of, or in addition to, removal actions to prevent or minimize the release of HS. RA covers two periods of activity at the site:

a. Remedial Action - Construction. During RA-C, the designed remedial system is constructed at the site. This phase also may include any construction related to the implementation of LUCs.

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b. Remedial Action - Operation. RA-O (formerly long-term operation) is that period of operation and maintenance required after the RA-C is completed but the RA objectives have not yet been met (RC has not been achieved). During the RA-O phase, the remediation system is operated or chemical or biological processes are occurring leading to the cleanup objective identified in the ROD or DD. Monitoring programs on a site during the RA-O phase are part of the RA-O; they are not LTMgt.

42-5.32. Remedial Action Objectives. RA objectives are site-specific goals based on the contaminants of concern, the impacted media, fate and transport of the contaminants of concern, and those potential exposure routes, receptors, and preliminary remediation goals identified in the conceptual site model.

42-5.33. Remedial Design. RD includes preparation of technical work plans, drawings, and specifications to convert the conceptual design for the remedy selected for a site from the FS into a full-scale detailed design for implementation.

42-5.34. Remedial Investigation and Feasibility Study. An RI/FS is an extensive technical study conducted to determine the nature and extent of the threat presented by a release and, where appropriate, to evaluate proposed remedies. The FS serves as the mechanism for the development, screening, and detailed evaluation of potential remedial alternatives, including no further action.

42-5.35. Remedy in Place. The RIP milestone is achieved when the construction of a long-term remedy is complete and the remedy is operating as planned to meet project RA goals in the future, or a short-term remedy has been successfully implemented and the final documentation is being prepared.

42-5.36. Removal Action. A removal action is a response implemented in an expedited manner to address releases or threatened releases of HS or MEC that require prompt action.

42-5.37. Reportable Quantity. The reportable quantity is the amount of an HS that must be reported if released. CERCLA Section 102 requires EPA to establish and revise a list of HS and their associated reportable quantities.

42-5.38. Residential and Commercial Settings. Residential and commercial settings are housing units and businesses which do not use substantial amounts of chemical compounds as part of the business operation such as single family homes, condominiums,

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apartments, hospitals, nursing homes, offices, stores, banks, and exchanges.

42-5.39. Response Complete. The RC milestone signifies the RA objectives have been met and the RA-0 phase has achieved cleanup goals specified in the ROD or DD. Formal documentation for the RC milestone is essential to ensure recognition of completion of cleanup goals at the site. Prior to claiming completion of the RC milestone, regulatory concurrence of this documentation is required.

42-5.40. Restoration Advisory Board. The RAB is a group established to serve as a focal point for the exchange of cleanup information between Navy, regulators, and an installation's local community. Members of the RAB include Navy, EPA officials, appropriate state and local authorities, Federal and State natural resources trustees, and representatives of the affected community.

42-5.41. Site. A site is a location on or off an installation's property where HS or MEC has been deposited, stored, disposed, placed, or has otherwise come to be located. Such areas may include multiple sources and may include the area between sources. This should not be confused with the EPA practice of listing an entire installation on the NPL. An NPL installation will generally have several discrete sites.

42-5.42. Site Closeout. The SC milestone signifies Navy has completed active management and monitoring at a site, the remedy is protective of human health and the environment, no restrictions on future land use are needed for the site, and no additional ER,N or BRAC funds are expected to be expended at the site.

42-5.43. Site Inspection. An SI is an on-site inspection to determine whether there is a release or potential release and the nature of the associated threats.

42-5.44. Stakeholder. Stakeholders include interested parties such as individual residents who live on or near the installation; representatives of citizen, environmental, and public interest groups whose members live in the vicinity of the installation; workers involved or affected by installation operations; elected and appointed local government officials; and representatives of Federal and State regulatory agencies. This chapter uses the term stakeholder in the context of RABs.

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42-5.45. Unexploded Ordnance. Unexploded ordnance are military munitions that:

a. Have been primed, fused, armed, or otherwise prepared for action;

b. Have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and

c. Remain unexploded either by malfunction, design, or any other cause.

42-5.46. Vapor Intrusion. VI is the migration of vapor of sufficiently volatile chemical compounds from the subsurface environment into the indoor air of overlying buildings.

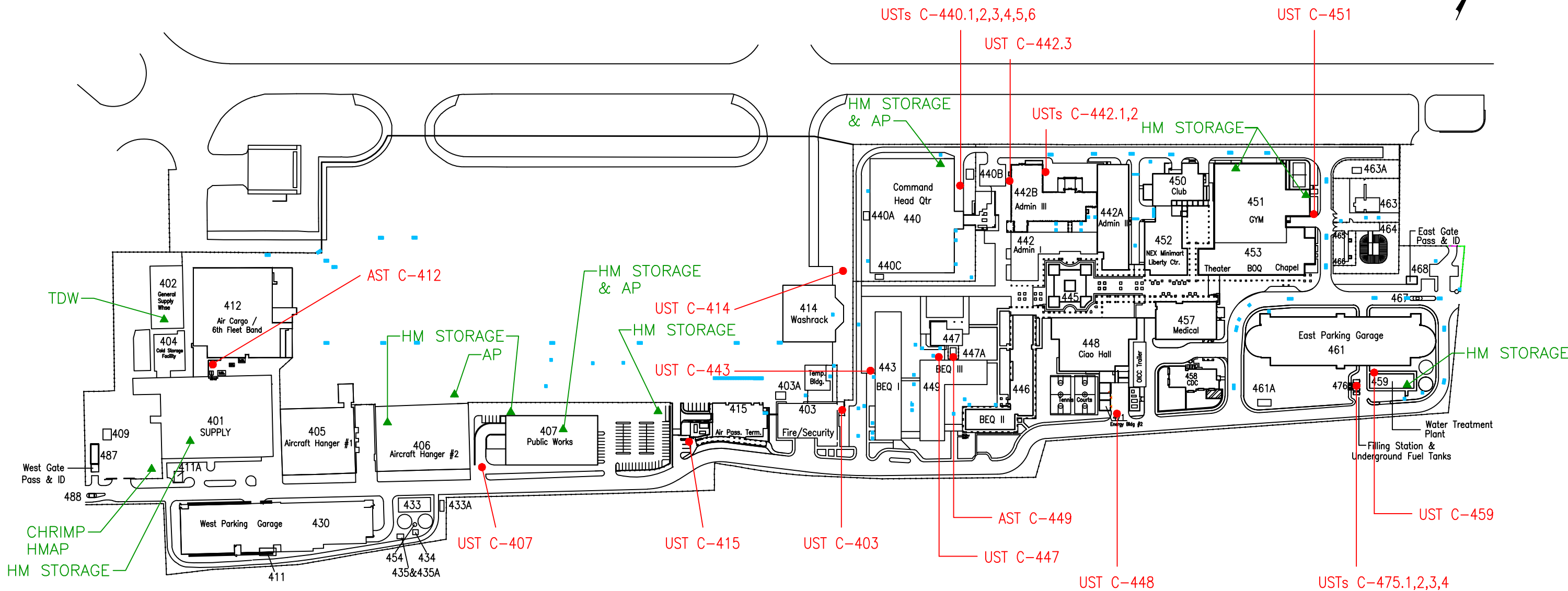
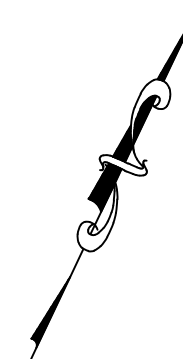
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APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS

CAPODICHINO

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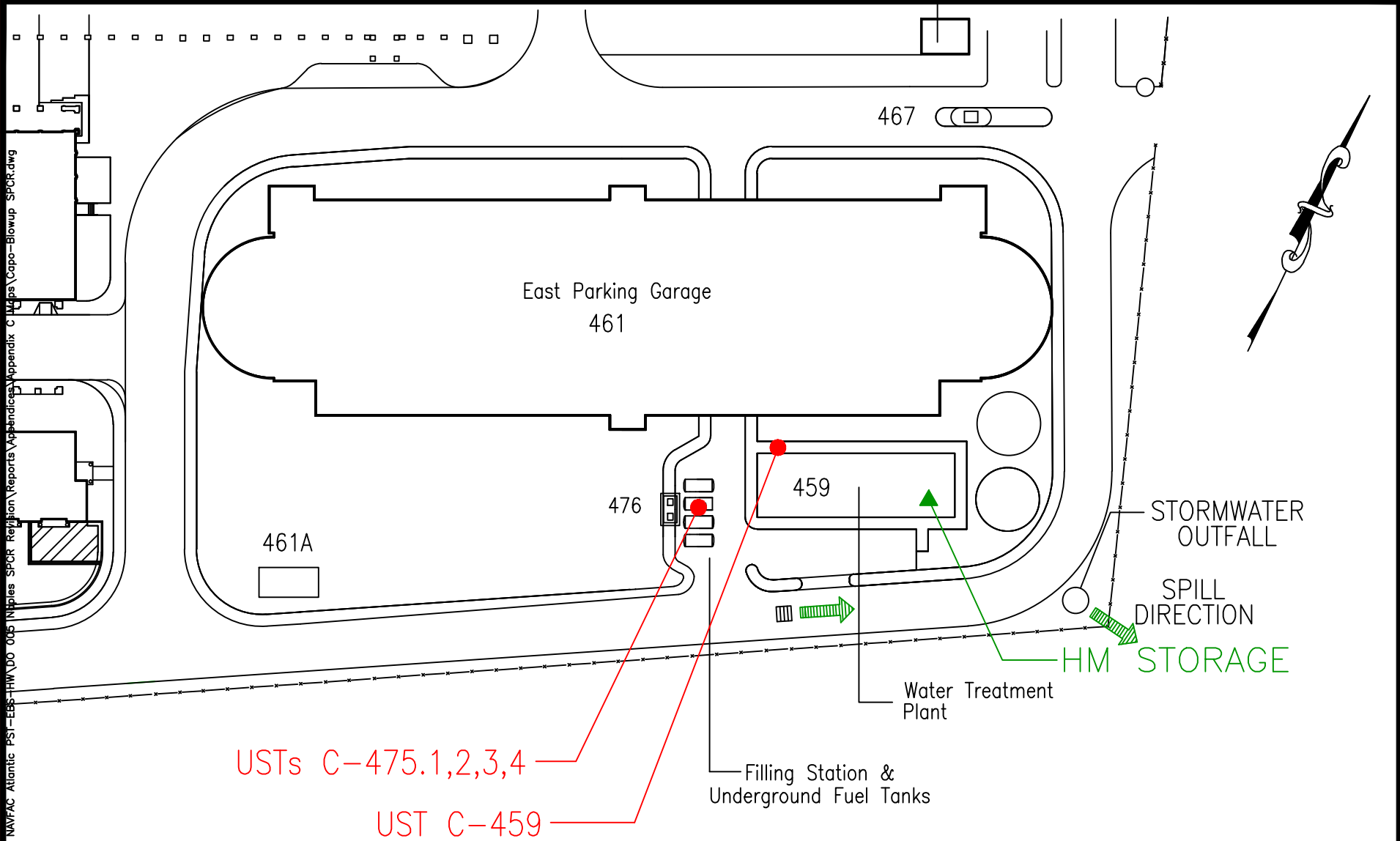
NSA Naples Capodichino



CAPODICHINO SITE
 PST AND HM STORAGE LOCATION MAP
 2016 SPILL PREVENTION AND RESPONSE PLAN
 NSA NAPLES, ITALY

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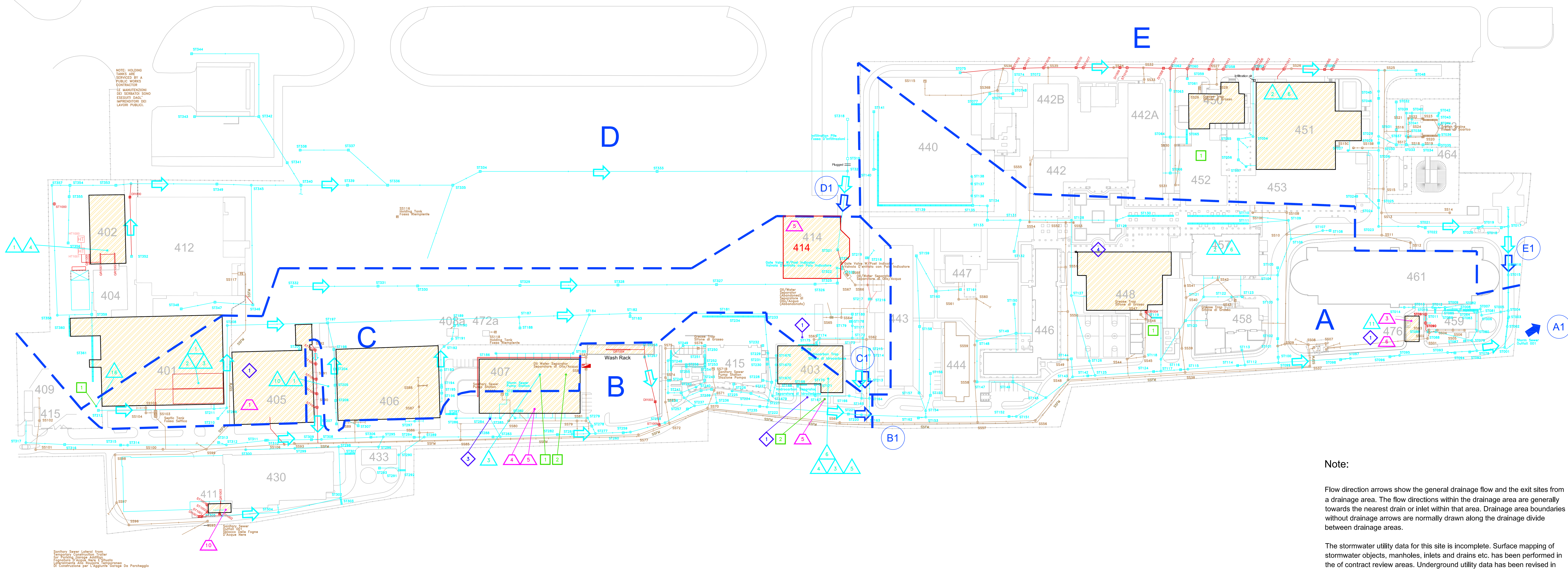
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USTs C-475.1,2,3,4
UST C-459

NSA Naples Capodichino

CAPODICHINO SITE
SPILL DIRECTION MAP
2016 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY



Note:

Flow direction arrows show the general drainage flow and the exit sites from a drainage area. The flow directions within the drainage area are generally towards the nearest drain or inlet within that area. Drainage area boundaries without drainage arrows are normally drawn along the drainage divide between drainage areas.

The stormwater utility data for this site is incomplete. Surface mapping of stormwater objects, manholes, inlets and drains etc. has been performed in the of contract review areas. Underground utility data has been revised in these areas where possible.

Nota:

La direzione generale di deflusso e il punto di scarico delle acque reflue sono indicate con frecce per ogni area di drenaggio. La direzione di deflusso all'interno dell'area di drenaggio generalmente è verso la trincea o il punto di scarico più vicino. I limiti di un'area di drenaggio sono normalmente indicati con linee senza frecce lungo la divisa tra aree di drenaggio confinanti.

Le indicazioni circa le strutture fognarie (acque reflue) sono incomplete. Il rilievo delle strutture fognarie, passi d'uomo, pozzetti, dreni etc. è stato eseguito nelle zone previste da contratto. Le indicazioni circa i sottoservizi sono state rivedute ove possibile.

Legend New Survey

- DLxxxx Numbering of Drop Inlet
- POLxxxx Numbering of Oil-Water-Separator
- GRxxxx Numbering of Trench Drain Inlet
- SSxxxx Numbering of Sewer Manhole
- STxxxx Numbering of Stormwater Manhole
- HTxxxx Numbering of Holding Tank

- Drop Inlet
- Oil-Water-Separator
- Holding Tank
- Trench Drain Inlet
- Sewer Manhole
- Sewer Line
- Stormwater Manhole
- Stormwater Line
- Stormwater Discharge

- Building Re-Mapped
- Building inspected

- Site Stormwater Outfall
- Drainage Area Outfall
- Drainage Area
- Numbering of Drainage Area Outfall
- Numbering of Drainage Area
- Water Culvert

Legenda Nuovo Rilievo

- Numerazione caditoia
- Numerazione separatore acqua - olio
- Numerazione trincea grigliata di drenaggio
- Numerazione pozzetto fognario / passo d'uomo (acque nere)
- Numerazione pozzetto / passo d'uomo (acque reflue)
- Numerazione serbatoio di ritenuta

- Caditoia
- Separatore acqua - olio
- Serbatoio di accumulo
- Drenaggio
- Pozzetto / passo d'uomo (acque nere)
- Linea fognaria (acque nere)
- Pozzetto / passo d'uomo (acque reflue)
- Linea fognaria (acque reflue)
- Scarico acque reflue

- Edificio nuovo rilievo
- Edificio ispezionato

- Scarico finale da sito (acque reflue)
- Scarico area di drenaggio
- Area di drenaggio
- Numerazione punto di scarico area di drenaggio
- Numerazione area di drenaggio
- Fogna aperta

Legend Existing Structures

- STxxxx Numbering of Stormwater Manhole
- Drop Inlet
- Stormwater Manhole
- Sewer Manhole
- Manhole with Pump
- Grease Trap
- Septic Tank
- Stormwater Line
- Sewer Line
- Flow Direction in Stormwater Line

Legenda Strutture Esistenti

- Numerazione pozzetto / passo d'uomo (acque reflue)
- Caditoia
- Pozzetto / passo d'uomo (acque reflue)
- Pozzetto / passo d'uomo (acque nere)
- Pozzetto con pompa di rilancio
- Separatore grasso
- Serbatoio acque nere
- Linea fognaria (acque reflue)
- Linea fognaria (acque nere)
- Direzione flusso in linea fognaria

Industrial Activity

- 1 Aircraft Ground Support Equipment Maintenance
- 2 Aircraft / runway deicing
- 3 Aircraft / vehicle fueling operations
- 4 Aircraft / vehicle maintenance & repair
- 5 Aircraft / vehicle washing
- 6 Bulk fuel storage areas
- 7 Construction activities
- 8 Corrosion control activities
- 9 Outdoor painting / repainting operations
- 10 Power production

Chemical Application areas

- 1 Pesticide operations

Material Storage Areas

- 1 Outdoor material storage areas
- 2 Vehicle storage

Attività industriale

- Manutenzione equipaggiamento assistenza aeromobili
- Disgelo aeri / piste
- Rifornimento velivoli / veicoli
- Manutenzione e riparazione aeromobili / veicoli
- Lavaggio velivoli / veicoli
- Area di stoccaggio carburanti
- Attività di costruzione
- Attività controllo corrosione
- Verniciatura all' aperto
- Produzione energia

Area use chemicals

- Pesticidi

Areie stoccaggio materiali

- Stoccaggi materiali all' aperto
- Stoccaggio veicoli

Hazardous material storage

- 1 Flammable
- 2 Corrosives / Acids
- 3 Lubricants
- 4 Solvents
- 5 Oil
- 6 Detergents
- 7 Biohazardous materials
- 8 Pesticides
- 9 Ethylene glycol / antifreeze
- 10 Diesel
- 11 UST diesel
- 12 Compressed gas cylinders
- 13 Cement asbestos panels
- 14 Batteries
- 15 Fire extinguish foam
- 16 Others

Leaks and Spills

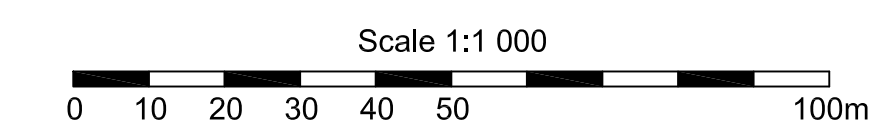
- 1 Oil / fuel
- 2 Corrosives / acids
- 3 Solvents (and paints)
- 4 Detergents (and washwater)

Areie stoccaggio materiali pericolosi

- Infiammabile
- Corrosivi / Acidi
- Lubrificanti
- Solventi
- Olio
- Detersivi
- Materiali pericolosi biologici
- Pesticidi
- Glicolo di etilene / antifreeze
- Gasolio
- UST Gasolio
- Bombole gas
- Tavole amianto
- Batterie
- Schiuma antincendio
- altri

Perdite

- Olio / carburante
- Corrosivi / acidi
- Solventi (e vernici)
- Detersivi (ed acqua di lavaggio)



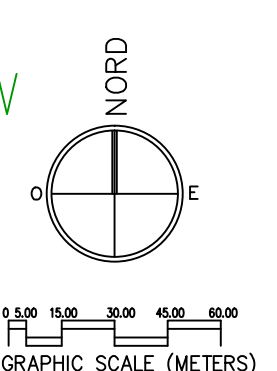
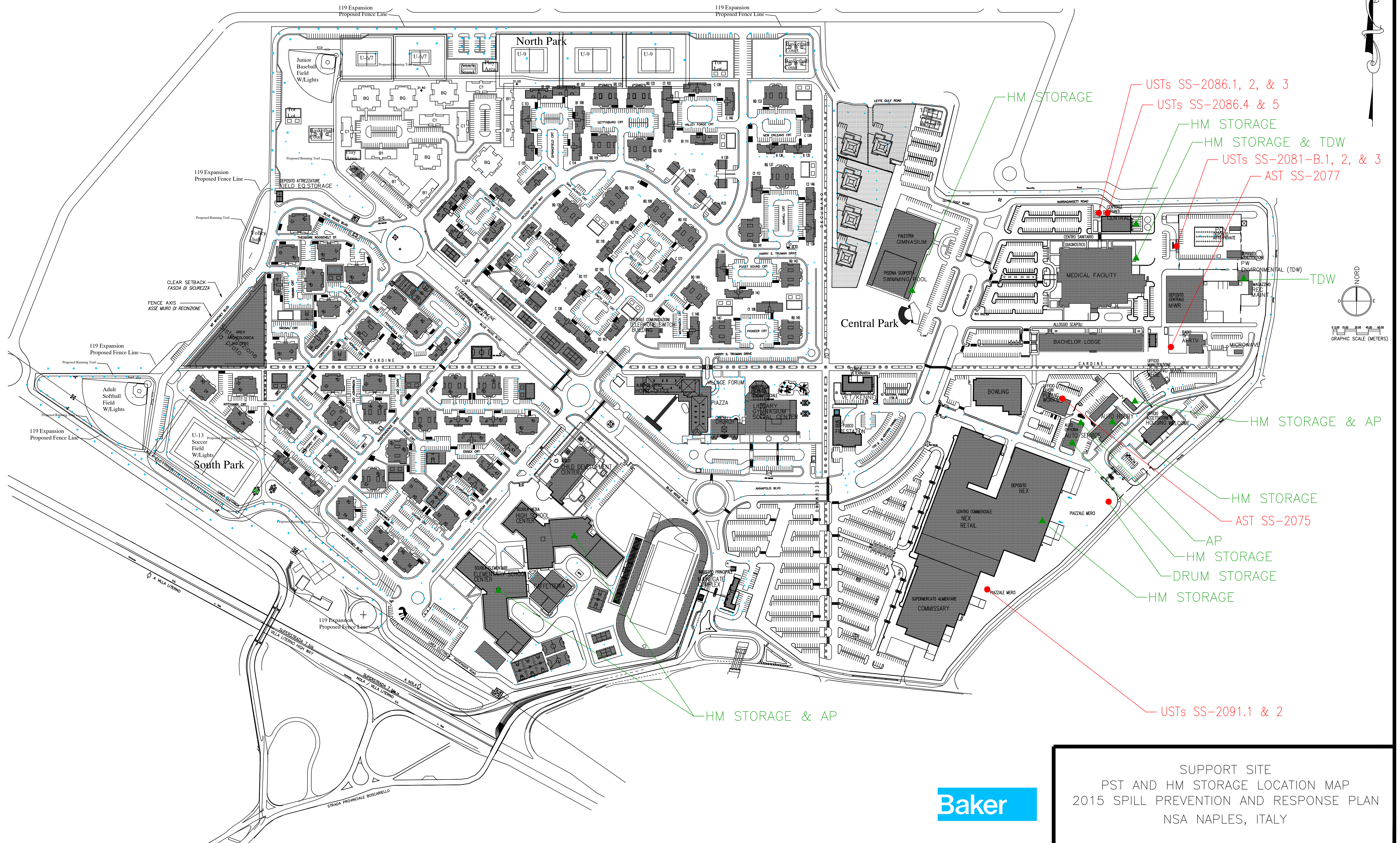
STORMWATER LAYOUT LINEE FOGNARIE BIANCHE CAPODICHINO NAPLES, ITALY		Client NAVAL FACILITIES ENGINEERING COMMAND, ATLANTIC DIVISION FOR NAVAL SUPPORT ACTIVITY, NAPLES, ITALY
Project STORMWATER POLLUTION PREVENTION PLAN (SWPPP)		URS URS Deutschland GmbH Frankfurt Office Mainfurtstr. 3 D-60325 Frankfurt Tel: +49 (0) 6103 93 89-0 Fax: +49 (0) 6103 93 89-99
Scale 1:1000	Responsible G. Tyanan	Sheet Size 33x44in
Date Jan. 2006	Drafter K. Schuler	Appr. E-01
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**APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS**

SUPPORT SITE

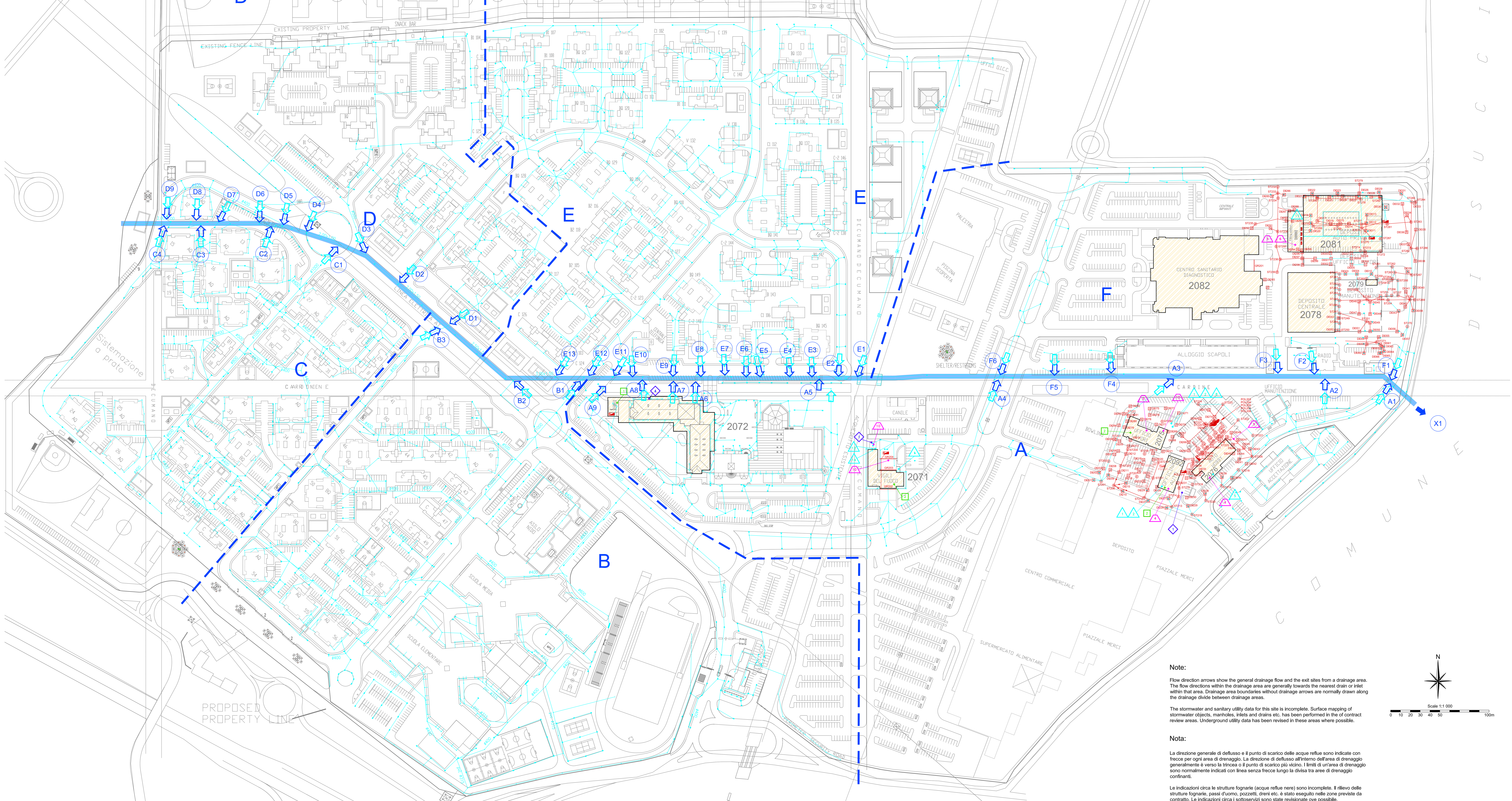
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SUPPORT SITE



SUPPORT SITE
PST AND HM STORAGE LOCATION MAP
2015 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY

BAKER E-FILE LOCATION: J:\Projects\0502 NAVPAC Atlantic PSI EBS-HW\005 Naples SPOR Revision\Reporta Appendices\Appendix C Maps\SS SPOR.dwg



Legend New Survey	Legenda Nuovo Rilievo
D1xxxx: Numbering of Drop Inlet	Numero casella
POLxxxx: Numbering of Oil-Water-Separator	Numero separatore acqua - olio
GTxxxx: Numbering of Trench Drain Inlet	Numero trincea grigliata di drenaggio
SMxxxx: Numbering of Sewer Manhole	Numero pozzetto fognario / passo d'uomo (acqua nera)
STxxxx: Numbering of Stormwater Manhole	Numero pozzetto / passo d'uomo (acqua reflua)
Drop Inlet	Caditoia
Oil-Water-Separator	Separatore acqua - olio
Trench Drain Inlet	Trincea grigliata di drenaggio
Sewer Manhole	Pozzetto fognario / passo d'uomo (acqua nera)
Sewer Line	Linea fognaria (acqua nera)
Stormwater Manhole	Pozzetto / passo d'uomo (acqua reflua)
Stormwater Line	Linea fognaria (acqua reflua)
Stormwater Discharge	Scarico acque reflue
Building Re-Mapped	Edificio nuovo rilievo
Building Inspected	Edificio ispezionato
Site Stormwater Outfall	Scarico finale da sito (acqua reflua)
Drainage Area Outfall	Area di drenaggio
Drainage Area	Area di drenaggio
Numbering of Drainage Area Outfall	Numero punto di scarico area di drenaggio
Numbering of Drainage Area	Numero area di drenaggio
Water Culvert	Fogna aperta

Legend Existing Structures	Legenda Strutture Esistenti
Stormwater Manhole	Pozzetto / passo d'uomo (acqua reflua)
Sewer Manhole	Pozzetto / passo d'uomo (acqua nera)
Stormwater Line	Linea fognaria (acqua reflua)
Sewer Line	Linea fognaria (acqua nera)
Flow Direction in Stormwater Line	Direzione flusso in linea fognaria

Industrial Activity	Attività industriale
Aircraft Ground Support Equipment Maintenance	Manutenzione equipaggiamento assistenza aeromobili
Aircraft / runway deicing	Disgelo aeri / piste
Aircraft / vehicle fueling operations	Rifornimento velivoli / veicoli
Aircraft / vehicle maintenance & repair	Manutenzione e riparazione aeromobili / veicoli
Aircraft / vehicle washing	Lavaggio velivoli / veicoli
Bulk fuel storage areas	Area di stoccaggio carburanti
Construction activities	Attività di costruzione
Corrosion control activities	Attività controllo corrosione
Outdoor painting / depainting operations	Verniciatura all'aperto
Power production	Produzione energia

Chemical Application areas	Area uso chemicals
Pesticide operations	Pesticidi

Material Storage Areas	Area stoccaggio materiali
Outdoor material storage areas	Stoccaggi materiali all'aperto
Vehicle storage	Stoccaggio veicoli

Hazardous material storage	Area stoccaggio materiali pericolosi
Flammable	Infiammabile
Corrosives / Acids	Corrosivi / Acidi
Lubricants	Lubrificanti
Solvents	Solventi
Oil	Olio
Detergents	Detersivi
Biohazardous materials	Materiali pericolosi biologici
Pesticides	Pesticidi
Ethylene glycol / antifreeze	Glicolo di etilene / antigelo
Diesel	Gasolio
UST diesel	UST Gasolio
Compressed gas cylinders	Bombole gas
Cement asbestos panels	Tavole amianto
Batteries	Batterie
Fire extinguish foam	Schiuma antincendio
Others	altri

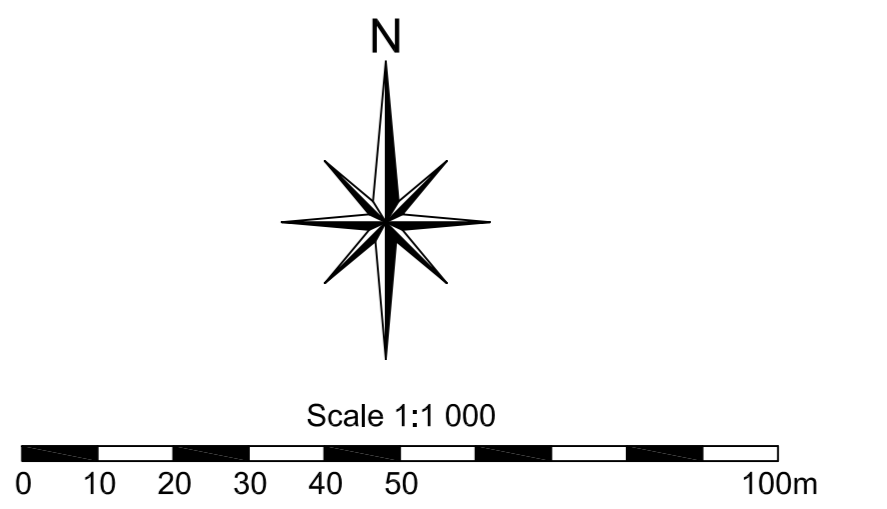
Leaks and Spills	Perdite
Oil / fuel	Olio / carburante
Corrosives / acids	Corrosivi / acidi
Solvents (and paints)	Solventi (e vernici)
Detergents (and washwater)	Detersivi (ed acqua di lavaggio)

Note:
Flow direction arrows show the general drainage flow and the exit sites from a drainage area. The flow directions within the drainage area are generally towards the nearest drain or inlet within that area. Drainage area boundaries without drainage arrows are normally drawn along the drainage divide between drainage areas.

The stormwater and sanitary utility data for this site is incomplete. Surface mapping of stormwater objects, manholes, inlets and drains etc. has been performed in the of contract review areas. Underground utility data has been revised in these areas where possible.

Nota:
La direzione generale di deflusso e il punto di scarico delle acque reflue sono indicate con frecce per ogni area di drenaggio. La direzione di deflusso all'interno dell'area di drenaggio generalmente è verso la trincea o il punto di scarico più vicino. I limiti di un'area di drenaggio sono normalmente indicati con linee senza frecce lungo la divisa tra aree di drenaggio confinanti.

Le indicazioni circa le strutture fognarie (acqua reflua nera) sono incomplete. Il rilievo delle strutture fognarie, passi d'uomo, pozzetti, dreni etc. è stato eseguito nelle zone previste da contratto. Le indicazioni circa i sottoservizi sono state rivedute ove possibile.

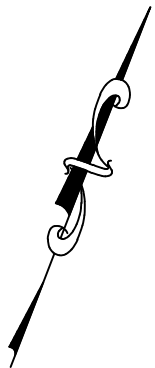


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Project: STORMWATER POLLUTION PREVENTION PLAN (SWPPP)	URS URS Design/Draw/Grant Project/Client/Contract 04/2013/1300000000 File: C:\CAD\GIS\Map\NaplesSupport_E02.dwg Date: 04/2013 Author: K. Schuler Appr: E02

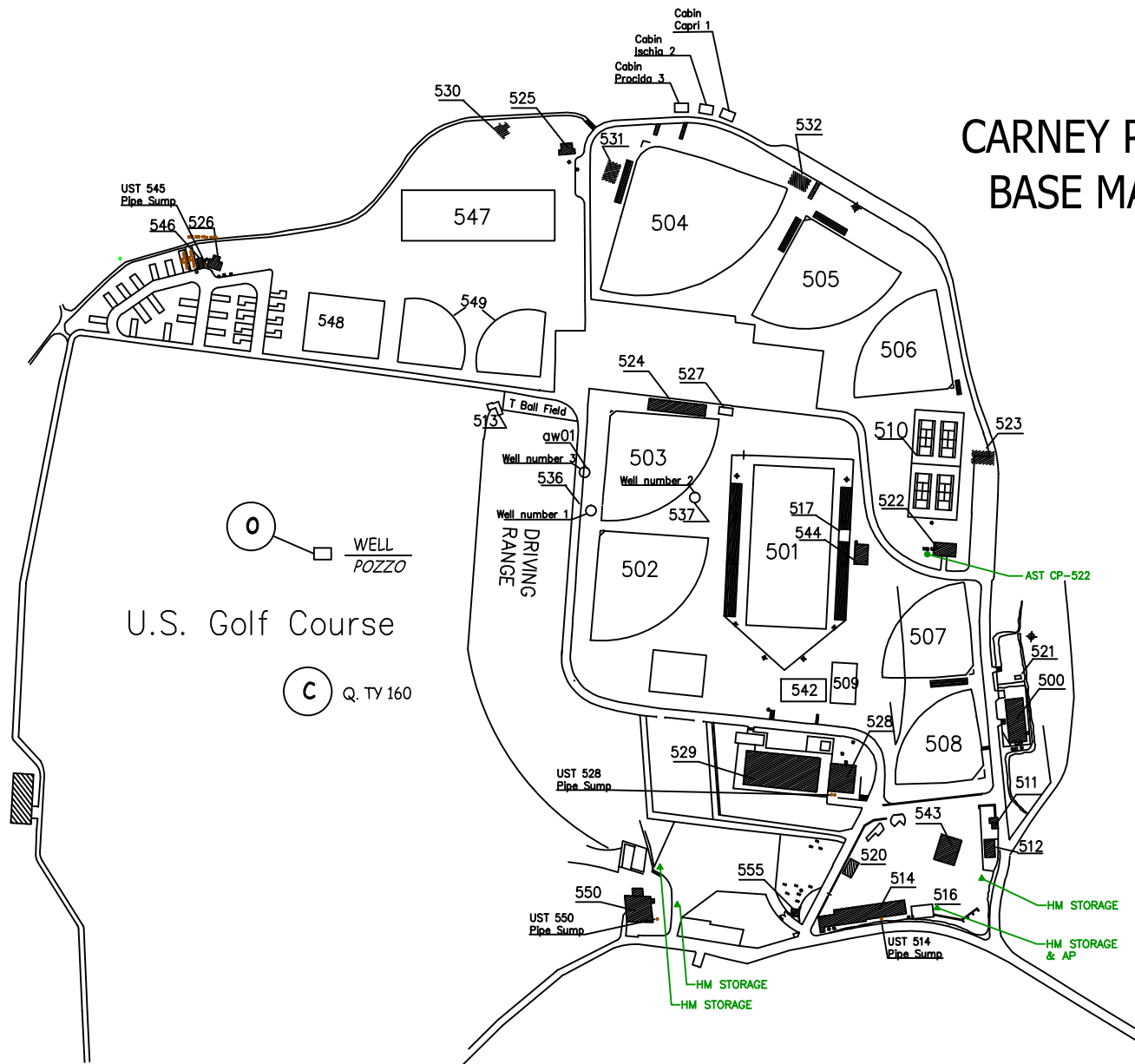
**APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS**

CARNEY PARK

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CARNEY PARK BASE MAP



U.S. Golf Course

CARNEY PARK SITE
PST AND HM STORAGE LOCATION MAP
2016 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY

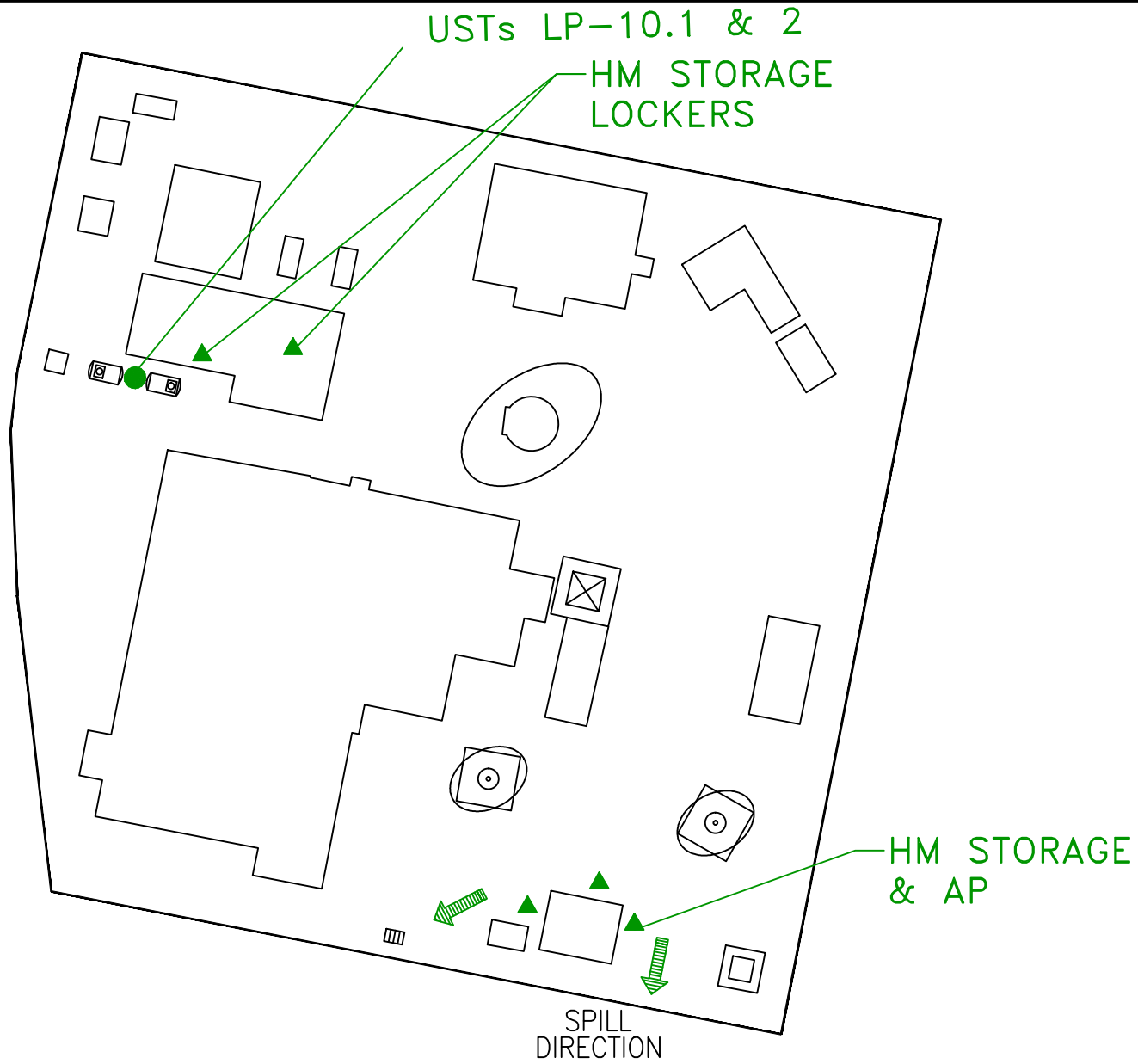
APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS

SATCOM LAGO PATRIA

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SATCOM Lago Patria





SATCOM LAGO PATRIA SITE
PST AND HM STORAGE LOCATION MAP
2016 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY

APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS

CAMALDOLI

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Camaldoli

Mt Camaldoli Relay Site

Strada Privata Rai

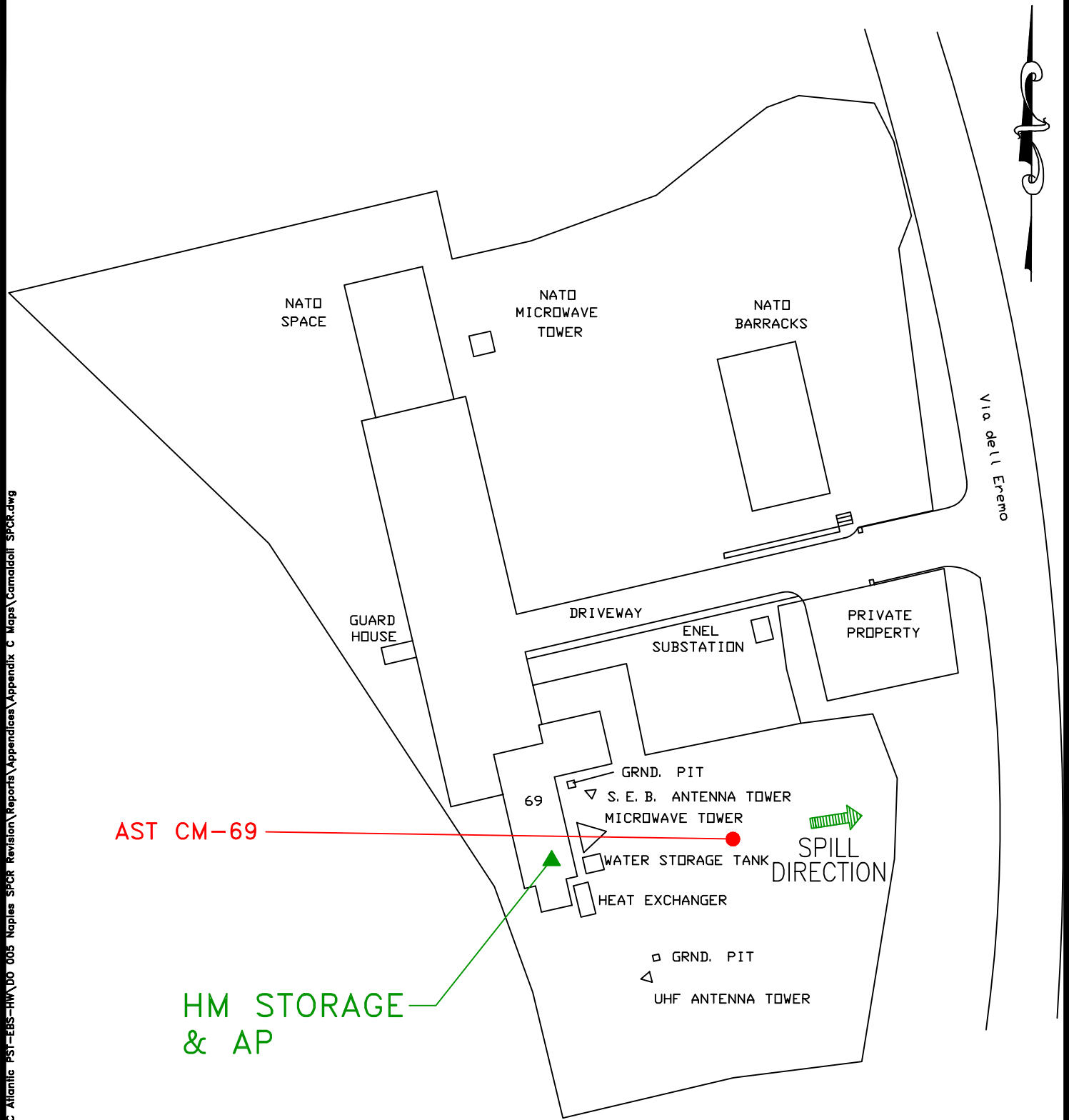
Google earth

© 2015 Google

Imagery Date: 8/10/2014 40°51'35.09" N 14°11'54.25" E elev 1265 ft eye alt 5904 ft

2003

BAKER E-FILE LOCATION: J:\Projects\0502 NAVFAC Atlantic PST-EBS-HW\00 005 Naples SPOR Revision\Reports\Appendices\Appendix C Maps\Camaldoli SPOR.dwg



AST CM-69

HM STORAGE
& AP

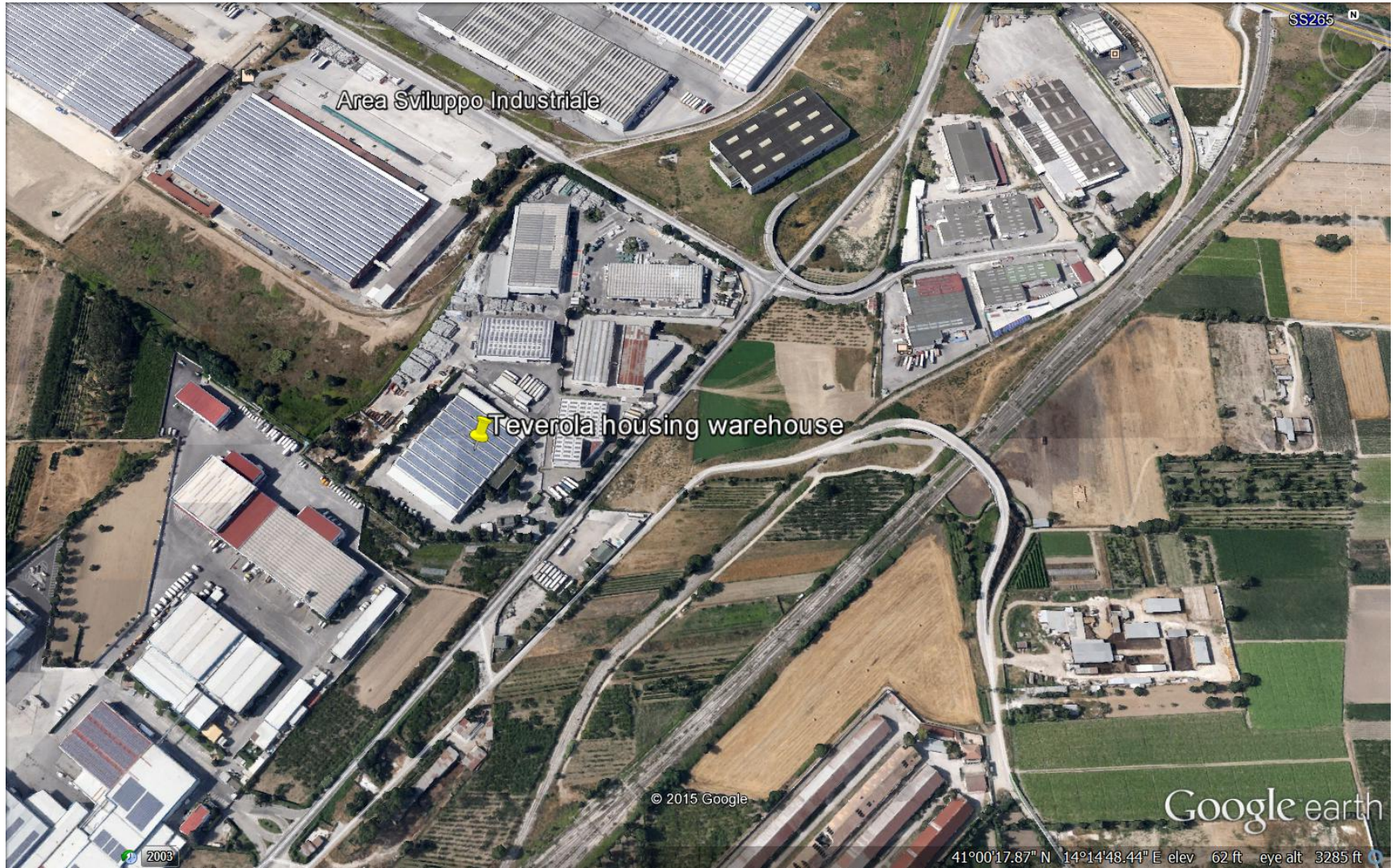
SPILL
DIRECTION

SCALE: N.T.S.

MT. CAMALDOLI RELAY SITE
PST AND HM STORAGE LOCATION MAP
2016 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY

APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS

TEVEROLA



Area Sviluppo Industriale

Teverola housing warehouse

SS265

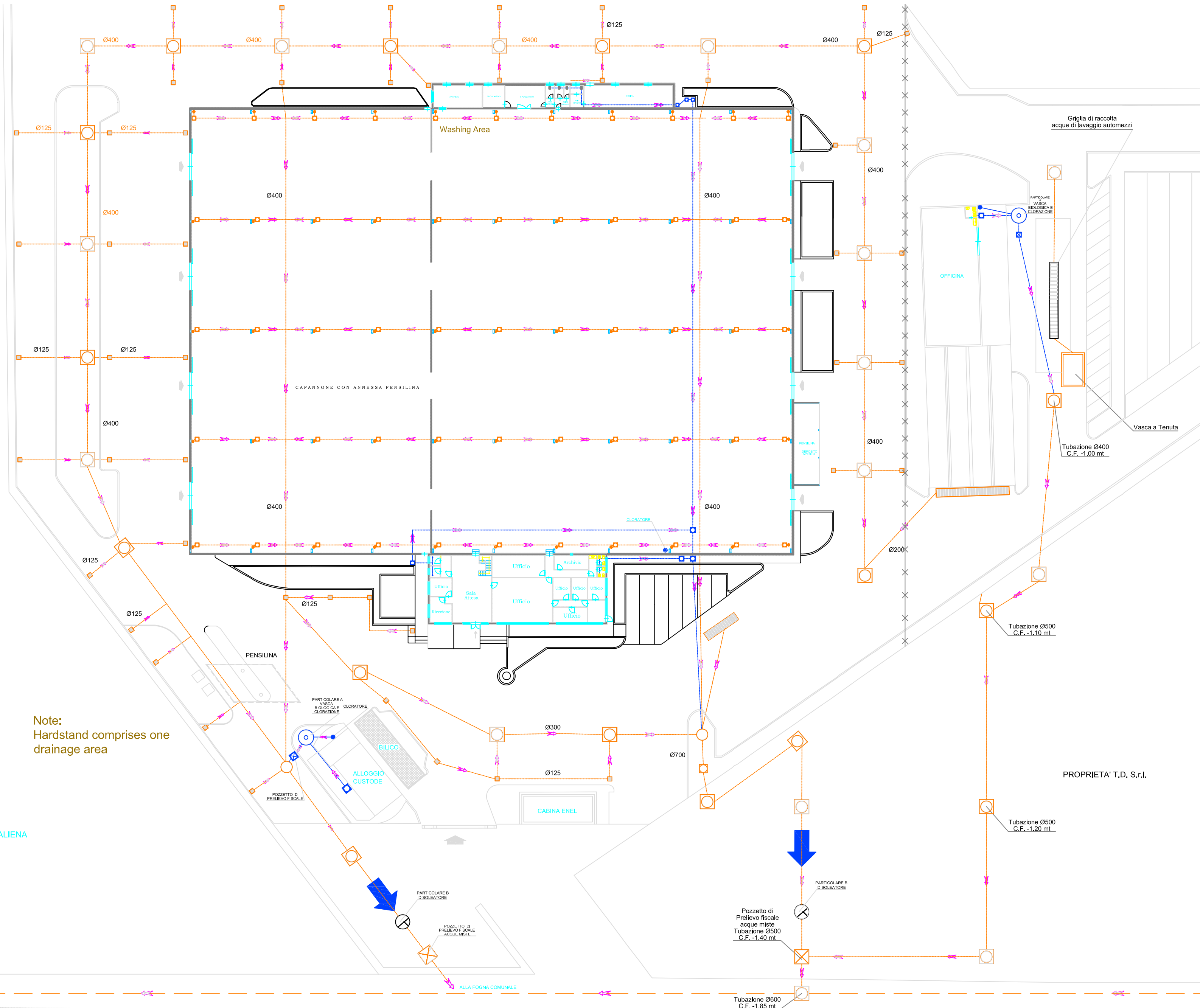
© 2015 Google

Google earth

2003

41°00'17.87" N 14°14'48.44" E elev 62 ft eye alt 3285 ft

Teverola Warehouse Magazzino di Teverola



Note:

Minor modifications have been made to the configuration of this as-built document, to demonstrate the present status of sanitary and storm sewer.

Northern direction not identified.

Nota:

Nel documento as-built sono state applicate minori modifiche alla configurazione delle reti, per dimostrazione dello stato attuale delle fognature bianche e nere.

Direzione Nord non è indicata.

Legend New Survey

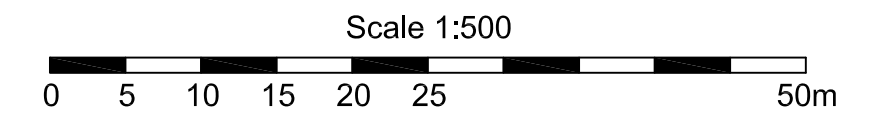
Legenda Nuovo Rilievo



Site Stormwater Outfall

Scarico finale da sito (acque reflue)

Note:
Hardstand comprises one drainage area



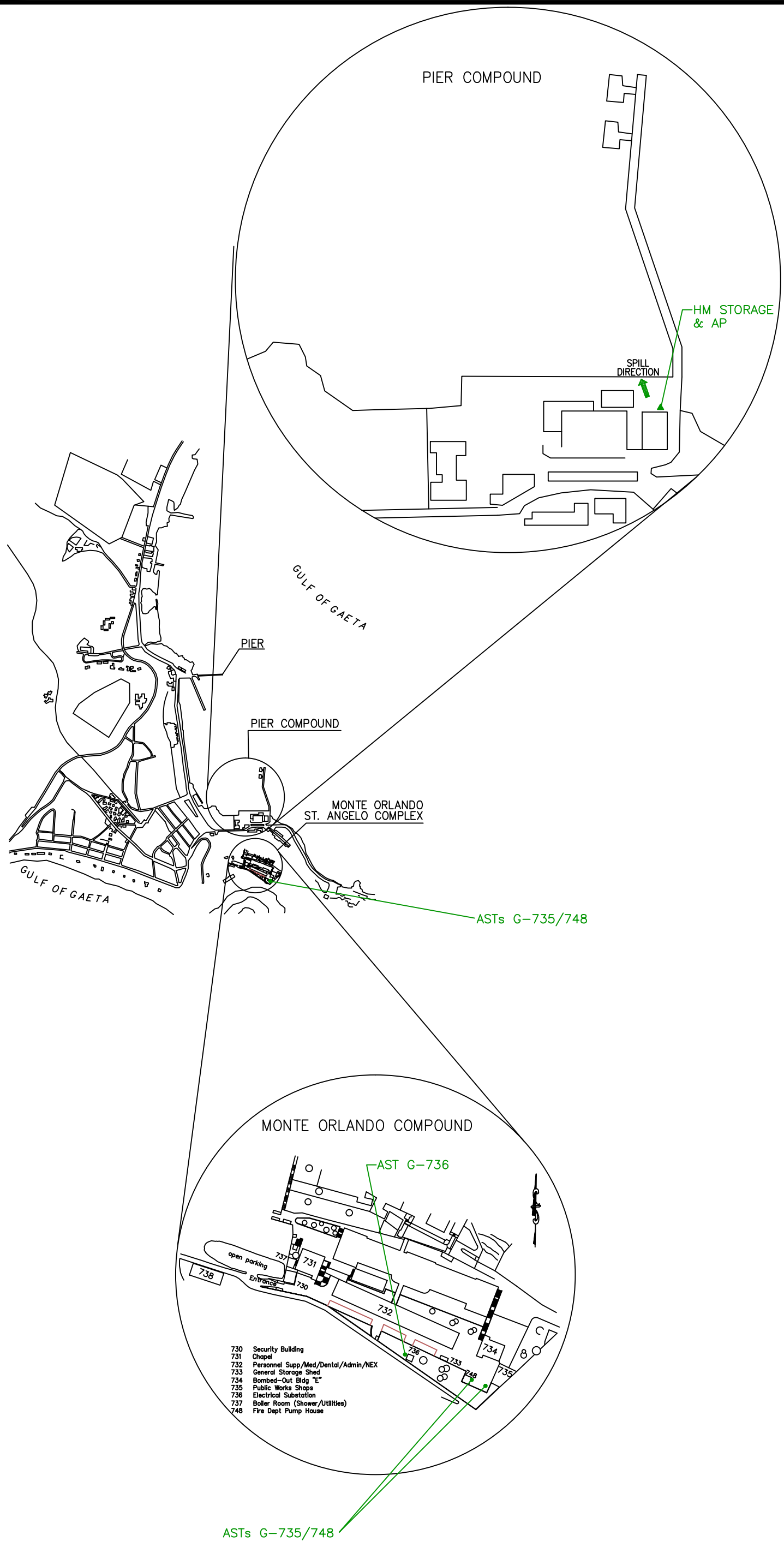
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Project STORMWATER POLLUTION PREVENTION PLAN (SWPPP)			URS Deutschland GmbH Frankfurt Office Heinrich-Hertz-Straße 3 D-63303 Dreieich Tel: +49 (0) 6103 93 89-0 Fax: +49 (0) 6103 93 89-99		
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Date Jan. 2006	Drafter K. Schüler	Appendix E-03	Project-No. (DoD) 43813764 N62470-99-D-3252 DO0021		

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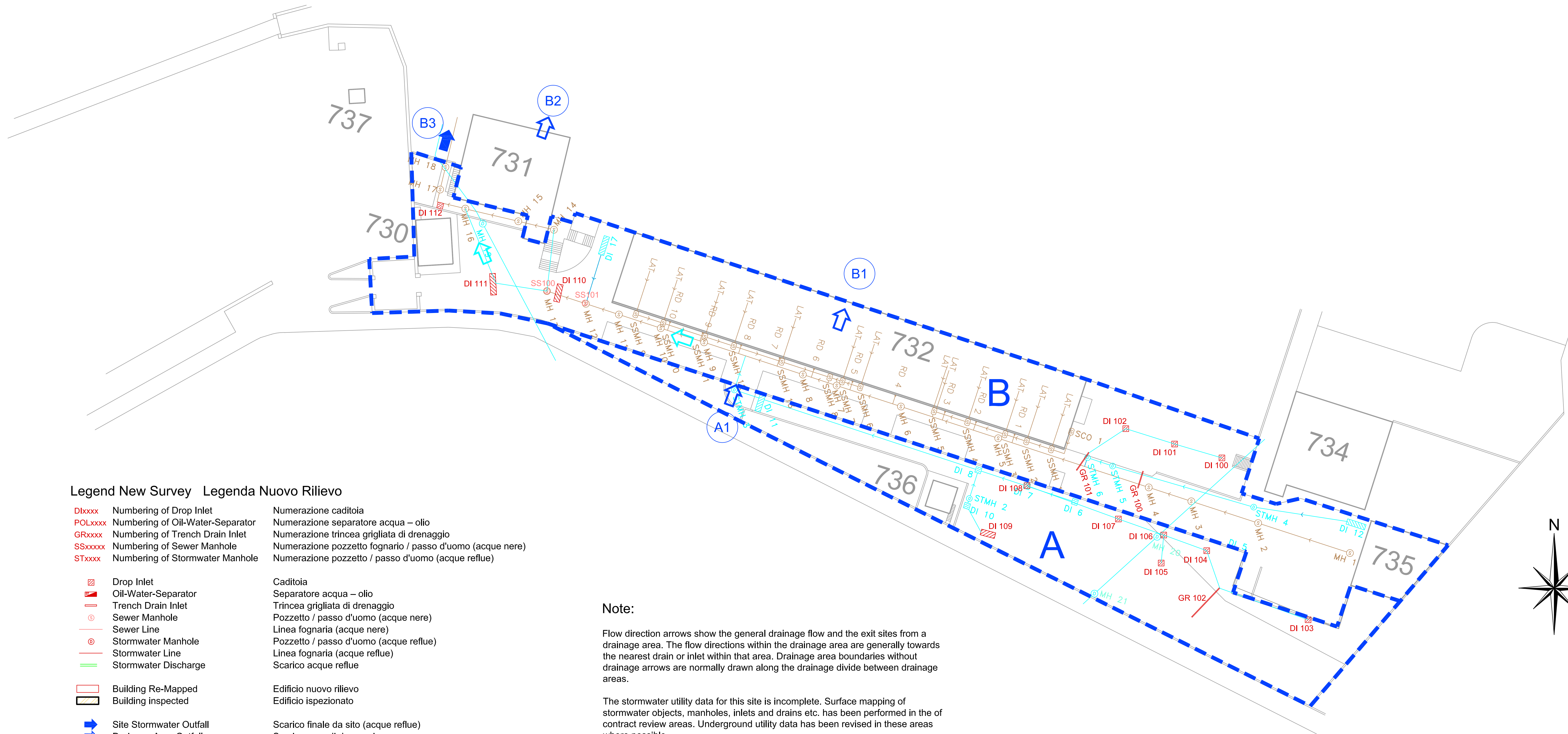
**APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS**

NSA DETACHMENT GAETA PIER AREA

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NSA DETACHMENT GAETA SITE
PST AND HM STORAGE LOCATION MAP
2016 SPILL PREVENTION AND RESPONSE PLAN
NSA NAPLES, ITALY



Legend New Survey / Legenda Nuovo Rilievo

DIxxxx	Numbering of Drop Inlet	Numerazione caditoia
POLxxxx	Numbering of Oil-Water-Separator	Numerazione separatore acqua - olio
GRxxxx	Numbering of Trench Drain Inlet	Numerazione trincea grigliata di drenaggio
SSxxxx	Numbering of Sewer Manhole	Numerazione pozzetto fognario / passo d'uomo (acque nere)
STxxxx	Numbering of Stormwater Manhole	Numerazione pozzetto / passo d'uomo (acque reflue)
	Drop Inlet	Caditoia
	Oil-Water-Separator	Separatore acqua - olio
	Trench Drain Inlet	Trincea grigliata di drenaggio
	Sewer Manhole	Pozzetto / passo d'uomo (acque nere)
	Sewer Line	Linea fognaria (acque nere)
	Stormwater Manhole	Pozzetto / passo d'uomo (acque reflue)
	Stormwater Line	Linea fognaria (acque reflue)
	Stormwater Discharge	Scarico acque reflue
	Building Re-Mapped	Edificio nuovo rilievo
	Building inspected	Edificio ispezionato
	Site Stormwater Outfall	Scarico finale da sito (acque reflue)
	Drainage Area Outfall	Scarico area di drenaggio
	Drainage Area	Area di drenaggio
	Numbering of Drainage Area Outfall	Numerazione punto di scarico area di drenaggio
	Numbering of Drainage Area	Numerazione area di drenaggio
	Water Culvert	Fogna aperta

Legend Existing Structures / Legenda Strutture Esistenti

DIxxxx	Numbering of Drop Inlet	Numerazione caditoia
RDxxx	Numbering of Downspout	Numerazione di pluviale
STMHxx	Numbering of Stormwater Manhole	Numerazione pozzetto / passo d'uomo (acque reflue)
SSMHxx	Numbering of Sewer Manhole	Numerazione pozzetto fognario / passo d'uomo (acque nere)
	Stormwater Manhole	Pozzetto / passo d'uomo (acque reflue)
	Sewer Manhole	Pozzetto / passo d'uomo (acque nere)
	Stormwater Line	Linea fognaria (acque reflue)
	Drop Inlet	Caditoia
	Sewer Line	Linea fognaria (acque nere)
	Flow Direction in Stormwater Line	Direzione flusso in linea fognaria

Note:

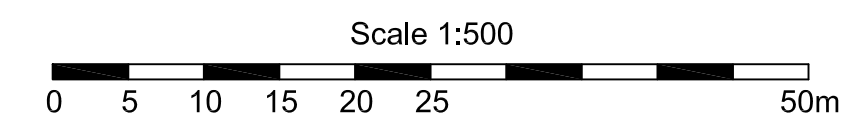
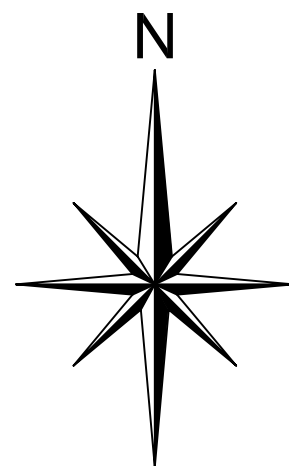
Flow direction arrows show the general drainage flow and the exit sites from a drainage area. The flow directions within the drainage area are generally towards the nearest drain or inlet within that area. Drainage area boundaries without drainage arrows are normally drawn along the drainage divide between drainage areas.

The stormwater utility data for this site is incomplete. Surface mapping of stormwater objects, manholes, inlets and drains etc. has been performed in the of contract review areas. Underground utility data has been revised in these areas where possible.

Nota:

La direzione generale di deflusso e il punto di scarico delle acque reflue sono indicate con frecce per ogni area di drenaggio. La direzione di deflusso all'interno dell'area di drenaggio generalmente è verso la trincea o il punto di scarico più vicino. I limiti di un'area di drenaggio sono normalmente indicati con linea senza frecce lungo la divisa tra aree di drenaggio confinanti.

Le indicazioni circa le strutture fognarie (acque reflue) sono incomplete. Il rilievo delle strutture fognarie, passi d'uomo, pozzetti, dreni etc. è stato eseguito nelle zone previste da contratto. Le indicazioni circa i sottoservizi sono state revisionate ove possibile.



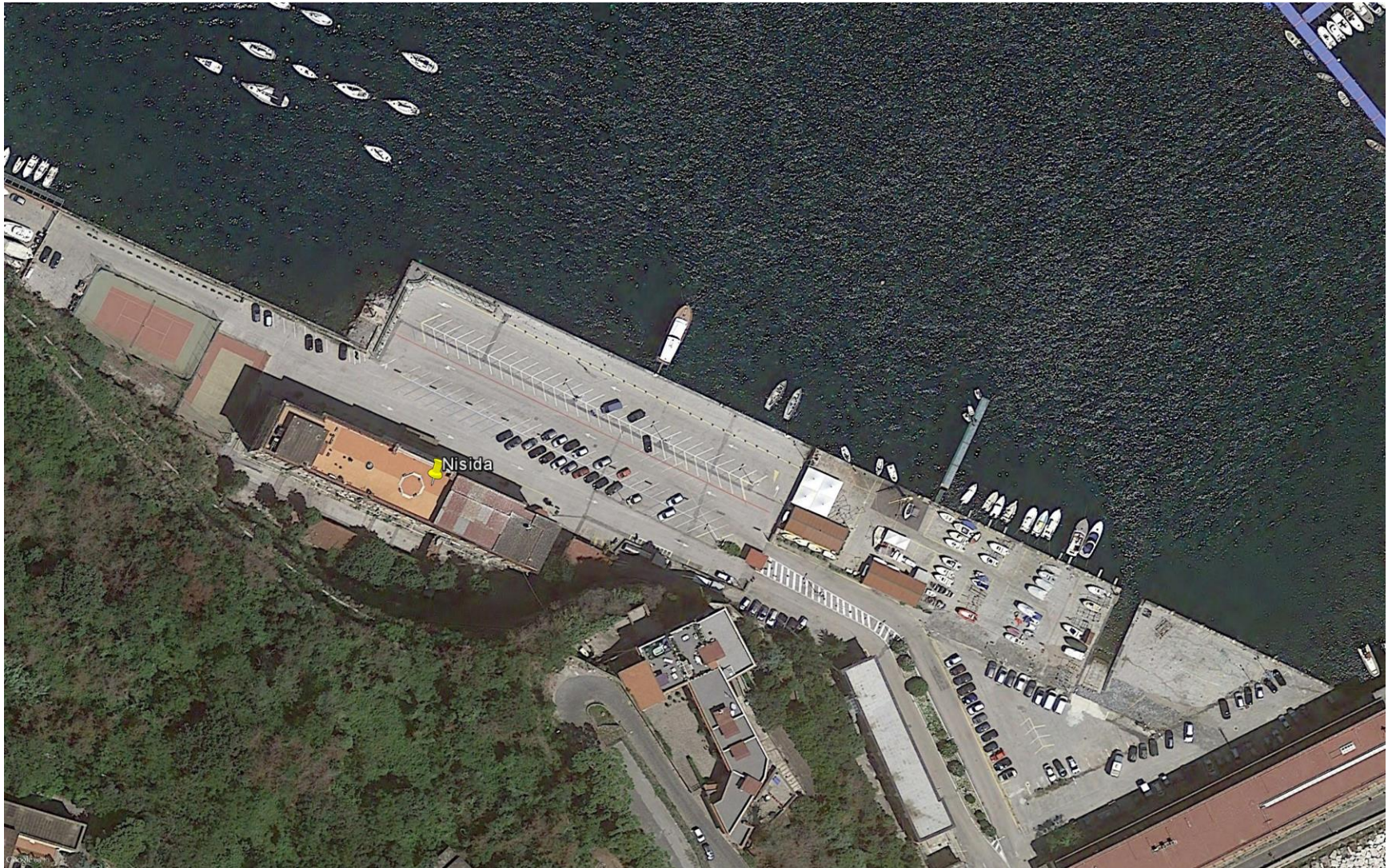
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Project STORMWATER POLLUTION PREVENTION PLAN (SWPPP)			
Scale 1:500	Responsible G. Tynan/U. Hoppe	Sheet Size 22x34 in	 <small>URS Deutschland GmbH Frankfurt Office Heinrich-Hertz-Straße 3 D-63303 Dreieich Tel: +49 (0) 6103 93 89-0 Fax: +49 (0) 6103 93 89-99</small>
Date Jan. 2006	Drafter K. Schüler	Appendix E-04	
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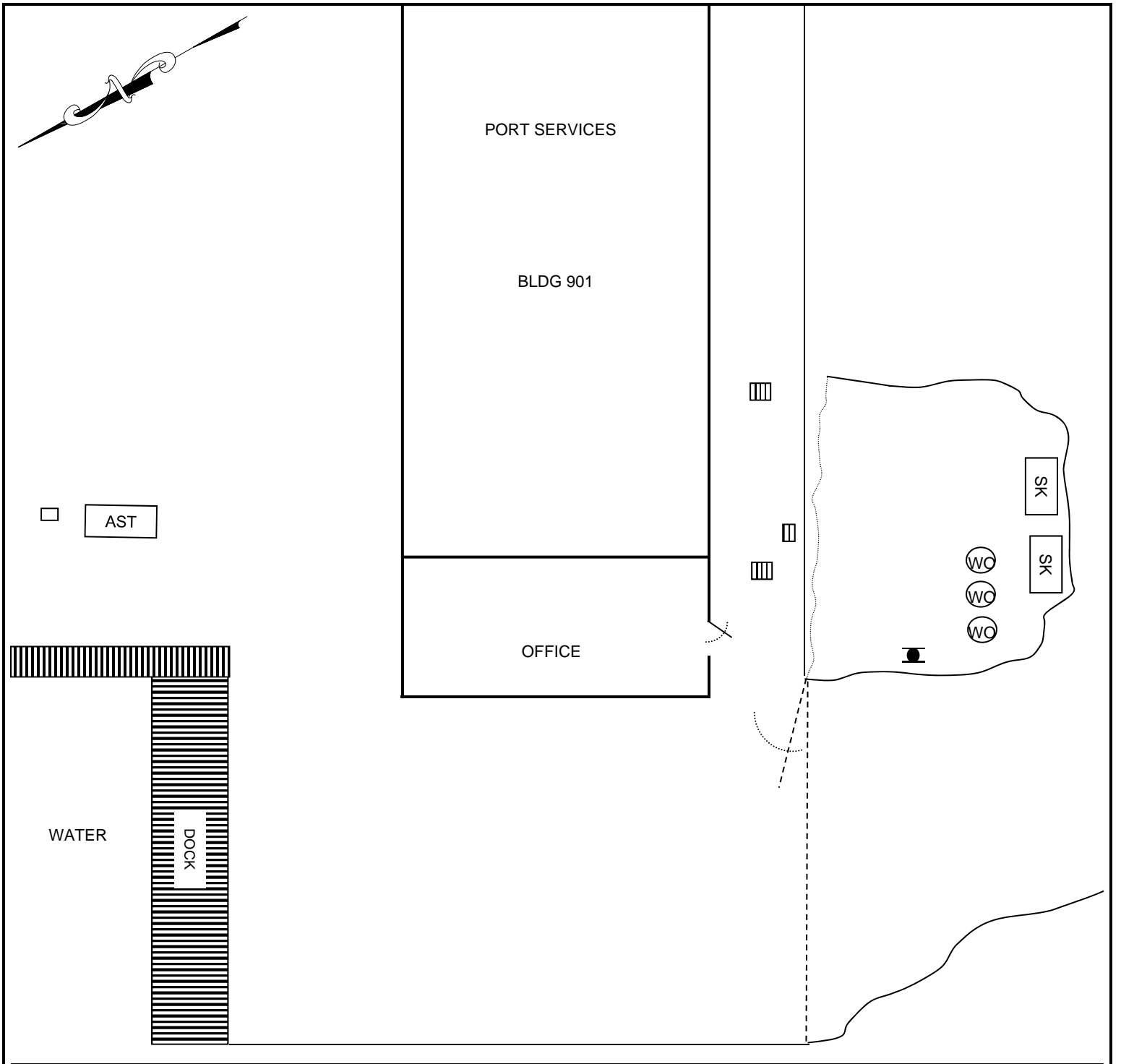
APPENDIX C
FACILITY LOCATIONS & DRAINAGE MAPS

NISIDA

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Nisida





WO = WASTE OIL

SK = SPILL KIT

□ = GAS PUMP

▤ = DRAIN

⋈ = DOOR/GATE

🔥 = FIRE EXTINGUISHER

○ = 55-GALLON DRUM

NOTE: ABOVE GROUND STORAGE TANK (AST) IS EMPTY AND NO LONGER IN USE

NISIDA ISLAND
 LOCATION MAP
 2016 SPILL PREVENTION AND RESPONSE PLAN
 NSA NAPLES, ITALY

APPENDIX D
HS COMPATIBILITY MATRIX

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SPILL PREVENTION GUIDANCE DOCUMENT

**Appendix D
Chemical/ Material Compatibility Matrix**

Chemical	Wood	Cement	Glass	Cast Iron	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Nickel	Monel	Inconel	Hastelloy	Ceramic	Ceromagnet	Epoxy Resins	Phenolic Resins	PVC	EPDM	Polyethylene	Chlorinated Polyethylene	Ploypropylene	Teflon	Neoprene	Hypalon	Buna-N	Natural Rubber
Chloroform	-	-	A	A	C	A	A	A	A	A	A	A	A	A	A	A	X	X	X	X	X	A	X	X	X	X
Chlorosulfonic Acid	-	-	A	X	-	C	C	A	A	A	A	A	-	-	X	X	A	-	-	-	-	-	X	-	-	-
Chromic Acid	X	X	A	X	-	X	X	X	X	X	-	-	A	-	X	X	A	-	C	-	-	-	X	-	-	-
Creosote	-	X	A	-	-	A	A	C	-	C	-	-	-	-	-	X	-	X	-	-	-	-	X	C	-	X
Cresol	-	X	A	A	-	A	A	A	A	A	-	-	-	-	-	X	X	-	X	-	-	-	X	-	-	A
Cyclohexane	-	-	A	A	C	-	-	A	-	-	-	-	-	-	-	X	A	X	X	A	A	-	X	X	A	X
Cyclohexanol	-	-	A	-	-	-	A	X	-	-	-	-	-	-	A	-	X	-	A	-	-	-	X	-	-	-
Cyclohexanone	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	X	-	-	-
Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	X	-	X
Diesel Oil	-	-	-	A	-	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethylamine	-	-	-	-	-	A	A	C	A	A	A	-	A	-	-	-	X	-	-	-	-	-	X	-	-	-
Dimethyl Hydrazine	-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
Ether (Ethyl or Diethyl)	-	-	A	-	-	C	C	-	-	-	-	-	-	-	X	-	X	-	X	-	-	-	X	-	-	-
Ethyl Acetate	A	X	A	A	-	A	A	A	A	A	A	A	A	-	A	A	X	-	X	-	-	-	X	-	-	-
Ethyl Alcohol (Ethanol)	-	-	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	-	-	A	-	A	A	A	A
Ethyl Benzene	-	-	A	-	A	A	A	-	-	-	-	-	-	-	A	-	X	X	X	C	-	X	X	X	-	X
Ethyl Chloride	-	-	-	-	X	A	A	C	-	-	-	-	A	A	-	-	-	-	-	C	-	X	A	C	X	X
Ethyl Mercaptan	-	-	A	-	-	-	A	A	-	-	-	-	-	-	X	-	-	-	-	-	-	-	X	-	-	-
Ethylene	-	-	-	-	A	A	A	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylene Dichloride	-	-	A	-	X	A	A	C	A	A	C	A	A	-	A	A	X	C	X	C	A	A	X	X	X	X
Ethylene Oxide	-	-	-	-	X	A	A	A	-	-	-	A	A	-	-	-	-	-	-	-	-	-	A	-	-	X
Formaldehyde Solution	-	-	A	C	C	-	C	C	A	A	A	A	A	C	A	A	A	C	A	C	A	A	A	C	C	C
Formic Acid	-	-	A	X	-	A	A	C	A	A	X	A	A	-	A	C	A	-	A	-	-	-	A	-	-	-
Gasoline	-	-	A	A	-	A	A	A	A	A	A	A	A	-	A	A	C	-	X	-	-	-	X	-	-	-
Glycerin	-	X	A	A	-	A	A	A	A	A	A	A	-	-	-	A	A	-	-	-	-	-	C	-	-	-
Hydrazine	X	-	X	X	-	A	A	A	X	X	X	X	-	-	A	A	A	-	-	-	-	-	X	-	-	-
Hydrochloric Acid	-	-	A	X	X	X	X	X	X	X	A	X	A	X	A	X	A	-	A	C	A	A	X	A	C	A
Hydrofluoric Acid	-	X	X	X	X	X	X	X	A	-	A	X	-	A	A	A	-	A	A	C	-	A	C	A	X	A
Hydrogen	-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	C	A	-	-	A	A	A	-	C
Hydrogen Cyanide	-	-	A	C	-	A	A	A	A	A	A	A	-	A	C	A	-	A	-	A	-	-	X	-	-	-
Hydrogen Peroxide	X	C	C	X	-	C	C	A	C	C	A	A	A	-	C	A	-	A	C	A	A	A	A	A	X	C
Hydrogen Sulfide	-	-	-	-	X	C	C	C	A	C	-	A	A	A	-	-	-	A	-	-	-	-	A	A	C	C
Isopropyl Alcohol (Isopropanol)	-	-	-	-	A	A	A	C	-	-	-	A	A	-	-	-	-	C	A	-	A	-	A	A	C	A
Kerosene	-	-	A	A	-	A	A	A	A	A	A	A	-	A	A	A	-	X	-	-	-	-	X	-	-	-
Mercury	-	-	-	-	C	A	A	C	-	-	-	C	A	-	-	-	-	A	A	-	A	C	A	A	C	A
Methane Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	A	C	-	X
Methyl Alcohol (Methanol)	A	A	A	A	A	A	A	C	A	A	A	A	A	A	A	A	A	A	A	C	A	A	A	A	A	A
Methyl Ethyl Ketone	-	A	A	-	A	A	A	-	-	-	-	-	-	-	X	A	X	A	X	-	-	A	X	X	X	C
Methyl Isobutyl Ketone	-	-	A	-	-	A	A	A	-	-	-	-	-	-	C	A	X	-	-	C	C	-	X	X	X	X
Methylene Chloride	-	-	-	-	C	A	A	A	-	-	-	A	A	-	-	-	-	-	-	C	X	A	-	-	-	X
Naphtha	-	-	A	A	-	A	A	A	A	A	A	A	-	A	A	C	-	A	-	-	-	-	X	-	-	-
Naphthalene	-	-	-	A	A	-	-	A	-	-	-	-	-	-	-	A	X	X	X	-	C	A	X	X	X	X
Nitric Acid	X	X	A	X	-	C	C	C	X	X	X	X	A	C	X	X	X	-	X	X	X	A	X	X	X	X
Nitrobenzene	-	-	A	A	-	A	A	A	A	A	A	A	-	C	C	X	-	X	-	-	-	-	X	-	-	-
Nitropropanes	-	-	-	-	-	A	A	-	-	-	-	-	-	-	-	-	A	-	-	-	-	-	X	-	-	-
Oxalic Acid	-	A	A	X	-	C	C	C	A	A	A	A	A	-	A	-	-	A	-	A	-	-	-	A	-	-
Oxygen Gas	-	-	-	-	-	-	-	C	-	-	-	-	-	-	-	-	-	C	A	C	-	-	C	C	-	C
Parathion	-	-	-	-	-	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	-	-	-	-	-	A	A	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	C	-	-	X
Perchloric Acid	X	X	C	X	-	X	X	X	X	X	-	-	-	-	A	-	C	-	C	-	-	-	X	-	-	-
Petroleum Ether	-	-	A	A	-	A	A	A	A	A	A	A	-	A	A	C	-	A	-	-	-	-	X	-	-	-
Phenol	A	A	A	A	C	A	A	A	A	A	A	A	A	A	X	X	C	X	C	C	C	A	X	X	X	X
Picric Acid	-	-	A	X	-	A	A	X	X	X	X	A	A	-	-	X	X	-	A	-	-	-	X	-	-	-
Potassium Cyanide	-	A	C	C	-	A	A	A	A	A	A	A	-	A	X	A	-	A	-	-	-	-	A	-	-	-
Pyridine	A	A	A	A	-	A	A	A	-	-	-	-	A	-	-	A	X	-	A	-	-	-	X	-	-	-
Silver Nitrate	-	-	A	A	-	A	A	X	X	X	A	A	A	-	A	A	A	-	A	-	-	-	A	-	-	-

SPILL PREVENTION GUIDANCE DOCUMENT

Chemical/ Material Compatibility Matrix (continued)

Chemical	Wood	Cement	Glass	Cast Iron	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Nickel	Monel	Inconel	Hastelloy	Ceramic	Ceramagnet	Epoxy Resins	Phenolic Resins	PVC	EPDM	Polyethylene	Chlorinated Polyethylene	Polypropylene	Teflon	Neoprene	Hypalon	Buna-N	Natural Rubber	
Sodium	-	-	-	-	-	A	A	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sodium Carbonate	-	C	A	A	C	A	A	X	A	A	A	A	-	-	A	A	A	A	A	C	A	A	A	A	A	A	
Sodium Chlorate	-	-	-	-	X	C	C	C	-	-	-	A	A	-	-	-	-	-	-	-	A	A	-	-	X	-	
Sodium Chloride	A	A	A	C	X	C	C	C	A	A	C	A	A	A	A	A	A	A	A	C	A	A	A	A	A	A	
Sodium Cyanide	A	A	C	A	C	A	A	X	X	X	X	-	A	-	A	A	A	C	A	-	A	A	A	A	A	A	
Sodium Hydroxide	-	A	C	A	A	A	A	X	A	A	A	X	A	A	A	X	A	-	A	C	A	A	X	A	X	C	
Sodium Hypochlorite	-	-	A	X	X	X	X	X	C	C	C	X	A	-	C	X	A	C	A	C	A	A	X	C	A	C	
Sodium Nitrate	-	-	-	-	C	A	A	A	C	C	-	A	A	A	-	-	-	-	A	A	A	A	A	A	A	C	A
Sodium Sulfide	-	-	-	-	-	-	X	C	C	-	-	A	-	-	-	-	-	A	A	A	A	A	A	A	A	C	A
Stoddard Solvent	-	-	A	A	-	A	A	A	A	A	A	A	A	-	A	A	C	-	A	-	-	-	X	-	-	-	
Styrene (Monomer)	-	-	A	-	-	-	C	A	-	-	-	-	-	-	-	X	X	X	X	C	-	A	X	-	X	X	
Sulfur	-	-	-	-	-	A	A	-	-	-	-	A	-	-	-	-	-	C	X	-	-	-	C	C	-	C	
Sulfur Dioxide	-	-	-	-	A	A	A	A	X	X	-	A	A	-	-	-	-	-	C	A	-	X	A	C	C	X	C
Sulfuric Acid	X	-	A	X	X	X	X	X	X	A	X	A	A	-	A	X	A	-	A	X	X	A	A	C	C	X	
Tetrahydrofuran	-	-	-	-	-	-	A	-	-	-	-	A	-	X	-	X	-	X	-	X	-	-	X	-	-	-	
Tetrachloroethane	-	-	A	-	-	-	A	X	-	-	-	-	-	-	A	-	X	-	-	-	-	-	X	-	-	-	
Tetraethyl Lead	-	-	-	-	C	-	A	-	-	-	-	-	-	-	-	-	A	-	A	-	-	-	-	-	-	-	
Toluene	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	X	X	C	X	A	X	X	X	X	
Transformer Oil	-	-	A	-	-	-	A	A	-	-	-	-	-	-	A	A	X	-	-	-	-	-	A	-	-	-	
Trichloroethane	-	-	-	-	-	-	C	-	-	-	-	-	A	-	-	-	-	X	A	C	-	A	X	X	X	X	
Trichloroethylene	-	-	A	A	-	X	A	A	A	A	A	A	-	A	A	X	-	X	-	-	-	-	X	-	-	-	
Turpentine	-	-	A	-	A	-	A	A	-	-	-	-	-	-	A	-	-	X	A	C	C	A	X	X	X	X	
Vinyl Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	X	-	C	
Xylenes	-	X	A	-	-	A	-	A	-	-	-	-	-	A	A	A	A	X	A	X	X	A	A	X	X	X	

Key:

A = Acceptable

C = Conditionally acceptable

X = Unacceptable

- = Insufficient Information

APPENDIX E
POL INSPECTION CHECKLISTS

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ABOVEGROUND STORAGE TANK (AST) FACILITY INSPECTION CHECKLIST

Inspection Date(s) ¹				Inspector(s) ²			
Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4
	Items of Inspection ³			Week 1	Week 2	Week 3	Week 4
1	Containment berms in satisfactory condition (i.e. free of cracks and corrosion.)						
2	Containment berms free of standing water.						
3	Containment berms free of high grass, weeds and debris.						
4	Ground surfaces around tank, containment structures and loading racks free of leakage, spills or signs thereof.						
5	Berm drain valves secured and locked in the closed position.						
6	Oily water separators in satisfactory condition. Separator holding tanks gauged and emptied as applicable.						
7	Tank high level alarm or valve systems checked and tested and in serviceable, fully operable condition.						
8	Fillstand overfill protection systems in serviceable condition and fully operable.						
9	Tank shell surfaces and foundation free of leakage. Welds, rivets/bolts, seams and joints free of rust and deterioration.						
10	Tank water draw-off valves secured and locked in the closed position.						
11	Tank inlet valves locked in the closed position when not in use. Outlet (issue) valves secured at the end of the duty day.						
12	Piping, valves, expansion joints, and other associated equipment/fittings free of deterioration and signs of leakage.						
13	Pipe supports in satisfactory condition.						
14	Dispensers, if present, free of leaks.						
15							

AST inspections will be accomplished every other Friday, prior to the close of business.

1. Inspection Date(s) - enter the date of the inspection in the appropriate block.
2. Inspector(s) - enter the inspector's Signature in the appropriate block.
3. Item of Inspection - enter Y-Yes, N-No, or N/A-Not Applicable in each box of the inspection checklist to indicate the state of compliance of each checklist item. On the reverse side of this form, provide comments on any item marked "No." Explain fully in a date, item, observation/action taken format.

On completion of the fourth weekly inspection, make a copy of the completed form. File and hold the original for three (3) years.

CONCRETE VAULTED AND STEEL DOUBLE-WALL AST FACILITY WEEKLY INSPECTION CHECKLIST

DATE: _____ INSPECTOR'S SIGNATURE: _____

TANK # & LOCATION: _____

AREAS COVERED: _____

wk. ____	wk. ____	wk. ____	wk. ____	wk. ____

1. Concrete encasement free of cracks or signs of damage from vehicle impact.
2. Tank free of signs of leakage from any existing cracks in concrete encasement.
3. Ground surface around tank free of signs of leakage or spills.
4. Tank liquid level gauge functioning, readable and accurate.
5. Tank fill ports closed and locked when not in use.
6. Valves and piping/tubing free of signs of leakage or deterioration.
7. Piping/tubing joints and fitting free of signs of leakage or deterioration.
8. Piping/tubing supports in satisfactory condition.
9. Area around tank accessible and free of clutter and excessive vegetation .

(Place either a Y=yes, N=no or N/A=not applicable in each box above to indicate the state of compliance with each checklist item.)

Comments (Please provide information on any item circled "No")

Date Item # Observation and Action

DRUM STORAGE FACILITY WEEKLY INSPECTION CHECKLIST

DATE: _____ INSPECTOR'S SIGNATURE: _____

LOCATION & BLDG.#: _____

AREAS COVERED: _____

wk. ____	wk. ____	wk. ____	wk. ____	wk. ____

1. Containment curbing in satisfactory condition (i.e., free of breaks, cracks, holes, corrosion or stains).
2. Containment free of standing water or oil, debris and unrelated stored items.
3. Ground surface around drums and within containment area free of signs of spills or leaks.
4. Manual drainage valve(s) for containment area closed and secured.

(Place either a Y=yes, N=no or N/A=not applicable in each box above to indicate the state of compliance with each checklist item.)

Comments (Please provide information on any item circled "No")

Date Item # Observation and Action

DIKE DRAINAGE INSPECTION- CHECKLIST 1

Inspector's Name/Phone Number: _____	Inspector's Signature: _____													
TANK #: _____														
Responsible Activity: _____														
Indicate Date, initials, and yes/no to contamination on water														
NOTES:														

BULK PST DAILY INSPECTION- CHECKLIST 2

Inspector's Name/Signature/Phone

Number:

Tank Number: _____

Responsible Activity: _____

Inspection Items	Year:							
	Month:	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	Date:							
	Initials:							
Tank & Piping structural integrity ok?								
Drainage valves closed?								
Condition of valves ok?								
Water/trash in containment?								
Evidence of spills?								
Cracks in containment?								
Cathodic Protection System ok?								
Condition coating on Tank & Piping ok?								
Tank marking legible?								
HLA/liquid level gauge working?								
Tank/Piping support and foundation ok?								
Spill control systems (OWS) ok?								
Maintenance actions:								
Date of request:								
Date work completed:								

NOTES:

UST MONTHLY INSPECTION- CHECKLIST 3

Inspector's Name/Phone _____

Inspector's Signature: _____

Number: _____

Tank Number: _____

Responsible Activity: _____

Inspection Items	Year:												
	Month:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Date:												
	Initials:												
Is leak detection system working?													
Monthly leak detection report?													
Oil/water in pipe sump?													
Is overfill alarm working?													
Water in tank?													
Evidence of surface spills?													
Problems with pumps?													
Is dispenser piping leaking?													
Is cathodic protection working?													
Is liquid level gauge working?													
Are tank markings legible?													
Is the Fuel Master system working?													
Maintenance actions:													
Date of request:													
Date work completed:													

NOTES:

AST MONTHLY INSPECTION- CHECKLIST 4

Inspector's Name/Phone Number: _____ Inspector's Signature: _____

Tank Number: _____

Responsible Activity: _____

Inspection Items	Year:												
	Month:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Date:												
	Initials:												
Tank & Piping structural integrity ok?													
Drainage valves closed?													
Condition of valves ok?													
Water/trash in containment?													
Evidence of spills?													
Cracks in containment?													
Cathodic Protection System ok?													
Condition of coating on Tank & Piping ok?													
Tank marking legible?													
HLA/liquid level gauge/FM working?													
Tank/Piping support and foundation ok?													
Spill control systems (OWS) ok?													
If present, is dispenser leaking?													
Maintenance actions:													
Date of request:													
Date work completed:													

NOTES:

OFFLOADING/LOADING AREA DAILY INSPECTION- CHECKLIST 5

Inspector's Name/Signature/Phone Number:
Loading/Offloading Area: _____
Responsible Activity: _____

Inspection Items	Year:							
	Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
	Date:							
	Initials:							
Is Overfill Prevention System functioning?								
Condition of containment ok?								
Condition of drainage system ok?								
Water in containment?								
Drain valves locked?								
Condition of piping, strainers, filters etc. ?								
Any PM required?								
Maintenance actions:								
Date of request:								
Date work completed:								

NOTES:

TANK TRUCK DAILY INSPECTION- CHECKLIST 6

**Inspector's
Name/Signature/Phone Number:**

Truck: _____

Responsible Activity: _____

Inspection Items	Year:							
	Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
	Date:							
	Initials:							
Is Overfill Prevention System functioning?								
Condition of Tank Compartments ok?								
Condition of Valves system ok?								
Breaks Functioning?								
Fire Extinguisher on board?								
Lights, horn & signals working ?								
Any PM required?								
Maintenance actions:								
Date of request:								
Date work completed:								

NOTES:

CATHODIC PROTECTION QUARTERLY INSPECTION- CHECKLIST 7

Inspector Name/Phone Number: _____

Inspector's Signature: _____

Tank Number: _____

Responsible Activity: _____

Inspection Items	Year:												
	Quarter:	1	2	3	4	1	2	3	4	1	2	3	4
	Date:												
	Initials:												
Is CP System functioning?													
What does the rectifier read?													
What do the Test Points read? (add additional notes as needed)													
Condition of overall system ok?													
Water in rectifier?													
All leads appear intact?													
Any PM required?													
Maintenance actions:													
Date of request:													
Date work completed:													

NOTES:

OIL FILLED EQUIPMENT & GENERATOR MONTHLY INSPECTION- CHECKLIST 8

Inspector Name/Phone Number: _____

Inspector's Signature: _____

Tank Number: _____

Responsible Activity: _____

Inspection Items	Year:												
	Month:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Date:												
	Initials:												
Evidence of spills?													
Fuel Tank Shows Corrosion?													
Maintenance actions:													
Date of request:													
Date work completed:													

NOTES:

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APPENDIX F
HW INSPECTION CHECKLIST

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WEEKLY INSPECTION OF HWAP

Building / Area:

Date:

Inspector:

Unit:

HWAP											YES	NO	N/A	
1. Is each waste stream stored in a separate container (i.e., not commingled)?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Is there only one accumulation container per waste stream? (i.e., no duplicates)											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Is a drum accumulation log maintained for each waste stream?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Are all waste containers adequately/appropriately labeled?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Are incompatible wastes segregated?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Mark the number of containers for each waste stream below:														
Waste Oil	Antifreeze	Waste Oil Filters	POL-contaminated solids	POL-contaminated absorbents	Paint-related Waste	Corrosive Containers	Aerosol Cans	Batteries			Other (Identify Below)			
								Lead Acid	Nickel-Cadmium	Gel Cell		Other		
7. Are containers in good condition and nonleaking?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Are all containers closed (unless adding or removing waste)?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Is adequate secondary containment provided for liquid wastes?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Are any containers full?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If yes to 10., list the waste type and the length of time the container has been stored full.														
11. Have all personnel handling hazardous waste at the HWAP been trained?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Is there a HWPS on file for each waste stream stored in the area?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Are warning signs appropriate for the waste types posted?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Are warning signs posted in English and Greek?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
E. Other Comments:														
F. Corrective Actions (for each noncompliant item, please describe type and completion date of corrective actions)														

Yes: Compliance

No: Noncompliance

N/A: Not Applicable

WEEKLY INSPECTION OF HWSA

Building / Area:

Date:

Inspector:

Unit:

HWSA											YES	NO	N/A
1. Is each waste stream stored in a separate container (i.e., not commingled)?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are all waste containers adequately/appropriately labeled?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Is a hazardous waste log maintained for the area?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Are incompatible wastes segregated?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Mark the number of containers for each waste stream below:													
Waste Oil	Antifreeze	Waste Oil Filters	POL-contaminated solids	POL-contaminated absorbents	Paint-related Waste	Corrosive Containers	Aerosol Cans	Batteries				Other (Identify Below)	
								Lead Acid	Nickel-Cadmium	Gel Cell	Other		
6. Are containers in good condition and nonleaking?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are all containers closed (unless adding or removing waste)?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is adequate secondary containment provided for liquid wastes?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Are containers present that exceed the 1-year storage limit?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes to 9., list the container numbers along with an explanation as to the reason for storage limit exceedance.													
10. Have all personnel handling hazardous waste at the HWSA been trained?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Is there a HWPS on file for each waste stream stored in the area?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Is this area secured from unauthorized entry?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are signs posted that say "Danger. Unauthorized Personnel, Keep Out"?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes to 13, are the signs in English and Greek?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the signs visible from 25 feet and from any side of the HWSA?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Is the HWSA equipped with any alarm or emergency communication device?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes to 14, is the equipment operable and in good condition?													
15. Are there occasions when only one person is working in the area?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes to 15, does that person have immediate access to a cell phone or two-way radio (or any other appropriate device that will allow for summoning assistance)?											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Other Comments:													
F. Corrective Actions (for each noncompliant item, please describe type and completion date of corrective actions)													

Yes: Compliance

No: Noncompliance

N/A: Not Applicable

MONTHLY INSPECTION OF HWAP by Hazardous Waste Manager.

HWAP: NAME AND/OR LOCATION (print) _____

POC: NAME & Tel.(print) _____

	YES	NO
1). Required items on site:		
a. Inventory of locker posted outside of locker. _____		
b. Proper Hazard Class/es posted outside on locker. _____		
c. Eye wash, within 150 feet or 10 seconds away. _____		
d. Safety shower readily available. _____		
e. Spill kit stocked. _____		
f. Fire extinguisher, immediate area. _____		
g. Hazardous Communications.		
1. Right to know station. _____		
2. MSDS for each HW. _____		
3. Signature sheet for MSDS information. _____		
h. Warning signs, English and Greek. _____		
i. Posted; responsible personnel list with phone #. _____		
j. Posted; spill response procedures. _____		
k. Containment for liquid, 10% of stored volume, minimum. _____		
1. Copy of Hazardous Waste Turn-in Procedures. _____		
m. Personal Protective Equipment:		
1. Readily available. _____		
2. Clean. _____		
3. Stored properly. _____		
n. Container log for each drum. _____		
o. Weekly Inspection Form, current and on file _____		
2). HW segregated properly. _____		
3). All HW containers labeled properly with standard 4 line information. _____		
4). All containers closed if not in use. _____		
5). No duplicate containers, one per waste stream. _____		
6). House keeping:		
a. Neat, no refuse in area. _____		
b. Orderly. _____		
c. No spill residue. _____		
7). Site secured properly. _____		
8). Attends monthly Safety/Environmental Meetings. _____		

See below

*All items checked "No " must be corrected.

Inspected by: _____ Maintain copy for five years.
Signature

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APPENDIX G
SPILL PREDICTIONS

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GENERAL SPILL ESTIMATIONS

ASSUMPTIONS: Reasonable expectations rather worst-case scenarios.

40 CFR 112.7(b) calls for information on spills from tanks rather than spills escaping from the facility; any facility in compliance with the regulation would have no spill escaping the facility since it would be retained in secondary containment.

Manifolded tanks are equivalent to a single tank whose capacity of the sum of all the tanks piped together; leak in one tank could drain all.

ESTIMATION OF FLOW RATE: Use units of gallons and minutes in all calculations.

Convert all truck pumping rates and piping delivery rates to gallons per minute (gpm) using Conversion to Gallons Per Minute (gpm) chart below.

Use Estimation of Flow Rate chart below to determine rates for the facility.

ESTIMATION OF TOTAL QUANTITY: Use Estimation of Total Quantity Discharged chart below to determine total quantity discharged for the facility.

ESTIMATION OF PATHWAYS: The facility must be walked and pathways from each tank to navigable waters marked on a field copy of an appropriate map. Topographic maps should never be the sole source of pathways; they do not show ditches, curbs, drains, and other features obvious to a field observer that would direct flow.

CONVERSION TO GALLONS PER MINUTE (gpm)	
GIVEN	MULTIPLY BY
bbl/hr	.7
gal/hr	.0167

ESTIMATION OF FLOW RATE	
FAILURE TYPE	ESTIMATED FLOW RATE
OVERFILL: (via tank truck)	RATE = MAXIMUM TRUCK PUMPING RATE The highest pumping rate the supplier's trucks are capable of.
OVERFILL: (via piping)	RATE = MAXIMUM PIPING DELIVERY RATE The highest rate the supplying piping can actually delivery "oil" to the facility at. The smaller the supplying piping, the lower the percentage of rated supply pump capacity that can actually be delivered (i.e., a 675 gpm pump may deliver 500 gpm via a 10" pipe, but only 200 gpm via a 4" pipe).
RUPTURE:	RATE = $\frac{\text{CAPACITY OF LARGEST TANK}}{60}$ Assume the largest tank (or manifolded tank set) in the facility will empty in 60 minutes.
LEAKAGE:	RATE = $\frac{\text{CAPACITY OF LARGEST TANK}}{10,080}$ Assume the largest tank (or manifolded tank set) in the facility will empty in a week (10,080 minutes)
FAULTY PIPING, ETC:	RATE = $\frac{\text{CAPACITY OF LARGEST TANK}}{1440}$ Assume the largest tank (or manifolded tank set) in the facility will empty in a day (1440 minutes)

POL	ESTIMATED FLOW RATE
Diesel Fuel truck (1)	1. Overfill by dispenser = 10 gpm 2. Fuel truck rupture = 83 gpm
Aircraft parking apron	1. Overfill by fuel truck = 300 gpm
AST C-412 – Capo Building 412	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 32 gpm 3. Leakage = 0.05 gallons /week
AST C-449 – Capo Building 449	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 37 gpm 3. Leakage = 0.05 gallons/week
AST CP-522 – Carney Park Building 522	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 13.3 gpm 3. Leakage = 0.05 gallons/week
AST CM-69 – Camaldoli Building 69	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 16.6 gpm 3. Leakage = 0.05 gallons/week
AST G-748 – Gaeta Building 748	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 3.5 gpm 3. Leakage = 0.052 gallons/week
AST G-735 – Gaeta Building 735	1. Overfill by fuel truck = 100 gpm 2. Tank rupture = 25 gpm 3. Leakage = 0.05 gallons/week

AST G-736 – Gaeta Building 736	<ol style="list-style-type: none">1. Overfill by fuel truck = 100 gpm2. Tank rupture = 8.8 gpm3. Leakage = 0.05 gallons/week
AST SS-2077 – Support Site Building 2077	<ol style="list-style-type: none">1. Overfill by fuel truck = 100 gpm2. Tank rupture = 22 gpm3. Leakage = 0.05 gallons/week
AST SS-2075 - Support Site Building 2075	<ol style="list-style-type: none">1. Overfill by fuel truck = 100 gpm2. Tank rupture = 5.7 gpm3. Leakage = 0.05 gallons/week

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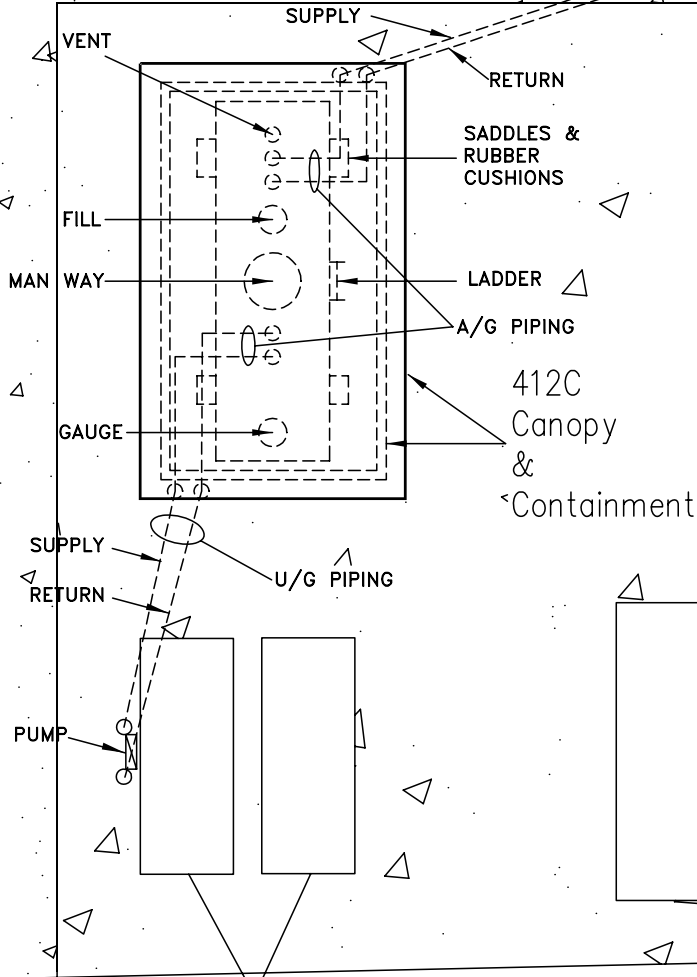
APPENDIX H
SITE DRAWINGS & PHOTOS

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412
Air Cargo / 6th Fleet Band

BOILER ROOM

Elevated Walk



412B

Chiller Pad

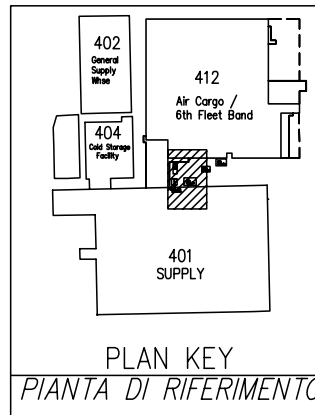
STORM DRAIN

401A
Substation

412D & 412E
Emergency Generators

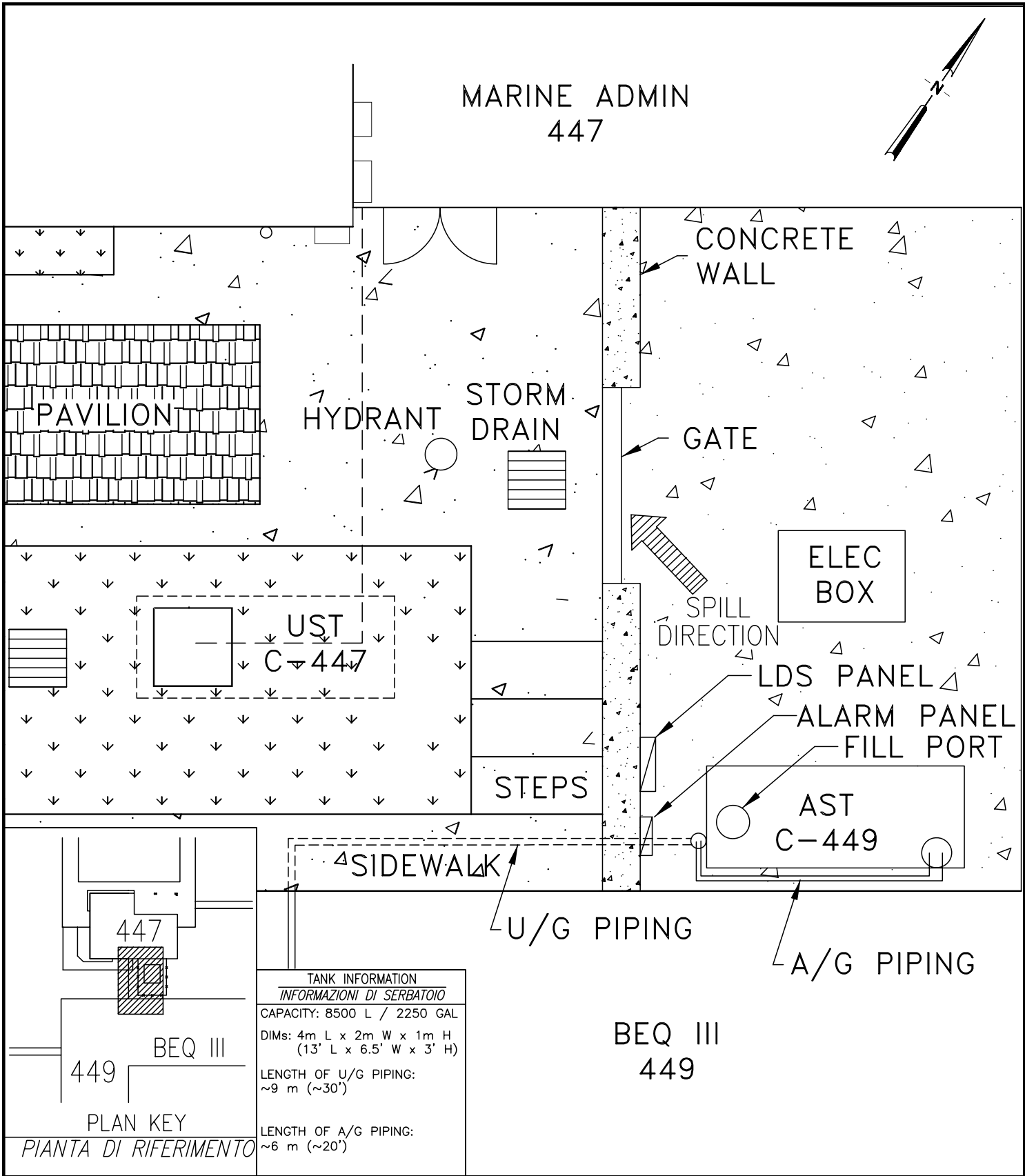
401
Supply

TANK INFORMATION
INFORMAZIONI DI SERBATOIO
CAPACITY: 8000 L / 2110 GAL
DIMS: ϕ 1600mm X 4000mm (L) [ϕ 5.25' X 13' (L)]
LENGTH OF U/G PIPING: ~4 m (12') to SE ~12 m (40') to N
LENGTH OF A/G PIPING: ~3 m (10') (X2)



AST C-412
AIR CARGO-BLDG #412
NSA NAPLES, ITALY
CAPODICHINO

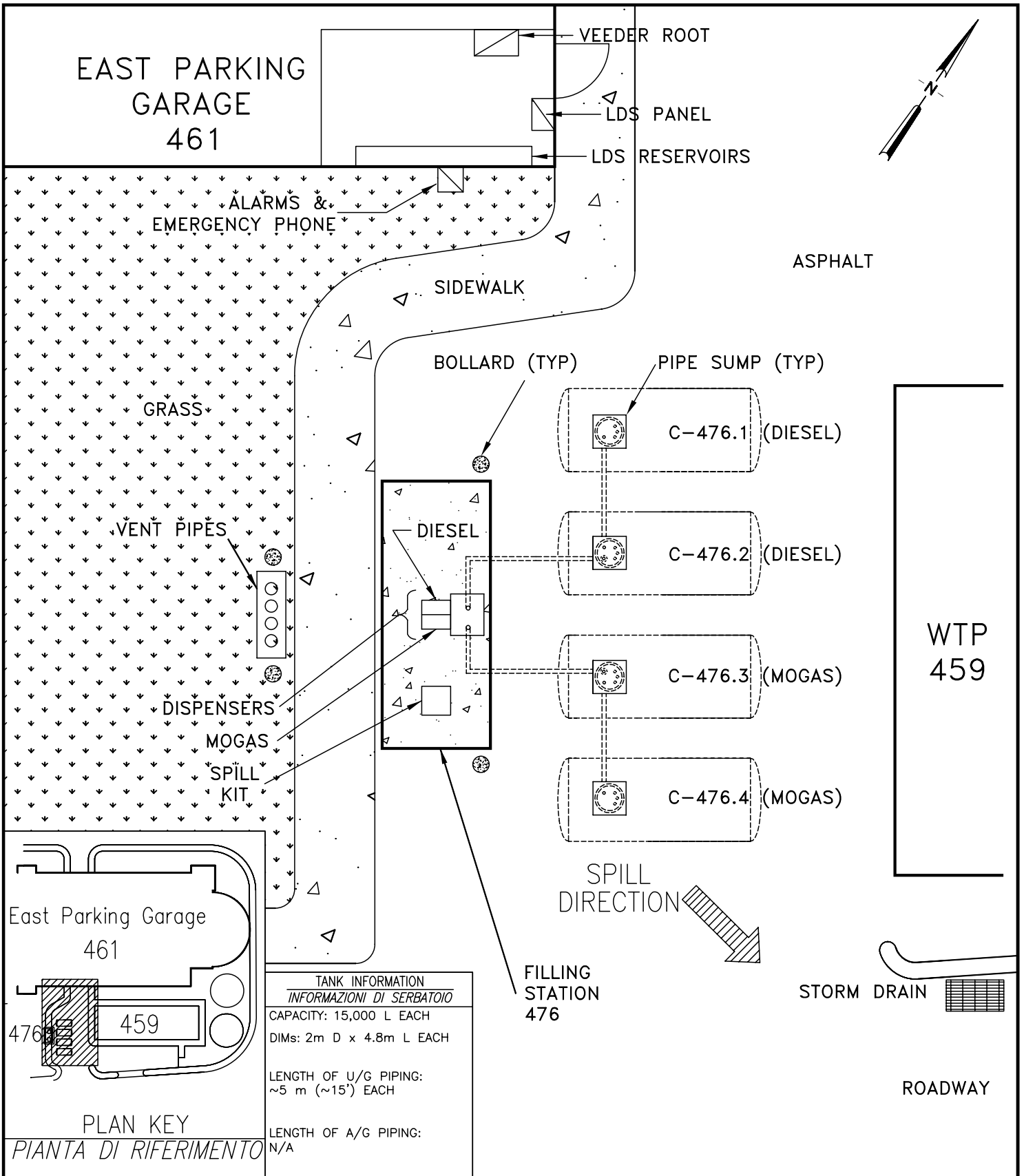
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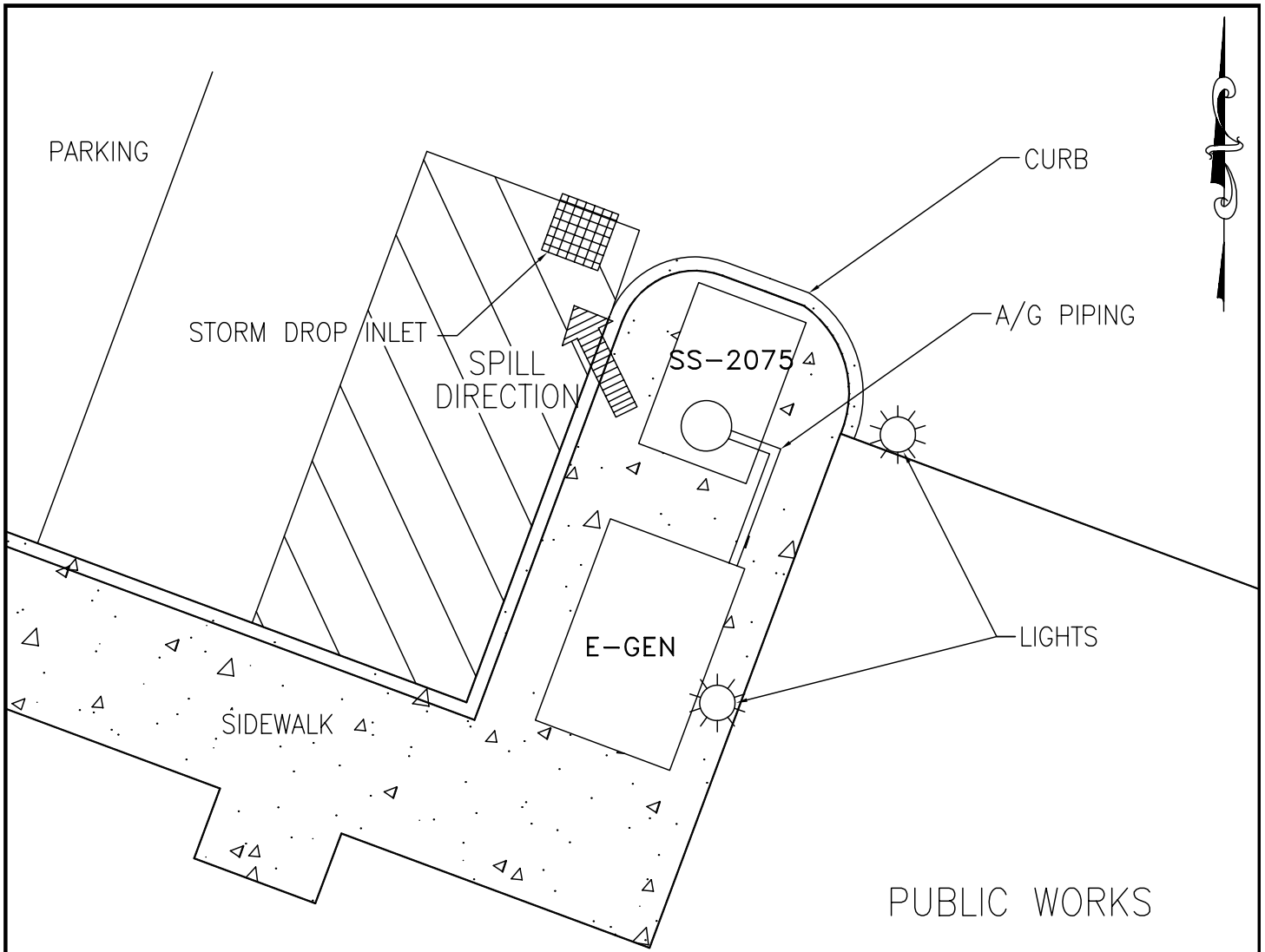
AST C-449
BEQ - BLDG #449
NSA NAPLES, ITALY
CAPODICHINO

FIGURE NO.

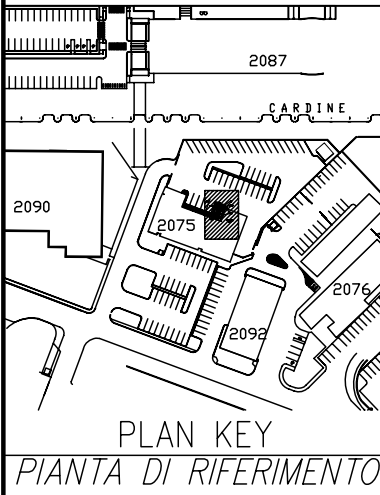
SCALE: (NTS)



USTs C-476.1-4 FILLING STATION-BLDG #476 NSA NAPLES, ITALY CAPODICHINO	FIGURE NO.
	SCALE: (NTS)



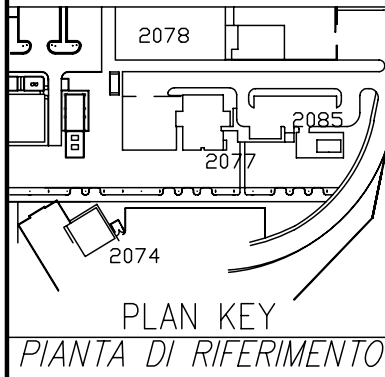
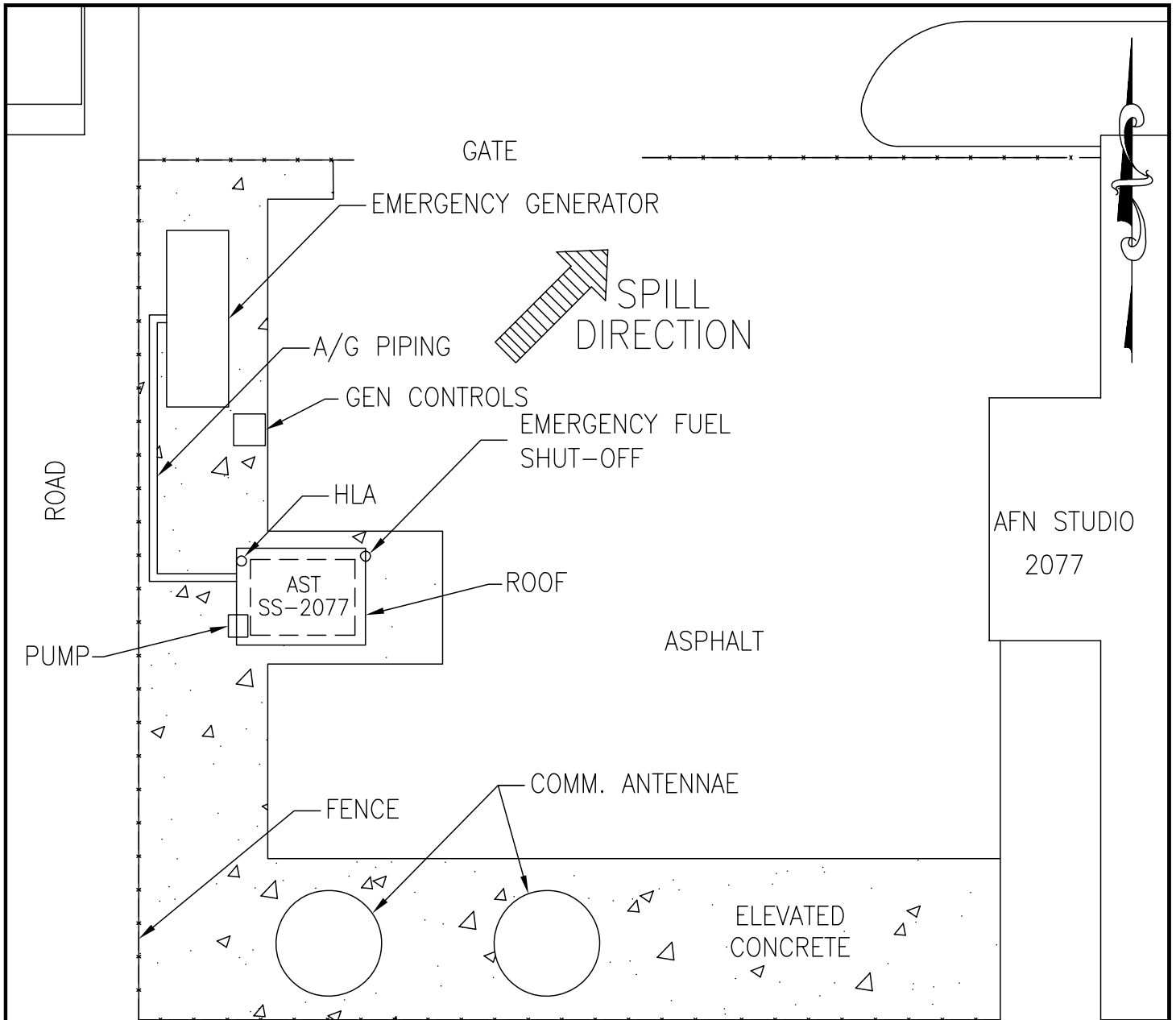
PUBLIC WORKS
2075



TANK INFORMATION <i>INFORMAZIONI DI SERBATOIO</i>	
CAPACITY: 1300 L / 345 GAL	
DIMS: $\varnothing 1\text{m} \times 1.75\text{m}$ (L) [$\varnothing 3' \times 5.5'$ (L)]	
LENGTH OF U/G PIPING: N/A	
LENGTH OF A/G PIPING: $\sim 0.75\text{m}$ ($\sim 3'$)	

AST SS-2075
PUBLIC WORKS-BLDG #2075
NSA NAPLES, ITALY
 SUPPORT SITE

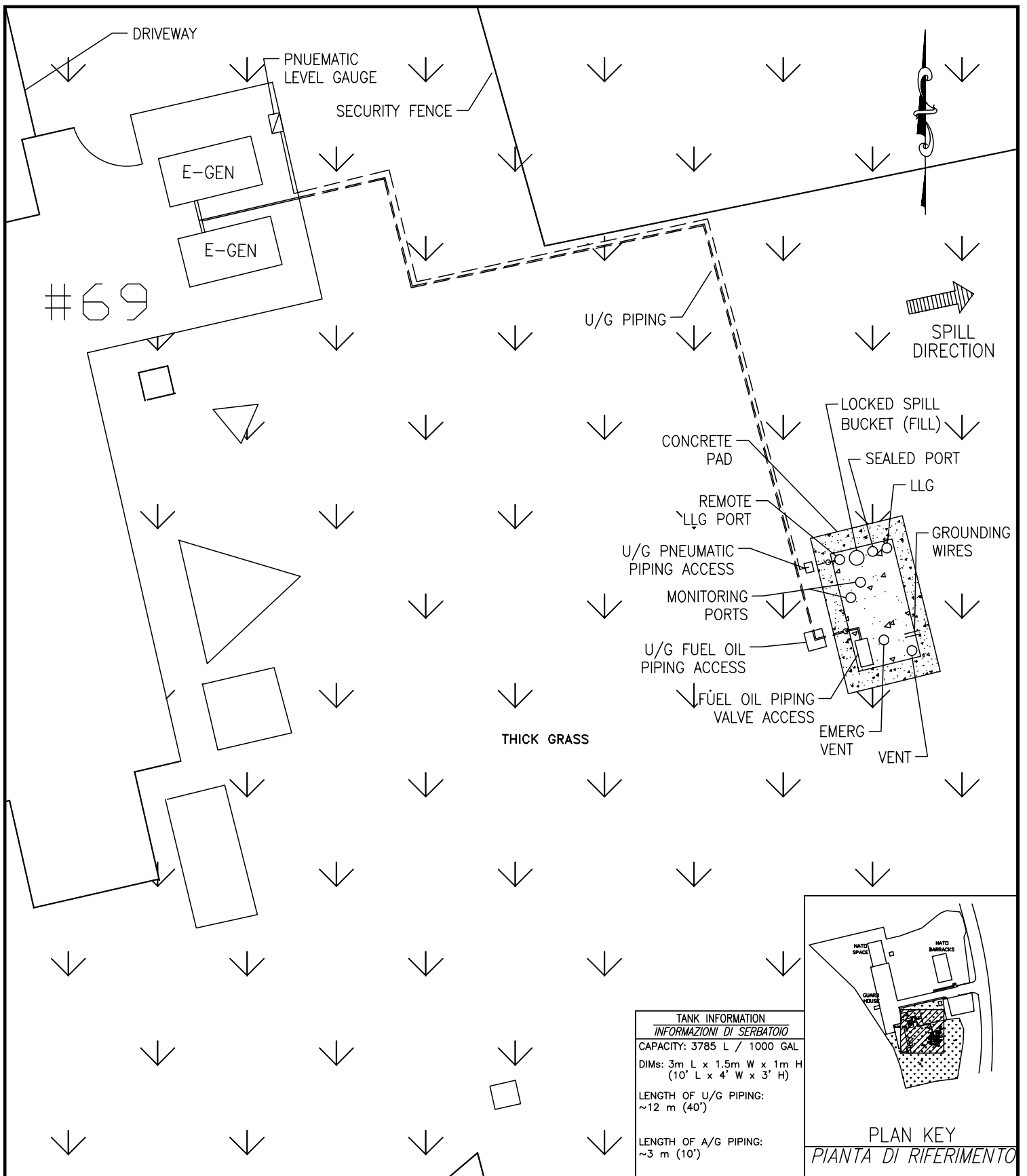
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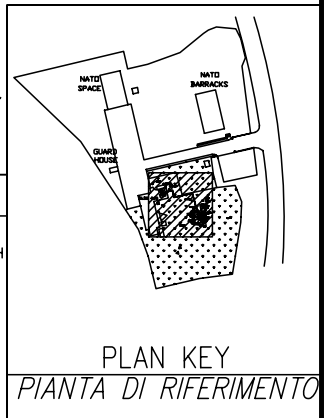
TANK INFORMATION
INFORMAZIONI DI SERBATOIO
CAPACITY: 5000 L / 1320 GAL
DIMs: ϕ 1.675m X 2.135m (L) [ϕ 5.5' X 7' (L)]
LENGTH OF U/G PIPING: N/A
LENGTH OF A/G PIPING: ~6 m (~20')

AST SS-2077
AFN STUDIO-BLDG #2077
NSA NAPLES, ITALY
 SUPPORT SITE

SCALE: (NTS)

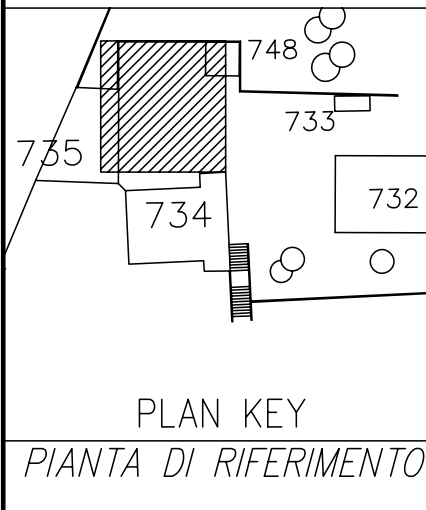
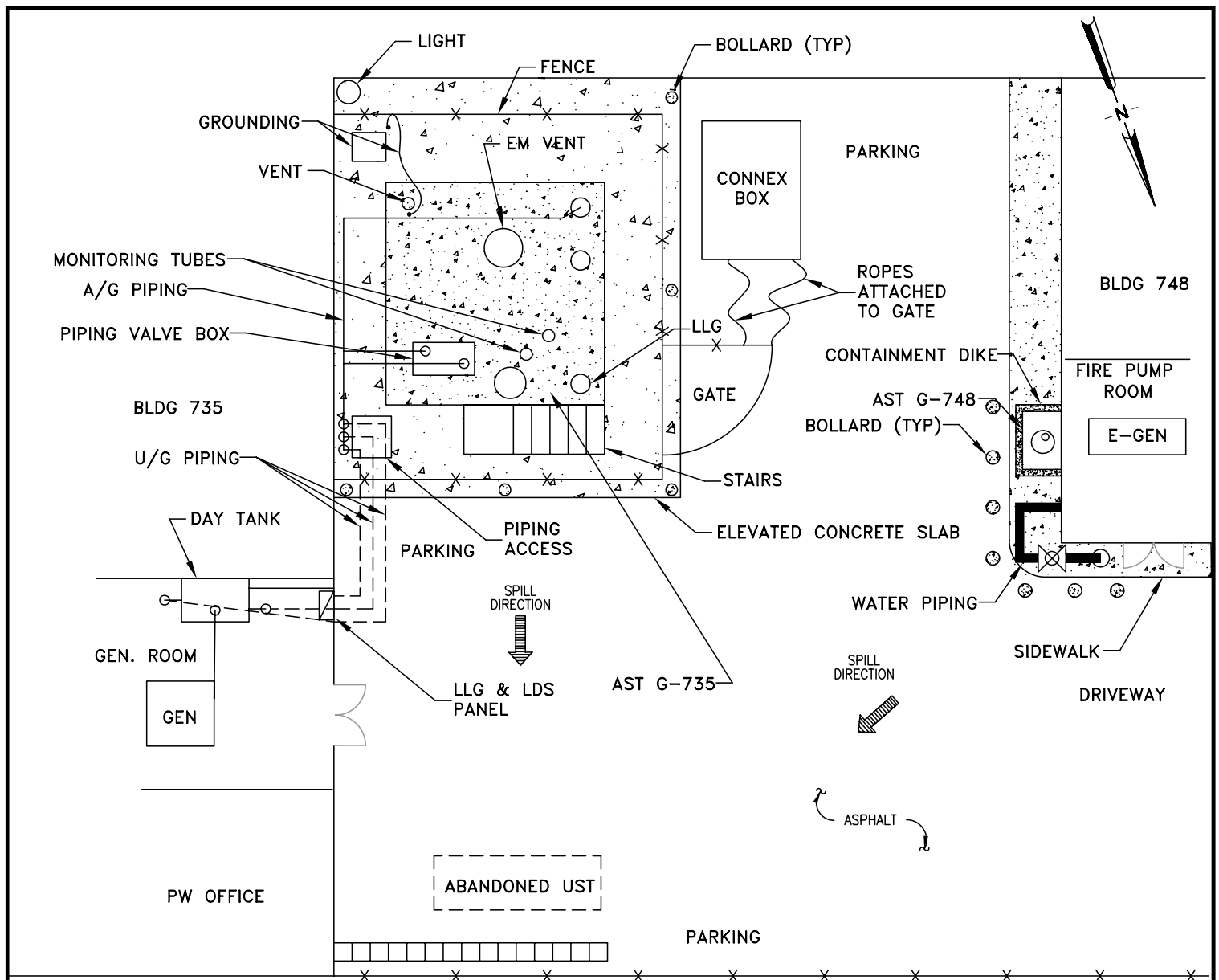


TANK INFORMATION
<i>INFORMAZIONI DI SERBATOIO</i>
CAPACITY: 3785 L / 1000 GAL
DIMS: 3m L x 1.5m W x 1m H (10' L x 4' W x 3' H)
LENGTH OF U/G PIPING: ~12 m (40')
LENGTH OF A/G PIPING: ~3 m (10')



AST CM-69
 REPEATER SITE-BLDG #69
NSA NAPLES, ITALY
 MT. CAMALDOLI

SCALE: (NTS)



TANK INFORMATION (G-735) <i>INFORMAZIONI DI SERBATOIO</i>	TANK INFORMATION (G-748) <i>INFORMAZIONI DI SERBATOIO</i>
CAPACITY: 5678 L / 1500 GAL	CAPACITY: 800 L / 200 GAL
DIMS: 3.4m L x 2.5m W x 2.2m H (11' L x 8' W x 7' H)	DIMS: 1 m D x 1 m L (3' D x 3' L)
LENGTH OF U/G PIPING: ~6 m (~20')	LENGTH OF U/G PIPING: N/A
LENGTH OF A/G PIPING: ~7 m (~25')	LENGTH OF A/G PIPING: ~3 m (~10')

ASTs G-735/748 PUBLIC WORKS-BLDG #735 FIRE DEPT PUMP HOUSE-BLDG #748 NSA NAPLES, ITALY GAETA	FIGURE NO.
	SCALE: (NTS)

NSA Naples SPRP Photo Album

Capodichino



AST C-412



AST C-412 Piping to Generator



USTs C-476.1, 2, 3, 4



Capo AST C-447A BEQ III



Capo C4I Generator Day tank



Capo C4I HW Storage



Capo C4I HW Storage



Capo C4I Spill Kit



Capo TWSA BLDG 402



Capo TWSA BLDG 402



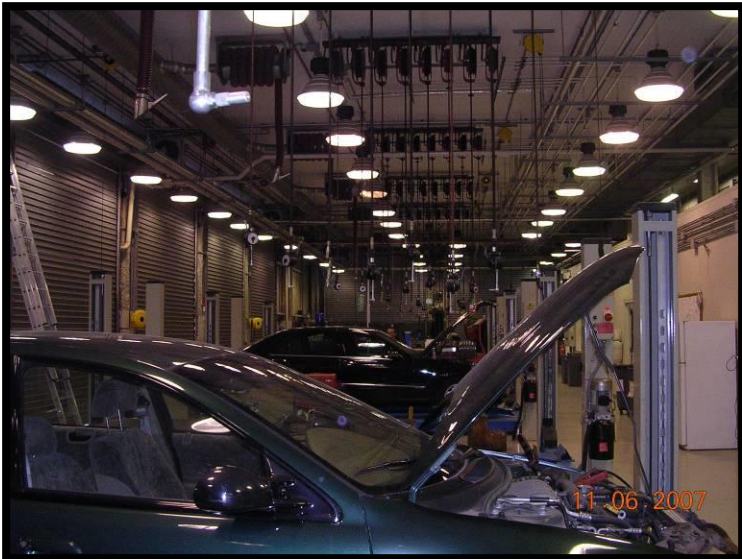
Capo TWSA BLDG 402



Capo TWSA BLDG 402



Capo PW Transportation HWAP



PW Transportation Lube Oil Dispensers



PW Transportation Lube Oil Storage



PW Transportation Battery Room



PW Transportation Fuel Truck



PW HM Storage



PW Transportation Seebee HM Locker



PW HM Storage



Capo Supply HM Storage BLDG 401



Capo Supply HM Storage



Capo Supply HM Storage



Capo Supply HM Storage



Capo CHRIMP



Capo CHRIMP



Capo CHRIMP HWAP



Capo CHRIMP Spill Response Supplies Storage



Capo CHRIMP Spill Response Supplies



Capo CHRIMP Spill Response Supplies



Capo CHRIMP



Capo CHRIMP Storm Drain



Capo Hangar Aircraft Maintenance Contractor HM Storage



Capo Hangar Aircraft Maintenance Contractor HM Storage



Capo Hangar SE HM Storage



Capo Hangar 406 HWAP



**Capo Hangar 406 AFF collection
Trench and Separator**



Capo Hangar 406 Spill Kit



**Capo Water
Treatment Plant
HM Storage**



Capo Water Treatment Plant
Eyewash/Shower



Capo Jacuzzi HM Storage Room



Capo Jacuzzi HM Storage Room



Capo Swimming Pool HM Storage



Capo Swimming Pool HM Storage

Carney Park



AST CP-528



CP Building 516 HM Storage Lockers



CP Building 516 HM storage Locker



CP Building 516 HM Storage Locker



CP Building 516 HS Locker



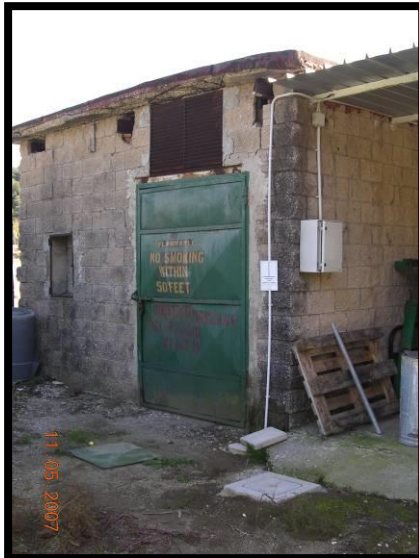
CP Building 516 HWAP



CP Building 516 HWAP



CP Golf Course HM Locker



**CP Golf Course
Flammable Storage**



CP Golf Course HM Storage



CP Golf Course Spill Kit



CP Golf Course future location of ASTs

Support Site



DODDS Chemistry Lab HM Storage



DODDS Chemistry Lab HM Storage



DODDS Chemistry Lab HM Fridge Storage



DODDS Chemistry Lab HM Fridge Storage



DODDS Chemistry Lab HM Storage



DODDS Chemistry Lab HM Storage



DODDS Chemistry Lab HM Storage



DODDS Eyewash/Shower



SS Hospital Generator Building HM Lockers



SS Hospital Generator Building HM Lockers



SS Hospital HM Lockers



SS Hospital Med Waste Locker



SS Hospital HM Locker



SS Hospital HM Locker



SS Hospital HM Locker



SS Hobby Shop HWAP



SS Hobby Shop HWAP



SS Hobby Shop HWAP



SS Hobby Shop HWAP



SS Hobby Shop HM



SS Hobby Shop HWAP



SS Hobby shop drainage 2



SS Hobby shop drainage



SS Hobby Shop General



SS Hobby Shop Oil Storage



SS Hobby Shop Battery Storage



SS Hobby Shop Battery Storage



SS NEX Autoport



SS NEX Autoport HM Storage



SS NEX Autoport HWAP



SS NEX Autoport
eyewash/shower



SS NEX Autoport Spill Kit



SS Swimming Pool HM storage



SS Swimming Pool HM storage



SS Swimming Pool HM Storage



SS PW AST SS-2075



SS AFN AST SS-2077

NSA Detachment Gaeta



NSA Detachment Gaeta AST G-735



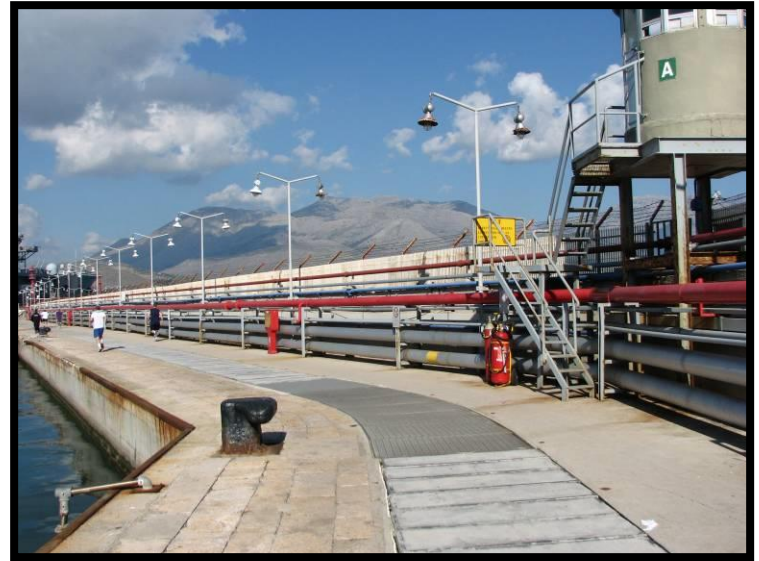
NSA Detachment Gaeta AST G-748



NSA Detachment Gaeta AST G-736



NSA Detachment Gaeta Pier Area



NSA Detachment Gaeta Pier Pipelines



NSA Detachment Gaeta Pier HM Storage



NSA Detachment Gaeta Pier HM Storage

Camaldoli



Mt Camaldoli AST CM-69

Teverola Warehouse



Teverola HS Storage



Teverola HS Storage 1

APPENDIX I
SMT ICS JOB AIDS & RESPONSIBILITIES

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COMMAND STAFF

Facility Incident Commander/EOC Incident Manager*	
Completed	Duties/Responsibilities
	Manage overall response operations.
	Obtain initial incident briefing from the Initial Response Team Leader.
	Determine the nature of the incident, the threat posed by the incident, and the appropriate level of response.
	Ensure that personnel safety is accorded the highest priority throughout the entire response.
	Develop strategic objectives and response priorities to guide response operations. [These objectives must be forwarded to the Operations and Planning Sections for inclusion in Incident Action Plans].
	Approve/authorize the implementation of Incident Action Plans.
	Serve as the primary contact with the Host Nation (HN).
	Review and approve resource allocations requested by the Section Chiefs.
	Monitor and evaluate the effectiveness of response operations and make adjustments to response strategies as necessary.
	Serve as the primary spokesperson with the news media.
	Review/approve press releases and statements.
	Approve requests for outside resources.
	Approve Demobilization Plan.
	Ensure that response actions are documented.
	Obtain an initial briefing from the FIC and attend daily planning/briefing meetings.
	Coordinate the preparation of the initial incident briefing form.
	Conduct planning meeting and coordinate with the Operations/Planning Section Chief.
	Provide information on manpower, equipment, and materials for Command Staff operations to the Logistics Section Chief.
	Assist in the development of strategic objectives and response priorities.
	Coordinate the activities of the section chiefs to ensure the safe, efficient, and effective implementation of the Incident Action Plans.
	Coordinate with the Safety Manager to ensure the safety of response personnel.
	Provide the FIC with regular briefings on the status of response operations.
	Ensure that each section chief documents the actions of his/her section and that this documentation is forwarded to the Operations/Planning Section.
	Coordinate with the Public Affairs and HN Liaison Officer to ensure that a steady, accurate flow of information is maintained.
	Coordinate rescue, salvage, and cleanup operations.
	Resolve conflicts that may arise during response operations.
	Conduct periodic surveys of the response.

***Note that the CO is the designated FIC.**

SAFETY OFFICER	
Completed	Duties/Responsibilities
	Obtain initial briefing from the FIC and attend periodic planning/briefing meetings.
	Provide FIC with information on manpower, equipment, and material needs.
	Provide Operations/Planning Section Chief with safety information for Incident Action Plans. <ul style="list-style-type: none"> – Description of safety hazards/risks – Measures to avoid/mitigate safety hazards/risks.
	Develop/issue safety bulletins and guidelines during the response.
	Brief safety staff on the contents of Incident Action Plans. <ul style="list-style-type: none"> – Verify that staff has most current plan – Make/verify assignment – Establish/review reporting requirements.
	Ensure compliance with relevant regulations.
	Assess the need for assistance from local emergency rescue units.
	Evaluate the need for an evacuation of response personnel/nearby residents.
	Coordinate the evaluation of field operations with Operations/Planning Section Chief to ensure that appropriate safety guidelines are developed.
	Coordinate personal protective equipment needs with Logistics section chief.
	Establish a system to recognize and eliminate safety hazards during response operations.
	Exercise emergency authority to prevent/stop unsafe operations.
	Investigate, report, record, and recommend corrective actions for all safety-related accidents that occur during response operations.
	Notify HN authorities, through the IBC, of appropriate HN safety-related incidents.
	Coordinate with Medical Official to identify locations for first aid stations and enforce industrial hygiene standards.
	Document all actions.

HN (ITALIAN) LIAISON OFFICER	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and attend daily planning/briefing meetings.
	Brief HN Liaison staff on contents of Incident Action Plans. <ul style="list-style-type: none"> – Verify that staff has most current plan – Make/verify assignments – Establish/review reporting requirement.
	Make contact with Italian government representatives for those threatened and/or affected areas; provide information on the incident/response status.
	Coordinate with the Public Affairs Officer; ensure that a steady, accurate flow of information is maintained to HN.
	Provide Public Affairs Officer with the contact list and telephone numbers for all government agencies.
	Assist/represent (as directed) the FIC at meetings with HN National, Regional, and local government representatives.
	Relay information from government representatives to the NOSC, FIC and section chiefs.
	Assist the Operations/Planning Section in obtaining HN government agency approvals/permits required for response operations.
	Maintain a record/log of contacts with HN government representatives.
	Document all actions.

PAO	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and attend planning/briefing meetings
	Provide FIC with manpower, equipment and material needs.
	Brief Public Affairs staff on contents of Incident Action Plans. <ul style="list-style-type: none"> – Verify that staff has most current plan – Make/verify assignments – Establish/review reporting requirement.
	Serve as the principal advisor to the FIC on all matters relating to external communications.
	Advise the FIC about the public and community relations impact(s) of the response operations.
	Coordinate with the FIC and the Staff Judge Advocate to establish incident specific public relations guidelines and distribute to all response team members.
	Establish lines of communications with local press, radio, and TV; national/international media representatives; concerned citizens' groups; and other public organizations.
	Contact Navy Media Center, Rota for video support and emergency broadcasting capability.
	Coordinate with the Operations and Planning Section Chiefs to ensure access to complete, accurate, and up-to-date information on the nature and status of response operations.
	Monitor media coverage of the response and provide follow-up information when necessary. Activate any local radio or TV coverage in CP.
	Be available to answer on-the-spot media inquiries.
	Prepare public statements, press releases, and fact sheets for approval of the FIC.
	Arrange news conferences, media briefings, interviews press tours, etc., for reporters, community groups/leaders, and others as directed by the FIC.
	Arrange VIP briefings/tours for HN representatives.
	Establish a press room.
	Maintain a record of newspaper articles, radio and television broadcasts, press conferences, and press briefings.
	Document all actions.

STAFF JUDGE ADVOCATE	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and attend planning/briefing meetings.
	Provide FIC with manpower, equipment and material needs.
	Brief Legal staff on contents of Incident Action Plans. <ul style="list-style-type: none"> – Verify that staff has most current plan – Make/verify assignments – Establish/review reporting requirement.
	Review policies, practices, and procedures related to response operations.
	Identify and address legal issues that may arise from or are associated with response operations.
	Coordinate the conduct of all damage assessment programs with the Operations/Planning Section Chief.
	Advise FIC and Operations and Planning Section Chief on legal matters related to the response.
	Advise FIC and Section Chiefs on the type of documentation that must be compiled and retained to support incident potential litigation and/or claims.
	As directed by the FIC, review press releases and/or statements prior to issuance.
	As directed by the FIC, review contracts issued by Logistics section before execution.
	Provide Operations and Planning Sections with legal counsel concerning response operations, particularly in operations that require regulatory agency approvals and/or permits.
	Coordinate establishment of Claims process with RLSO, US Consulate, IBC, and Finance/Admin Section Chief.
	Ensure that guidelines are established concerning/limiting communications related to liability or fault.
	Supervise the activities of outside legal counsel.
	Document all actions.

Medical Officer	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and OSIC, attend briefing meetings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Logistics Section Chief with information for the medical/health portion Incident Action Plans: <ul style="list-style-type: none"> -Description of major medical/health hazards and risks -Measures to avoid or mitigate medical/health hazards and risks.
	Prepare Medical Plans for inclusion in Incident Action Plans, coordinating efforts with the Medical Officer.
	Establish procedures for handling medical emergencies.
	Coordinate with Transportation, Air Operations, and Communications Unit Leader to establish a transportation system and communications network to handle medical emergencies.
	Coordinate with Safety Officer to locate, establish, and man first aid field stations.
	Maintain inventory of medical supplies and disburse as needed.
	Ensure that medical response personnel, equipment, and facilities are available to pickup, transport, treat and care for injured personnel.
	Notify Support Services Unit Leader of all injuries/fatalities.
	Develop and maintain a record of all accidents/injuries/fatalities.
	Notify appropriate agencies of all medical/health/related accidents, incident, and/or problems and provide Logistics Section Chief with information on all regulatory agency contacts..
	Document all actions.

OPERATIONS SECTION

Operations Section Chief	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC; attend planning/briefing meetings.
	Conduct briefings with Operations Section personnel.
	Provide information on manpower, equipment, and material needs to Logistics Section Chief.
	<p>Conduct tactical operations planning meetings and supervise the development and distribution of tactical operations plans.</p> <ul style="list-style-type: none"> • Review strategic objectives and response priorities • Obtain summary of current response actions • Obtain summary of resource utilization • Devise response strategies • Prepare/post Operations Section Organizational Chart.
	<ul style="list-style-type: none"> • Brief Operations/Planning Section personnel on contents of Incident Action Plans • Verify that section personnel have most current plan • Identify Field Supervisors • Make/verify field assignments • Establish/review reporting requirements.
	Ensure section personnel comply with Site-Specific Health & Safety Plan.
	Ensure section personnel have the equipment and materials to carry out response operations in a safe, efficient, and effective manner.
	Ensure that personnel are aware of and follow all policies and directives.
	Obtain up-to-date surveillance information.
	Ensure that the concerns of Italian Government and impacted communities are adequately addressed when formulating and executing response strategies.
	Provide regular briefings to the FIC about the nature and status of rescue, salvage, and spill cleanup operations.
	Provide Planning and Public Affairs Officer with accurate, up-to-date information on the nature and status of rescue, salvage and cleanup operations.
	<p>Coordinate response operations with other response resources (e.g., Italian Navy, oil spill response organizations, specialized service companies).</p> <p>Initiate recommended releases/reassignment of equipment and/or personnel when resources are no longer needed.</p>
	Provide Planning/Operations/Logistics Section Chiefs with information on manpower, equipment, and material needs for Operations Section.

Protection and Recovery Branch Director	
Completed	Duties/Responsibilities
	Identify and obtain the manpower, equipment, and materials needed for shoreline protection operations.
	Evaluate effectiveness of shoreline protection techniques; adjust techniques and/or equipment as necessary to enhance effectiveness.
	Obtain initial briefing from Operations/Planning Section Chief and attend daily tactical operations planning meetings and briefing meetings.
	Provide Operations/Planning Section Chief with information on manpower, equipment, and material needs for unit operations.
	Provide Environmental Planning Branch with information for Situation Status Reports and the onshore response section for the tactical operations portion of Incident Action Plans: <ul style="list-style-type: none"> • Summary of current actions • Identification of the amount and type of onshore area(s) affected and degree of contamination • Identification of area(s) to be protected/cleaned • Identification of response technique(s) to be employed • List of equipment to be used • List of personnel resources to be used.
	Obtain weather forecasts from Operations/Planning Section Chief.
	Coordinate with Environmental Planning Branch to develop an overall Shoreline Response Plan and submit completed plan to Operations/Planning Section Chief.
	Establish zones of operations.

Protection and Recovery Branch Director (continued)	
Completed	Duties/Responsibilities
	Identify staging base(s) and support services.
	Coordinate with Planning to identify appropriate shoreline response techniques.
	Identify and arrange to obtain heavy equipment, containment booms, recovery equipment, pressure washers, pumps, absorbent materials, and any other equipment needed to contain and recover spilled material.
	Assign Field Supervisor and develop a method to receive regular progress reports.
	Ensure that all personnel comply with the Site-Specific Health & Safety Plan.
	Evaluate effectiveness of shoreline response techniques; adjust techniques and/or equipment as necessary to enhance effectiveness.
	Approve changes to Shoreline Response Plan; provide updated/modified plan to Operations/Planning Section Chief.
	Provide Operations and Planning Section Chiefs with information on nature and quantity of liquid/solid/hazardous wastes generated during onshore cleanup operations.
	Provide Operations/Planning Section Chief with recommendations on the timing of the release of equipment and/or personnel resources.
	Provide Operations/Planning Section Chief with information on all regulatory agency contacts.
	Provide Operations/Planning Section Chief with information on all special incidents and/or accidents.
	Coordinate with Environmental Planning Branch leader to collect and present environmental information required to support waste management permit applications.
	Assign Field Supervisors and receive regular progress reports.
	Ensure that all personnel comply with the Site-Specific Health & Safety Plan.
	Document all actions.

On-Water Recovery Group Supervisor	
Completed	Duties/Responsibilities
	Implement recovery strategies in Incident Action Plan and as directed by the Operations Section Chief.
	Direct, coordinate, and assess effectiveness of on-water strategy actions.
	Modify actions, as needed.
	Monitor tides, winds, and spill trajectories.
	Anticipate resource shortfalls; notify Recovery and Protection Branch Director as known.
	Identify waste disposal requirements, including temporary storage.
	Coordinate actions with other Group Supervisors.
	Brief the Recovery and Protection Branch Director on activities.
	Document all actions.

Protection Group Supervisor	
Completed	Duties/Responsibilities
	Implement Protection Strategies in Incident Action Plan and as directed by the Protection and Response Branch Director.
	Direct, coordinate, and assess effectiveness of protective actions
	Modify protective actions, as needed.
	Identify waste management requirements and establish on-site procedures.
	Assess resources and identify any shortfalls as soon as possible; brief Protection and Recovery Branch Director.
	Brief the Recovery and Protection Branch Director on activities.
	Document all actions.

Shore-side Clean-up Group Supervisor	
Completed	Duties/Responsibilities
	Implement recovery strategies in Incident Action Plan.
	Direct, coordinate, and assess effectiveness of on-water recovery actions.
	Modify recovery actions, as needed.
	Anticipate resource shortfalls and notify Branch Director.
	Ensure site safety requirements for workers is followed. Manage PPE requirements.
	Establish efficient waste collection and disposal procedures; coordinate with Disposal Group Supervisor.
	Modify recovery actions, as needed.
	Document all actions

Disposal Group Supervisor	
Completed	Duties/Responsibilities
	Receive briefing from Protection and Recovery Branch Director.
	Implement disposal portion of Incident Action Plan, and as required by field operations.
	Ensure compliance with all hazardous waste laws and regulations.
	Coordinate waste management requirements with all Group Supervisors.
	Develop waste management plan with EUL Waste Management Specialists.
	Maintain accurate records of recovered materials.
	Identify temporary storage capabilities and any shortfalls; brief the Protection and Recovery Director.
	Brief Recovery and Protection Branch Director on activities.
	Ensure all personnel handling waste have proper PPE.

SECURITY BRANCH DIRECTOR	
Completed	Duties/Responsibilities
	Obtain initial briefing from Logistics Section Chief and attend daily briefing meetings.
	Provide Logistics Section Chief with information on the manpower, equipment, and material needs for unit operations.
	Coordinate with section chiefs to identify security needs.
	Arrange for security at the following locations: <ul style="list-style-type: none"> • Command Center • Communications center(s) and facilities • Staging area(s) • Warehouse(s) • Other facilities as required.
	Establish a procedure to ensure rapid access to secured facilities for authorized personnel.
	Maintain a record of all visitors to secured facilities.
	Arrange for security escorts for visitors.
	Coordinate security operations with Italian authorities and other U.S. DOD personnel.
	Arrange for the use of additional security personnel as required.
	Coordinate any evacuation or traffic re-routing.
	Document all actions.

PLANNING SECTION

Planning Section Chief	
Completed	Duties/Responsibilities
	Obtain initial briefing from Operations/Planning Section Chief, attend daily planning meetings, and conduct briefing meetings with section personnel.
	Supervise the preparation of Incident Action Plans.
	Brief team members on the contents of Incident Action Plans and other matters related to section operations: <ul style="list-style-type: none"> • Verify that section personnel have most recent plan • Make/verify assignments • Establish/review reporting requirements.
	Ensure that systems and lines of communication are established that will facilitate the preparation and distribution of Incident Action Plans.
	Ensure that any incident-specific plans, reports, or other documents required by the FIC and/or HN agencies during or following the completion of response operations are compiled in a timely, efficient, and satisfactory manner.
	Ensure that systems are established that will facilitate the collection, evaluation, analysis, and dissemination of environmental, cultural, and social information and data. In the event of an oil/hazardous substance spill, this may include information on slick movements, potential spill-related impacts to environmentally sensitive areas, and air and water quality considerations.
	Advise Operations Section Chief on all environmental issues relating to response operations
	Ensure compliance with all environmental requirements and communication of these requirements to the Operations and Planning Section Chiefs.
	Ensure systems are established that will facilitate the collection, analysis, verification, and dissemination of information on the status of response resources and operations.

Planning Section Chief (continued)	
Completed	Duties/Responsibilities
	Provide Public Affairs Officer with accurate, up-to-date information which may include: <ul style="list-style-type: none"> • Paths and effects of spilled oil/hazardous substances • Location of spilled oil/hazardous substances • Impacts (including potential impacts) <ul style="list-style-type: none"> People Environment Property • Status of evacuation operations • Status of firefighting operations • Weather and other site conditions • Types and number of wildlife affected by the incident • Status of wildlife rehabilitation efforts • Summaries of response operations.
	Supervise the compilation of environmental information necessary to obtain regulatory agency approvals.
	Coordinate with Section Chiefs and Command Staff to gather information for Incident Action Plans including: <ul style="list-style-type: none"> • Cover page • Incident objectives and response priorities • Health and Safety message • Section assignments • Division/group assignments • Environmental Operations plan • Communications plan • Air Operations plan • Medical plan.
	Collect and maintain baseline environmental data from potentially affected areas.
	Distribute Incident Action Plans.
	Assist Legal Officer with development of Documentation Guidelines for distribution to appropriate response personnel.

Documentation Unit Leader	
Completed	Duties/Responsibilities
	Distribute copies of incident documents to appropriate response personnel, including Command Staff.
	Coordinate with all Command Staff and Functional Sections for documentation support.
	Direct the organization, maintenance, and storage of incident files in a convenient, secure location.
	Ensure that duplication services are available for the incident.
	Supervise the duplication and filing of all official forms and reports.
	Prepare Environmental Operations Plans for inclusion in Incident Action Plans.
	Ensure that duplication services are available for the incident.
	Supervise the duplication and filing of all official forms and reports.
	Prepare Environmental Operations Plans for inclusion in Incident Action Plans.

Situation Unit Leader	
Completed	Duties/Responsibilities
	Obtain briefing and special instructions from the Planning Section Chief.
	Participate in planning meetings, as required.
	Prepare and maintain Incident Situation Display.
	Collect and maintain current incident data.
	Prepare periodic predictions, as requested by the Planning Section Chief.
	Prepare, post, and disseminate resource and situation status information, as required in the Incident Information Center.
	Prepare the Incident Status Summary (ICS 209).
	Provide status reports to appropriate requesters.
	Provide photographic services and maps.
	Ensure that duplication services are available for the incident.
	Supervise the duplication and filing of all official forms and reports.
	Prepare Environmental Operations Plans for inclusion in Incident Action Plans.

Waste Management Specialist	
Completed	Duties/Responsibilities
	Prepare and submit a Waste Management Plan to the Operations and Planning Section Chiefs.
	Coordinate with DRMO and Italian Liaison Officer to obtain all necessary waste management permits and approvals.
	Provide Operations/Planning Section Chief with recommendations on methods that can be applied to minimize the generation of wastes during response operations.
	Develop a system for the segregation of wastes to assist in storage, treatment, and disposal operations.
	Document all actions.

Environmental Unit Leader	
Completed	Duties/Responsibilities
	Provide Operations and Planning Section Chiefs with information on the potential environmental impacts of response operations.
	Provide EUL support as directed in SPRP Volume I
	Coordinate/assist with drafting of all external notifications and press releases.
	Be familiar with existing environmental regulations and restrictions within an incident area.
	Coordinate with HN Liaison Officer to obtain necessary regulatory approvals for environmentally related permits and approvals.
	Provide Operations and Planning Section Chiefs with information on the manpower, equipment, and materials needed to carry out waste collection, transportation, storage, treatment, and disposal operations.
	Coordinate with regulatory agencies through the HN Liaison Officer to identify environmentally sensitive areas and wildlife habitats..
	Coordinate wildlife rescue and rehabilitation operations with appropriate HN agencies.
	Prioritize sensitive habitat areas for protection and/or cleanup operations.
	Provide advice on cleanup techniques that will minimize secondary impacts to affected wildlife and/or sensitive habitat areas.

LOGISTICS SECTION

Logistics Section Chief	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and attend planning meetings. Conduct briefings with Logistics Section personnel.
	Supervise preparation of logistic support and services portions of Incident Action Plans: <ul style="list-style-type: none"> • Make duty assignments • Prepare and post Logistics Section Organization Chart • Obtain summary of current actions • Equipment, materials, and services on scene and where they are located • Equipment, materials, and services <i>en route</i> and ETA.
	Provide logistic support and services information to Environmental Planning Branch leader for inclusion in Situation Status Reports.
	Brief section personnel on contents of Incident Action Plans and other matters related to section operations: <ul style="list-style-type: none"> • Verify that personnel have most current plan • Make/verify assignments • Establish/review reporting requirements.
	Coordinate with Operations and Planning Section Chiefs to identify and ensure the timely and efficient provisions of field support services including: <ul style="list-style-type: none"> • Evacuation vessels • Communications equipment • Berthing and/or housing • Decontamination units • Potable water • Food • Sanitary facilities • Fuel • Transportation for personnel and/or supplies (by various modes, i.e., air, ground, water) • Waste handling • Security services • Others.

Logistics Section Chief (continued)	
Completed	Duties/Responsibilities
	Ensure that logistics support and service needs are met in a timely and efficient manner and in a manner that maximizes personnel safety.
	Ensure that guidelines, procedures, forms, and data management systems necessary to manage the acquisition of equipment, the control inventory, and the accounting for expenditures are in place.
	Ensure that an overall inventory is maintained for all equipment and materials purchased, rented, borrowed, or otherwise obtained during the response operations.
	Ensure that necessary warehouse space is obtained to store equipment and materials.
	Ensure that programs are in place to inspect and service equipment, obtain and store spare parts, and repair or replace damaged or defective equipment.
	Ensure that records are maintained on equipment and services used, materials and services provided, and contracts executed during response operations.
	Provide Operations/Planning Section with recommendations on the release timing of logistics service and support personnel resources and equipment.
	Document all actions.

Service Branch Director	
Completed	Duties/Responsibilities
	Obtain initial briefing from Logistics Section Chief and attend briefing meetings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Prepare Radio Communications Plan for Incident Action Plans.
	Obtain information for on-scene communications equipment, including: Channels, functions, frequencies, and assignments.
	Verify that existing communications equipment is operational and obtain additional communications equipment as needed to accommodate response operations.
	Coordinate with section chiefs to identify communications needs and ensure timely and efficient response to support operations.
	Arrange for the installation of an adequate telephone system in the Command Center.
	Establish a radio base system in the Command Center.
	Ensure the establishment and maintenance of a dedicated communication network that will allow for comprehensive communications.
	Schedule/track amount of time individuals are working and coordinate their replacements.
	Determine the food, potable water, and sanitation requirements for the response operations.
	Assess the conditions at each location and determine and arrange for the most appropriate food service method (e.g., restaurant, catering, mess hall, etc.).
	Coordinate with Logistics Section Chief to ensure that contracts are executed to obtain necessary equipment and supplies for food service at each location.
	Verify that potable water and well-balanced meals are being served at each location.
	Determine the lodging requirements for response personnel, assess the current availability of lodging services, and arrange lodging for response personnel as necessary.
	Coordinate with Facilities Unit Leader to establish temporary sleeping quarters on-site if necessary.
	Assess the need for sanitary facilities at all areas of operation.
	Provide Logistics Section Chief with information on equipment and materials for the logistics and services portion of Incident Action Plans: <ul style="list-style-type: none"> • Equipment and materials on-scene • Location(s) of equipment and materials • Equipment and materials en route and the ETA.
	Coordinate with section chiefs to determine equipment and material needs for each.

Support Branch Director	
Completed	Duties/Responsibilities
	Obtain initial briefing from Logistics Section Chief and attend briefing meetings.
	Provide Logistics Section Chief with information on manpower, equipment, and material needs for unit operations.
	Develop and implement a purchasing plan to organize the acquisition of equipment, materials, and services required for response operations.
	Prepare guidelines, procedures, forms, and data management systems necessary to manage the acquisition of equipment, control inventory, and account for expenditures.
	Establish a system to keep track of equipment and materials that are <i>en route</i> to an incident scene including: <ul style="list-style-type: none"> • Date shipped • Shipment made • Shipment scheduled • Location and date of intermediate stops • Date due at final destination • Location of final destination.
	Activate existing contracts/agreements as needed to provide equipment, materials, and services for response operations and evaluate the need for additional contracts/ agreements.
	Prepare and process all necessary contracts and purchase/work orders.
	Contact sources of equipment and materials to obtain: <ul style="list-style-type: none"> • Accurate and up-to-date information on the type, quantity, and availability of equipment and materials • The conditions (new, reconditioned, or used) of equipment and materials • The terms and conditions for the purchase, lease, and/or rental of equipment and materials • How the equipment and materials will be shipped, where they will be delivered, and when will they arrive • Whether additional equipment and materials are needed to make ordered equipment and/or materials fully operational • The availability of technicians to explain the operation and maintenance of equipment and/or supplies The availability of spare parts.
	Coordinate the purchase of all equipment and materials with the Procurement Unit Leader.
	Establish an inventory system for equipment and materials stored in central receiving point(s).
	Establish a system to keep track of equipment and materials used during response operations.
	Document all actions.

FINANCE/ADMIN SECTION

Finance/Admin Section Chief	
Completed	Duties/Responsibilities
	Obtain initial briefing from FIC and attend daily planning meetings; conduct briefings with Finance Section personnel.
	Provide FIC with information on personnel, equipment, and material needs for section operations. Include establishment of other Groups/units as required.
	Brief Finance Section Personnel on contents of Incident Action Plans: <ul style="list-style-type: none"> • Verify that section personnel have most current plan • Make/verify assignments • Establish/review reporting requirements.
	Provide FIC with information on the financial implications of actions taken (to be taken) during response operations.
	Discuss/advise FIC and staff on issues regarding insurance coverage and exclusions, claims management processing, and settlements.
	Coordinate with Legal and RLSO on Claims and Compensation personnel.
	Make duty assignments and supervise operations of Finance Section.
	Facilitate the preparation and distribution of guidelines, procedures, forms, and the establishment of a data management system necessary to account for expenditures/claims made during response operations.
	Coordinate purchasing and accounting functions with Logistics Section.
	Supervise the development and administration of cash accounts.
	Ensure that purchase requisitions and work orders are prepared and processed in a timely manner.
	Verify that obligation documents initiated during response operations are properly prepared.
	Coordinate with auditors to ensure proper documentation of expenditures.
	Ensure appropriate cost and accounting control systems are established.
	Provide accounting function as directed, including: auditing; billing; and documenting labor, materials, and services used.
	Administer vendor contracts, and service and equipment rental agreements.
	Coordinate the investigation and processing of claims.
	Provide FIC and staff with regular financial reports.
	Document all actions.

Claims Unit Leader	
Completed	Duties/Responsibilities
	Obtain initial briefing from Finance Section Chief and attend daily briefing meetings.
	Provide Finance Section Chief with information on manpower, equipment, and material needs for unit operations.
	Coordinate with Claims and Compensation personnel to establish a system for the receipt, evaluation and processing of all claims.
	Determine the need for and location of claims offices.
	Receive advice from Finance Section Chief and Legal Officer during the processing of claims.
	Identify and obtain technical experts and contractors to assist in damage assessment and in the processing of claims.
	Establish and maintain contact with Finance, Safety Officer and Medical Officer as required to prepare and process reports on injuries/deaths caused by the spill incident or resulting from response operations.
	Follow the status of hospitalized personnel and coordinate/prepare required administrative records on all injuries and deaths.
	Provide HN Liaison Officer, Finance Section Chief, and Public Affairs Officer with periodic reports on damage assessment/claims.
	Obtain initial briefing from Finance Section Chief and attend briefing meetings.
	Provide Finance Section Chief with information on manpower, equipment, and material needs for unit operations.
	Develop and implement an accounting system for response operations and maintain records of all accounting activities.
	Establish and maintain a cash account.
	Periodically add cost saving analyses.
	Ensure all accounting records and documents are prepared accurately.
	Maintain a cumulative cost/financial record.
	Serve as liaison with auditing personnel.
	Provide for records security.
	Document all actions.

APPENDIX J
SITE SAFETY PLAN & MONITORING PROGRAM

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ICS Compatible Site Safety and Health Plan

EMERGENCY SAFETY AND RESPONSE PLAN (FORM SSP-A)

Purpose: The Emergency Safety and Response Plan provides the Safety Officer and ICS personnel a plan for safeguarding personnel during the initial emergency phase of the response. *It is only used during the emergency phase of the response, which is defined as a situation involving an uncontrolled release.* It is also intended to meet the requirements of the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, Title 29 Code of Federal Regulations Part 1910.120.

Preparation: The Safety Officer or his/her designated staff starts the Emergency Site Safety and Response Plan. They initially address the hazards common to all operations involved in the response (initial site characterization). Outside support organizations must be contacted to ensure the plan is consistent with other plans (local, state, other federal plans). Form SSP-G need not be completed if this form is used. When the operation proceeds into the post-emergency phase (site stabilized and cleanup operations begun) forms SSP-B and SSP-G should be used. For large incidents, the Emergency Site Safety and Response Plan complements the Incident Action Plan. For smaller incidents, the Emergency Site Safety and Response Plan complements ICS Form 201.

Distribution: The Emergency Safety and Response Plan completed by the Safety Officer is forwarded to the Planning Section Chief. Copies are made and attached to the Assignment List(s) (ICS Form 204). The Operations Section Chief, Directors, Supervisors or Leaders get a copy of the plan. They must ensure it is available on site for all personnel to review. The Safety Officer is responsible for ensuring that the Emergency Site Safety and Response Plan properly addresses the hazards of the operation. The Safety Officer accomplishes this through on site enforcement and feedback to the operational units.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Attachments	Enter attachments. Material Safety Data Sheets are mandatory under 1910.120. Safe Work Practices may also be attached.
5	Organization	List the personnel responsible for these positions. IC and Safety Officer are mandatory.
6	Physical Hazards & Protection	Check off the physical hazards at the site. Identify the major tasks involved in the response (skimming, lightering, overpacking, etc.). Check off the controls that would be used to safeguard workers from the physical hazards for each major task.
7	Chemicals	List the chemicals involved in the response. Chemicals may be listed numerically. Check off the hazards, potential health effects, pathway of dispersion, and exposure route of the chemical. Numbers corresponding to the chemical may be entered into the check blocks to differentiate. Check off the PPE to be used. Identify the type of PPE selected (for example: gloves: butyl rubber).
8	Instruments	Indicate the instruments being used for monitoring. List the action levels adjacent to the instruments being used. Identify the chemicals being monitored (2). List the physical parameters of the chemicals. Use a separate form for additional chemicals monitored.

EMERGENCY SAFETY AND RESPONSE PLAN (FORM SSP-A)

Instructions (continued):

Item #	Item Title	Instructions
9	Decontamination	Check off the decontamination steps to be used. Numbers may be entered to indicate the preferred sequence. Identify any intervening steps necessary on the form or in a separate attachment.
10	Site Map	Draw a rough site map. Ensure all the information listed is identified on the map.
11	Potential Emergencies	Identify any potential emergencies that may occur. If none, so state. Check off the appropriate alarms that may be used. Identify emergency prevention and evacuation procedures in the space provided or on a separate attached sheet.
12	Communications	Indicate type of site communications (phone, radio). Indicate phone numbers or frequencies for the command, tactical and entry functions.
13	Site Security	Identify the personnel assigned. Identify security procedures in the space provided or on a separate attached sheet. Identify the equipment needed to support security operations.
14	Emergency Medical	Identify the personnel assigned. Identify emergency medical procedures in the space provided or on a separate attached sheet. Identify the equipment needed to support security operations.
15	Prepared by:	Enter the name and position of the person completing the worksheet.
16	Date/time briefed:	Enter the date/time the document was briefed to the appropriate workers and by whom.

SITE SAFETY PLAN (FORM SSP-B)

Purpose: The Site Safety Plan provides the Safety Officer and ICS personnel a plan for safeguarding personnel during the post-emergency phase of an incident. The post-emergency phase is when the situation is stabilized and cleanup operations have begun. SSP-B is intended to meet the requirements of the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, Title 29 Code of Federal Regulations Part 1910.120.

Preparation: The Safety Officer or his/her designated staff starts the Site Safety Plan. They initially address the hazards common to all operations involved in the response (initial site characterization). The plan is then reproduced and as a minimum sent to ICS Group/Division Supervisors. They amend it according to unique job or on-scene hazards with support from the Safety Officer and/or his/her staff (detailed site characterization). The plan is continuously updated to address changing conditions. During the first hours of the response, where most response functions are in the emergency phase, the Safety Officer may chose to use the Emergency Safety and Response Plan (SSP-A) in place of the Site Safety Plan. For large incidents, SSP-B compliments the Incident Action Plan (IAP). For smaller incidents, SSP-B compliments ICS Form 201. The Safety Officer is encouraged to use the HAZWOPER Compliance Checklist (Form SSP-K) to ensure the IAP and the 201 address the requirements and all other pertinent ICS forms (203, 205, 206, etc.) are completed.

Distribution: The initial Site Safety Plan completed by the Safety Officer is forwarded to the Planning Section Chief. Copies are made and attached to the Assignment List(s) (ICS Form 204). The Operations Section Chief, Directors, Supervisors or Leaders get a copy and make on site amendments specific to their operation. They must also ensure it is available on site for all personnel to review. The Safety Officer provides personnel from his/her staff to assist in the detailed site characterization. The Safety Officer is responsible for ensuring that the Site Safety Plan for each assignment properly addresses the hazards of the assignment. The Safety Officer must ensure that the safety plans on site are consistent. The Safety Officer accomplishes this through on site enforcement and feedback to the operational units.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Group/Division Supv Strike Team/TF Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	Site Accessibility	Check the block(s) if the site is accessible by land, water, air, etc.
8	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
9	Attachments	Enter attachments. Material Safety Data Sheets are mandatory under 1910.120. Safe Work Practices may also be attached.
10	Job/Task Activity	Enter Job/Task & Activities, list hazards, list potential injury and health effects, check exposure routes and identify controls. If more detail is needed for controls, provided attachments.
11	Prepared by	Enter the name and position of the person completing the worksheet.
12	Briefed on by	Enter the date/time the document was briefed to the appropriate workers and by whom.

SITE MAP FOR SITE SAFETY PLAN (SSP-C)

Purpose: The Site Map for the Site Safety Plan is required by Title 29 Code of Federal Regulations Part 1910.120. It provides in 1 place a visual description of the site which can help ICS personnel locate hazards, identify evacuation routes and places of refuge.

Preparation: The Site Map for the Site Safety Plan can be completed by the Safety Officer, his/her staff or by ICS field personnel (Group Supervisors, Task Force/Strike Team Leaders) working at a site with unique and specific hazards. One or several maps may be developed, depending on the size of the incident and the uniqueness of the hazards. The key is to ensure that the workers using the map(s) can clearly identify the work zones, locations of hazards, evacuation routes and places of refuge.

Distribution: This form must be located with the Site Safety Plan (SSP-B). It therefore follows the same distribution route.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	Site Accessibility	Check the block(s) if the site is accessible by land, water, air, etc.
8	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
9	Include	Ensure the map includes the listed items provided in this block.
10	Prepared by	Enter the name and position of the person completing the worksheet.
11	Briefed on by	Enter the date/time the document was briefed to the appropriate workers and by whom.

EMERGENCY RESPONSE PLAN (ICS FORM 208D)

Purpose: The Emergency Response Plan provides information on measures to be taken in the event of an emergency. It is used in conjunction with the Site Safety Plan (Form SSP-B). It is also required by Title 29 Code of Federal Regulations Part 1910.120.

Preparation: The Safety Officer, his/her staff member or the Site Supervisor/Leader prepares the Emergency Response Plan. A copy of the Medical Plan (ICS Form 206) must always be attached to this form.

Distribution: This form must be located with Site Safety Plan (SSP-B). It therefore follows the same distribution route.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
8	Attachments	Enter attachments. ICS Form 206 must be included.
9	Emergency Alarm	Enter a description of the sound of the emergency alarm and it's location.
10	Backup Alarm	Enter a description of the sound of the emergency alarm and it's location.
11	Emergency Hand Signals	Enter the emergency hand signals to be used.
12	Emergency Personal Protective Equipment Required	Enter the emergency personal protective equipment that may be needed in the event of an emergency.
13	Emergency Notification Procedures	Enter the procedures for notifying the appropriate personnel and organizations in the event of an emergency.
14	Places of Refuge	Enter by name the place of refuge personnel can go to in the event of an emergency.
15	Emergency Decon & Evacuation Steps	Enter emergency decontamination steps and evacuation procedures.
16	Site Security Measures	Enter site security measures needed for emergencies.
17	Prepared by	Enter the name and position of the person completing the worksheet.
18	Briefed on _____ by	Enter the date/time the document was briefed to the appropriate workers and by whom.

DAILY AIR MONITORING LOG (FORM SSP-E)

Purpose: The Daily Air Monitoring Log provides documentation of air monitoring conducted during a spill. The log is a supplement to the Site Safety Plan (SSP-B). It is only required when performing air monitoring operations. The information used from the log can help update the Site Safety Plan.

Preparation: Persons conducting monitoring complete the Daily Air Monitoring Log. Normally these are air monitoring units under the Site Safety Officer. If there is a decision not to monitor during a spill, the reasons must be stated clearly in the Site Safety Plan (SSP-B).

Distribution: The Daily Air Monitoring Log when completed is copied and forwarded to the Site Safety Officer who must review and sign the form. The original form must be available on site, readily available and briefed to all impacted ICS personnel.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Location & size of site	Enter the geographical location of the site and the approximate square area.
6	Hazards of Concern	Enter the hazards being monitored.
7	Action Levels	Enter the action levels/readings for the monitoring teams.
8	Weather	Enter weather information. Ensure units of measure are listed.
9	Air Monitoring Data	Enter the instrument type and number, persons monitoring, results with appropriate units, location of reading, time of reading and interferences and comments.
10	Safety Officer Review	The Safety Officer must review and sign the form.

PERSONAL PROTECTIVE EQUIPMENT (SSP-F)

Purpose: The Personal Protective Equipment form is a list of personal protective equipment to be used in operations. The listing of personal protective equipment is required by Title 29 Code of Federal Regulations Part 1910.120.

Preparation: The Personal Protective Equipment form is completed by the Site Safety Officer, or his/her staff. Personal protective equipment common to all ICS Operations personnel is addressed first. Jobs with unique personal protective equipment requirements (fall protection) are addressed next. When the form is delivered on site, the ICS Director, Supervisor, or Leader may amend the list to ensure personnel are adequately protected from job hazards. It must be completed prior to the onset of any operations, unless addressed elsewhere by Standard Operating Procedures.

Distribution: This form must be located with Site Safety Plan (SSP-B). It therefore follows the same distribution route.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	Hazard(s) Addressed:	Enter the hazards that need to be safeguarded.
8	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
9	Equipment	List the equipment needed to address the hazards. If pre-designed Safe Work Practices are used, indicate here and attach to form.
10	References consulted	List the references used in making the selection for PPE.
11	Inspection Procedures	Enter the procedures for inspecting the Personal Protective Equipment prior to donning. If pre-designed Safe Work Practices are used, indicate here and attach to form.
12	Donning Procedures	Enter the procedures for putting on the PPE. If pre-designed Safe Work Practices are used, indicate here and attach to form.
13	Doffing Procedures	Enter the information for removing the PPE. If pre-designed Safe Work Practices are used, indicate here and attach to form.
14	Limitations and Precautions	List the limitations and precautions when using PPE. Include the maximum time to be inside the PPE, Heat Stress concerns, psychomotor skill detraction and other factors.
15	Prepared by	Enter the name and position of the person completing the worksheet.
16	Briefed on _____ by	Enter the date/time the document was briefed to the appropriate workers and by whom.

DECONTAMINATION (SSP-G)

Purpose: The Decontamination form provides information on how workers can avoid contamination and how to get decontaminated. It is a supplemental form to the Site Safety Plan.

Preparation: The Decontamination Form can be completed by the Site Safety Officer, a member of his/her staff or by the Group/Division Supervisor, Task Force/Strike Team Leader on the site

Distribution: This form must be located with Site Safety Plan (SSP-B). It therefore follows the same distribution route.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
8	Hazard(s) Addressed:	Enter the hazards that need to be safeguarded.
9	Equipment	Enter the decontamination equipment needed for the site. If pre-designed Safe Work Practices are used, indicate here and attach to this form.
10	References consulted	List the references used in making the selection for PPE.
11	Contamination Avoidance Practices	Enter procedures for personnel to avoid contamination. If pre-designed Safe Work Practices are used, indicate here and attach to form.
12	Decon Diagram	Draw a diagram for the decontamination operation. If pre-designed Safe Work Practices are used, indicate here and attach to form.
13	Decon Steps	List the decontamination steps.
14	Prepared by	Enter the name and position of the person completing the worksheet.
15	Briefed on _____ by	Enter the date/time the document was briefed to the appropriate workers and by whom.

SITE SAFETY ENFORCEMENT LOG (SSP-H)

Purpose: The Site Safety Plan Enforcement Log is used to help enforce safety during an incident.

Preparation: The Safety Officer and/or his/her staff complete the Site Safety Plan Enforcement Log. The log is completed as Safety personnel are on scene reviewing the site. It should be completed at a minimum once per day. The number of enforcement logs to be completed depends on the size of the incident. Enough should be completed to ensure that site safety is being adequately enforced.

Distribution: The Site Safety Plan enforcement log when completed is delivered to the Safety Officer. The Safety Officer can use the form to amend the Site Safety Plan (SSP-A or B).

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
7	Attachments	List any attached supporting documentation.
8	Job/Task Activity	Enter only those Job Task/activities for which a deficiency is noted.
	Hazards	Enter the hazard not being sufficiently addressed.
	Deficiency	Enter the deficiency.
	Action Taken	Enter the corrective action taken to address the deficiency.
	Safety Plan Amended?	Enter whether the on site safety plan was amended.
	Signature of Supervisor/Leader	Ensure the Supervisor/Leader signs the form to acknowledge the deficiency.
9	Prepared by	Enter the name and position of the person completing the worksheet.
10	Briefed on _____ by	Enter the date/time the document was briefed to the appropriate workers and by whom.

WORKER ACKNOWLEDGEMENT FORM (SSP-I)

Purpose: The Worker Acknowledgement form is used to document workers who have received safety briefings.

Preparation: Those personnel responsible for conducting safety briefings complete this form initially. Once the briefings are completed, workers who were briefed print their name, sign, date and indicate the time of the briefing.

Distribution: This form is returned to the Safety Officer or designated representative at the end of each operational period.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Site Location	Indicate the location where the briefings are held.
3	Attachments	Indicate any attachments used as part of the briefings.
4	Type of briefing	Check the block next to the type of briefing.
5	Presented by	Enter the name of the person conducting the briefing.
6	Date	Enter the date of the briefing.
7	Time	Enter the time of the briefing.
8	Worker Name	Workers receiving the briefing print their name, sign, date and enter the time they acknowledge the briefing.

EMERGENCY SAFETY & RESPONSE PLAN COMPLIANCE CHECKLIST (SSP-J)

Purpose: The Emergency Safety and Response Plan 1910.120 Compliance Checklist is to ensure that incident response operations are in compliance with Title 29, Code of Federal Regulations Part 1910.120, Hazardous Waste Operations and Emergency Response. It also identifies how form SSP-J can be used to satisfy the HAZWOPER requirements. This checklist is an optional form.

Preparation: The Emergency Safety and Response Plan 1910.120 Compliance Checklist is completed by the Safety Officer or his/her staff as frequently as necessary whenever the Safety Officer wants to ensure regulatory compliance. It is best used in conjunction with the Site Safety Plan Enforcement Log (SSP-H). Many of the requirements are performance based and are best evaluated on scene by the Safety Officer or his/her staff.

Distribution: The Safety Officer should maintain The Emergency Safety and Response Plan (ERP) 1910.120 Compliance Checklist.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
5	Location of Site	Enter the site location.
	Cites	These are the regulatory cites within 1910.120. The major headings are highlighted in bold. Informational cites or cites that are duplicative are not included.
	Requirement	This lists the requirement in a question format. Some require documentation or some form of action.
	ICS Form	Lists those requirements covered by SSP-A.
	Check Block	Enter the check if the site satisfies the requirement.
	Comments	This provides additional information on the requirement. The user may also enter comments.
6	Prepared by	Enter the name and position of the person completing the worksheet.

HAZWOPER 1910.120 COMPLIANCE CHECKLIST (SSP-K)

Purpose: The HAZWOPER 1910.120 Compliance Checklist is to ensure that incident response operations are in compliance with Title 29, Code of Federal Regulations Part 1910.120, Hazardous Waste Operations and Emergency Response. It also identifies how other ICS forms can be used to satisfy the HAZWOPER requirements. This is an optional form.

Preparation: The HAZWOPER 1910.120 Compliance Checklist is completed by the Safety Officer or his/her staff as frequently as necessary whenever the Safety Officer wants to ensure regulatory compliance. It is best used in conjunction with the Site Safety Plan Enforcement Log (SSP-H). The Site Safety Plan Forms (A-G) best meet some of the requirements. The Incident Action Plan is suited to address other requirements, and the Safety Officer should ensure the IAP addresses them. Other requirements are performance based and are best evaluated on scene by the Safety Officer or his/her staff.

Distribution: The HAZWOPER 1910.120 Compliance Checklist should be maintained by the Safety Officer.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
5	Location of Site	Enter the site location.
	Cites	These are the regulatory cites within 1910.120. The major headings are highlighted in bold. Informational cites or cites that are duplicative are not included.
	Requirement	This lists the requirement in a question format. Some require documentation or some form of action.
	ICS Form	Lists those ICS Forms that cover the requirement. IAP designations means it should be covered in IAP, it does not guarantee it is covered. The Safety Officer must ensure this.
	Check Block	Enter the check if the site satisfies the requirement.
	Comments	This provides information on where else the requirement may be met. The user may also enter comments.
6	Prepared by	Enter the name and position of the person completing the worksheet.

HAZWOPER 1910.120 DRUM COMPLIANCE CHECKLIST (SSP-L)

Purpose: The HAZWOPER 1910.120 Drum Compliance Checklist is to ensure that incident response operations are in compliance with Title 29, Code of Federal Regulations Part 1910.120, Hazardous Waste Operations and Emergency Response whenever drums are encountered during an incident. This is an optional form.

Preparation: The HAZWOPER 1910.120 Drum Compliance Checklist is completed by the Safety Officer or his/her staff as frequently as necessary whenever the Safety Officer wants to ensure regulatory compliance. It is best used in conjunction with the Site Safety Plan Enforcement Log (SSP-H). The Site Safety Plan Forms (A-G) best meet some of the requirements. Other requirements are performance based and are best evaluated on scene by the Safety Officer or his/her staff.

Distribution: The HAZWOPER 1910.120 Drum Compliance Checklist should be maintained by the Safety Officer.

Instructions:

Item #	Item Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	Date/Time Prepared	Enter date (month, day, year) prepared.
3	Operational Period	Enter the time interval for which the assignment applies.
4	Safety Officer	Enter the name of the Safety Officer and means of contact.
5	Supervisor/Leader	The Supervisor/Leader who receives this form will enter their name here.
6	Location & size of site	Enter the geographical location of the site and the approximate square area.
7	For Emergencies Contact	Enter the name and way to contact the individual who handles emergencies.
8	Note	<u>Tanks and vaults</u> should also be treated in the same manner as described in the checklist (1910.120((j)(9))).
9	Cites	These are the regulatory cites within 1910.120. The major headings are highlighted in bold. Informational cites or cites that are duplicative are not included.
	Requirement	This lists the requirement in a question format. Some require documentation or some form of action.
	Check Block	Enter the check if the site satisfies the requirement.
	Comments	This provides information on where else the requirement may be met. The user may also enter comments.
10	Prepared by	Enter the name and position of the person completing the worksheet.

SITE SAFETY PLAN ATTACHMENTS (SSP-ATTACH #1 thru #11)

Purpose: The Site Safety Plan attachments provide ready made safe work practices for the Safety Officer and ICS personnel. They are optional documents designed to assist the Safety Officer in communicating and enforcing control of safety hazards. They were derived from the U.S. Coast Guard's National Strike Force's Guide for Developing Oil Spill Site Safety Plans (NSFCCINST M16465.2).

Preparation: The SSP-Attachments require little to no preparation. Some of them have blank sections (due to information changing) that are required to be filled by the Safety Officer or his/her staff. The Safety Officer is encouraged to use the format presented by the attachments for developing his/her own additional safe work practices.

Distribution: These forms must be located with Site Safety Plan (SSP-A). They therefore follow the same distribution route.

Table of Forms

FORM NAME	FORM #	USE	REQUIRED	OPTIONAL	ATTACHED?
Emergency Safety and Response Plan	A	Emergency response phase (uncontrolled)	X		
Site Safety Plan	B	Post-emergency phase (stabilized, cleanup)	X		
Site Map	C	Post-emergency phase map of site and hazards	X		
Emergency Response Plan	D	Part of Form B, to address emergencies	X		
Air Monitoring Log	E	To log air monitoring data	X*		
Personal Protective Equipment	F	To document PPE equipment and procedures	X*		
Decontamination	G	To document decon equipment and procedures	X*		
Site Safety Enforcement Log	H	To use in enforcing safety on site		X	
Worker Acknowledgement Form	I	To document workers receiving briefings		X	
Form A Compliance Checklist	J	To assist in ensuring HAZWOPER compliance		X	
Form B Compliance Checklist	K	To assist in ensuring HAZWOPER compliance		X	
Drum Compliance Checklist	L	To assist in ensuring HAZWOPER compliance		X	
Other:					

* Required only if function or equipment is used during a response

EMERGENCY SAFETY and RESPONSE PLAN		1. Incident Name			2. Date/Time Prepared			3. Operational Period			4. Attachments: Attach SDS for each Chemical																						
5. <u>Organization IC:</u>		Safety: Group Supv:			Entry Team:			Backup Team:			Decon Team:																						
6. <u>Physical Hazards and Protection</u>		Confined Space <input type="checkbox"/> Noise <input type="checkbox"/> Heat Stress <input type="checkbox"/> Cold Stress <input type="checkbox"/> Electrical <input type="checkbox"/> Animal/Plant/Insect <input type="checkbox"/> Ergonomic <input type="checkbox"/> Ionizing Rad <input type="checkbox"/> Slips/Trips/Falls <input type="checkbox"/> Struck by <input type="checkbox"/> Water <input type="checkbox"/> Violence <input type="checkbox"/> Excavation <input type="checkbox"/> Biomedical waste and/or needles <input type="checkbox"/> Fatigue <input type="checkbox"/> Other (specify)																															
Major Tasks		Entry Permit	Ventilate	Hearing Protection	Shoes (type)	Hard Hats	Clothing (cold wx)	Life Jacket	Work/ Rest (hrs)	Fluids (amt/time)	Signs and Barricade	Fall Protect	Post Guards	Flash Protect	Work Gloves	Other																	
7. <u>Chemicals</u>		Hazards			Target Organs			Exposure Routes			PPE			Type of PPE																			
		Explosive <input type="checkbox"/>	Flammable <input type="checkbox"/>	Reactive <input type="checkbox"/>	Biomedical <input type="checkbox"/>	Toxic <input type="checkbox"/>	Radioactive <input type="checkbox"/>	Carcinogen <input type="checkbox"/>	Oxidizer <input type="checkbox"/>	Corrosive <input type="checkbox"/>	Specify Other:	Eyes <input type="checkbox"/> Nose <input type="checkbox"/> Skin <input type="checkbox"/> Ears <input type="checkbox"/>	Central Nervous System <input type="checkbox"/>	Respiratory <input type="checkbox"/> Throat <input type="checkbox"/> Lungs <input type="checkbox"/> Heart <input type="checkbox"/>	Liver <input type="checkbox"/> Kidney <input type="checkbox"/> Blood <input type="checkbox"/> Lungs <input type="checkbox"/>	Circulatory <input type="checkbox"/> Gastrointestinal <input type="checkbox"/> Bone <input type="checkbox"/>	Other:	Inhalation <input type="checkbox"/>	Absorption <input type="checkbox"/>	Ingestion <input type="checkbox"/>	Injection <input type="checkbox"/>	Membrane <input type="checkbox"/>	Face Shield <input type="checkbox"/>	Eyes <input type="checkbox"/>	Gloves <input type="checkbox"/>	Inner Suit <input type="checkbox"/>	Splash Suit <input type="checkbox"/>	Level A Suit <input type="checkbox"/>	SCBA <input type="checkbox"/> APR <input type="checkbox"/>	SAR <input type="checkbox"/>	Cartridges <input type="checkbox"/>	Fire Resistance <input type="checkbox"/>	
8. <u>Instruments</u>		Action Levels	Chemical Name:			LEL/UEL %	Odor Thresh Ppm	Ceiling/IDLH	STEL/TLV	Flash Point/ Ignition Pt (F or C)	Vapor Pressure (mm)	Vapor Density	Specific Gravity	Boiling Point F or C																			
		O2 <input type="checkbox"/>																															
		CGI <input type="checkbox"/>																															
		Radiation <input type="checkbox"/>																															
		Total HCs <input type="checkbox"/>																															
		Colorimetric <input type="checkbox"/>																															
		Thermal <input type="checkbox"/>																															
		Other <input type="checkbox"/>																															

10. Site Map. Include: Work Zones, Locations of Hazards, Security Perimeter, Places of Refuge, Decontamination Line, Evacuation Routes, Assembly Point, Direction of North

11. <u>Decontamination:</u> Instrument Drop Off <input type="checkbox"/> Outer Boots/Glove Removal <input type="checkbox"/> Suit/Gloves/Boot Disposal <input type="checkbox"/>	Specify:	Suit Wash <input type="checkbox"/> Decon Agent: Water <input type="checkbox"/> Other <input type="checkbox"/>	Bottle Exchange <input type="checkbox"/> Outer Suit Removal <input type="checkbox"/> Inner Suit Removal <input type="checkbox"/> SCBA/Mask Removal <input type="checkbox"/>	SCBA/Mask Rinse <input type="checkbox"/> Inner Glove Removal <input type="checkbox"/> Work Clothes Removal <input type="checkbox"/> Body Shower <input type="checkbox"/>	Intervening Steps <input type="checkbox"/> Specify:
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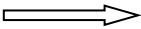
12. <u>Potential Emergencies</u> Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Other <input type="checkbox"/>	Evacuation Alarms: Horn <input type="checkbox"/> # Blasts <input type="checkbox"/> Bells <input type="checkbox"/> #Rings <input type="checkbox"/> Radio Code <input type="checkbox"/> Other:	Emergency Prevention and Evacuation Procedures: Safe Distance
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13. <u>Communications:</u> Radio? <input type="checkbox"/> Phone? <input type="checkbox"/>	Command #:	Tactical #:	Entry #:
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14. <u>Site Security</u> Personnel Assigned	Procedures:	Equipment
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15. <u>Emergency Medical</u> Personnel Assigned	Procedures:	Equipment
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16. <u>Prepared By:</u>	17. <u>Date/Time Briefed:</u>	Form SSP-A: Page of
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CG ICS SITE SAFETY PLAN (SSP) HAZARD ID/EVAL/CONTROL	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)	
5. Supervisor/Leader	6. Location and Size of Site	7. Site Accessibility Land <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Comments:	8. For Emergencies Contact:	9. Attachments: Attach SDS for each Chemical	
10. Job Task/Activity	Hazards* 	Potential Injury and Health Effects	Exposure Routes	<u>Controls</u> : Engineering, Administrative, PPE	
			Inhalation <input type="checkbox"/> Absorption <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Membrane <input type="checkbox"/>		
			Inhalation <input type="checkbox"/> Absorption <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Membrane <input type="checkbox"/>		
			Inhalation <input type="checkbox"/> Absorption <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Membrane <input type="checkbox"/>		
			Inhalation <input type="checkbox"/> Absorption <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Membrane <input type="checkbox"/>		
			Inhalation <input type="checkbox"/> Absorption <input type="checkbox"/> Ingestion <input type="checkbox"/> Injection <input type="checkbox"/> Membrane <input type="checkbox"/>		
11. Prepared By:	12. Date/Time Briefed:	*HAZARD LIST: Physical/Safety, Toxic, Explosion/Fire, Oxygen Deficiency, Ionizing Radiation, Biological, Biomedical, Electrical, Heat Stress, Cold Stress, Ergonomic, Noise, Cancer, Dermatitis, Drowning, Fatigue, Vehicle, Diving		Form SSP-B: Page of	

CG ICS SSP: SITE MAP	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)
5. Supervisor/Leader	6. Location and Size of Site	7. Site Accessibility Land <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Comments:	8. For Emergencies Contact:	9. <u>Include</u> : - Work Zones - Security Perimeter - Decontamination Line - Locations of Hazards - Places of Refuge - Evacuation Routes
10. Sketch of Site:				
11. Prepared By:	12. Date/Time Briefed:	HAZARD LIST: Physical/Safety, Toxic, Explosion/Fire, Oxygen Deficiency, Ionizing Radiation, Biological, Biomedical, Electrical, Heat Stress, Cold Stress, Ergonomic, Noise, Cancer, Dermatitis, Drowning, Fatigue, Vehicle, Diving		Form SSP-C: Page of

CG ICS SSP: EMERGENCY RESPONSE PLAN	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)
5. Supervisor/Leader	6. Location and Size of Site	7. For Emergencies Contact:		8. Attachments: INCLUDE ICS FORM 206 and EMT Medical Response Procedures
9. Emergency Alarm (sound and location)	10. Backup Alarm (sound and location)	11. Emergency Hand Signals	12. Emergency Personal Protective Equipment Required:	
13. Emergency Notification Procedures	14. Places of Refuge (also see site map form 208B)	15. Emergency Decon and Evacuation Steps	16. Site Security Measures	
17. Prepared By:	18. Date/Time Briefed:	HAZARD LIST: Physical/Safety, Toxic, Explosion/Fire, Oxygen Deficiency, Ionizing Radiation, Biological, Biomedical, Electrical, Heat Stress, Cold Stress, Ergonomic, Noise, Cancer, Dermatitis, Drowning, Fatigue, Vehicle, Diving		Form SSP-D: Page of

CG ICS SSP: AIR MONITORING LOG	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)	
5. Site Location	6. Hazards of Concern	7. Action Levels (include references):		8. <u>Weather</u> : Temperature: Precipitation: Wind: Relative Humidity: Cloud Cover:	
9. Instrument, ID Number Calibrated? Indicate below.	Monitoring Person Name(s)	Results (units)	Location	Time	Interferences and Comments
10. Safety Officer Review:		Potential Health Effects: Bruise/Lacerations, Organ Damage, Central Nervous System Effects, Cancer, Reproductive Damage, Low Back Pain, Temporary Hearing Loss, Dermatitis, Respiratory Effects, Bone Breaks, Eye Burning			Form SSP-E: Page of

CG ICS SSP: PERSONAL PROTECTIVE EQUIPMENT	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)
	5. Supervisor/Leader	6. Location and Size of Site	7. Hazards Addressed:	8. For Emergencies Contact:
9. Equipment:				10. References Consulted:
11. Inspection Procedures:	12. Donning Procedures:	13. Doffing Procedures:	14. Limitations and Precautions (include maximum stay time in PPE):	
15. Prepared By:	16. Date/Time Briefed:	Potential Health Effects: Bruise/Lacerations, Organ Damage, Central Nervous System Effects, Cancer, Reproductive Damage, Low Back Pain, Temporary Hearing Loss, Dermatitis, Respiratory Effects, Bone Breaks, Eye Burning		Form SSP-F: Page of

CG ICS SSP: DECONTAMINATION	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)
5. Supervisor/Leader	6. Location and Size of Site	7. For Emergencies Contact:		8. Hazard(s) Addressed:
9. Equipment:				10. References Consulted:
11. Contamination Avoidance Practices:	12. Decon Diagram			13. Decon Steps
14. Prepared By:	15. Date/Time Briefed:	<u>Potential Health Effects:</u> Bruise/Lacerations, Organ Damage, Central Nervous System Effects, Cancer, Reproductive Damage, Low Back Pain, Temporary Hearing Loss, Dermatitis, Respiratory Effects, Bone Breaks, Eye Burning		Form SSP-G: Page of

CG ICS SSP: ENFORCEMENT LOG	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)	
5. Supervisor/Leader	6. For Emergencies Contact:			7. Attachments:	
8. Job Task/Activity	Hazards	Deficiency	Action Taken	Safety Plan Amended?	Signature of Supervisor/Leader
9. Prepared By:	10. Date/Time Briefed:	HAZARD LIST: Physical/Safety, Toxic, Explosion/Fire, Oxygen Deficiency, Ionizing Radiation, Biological, Biomedical, Electrical, Heat Stress, Cold Stress, Ergonomic, Noise, Cancer, Dermatitis, Drowning, Fatigue, Vehicle, Diving			Form SSP-H: Page of

CG ICS SSP WORKER ACKNOWLEDGEMENT FORM	1. Incident Name	2. Site Location:	3. Attachments:	
4. Type of Briefing Safety Plan/Emergency Response Plan <input type="checkbox"/> Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:	5. Presented By:		6. Date	7. Time
8. Worker Name (Print)	Signature*		Date	Time
<i>* By signing this document, I am stating that I have read and fully understand the plan and/or information provided to me.</i>			Form SSP-I: Page of	

5. Location of Site

CG ICS Emergency Response Plan 1910.120 COMPLIANCE CHECKLIST	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Site Supervisor/Leader	
Cite: 1910.120	Requirement(sections that duplicate or explain are omitted)		ICS Form	[4]	Comments
(q)(1)	Is the plan in writing?		SSP-A	<input type="checkbox"/>	
(1)	Is the plan available for inspection by employees?		N/A	<input type="checkbox"/>	Performance based
(q)(2)(i)	Does the plan address pre-emergency planning and coordination?		SSP-A	<input type="checkbox"/>	
(ii)	Does it address personnel roles?		SSP-A	<input type="checkbox"/>	
(ii)	Does it address lines of authority?		SSP-A	<input type="checkbox"/>	
(ii)	Does it address communications?		SSP-A	<input type="checkbox"/>	
(iii)	Does it address emergency recognition?		SSP-A	<input type="checkbox"/>	
(iii)	Does it address emergency prevention?		SSP-A	<input type="checkbox"/>	
(iv)	Does it identify safe distances?		SSP-A	<input type="checkbox"/>	
(iv)	Does it address places of refuge?		SSP-A	<input type="checkbox"/>	
(v)	Does it address site security and control?		SSP-A	<input type="checkbox"/>	
(vi)	Does it identify evacuation routes?		SSP-A	<input type="checkbox"/>	
(vi)	Does it identify evacuation procedures?		SSP-A	<input type="checkbox"/>	
(vii)	Does it address decontamination?		SSP-A	<input type="checkbox"/>	
(viii)	Does it address medical treatment and first aid?		SSP-A	<input type="checkbox"/>	
(ix)	Does it address emergency alerting procedures?		SSP-A	<input type="checkbox"/>	
(ix)	Does it address emergency response procedures		SSP-A	<input type="checkbox"/>	
(x)	Was the response critiqued?		N/A	<input type="checkbox"/>	Performance based
(xi)	Does it identify Personal Protection Equipment?		SSP-A	<input type="checkbox"/>	
(xi)	Does it identify emergency equipment?		SSP-A	<input type="checkbox"/>	
(q)(3)(ii)	All the hazardous substances identified to the extent possible?		N/A	<input type="checkbox"/>	Performance based
(ii)	All the hazardous conditions identified to the extent possible?		N/A	<input type="checkbox"/>	Performance based
(ii)	Was site analysis addressed?		N/A	<input type="checkbox"/>	Performance based
(ii)	Were engineering controls addressed?		N/A	<input type="checkbox"/>	Performance based
(ii)	Were exposure limits addressed?		N/A	<input type="checkbox"/>	Performance based
(ii)	Were hazardous substance handling procedures addressed?		N/A	<input type="checkbox"/>	Performance based
(iii)	Is the PPE appropriate for the hazards identified?		N/A	<input type="checkbox"/>	Performance based
(iv)	Is respiratory protection worn when inhalation hazards present?		N/A	<input type="checkbox"/>	Performance based
(v)	Is the buddy system used in the hazard zone?		N/A	<input type="checkbox"/>	Performance based
(vi)	Are backup personnel on standby?		N/A	<input type="checkbox"/>	Performance based
(vi)	Are advanced first aid support personnel standing by?		N/A	<input type="checkbox"/>	Performance based
(vii)	Has the ICS designated safety official been identified?		SSP-A	<input type="checkbox"/>	
(vii)	Has the Safety Official evaluated the hazards?		N/A	<input type="checkbox"/>	Performance based
(viii)	Can the Safety Official communicate with IC immediately?		N/A	<input type="checkbox"/>	Performance based
(ix)	Are appropriate decontamination procedures implemented?		N/A	<input type="checkbox"/>	Performance based

Form SSP-J:

Page of

CG ICS SSP: 1910.120 COMPLIANCE CHECKLIST	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Site Supervisor/Leader	5. Location of Site
Cite: 1910.120	Requirement(sections that duplicate or explain are omitted)		ICS Form	[4]	Comments
(b)(1)(ii)(A)	Organizational structure?		203	<input type="checkbox"/>	
(B)	Comprehensive workplan?		IAP	<input type="checkbox"/>	Incident Action Plan
(C)	Site Safety Plan?		SSP-B	<input type="checkbox"/>	
(D)	Safety and health training program?		N/A	<input type="checkbox"/>	Responsibility of each employer
(E)	Medical surveillance program?		N/A	<input type="checkbox"/>	Responsibility of each employer
(F)	Employer SOPs?		N/A	<input type="checkbox"/>	Responsibility of each employer
(G)	Written program related to site activities?		N/A	<input type="checkbox"/>	
(b)(1)(iii)	Site excavation meets shored or slope requirements in 1926?		N/A	<input type="checkbox"/>	
(b)(2)(i)(D)	Lines of communication?		201 203 205	<input type="checkbox"/>	
(b)3(iv)	Training addressed?		N/A	<input type="checkbox"/>	Responsibility of each employer
(v)-(vi)	Information and medical monitoring addressed?		N/A	<input type="checkbox"/>	Responsibility of each employer
(b)4(i)	Site Safety Plan kept on site?		N/A	<input type="checkbox"/>	
(ii)(A)	Safety and health hazard analysis conducted?		N/A	<input type="checkbox"/>	
(B)	Properly trained employees assigned to right jobs?		N/A	<input type="checkbox"/>	
(C)	Personnel Protective Equipment issues addressed?		SSP-F	<input type="checkbox"/>	
(E)	Frequency and types of air monitoring addressed?		SSP-E	<input type="checkbox"/>	
(F)	Site control measures in place?		SSP-B	<input type="checkbox"/>	
(G)	Decontamination procedures in place?		SSP-G	<input type="checkbox"/>	
(H)	Emergency Response Plan in place?		SSP-D	<input type="checkbox"/>	
(I)	Confined space entry procedures?		SSP-B	<input type="checkbox"/>	
(J)	Spill containment program		SSP-B	<input type="checkbox"/>	
(iii)	Pre-entry briefings conducted?		SSP-I	<input type="checkbox"/>	
(iv)	Site Safety Plan effectiveness evaluated?		SSP-H	<input type="checkbox"/>	
(c)(1)	Site characterization done?		N/A	<input type="checkbox"/>	
(c)(2)	Preliminary evaluation done by qualified person?		N/A	<input type="checkbox"/>	
(c)(3)	Hazard identification performed?		SSP-B	<input type="checkbox"/>	
(c)(4)(i)	Location and size of site identified?		SSP-B	<input type="checkbox"/>	
(ii)	Response activities, job tasks identified?		SSP-B	<input type="checkbox"/>	
(iii)	Duration of tasks identified?		SSP-B	<input type="checkbox"/>	Operational period
(iv)	Site topography and accessibility addressed?		SSP-C	<input type="checkbox"/>	
(v)	Health and safety hazards addressed?		SSP-B	<input type="checkbox"/>	
(vi)	Dispersion pathways addressed?		SSP-B	<input type="checkbox"/>	
(vii)	Status and capabilities of medical emergency response teams?		206	<input type="checkbox"/>	
(c)(5)(i)(iv)	Chemical protective clothing addressed and properly selected?		SSP-F	<input type="checkbox"/>	
(ii)	Respiratory protection addressed?		SSP-B and F	<input type="checkbox"/>	
(iii)	Level B used for unknowns?		N/A	<input type="checkbox"/>	
(c)(6)(i)	Monitoring for ionization conducted?		SSP-E	<input type="checkbox"/>	
(ii)	Monitoring conducted for IDLH conditions?		SSP-E	<input type="checkbox"/>	
(iii)	Personnel looking out for dangers of IDLH environments?		N/A	<input type="checkbox"/>	
(iv)	Ongoing air monitoring program in place?		SSP-E	<input type="checkbox"/>	

CG ICS SSP: 1910.120 COMPLIANCE CHECKLIST	1. Incident Name	2. Date/Time Prepared	3. Operational Period		
	Cite: 1910.120	Requirement	ICS Form	[4]	Comments
(c)(7)	Employees informed of potential hazard occurrence?	SSP-B	<input type="checkbox"/>		
(c)(8)	Properties of each chemical made aware to employees?	SSP-B	<input type="checkbox"/>		
(d)(1)	Appropriate site control procedures in place?	IAP, SSP-B	<input type="checkbox"/>		
(d)(2)	Site control program developed during planning stages?	IAP, SSP-B	<input type="checkbox"/>		
(d)(3)	Site map, work zones, alarms, communications addressed?	IAP, SSP-B	<input type="checkbox"/>		
(g)(1)(i)	Engineering, admin controls considered?	SSP-B	<input type="checkbox"/>		
(iii)	Personnel not rotated to reduce exposures?	N/A	<input type="checkbox"/>		
(g)(5)(i)	PPE selection criteria part of employer's program?	N/A	<input type="checkbox"/>		Responsibility of employer
(ii)	PPE use and limitations identified?	SSP-F	<input type="checkbox"/>		
(iii)	Work mission duration identified?	SSP-F	<input type="checkbox"/>		
(iv)	PPE properly maintained and stored?	N/A	<input type="checkbox"/>		Responsibility of employer
(vi)	Are employees properly trained and fitted with PPE?	N/A	<input type="checkbox"/>		Responsibility of employer
(vii)	Are donning and doffing procedures identified?	SSP-F	<input type="checkbox"/>		
(viii)	Are inspection procedures properly identified?	SSP-F	<input type="checkbox"/>		
(ix)	Is a PPE evaluation program in place?	SSP-F	<input type="checkbox"/>		
(h)(3)	Periodic monitoring conducted?	SSP-E	<input type="checkbox"/>		
(k)(2)(i)	Have decontamination procedures been established?	SSP-G	<input type="checkbox"/>		
(ii)	Are procedures in place for contamination avoidance?	SSP-G	<input type="checkbox"/>		
(iii)	Is personal clothing properly decontaminated prior to leaving the site?	SSP-G	<input type="checkbox"/>		
(iv)	Are decontamination deficiencies identified and corrected?	SSP-H	<input type="checkbox"/>		
(k)(3)	Are decontamination lines in the proper location?	SSP-C	<input type="checkbox"/>		
(k)(4)	Are solutions/equipment used in decon properly disposed of?	N/A	<input type="checkbox"/>		
(k)(6)	Is protective clothing and equipment properly secured?	N/A	<input type="checkbox"/>		
(k)(7)	If cleaning facilities are used, are they aware of the hazards?	N/A	<input type="checkbox"/>		
(k)(8)	Have showers and change rooms provided, if necessary?	N/A	<input type="checkbox"/>		
(l)(1)(iii)	Are provisions for reporting emergencies identified?	SSP-D	<input type="checkbox"/>		
(iv)	Are safe distances and places of refuge identified?	SSP-B and C	<input type="checkbox"/>		
(v)	Site security and control addressed in emergencies?	SSP-D	<input type="checkbox"/>		
(vi)	Evacuation routes and procedures identified?	SSP-D	<input type="checkbox"/>		
(vii)	Emergency decontamination procedures developed?	SSP-D	<input type="checkbox"/>		
(ix)	Emergency alerting and response procedures identified?	SSP-D	<input type="checkbox"/>		
(x)	Response teams critiqued and followup performed?	SSP-H	<input type="checkbox"/>		
(xi)	Emergency PPE and equipment available?	SSP-D	<input type="checkbox"/>		
(l)(3)(i)	Emergency notification procedures identified?	SSP-D	<input type="checkbox"/>		
(ii)	Emergency response plan separate from Site Safety Plan?	SSP-D	<input type="checkbox"/>		
(iii)	Emergency response plan compatible with other plans?	SSP-D	<input type="checkbox"/>		
(iv)	Emergency response plan rehearsed regularly?	SSP-D	<input type="checkbox"/>		
(v)	Emergency response plan maintained and kept current?	SSP-H	<input type="checkbox"/>		
1910.165(b)(2)	Can alarms be seen/heard above ambient light and noise levels?	N/A	<input type="checkbox"/>		
(b)(3)	Are alarms distinct and recognizable?	N/A	<input type="checkbox"/>		

CG ICS SSP: 1910.120 COMPLIANCE CHECKLIST	1. Incident Name	2. Date/Time Prepared	3. Operational Period		
Cite: 1910.165	Requirement		ICS Form	[4]	Comments
(b)(4)	Are employees aware of the alarms and are they accessible?		SSP-D	<input type="checkbox"/>	
(b)(5)	Are emergency phone numbers, radio frequencies clearly posted?		206	<input type="checkbox"/>	
(b)(6)	Signaling devices in place where there are 10 or more workers?		IAP	<input type="checkbox"/>	
(c)(1)	Are alarms like steam whistles, air horns being used?		IAP	<input type="checkbox"/>	
(d)(3)	Are backup alarms available?		IAP	<input type="checkbox"/>	
1910.120(m)	Are areas adequately illuminated?		IAP	<input type="checkbox"/>	
(n)(1)(i)	Is an adequate supply of potable water available?		IAP	<input type="checkbox"/>	
(ii)	Are drinking water containers equipped with a tap?		IAP	<input type="checkbox"/>	
(iii)	Are drinking water containers clearly marked?		IAP	<input type="checkbox"/>	
(iv)	Is a drinking cup receptacle available and clearly marked?		IAP	<input type="checkbox"/>	
(n)(2)(i)	Are non-potable water containers clearly marked?		IAP	<input type="checkbox"/>	
(n)(3)(i)	Are their sufficient toilets available?		IAP	<input type="checkbox"/>	
(n)(4)	Have food handling issues been addressed?		IAP	<input type="checkbox"/>	
(n)(6)	Have adequate wash facilities been provided outside hazard zone?		IAP	<input type="checkbox"/>	
(n)(7)	If response is greater than 6 months, have showers been provided?		IAP	<input type="checkbox"/>	
4. Prepared By:				Form SSP-K: Page 3 of 3	

CG ICS SSP: 1910.120 DRUM COMPLIANCE CHECKSHEET	1. Incident Name	2. Date/Time Prepared	3. Operational Period	4. Safety Officer (include method of contact)	
5. Supervisor/Leader	6. Location and Size of Site	7. For Emergencies Contact:		8. Note: <u>tanks and vaults</u> should also be treated in the same manner as described below [1910.120(j)(9)]. Many can also pose confined space hazards.	
9. Cite: 1910.120 (Cites that duplicate or explain requirements are omitted)	Requirement			[4]	Comments
(j)(1)(ii)	Drums meet DOT, OSHA, EPA regs for waste they contain, including shipment?			<input type="checkbox"/>	
(iii)	Drums inspected and integrity ensured prior to movement?			<input type="checkbox"/>	
(iii)	Or drums moved to an accessible location (staging area) prior to movement?			<input type="checkbox"/>	
(iv)	Unlabelled drums treated as unknown until properly identified and labeled?			<input type="checkbox"/>	
(v)	Site activities organized to minimize drum handling?			<input type="checkbox"/>	
(vi)	Employers properly warned about the hazards of moving and handling drums?			<input type="checkbox"/>	
(vii)	Suitable overpack drums are available for addressing leaking and ruptured drums?			<input type="checkbox"/>	
(viii)	Leaking materials from drums properly contained?			<input type="checkbox"/>	
(ix)	Are drums that cannot be moved, emptied of contents with transfer equipment?			<input type="checkbox"/>	
(x)	Are suspect buried drums surveyed with underground detection system?			<input type="checkbox"/>	
(xi)	Are soil and covering material above buried drums removed with caution?			<input type="checkbox"/>	
(xii)	Is the proper extinguishing equipment on scene to control incipient fires?			<input type="checkbox"/>	
(j)(2)(i)	Are airlines on supplied air systems protected from leaking drums?			<input type="checkbox"/>	
(ii)	Are employees at a safe distance, using remote equipment, when handling explosive drums?			<input type="checkbox"/>	
(iii)	Are explosive shields in place to protect workers opening explosive drums?			<input type="checkbox"/>	
(iv)	Is response equipment positioned behind shields when shields are used?			<input type="checkbox"/>	
(v)	Are non-sparking tools used in flammable or potentially flammable atmospheres?			<input type="checkbox"/>	
(vi)	Are drums under extreme pressure opened slowly & workers protected by shields/distance?			<input type="checkbox"/>	
(vii)	Are workers prohibited from standing and working on drums?			<input type="checkbox"/>	
(j)(3)	Is the drum handling equipment positioned and operated to minimize sources of ignition?			<input type="checkbox"/>	
(j)(5)(i)	For shock sensitive drums, have all non-essential employees been evacuated?			<input type="checkbox"/>	
(ii)	For shock sensitive drums: is handling equipment provided with shields to protect workers?			<input type="checkbox"/>	
(iii)	Are alarms that announce start/finish of explosive drum handling actions in place?			<input type="checkbox"/>	
(iv)	Are continuous communications in place between the drum handling site & command post?			<input type="checkbox"/>	
(v)	Are drums under pressure properly controlled for prior to handling?			<input type="checkbox"/>	
(vi)	Are drums containing packaged laboratory wastes treated as shock sensitive?			<input type="checkbox"/>	
(j)(6)(i)	Are lab packs opened by trained and experienced personnel?			<input type="checkbox"/>	
(ii)	Are lab packs showing crystallization treated as shock sensitive?			<input type="checkbox"/>	
(j)(8)(ii-iii)	Are drum staging areas manageable with marked access and egress?			<input type="checkbox"/>	
(iv)	Is bulking of drums conducted only after drum contents have been properly identified?			<input type="checkbox"/>	
10. Prepared By:				Form SSP-L:	

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Products containing Benzene Additional Attachments:		2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:	
Medical Condition	Action Level	Reference	Signs, Symptoms & Potential Health Effects	Exposure Route	Controls: Engineering, Administrative, PPE	Medical Response
Cancer			Bone marrow depression, Abnormal blood counts, Cancer of the blood (leukemia), incapacitating illness & death	Inhalation X Absorption X Ingestion Injection Membrane _____	- Avoid Contact - Avoid confined & tight spaces - Keep upwind - Air monitoring - Chem resistance clothing - Respirators > PEL	- Test blood & urine for phenol
Dermatitis			Reddening of the skin, benzene is a suspected skin carcinogen	Inhalation Absorption X Ingestion Injection Membrane _____	- Avoid Contact - Keep upwind - Wear chemical resistance gloves & clothing - Wash frequently	- Wash skin & exposed areas with soap and water
Eye Irritation			Red eye, weeping eye, blurry vision	Inhalation Absorption X Ingestion Injection Membrane _____	- Avoid Contact - Keep upwind - Wear safety glasses - High splash zone, wear chemical resistance goggles	- Flush eyes with water
Central Nervous System Effect			Giddiness, headache, nausea, staggered gait, fatigue -	Inhalation X Absorption X Ingestion Injection Membrane _____	- Avoid contact, & confined/tight spaces - Keep upwind - Air monitoring - Chem resistance clothing Respirators > PEL	- Test blood & urine for phenol
Respiratory Irritant			Irritation of nose, throat and lungs	Inhalation X Absorption X Ingestion Injection Membrane _____	- Avoid confined & tight spaces - Keep upwind - Air monitoring - Chem resistance clothing Respirators > PEL	- Test blood & urine for phenol
4. Prepared by:	5. Date/time briefed:		Last Update: 3/18/15			SSP-Attach 1: Benzene Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Products Containing Hydrogen Sulfide Additional Attachments:		2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:	
Medical Condition	Action Level	Reference	Signs, Symptoms & Potential Health Effects	Exposure Route	<u>Controls:</u> Engineering, Administrative, PPE	Medical Response
Chemical asphyxiation	Note: Poor Warning Properties		Headache, dizziness, fatigue, staggered gait, giddiness	Inhalation X Absorption Ingestion Injection Membrane _____	- Avoid Contact - Avoid confined & tight spaces - Keep upwind - Air monitoring - SCBA > PEL	
Diarrhea			Runny or loose stool	Inhalation X Absorption Ingestion X Injection Membrane _____	- Avoid Contact - Keep upwind - Wash frequently - Avoid confined & tight spaces - Keep upwind - Air monitoring - SCBA > PEL	- If ingested, induce vomiting, drink large volumes of water
Respiratory Paralysis			Difficulty breathing, fatigue, strong signs of weakness	Inhalation X Absorption Ingestion Injection Membrane _____	- Avoid Contact - Keep upwind - Wash frequently - Avoid confined & tight spaces - Keep upwind - Air monitoring - SCBA > PEL	- Provide support respiration where needed
Chemical Burns			Severe burning of skin, eyes and other external organs -	Inhalation Absorption Ingestion Injection Membrane Contact X	- Avoid areas above 10% LEL - Keep upwind - Air monitoring - Flash protective clothing SCBAs > PEL	-Treat for burns as appropriate
Central Nervous System Depression			Headache, dizziness, fatigue, staggered gait, giddiness	Inhalation X Absorption Ingestion Injection Membrane _____	- Avoid confined & tight spaces - Keep upwind - Air monitoring - Chem resistance clothing SCBA > PEL	- Remove from site
4. Prepared by:	5. Date/time briefed:		Last Update: 3/18/15			SSP-Attach 2: Hydrogen Sulfide Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Generic Signs & Symptoms of Toxic Exposure Attachments:	2. Divisions/Groups/Units affected:	3. Job Tasks Involving Hazard:
Signs and Symptoms		Action to be Taken	
<ul style="list-style-type: none"> - Sudden weight loss or change in appetite. - Unusual fatigue or sleeping difficulties - Unusual irritability - Skin rashes/allergies/sores - Hearing loss - Vision loss or problems - Changes in sense of smell - Shortness of breath, asthma, cough, wheeze, excess sputum - Chest pains - Nausea, vomiting, dizziness - Weakness, tremors - Headaches - Stomach pains - Personality changes 		<ol style="list-style-type: none"> 1. REMOVE PERSON AND OTHERS FROM SITE. 2. REPORT SYMPTOM TO SUPERVISOR 3. EVALUATE POTENTIAL SOURCES 4. REQUEST SITE CHARACTERIZATION BY SITE SAFETY OFFICER 	
4. Prepared by:	5. Date/time briefed:	Last Update: 3/18/15	SSP-Attach 3: Signs/Symptoms of Toxic Exposure Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Heat Stress Attachments:		2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:	
Medical Condition	Action Level	Reference	Signs, Symptoms & Potential Health Effects	Exposure Route	Controls: Engineering, Administrative, PPE	Medical Response
Heat Stroke	Minimize exposure	NIOSH: Working in Hot Environments	Skin is hot Skin is dry Skin is red and spotted Body Temp: 105 or > Mental confusion Convulsions Unconscious	Inhalation Absorption X Ingestion Injection Membrane _____	<ul style="list-style-type: none"> - Acclimitize workers - Avoid direct sun - Institute work/rest regimens - Provide cool rest areas - Drink 5-7 ounces water every 15-20 minutes - Consider cooling garments - Use heat stress monitors - Use canopies or other shelter - Minimize workers with illnesses and excessive weight 	<ul style="list-style-type: none"> - Get EMT assistance immediately - Remove victim to cool area - Soak clothing w/water - Fan body to increase cooling
Heat Exhaustion	Minimize exposure	NIOSH: Working in Hot Environments	Extreme weakness Giddiness, headache Nausea, Vomiting Skin is clammy & moist Complexion is pale/flushed Body Temp: normal to slightly elevated	Inhalation Absorption X Ingestion Injection Membrane _____		<ul style="list-style-type: none"> - Notify EMT - Rest victim in cool place - Have victim drink plenty of water
Heat Cramps	Minimize exposure	NIOSH: Working in Hot Environments	Painful spasms of muscles Profuse sweating	Inhalation Absorption X Ingestion Injection Membrane _____		<ul style="list-style-type: none"> - Remove victim from site - Ensure victim drinks plenty of water and replaces electrolytes
Fainting	Minimize exposure	NIOSH: Working in Hot Environments	Victim faints due to lack of blood to the brain	Inhalation Absorption X Ingestion Injection Membrane _____		<ul style="list-style-type: none"> - Remove victim to cool area - Ensure victim drinks plenty of fluid - Ensure victim is not sedentary in direct heat
Heat Rash	Minimize exposure	NIOSH: Working in Hot Environments	Skin rash Experience of prickly heat	Inhalation Absorption X Ingestion Injection Membrane _____		<ul style="list-style-type: none"> - Remove victim to cool place - Ensure victim drinks plenty of water
4. Prepared by:		5. Date/time briefed:		Last Update: 3/18/15		SSP-Attach 4: Heat Stress Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Cold Stress Attachments:		2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:	
Medical Condition	Action Level	Reference	Signs, Symptoms & Potential Health Effects	Exposure Route	Controls: Engineering, Administrative, PPE	Medical Response
Hypothermia	Minimize exposure	NIOSH: Working in Cold Environments	Pain in extremities Uncontrollable shivering Reduced core temperature Cool skin Rigid muscles Slowed heart rate Weakened pulse Low blood pressure Slow irregular breathing Slurred speech Drowsiness Incoherence Uncoordination Diminished dexterity Diminished judgement	Inhalation Absorption X Ingestion Injection Membrane _____	<ul style="list-style-type: none"> - Reduce manual work load - Ensure workers drink plenty of water - Establish warm locations for breaks - Establish work & rest regimens - Establish shelters, canopies or other devices to reduce wind effect - Minimize sitting still or standing around - Ensure proper sleep - Ensure proper diet - Ensure right balance of protective clothing - Ensure workers are not overheated by clothing 	<ul style="list-style-type: none"> - Remove victim from wind, snow & rain - Minimize use of energy - Keep person awake - Remove wet clothing - Get into dry clothing - Wrap blanket around - Pack neck, groin, armpits with warm packs or towels - Give sweat warm drinks - Remove person to medical facility
Frostbite	Minimize exposure	NIOSH: Working in Cold Environments	Whitened areas of skin Burning sensation at first Blistering Affected part; cold, numb & tingling	Inhalation Absorption X Ingestion Injection Membrane _____	<ul style="list-style-type: none"> - Ensure proper diet - Ensure right balance of protective clothing - Ensure workers are not overheated by clothing 	<ul style="list-style-type: none"> - Cover frozen part - Provide extra clothing & blankets - Place affected part in warm water or with warm packs - If no pads, wrap in blanket - Discontinue warming when part becomes flushed and swollen - Exercise part after warming, but place no pressure on it - Give sweet warm fluids - Do not rub part with anything - Do not use hot heating devices on part - Obtain medical assistance
4. Prepared by:		5. Date/time briefed:		Last Update: 3/18/15		SSP-Attach 5: Cold Stress Page 1 of 2

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Cold Stress Attachments:		2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:	
Medical Condition	Action Level	Reference	Signs, Symptoms & Potential Health Effects	Exposure Route	<u>Controls:</u> Engineering, Administrative, PPE	Medical Response
Chilblain	Minimize exposure	NIOSH: Working in Cold Environments	Recurring localized itching Swelling, painful inflammation of fingers, toes, or ears Severe spasms	Inhalation Absorption X Ingestion Injection Membrane	<ul style="list-style-type: none"> - Reduce manual work load - Ensure workers drink plenty of water - Establish warm locations for breaks - Establish work & rest regimens - Establish shelters, canopies or other devices to reduce wind effect - Minimize sitting still or standing around - Ensure proper sleep - Ensure proper diet - Ensure right balance of protective clothing - Ensure workers are not overheated 	<ul style="list-style-type: none"> - Remove to warmer area - Consult physician
Frostnip	Minimize exposure	NIOSH: Working in Cold Environments	Skin turns white	Inhalation Absorption X Ingestion		<ul style="list-style-type: none"> - Remove to warmer area - Refer to treatment for frost bite
Acrocyanosis	Minimize exposure	NIOSH: Working in Cold Environments	Hands and feet are cold, blue and sweaty	Inhalation Absorption X Ingestion		<ul style="list-style-type: none"> - Remove to warmer area - Loosen tight clothing - Consult physician
Trench Foot	Minimize exposure	NIOSH: Working in Cold Environments	Swelling of the foot Tingling, itching Severe pain Blistering	Inhalation Absorption X Ingestion		<ul style="list-style-type: none"> - Remove to warmer area - Refer to treatment for frost bite - Consult physician
Raynaud's Disease	Minimize exposure	NIOSH: Working in Cold Environments	Fingers turn white & stiff Intermittent blanching & reddening of fingers and toes Affected areas tingle & becomes very red or reddish purple	Inhalation Absorption X Ingestion Injection Membrane		<ul style="list-style-type: none"> - Remove to warmer area - Consult physician
4. Prepared by:		5. Date/time briefed:		Last Updated: 3/18/15		SSP-Attach 5: Cold Stress Page 2 of 2

CG ICS SSP LOG/RECORD OF SAFETY BRIEFINGS ATTACHMENT	1. Incident Name	2. Site Location:	3. Site Supervisors:	
4. Type of Briefing	5. Presented by:		6. Date	7. Time
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Start Shift <input type="checkbox"/> Pre-Entry <input type="checkbox"/> Exit <input type="checkbox"/> End of Shift <input type="checkbox"/> Specify Other:				
Last Updated: 3/18/15			SSP-Attach 6: Record of Safety Briefings Page _____ of _____	

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Helicopter Operations Additional Attachments:	2. Helicopter Location	3. Emergency contacts:
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Activity	Safe Work Practice	4. Checked [X]
Pre-boarding	- Receive Safety briefing from helicopter operators	<input type="checkbox"/>
	- Receive emergency extrication briefing	<input type="checkbox"/>
	- Know location of emergency equipment	<input type="checkbox"/>
	- Know water landing procedures	<input type="checkbox"/>
	- Loose fitting hats, clothing & other gear removed at minimum 100 ft away	<input type="checkbox"/>
	- Ensure operator knows how to contact emergency services	<input type="checkbox"/>
	- Ensure operator has good communications with coordinating vessels	<input type="checkbox"/>
	-	
Approaching and Exiting Helicopter	- Approach from front	<input type="checkbox"/>
	- Approach only when signaled by pilot	<input type="checkbox"/>
	- Never walk under tail blade	<input type="checkbox"/>
	- Approach in clear view of pilot	<input type="checkbox"/>
	- Approach in crouching position	<input type="checkbox"/>
Onboard Helicopter/Helicopter Startup	- Wear seatbelts	<input type="checkbox"/>
	- Wear hearing protection	<input type="checkbox"/>
	- Ground crew & other persons maintain minimum 50 ft from operating helo	<input type="checkbox"/>
	- Be alert for ground traffic and air traffic to assist pilot	<input type="checkbox"/>
Other	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Small Boat Operations Additional Attachments:	2. Small Boat Unit Assignment	3. Emergency contacts:
Activity	Safe Work Practice		4. Checked [X]
Pre-boarding	- Receive safety briefing from boat crew operators		<input type="checkbox"/>
	- Receive emergency extrication briefing		<input type="checkbox"/>
	- Know location of emergency equipment		<input type="checkbox"/>
	- Ensure operator knows how to contact emergency services		<input type="checkbox"/>
	- Ensure operator has good comms with coordinating vessels & shore units		<input type="checkbox"/>
	- Ensure comms schedule with parent unit is understood		<input type="checkbox"/>
	- Ensure distress signals are available for day & night operations (3 per shift)		<input type="checkbox"/>
	- Ensure qualified operators are running the boats		<input type="checkbox"/>
	- Ensure appropriate number of CG approved Type I & II preservers		<input type="checkbox"/>
	- Confirm location of safe seating from boat operator		<input type="checkbox"/>
	- Ensure portable fuel tanks are full prior to boarding		<input type="checkbox"/>
	- Keep all sources of ignition away from fueling area		<input type="checkbox"/>
	- Ensure boat does not exceed safe load capacity (personnel & equipment)		<input type="checkbox"/>
	- Ensure proper footwear for maintaining adequate boat deck contact		<input type="checkbox"/>
	- Ensure equipment on boat is distributed evenly to ensure stability		<input type="checkbox"/>
	- Ensure at least 2 people are operating the boat		<input type="checkbox"/>
	- Ensure sun protection is available (glasses, and sun screen)		<input type="checkbox"/>
	- Ensure adequate food & water is available for duration of operation		<input type="checkbox"/>
	- Ensure first aid kits, fire extinguishers, alternate means of propulsion		<input type="checkbox"/>
	- Ensure adequate fenders and mooring lines are available		<input type="checkbox"/>
Boat Operations	- Remain seated whenever possible. Keep low in the boat.		<input type="checkbox"/>
	- Ensure boat is able to maintain direct contact visually or by radio		<input type="checkbox"/>
	- Avoid anchoring the boat by the stern		<input type="checkbox"/>
Boat mooring and egress	- Keep hands & feet away from pinch points between boat & dock		<input type="checkbox"/>
	- Stay clear of lines being used for mooring		<input type="checkbox"/>
	- Do not disembark with bulky or heavy equipment, get assistance		<input type="checkbox"/>
	- If not assisting in the mooring operation, remain seated until lines are tied		<input type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>
5. Prepared by:	6. Date/time briefed:	Last Updated: 3/18/15	SSP-Attach 8: Small Boat Safety Page ____ of ____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Vehicle Operations:	2. Vehicle Unit Designator	3. Emergency contacts:
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Activity	Safe Work Practice	4. Checked [X]
Before driving	- Ensure tires are inflated	<input type="checkbox"/>
	- Ensure gas cap is in place & tight	<input type="checkbox"/>
	- Ensure front hood and trunk are secured	<input type="checkbox"/>
	- Ensure spare tire is in good condition	<input type="checkbox"/>
	- Locate tire changing equipment	<input type="checkbox"/>
	- Locate emergency road kit	<input type="checkbox"/>
	- Check headlights, brake, emergency, turn signals and parking lights	<input type="checkbox"/>
	- Adjust side mirrors	<input type="checkbox"/>
	- Adjust review mirrors	<input type="checkbox"/>
	- Ensure horn is in working order	<input type="checkbox"/>
	- Ensure seat belts fasten	<input type="checkbox"/>
	- Ensure sunglasses are available	<input type="checkbox"/>
	- Locate operating switches for lights, wipers, temperature control, defroster	<input type="checkbox"/>
	- Ensure adequate directions to destination are available	<input type="checkbox"/>
	- Check to ensure driving route avoids high crime areas	<input type="checkbox"/>
	- Ensure adequate fuel (keep half full during emergencies)	<input type="checkbox"/>
Vehicle Operations	- After ignition, look for warning lights.	<input type="checkbox"/>
	- Test braking system	<input type="checkbox"/>
	- Obey all traffic signs and speeds	<input type="checkbox"/>
	- Do not drive if hearing, sight or appendages are impaired	<input type="checkbox"/>
	- Take frequent breaks; once every 100 miles	<input type="checkbox"/>
	- During breaks, if sleeping, park in lighted lot and keep doors locked	<input type="checkbox"/>
	- Do not drive if tired, on medication or under influence of alcohol	<input type="checkbox"/>
	- Monitor traffic reports for accidents, weather and construction	<input type="checkbox"/>
Other Precautions	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>
	-	<input type="checkbox"/>

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Insect Hazards Additional Attachments:	2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:
Hazard Type	Potential Sources	Signs & Symptoms	Control	Medical Treatment
Insect Bites & Stings	Bees	<u>Allergic person:</u> -Swollen throat -Difficult breathing -Noisy breath -Sudden pain -Severe itching, hives, acute redness, swelling -white firm swelling -reduced consciousness, shock	- Recon area prior to work & identify nests & habitats - Identify as hazard areas & place on SSP map - Provide insect repellent - Encourage long sleeves & pants if practical - Conduct tick & bite inspection during breaks and prior to departing site - Identify persons with insect allergies & restrict them where necessary - Obtain emergency insect bite kits	- Wash wound with soap & water - Request med assistance for allergic persons - Remove stinger without pinching or squeezing - Use cold pack to reduce swelling, use pad between skin and pack - Keep wounded area below heart to slow spread of venom - Do not administer aspirin or alcohol
	Black Widow Spider	-Systemic poison -Flu – like symptoms -Severe abdominal pain -Rigidity, muscle pain, cramping, -Chest tightness, breathing difficulty, -Pain in soles of feet -Alternating dry & salivating mouth, -Nausea, vomiting -Profuse sweating or swollen eyelids		- Wash wound with soap & water - Request med assistance address symptoms - Use cold pack to reduce swelling, use pad between skin and pack
	Brown Recluse	-Severe redness -Red circle around bite -Bite takes several months to heal		- Wash wound with soap & water - Request med assistance for allergic persons - Remove stinger without pinching or squeezing - Use cold pack to reduce swelling, use pad between skin and pack
	Ticks	-Flu like symptoms -Fever -Rash, joint pain, headaches		- Wash wound with soap & water - Request med assistance for allergic persons - Remove tick with oil, alcohol or heated tweezers - Use tweezers to remove imbedded head - If fever, rash, unusual markings develop around bite, contact physician
4. Prepared by:	5. Date/time briefed:	Last Updated: 3/18/15		SSP-Attach 10: Insect Hazards Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Animal Hazards Additional Attachments:	2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:
Hazard Type	Potential Sources	Signs & Symptoms	Control	Medical Treatment
Mammal Bites	Dogs, Cats Skunks, Raccoons Foxes, Badgers Wolves, Bears Cows	-Pain & tenderness of wound -Redness, heat, swelling -Puss under the skin -Red streaks around wound -Swollen lymph nodes in arm pits, groin & neck	- Recon area prior to work & identify nests & habitats - Identify animals & any unusual behavior - Relocate animals if necessary using wildlife experts - Report rabid animals to local wildlife authorities - Obtain emergency bite kits	- Get medical attention ASAP to address infection - Ensure tetanus shot is updated - Interview individual to determine appearance/disposition of animal - Control serious bleeding - Apply pressure using gauze pad, tourniquets are inadvisable - Wash before touching wound - Wear rubber gloves when treating victim - Wash wounds that are not bleeding heavily - Cover with clean dressing and bandage - Get medical assistance immediately
		<u>Rabies</u> -Drooling -Irritability -Strange, abnormal behavior		
Snake Bites	Coral Snakes Water Moccasins Rattle Snakes Pit Vipers Ticks	<i>Some or all of these symptoms may be present:</i> -Fang marks -Swelling, discoloration, pain -Heat around fang marks -Weakness, sweating, faintness, shock <u>Coral snake:</u> -Respiratory paralysis -Bizarre behavior -Unusual eye movement	- Recon area prior to work & identify nests & habitats - Place locations on SSP map - Identify animals & any unusual behavior - Relocate animals if necessary using wildlife experts - Report aggressive animals to local wildlife authorities - Obtain emergency bite kits	- Get medical attention ASAP - Ensure tetanus shot is updated - Interview individual to determine appearance/disposition of snake - Control serious bleeding - Apply pressure using gauze pad, tourniquets are inadvisable - Wash before touching wound - Wear rubber gloves when treating victim - Wash wounds that are not bleeding heavily - Cover with clean dressing and bandage Poisoned Victim - Get immediate medical attention - Keep patient still to slow spread of venom - Place bite area below heart to slow venom - Wash with soap & water - Use splint to immobilize bitten arms/legs - Use cold pack with gauze before skin - Do not administer aspirin or alcohol - Do not suck out poison - Do not use tourniquets
4. Prepared by:	5. Date/time briefed:	Last Updated: 3/18/15		SSP-Attach 11: Animal Hazards Page _____ of _____

CG ICS SSP SPECIFIC HAZARD ATTACHMENT	1. Hazard Marine Animal and Plant Hazards Additional Attachments:	2. Divisions/Groups/Units affected:		3. Job Tasks Involving Hazard:
Hazard Type	Potential Sources	Signs & Symptoms	Control	Medical Treatment
Animal Stings & Punctures	<p><u>Group I</u> Jellyfish, Portuguese Man-o-war Anemones Corals Hydras</p> <p><u>Group II</u> Urchins, Cone Shells, Stingrays, Spiny fish</p>	<p>-Pain & tenderness of wound -Redness, heat, swelling -Puss under the skin -Red streaks around wound</p> <p><i>Sensitive Individuals</i> -Allergic reactions -Respiratory arrest -Fainting -Infections & tetanus may develop</p>	<p>- Recon area prior to work & identify nests & habitats - Place locations on SSP map - Outfit workers with protective clothing for water activities and to prevent bites</p>	<p>- Get medical attention ASAP to address infection - Ensure tetanus shot is updated - Interview individual to determine appearance of animal - Control serious bleeding <u>Group I</u> - Do not rub or scratch affected area - Sprinkle alcohol on affected area, follow with meat tenderizer or talcum if available (denatures toxin) <u>Group II</u> - Soak in very warm water for 30 minutes - Do not use very hot water</p>
Plants	Poison Ivy Poison Oak Poison Sumac	<p><i>Some or all of these symptoms may be present:</i> -Itching -Burning -Blistering -Rash & bumpy skin</p>	<p>- Recon area prior to work & identify plant types - Place locations on SSP map - Remove if necessary - Long sleeve shirts and pants should be worn - Gloves should be worn - Wash frequently during breaks & prior to departing work site. - Employ body screen salves</p>	<p>- If contact occurs, wash with soapy water immediately - Do not scratch - Provide medical attention of spreading is severe</p>
4. Prepared by:	5. Date/time briefed:	Last Updated: 3/18/15		SSP-Attach 11: Animal Hazards Page _____ of _____

APPENDIX K
FIRE RESPONSE EQUIPMENT

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**NSA FIRE RESCUE DIVISION
APPARATUS INVENTORY CHECK SHEET
SPECIAL OPERATIONS TRAILER – T3**

FLOOR AREA			FLOOR AREA		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
2	55-Gallon Salvage Drums		1	Portable MODEC Unit	
1	55-Gallon Salvage Drum Dolly		1	Little Giant Ladder	
1	55-Gallon Salvage Drum Barrel Lift				
ENSEMBLES			RESPIRATORY PROTECTION		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
9	Kappler Level A Suits		4	SCBA 60-Minute Air-Packs	
8	Kappler Level B Suits (CPF-4)		4	60-Minute Spare bottles	
32	Tyvex Level C Suits		8	AV-2000 Scott Voice Amplifiers	
15	Boots Various Sizes		1	Portable Bauer Refill Station	
8	Helmets (Red)				
6	Helmets (Blue)				
35	Butyl Rubber Gloves (Pair)				
20	Silver Shield Gloves (Pair)				
7	Entry Suit Tape				
1	Kappler Suit Tester				
MONITORING EQUIPMENT			MONITORING EQUIPMENT		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
100	M-8 Papers		2	Radiation Detectors	
16	M-9 Tapes		2	Gamma/Beta Radiation Probes	
25	M-295 Packs		1	SFU Sampling Kits	
2	M-256 Kits		1	Dry Filter Sampling Unit	
2	MSA Multi-Gas CGI		1	Drager CDS Kit	
2	Q-RAE Multi-Gas CGI		2	Ph-25 Meters (Electronic)	
2	Q-RAE Calibration Cylinder Kit				
TACTICAL EQUIPMENT			TACTICAL EQUIPMENT		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
2	Drum & Tank Repair Kits		1	Plug & Wedge Kit	
1	Non-Sparking Tool Box				
2	Fork Lift Puncture Kits				
2	5-Gallon Pump Sprayers				
ENTRYLINK SYSTEM			ENTRYLINK SYSTEM		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
1	Entry-Link Search Camera		1	20' Entry-Link Tri-Pod	
1	Entry-Link Antenna		1	9" JVC Color Monitor	
1	Entry-Link Console				
PRESERVATION EQUIPMENT			PRESERVATION EQUIPMENT		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
1	Canon Digital Camera				
1	Canon Digital Camera Case				
1	5' Digital Camera Tri-Pod				
1	Biological Sampling Kit				

**NSA FIRE RESCUE DIVISION
APPARATUS INVENTORY CHECK SHEET
SPECIAL OPERATIONS TRAILER – T1**

IDENTIFICATION VEST			MASS DECON EQUIPMENT		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
2	Incident Command (Blue)		1	Transfer Pump	
5	Haz/Mat Officer (Orange)		36	Survival Blankets	
10	Safety (Blue)		1	Body Towels	
5	Medical (Green)				
5	Security (Blue)				
COMMUNICATIONS			EQUIPMENT DECON		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
1	Battery Charger (DP Radios)		4	MODEC Decontamination Chemicals	
1	Battery Charger (FD Radios)				
6	Disaster Preparedness Radios				
12	Replacement Batteries				
REFERENCE MATERIAL			REFERENCE MATERIAL		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
3	CHRIS Manuals Vol.1-Vol.3		1	Emergency Response Guidebook	
1	SBCCOM		1	NIOSH Manual	
1	Merck's Index CD-Rom				
1	Jane's Chem-Bio Manual				
1	Hawley's Condensed Chemical Dictionary				
CONFINED SPACE RESCUE			CONFINED SPACE RESCUE		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
2	200 ft. Lifeline Rescue Rope		2	Gibbs Ascender	
2	Single Pulley		1	Roof Roller	
1	Double Pulley		1	Sked-Evac Tripod	
1	Brake Bar Racks		2	Rescue Harness	
20	Carabiners		2	Rope Bags	
5	Prusik Cords		4	10 ft. Webbing (Yellow)	
1	Confined Space Communications Kit		4	20 ft. Webbing (Red)	
CONFINED SPACE RESCUE			CONFINED SPACE RESCUE PPE		
Qty.	Item Description	On Hand	Qty.	Item Description	On Hand
1	Pick off Strap		4	Bullard Rescue Helmets	
1	Load Release Strap		4	Rescue Elbow Pads	
2	Anchor Strap		4	Rescue Knee Pads	
3	Edge Guards		4	Rescue Gloves	
1	Lockout/Tag out Kit		4	Pelican Helmet Lights	

SIGNATURE	DATE	SUPERVISOR'S SIGNATURE	DATE

APPENDIX L
EMERGENCY PUBLIC AFFAIRS PLAN

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NAVAL SUPPORT ACTIVITY (NSA) NAPLES PUBLIC AFFAIRS EMERGENCY RESPONSE PLAN

Purpose: To provide guidance on carrying out the Public Affairs function in support of Naval Support Activity Naples' response to a major disaster or emergency.

Concept of Operations: After a major disaster, normal means of communications in the affected area may be destroyed or severely disrupted; therefore, only limited and incomplete information may be expected from the area until communications can be restored.

The immediate release of internal emergency information is imperative to getting essential news and instructions out to the NSA Naples military, civilian personnel and their families. An initial release containing emergency information will be broadcast on AFN TV and radio, the NSA Web site at www.nsa.naples.navy.mil, and ALL HANDS E-mail message, if possible.

Response: After notification of an emergency or disaster, with NSA Naples Commanding Officer's approval, the NSA Naples PAO will make a report to the CNRE PAO and/or CNE PAO with the available details of the incident and request assistance, if necessary. The U.S. Embassy and Consulate General will be informed of internal and external communication action taken. Pertinent information will be received from the Emergency Operations Center (EOC) of the incident for on-site information.

The NSA PAO will work from the EOC with the PAO staff at their assigned office spaces in room 208, Admin 1. A staff photographer will be available for documentation of the event. Assistance will be required if there are media to escort.

Should either base threat condition be raised to DELTA, only ESSENTIAL personnel will be allowed access to the installation until the threatcon is relaxed. Be advised, Stars & Stripes have an office at NSA Naples Capodichino and have access to all U.S. military bases.

Dissemination of Subsequent/External Information: The NSA PAO will draft a proposed statement and response to (media) queries (RTQs) once sufficient information is obtained and the initial press release is complete. The statement and RTQs will be forwarded up the chain of command for approval by the NSA Naples Commanding Officer, CNRE PAO and CNE PAO, in that order.

Once the statement is approved for release, the PAO shall provide copies to the NSA Naples CO/XO, CNE/C6F PAO, CNRE PAO, U.S. Consulate PAO, CHINFO Duty Officer, AFN Naples OIC, and any others deemed appropriate (U.S. Naval Hospital Naples PAO, etc.). The statement/press release will be sent to the media separately; RTQs are used to respond to questions from the media only and is not to be released to external media.

Command Information Bureaus (CIB): NSA Naples Public Affairs office has established two sites for CIBs, should the event arise in which external media require an extended stay on either the NSA Naples Capodichino compound or the Gricignano support site compound.

NSA Naples Capodichino: University of Maryland University College (UMUC) computer lab in room G049.1 in Admin II. POC: Ms. Mitzia Williams, UMUC Community Field Representative in Naples, (work) 081-568-6676 or (cell) 339-375-3699.

Gricignano support site: The Village Forum Library. POC: Mr. Tony Smith, NSA Naples MWR Director, (work) 626-4050 or (cell) 335-729-5783.

These sites were selected to keep the media separate from the Command Suite and the EOC and still allow them to be functional. At all times a PA specialist will be located in the CIB.

Scope: The mission of Public Affairs is to provide timely, accurate and essential information to the military community and those civilians working for the U.S. government in the event of a disaster by using all available means of communication. Specific objectives are to:

- Instill confidence that NSA Naples' Emergency Response Team will conduct response and recovery operations fast, effectively, efficiently and safely.
- Provide critical information including how to apply for assistance and the location and status of life-sustaining shelters and resources; and
- Provide authoritative information to quail unsubstantiated rumors.

Policies in Theory: Approval by the Commanding Officer, NSA Naples, and coordination with the U.S. Consulate Public Affairs Office is required before any public release of information. The U.S. Embassy and Consul General should be informed of internal communications actions taken. The Public Affairs Officer or designated representative is the only person who can release information to the news media.

PAO Contact List

NSA Naples PAO (Naval Support Activity Naples)

LT Alexander Perrien

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Alexander.perrien@eu.navy.mil

USNH Naples PAO (U.S. Naval Hospital, Naples)

LT Claudia Cespedes

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Claudia.Cespedes@med.navy.mil

AFN Naples OIC (Armed Forces Network)

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CNE PAO (Commander, U.S. Naval Forces Europe)

CAPT Pamela Kunze

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U.S. Consulate Naples, Italy

Mr. Shawn Baxter

COM: 081-583-8262 Cell: 335-846-8031

baxtergs@state.gov

CHINFO Deputy Chief of Information (Chief of Naval Operations)

Washington, D.C.

CAPT Amy Derrick

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APPENDIX M
SOP FOR INVENTORY CONTROL
& FUEL TRANSFER OPERATIONS

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Standard Operating Procedure

Inventory Control and Fuel Transfer Operations

NSA Naples, Italy

Purpose: The purpose of this Standard Operating Procedure is to minimize the potential for release of POL during refueling of PSTs, and to track the delivery of POL. This SOP is to be employed for refilling all PSTs (i.e. diesel emergency generators) on board Naval Support Activity Naples and its support sites.

Procedure:

1. Pre-operational checks will be performed on all equipment prior to receiving or issuing fuel.
2. Fuel will be issued only to equipment authorized by the U. S. Government.
3. All operators of fuel trucks will notify the designated PW POC of their departure, destination and estimated time of return (ETR).
4. Only approved routes will be traveled unless authorized to deviate from the route by management.
5. Loading and unloading procedures are completed in accordance with the Petroleum Storage Tank Management Plan (PSTMP) and the Spill Prevention, and Response Plan (SPRP).
6. Perform visual site inspection:
 - a. Tank / Drainage valves closed
 - b. Water in containment
 - c. Evidence of spills
 - d. Cracks in containment
 - e. Obvious signs of damage – Rust / Leakage
 - f. Are high level alarms working?
 - g. Is corrosion protection working?
 - h. Is leak detection working?

Reports

1. Provide daily status / fuel report in US gallons through the supervisory chain.
2. Supervisory chain will submit (1) Monthly Abstract of Issues of Petroleum Product, (2) Monthly Petroleum Accounting Summary to the designated PW POC.

Fuel Accountability

1. Fuel operators and drivers will measure using “Calibrated Gauging Sticks,” the quantity contained in tanks prior to commencing transfer operations.
2. Fuel operators will compare gauging stick reading to the Liquid Level Gauge (LLG).
3. Gauge tanks in line haul vehicles prior to receiving fuel to verify tank capacity is low enough to receive fuel.

4. Take precautions to prevent spills. Place mats over storm drains and drainage tubs/containers under hose connections, faucets, etc.
6. Re-gauge tanks to verify the quantity delivered.
7. Fuel operator closes out and signs Daily Issues of Petroleum Products form and turns in to Supervisor.

Fuel Point Fueling Procedures

1. For all petroleum operations, always bond and ground equipment.
2. Strictly enforce NO SMOKING rules.
3. Ensure vehicle engines are switched off prior to re-fueling.
4. Wear fuel-resistant or rubber gloves and eye protection when fueling vehicle or stationary equipment.
5. Inspect work area prior to transfer. Keep free of loose tools, lumber, and other objects that may cause accidents.
6. Check for water inside secondary containment and check for water inside tank using water-finding paste.
7. The tank is gauged to determine the amount of fuel that can be safely added, allowing a minimum of 10% of capacity for expansion. Complete entries on the fuel issue log sheet.
8. Place spill mats over storm drains to prevent migration of any spill.
9. Use drip pans during fueling operations.
10. Immediately clean up and report spills.
11. Following transfer, gauge the tank again and verify amount of product transferred.
12. Stop fueling operations (as, applicable), when there are lightening discharges within 5 miles. Monitor communications channels for weather warnings whenever the potential exists. If no warnings are received, but lightning is observed, one option is to use the “flash to bang” method to determine distance to the lightning. Count the number of seconds between the flash and the bang and divide by five to get the rough distance to the lightning. Twenty-five seconds or less from flash to bang will be cause for site closure.
13. Any employee has authority to close down the site for safety reasons.

APPENDIX N
CHRIMP INVENTORY

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLLN046043;HDFJTC	LH33191001	AEROSOL, POLYURETHANE FOAM 750	171300402	14,250.000	ML
HZLHA001594;HDFWBV	LH33191001	PAINT, INT/EXT , ENAMEL, GLOSS, BLUE , 7	171300502	67.500	ML
HZLHA001909;HDFYMF	LH33191001	PAINT, ALKYD ENAMEL DARK BLUE 2.5 LI	171300502	15.000	LI
HZLHA001912;HDFYML	LH33191001	PAINT, ALKYD ENAMEL BLACK 7.5 ML	171300502	75.000	ML
HZLHA001918;HDFYMN	LH33191001	PAINT, ENAMEL, ALKYD, YELLOW, 7.5ML	171300502	75.000	ML
HZLHA002124;HDFZSV	LH33191001	BOERO LITRON GREY 2.5 LI	171300503	40,000.000	ML
HZLHA001911;HDFYMG	LH33191001	PRIMER, NORMAL 2.5 LI	171300602	7.500	LI
HZLHA006820;HDQLBJ	LH33191001	SEALANT, SILICONE RTV WHITE, 280ML	171300602	5,600.000	ML
HZLLN046919;HDQNBP	LH33191001	SEALANT,SILICONE,CLEAR	171300602	8,400.000	ML
HZLLN054289;HDCKZM	LH33191001	ROOF COATING, TAR 5 KG CO	171300602	5.000	KG
HZLHA010709;HDKCFP	LH33191001	SEALANT, JOINT SILICONE	171300603	7,500.000	ML
HZLHA011459;HDKKNK	LH33191001	PAINT,ACRYLIC,BASE,BITUMINOUS	171300605	112,000.000	ML
HZ013323744;HCVCHH	LH33191001	ENAMEL	171300702	12	EA
HZLHA015305;HDQCCY	LH33191001	SEALANT,SILICONE,GRAY	171300702	17,360.000	ML
HZLLN001499;HDFZSQ	LH33191001	SILICONE, RUBBER SEALANT CLEAR 10 OZ	171300702	180.000	OZ
HZLLN004085;HCZMBY	LH33191001	ADHESIVE, ALL COLORS	171300702	30.900	OZ
HZLHA013672;HDMNQD	LH33191001	ADHESIVE,ANCHORING	171300703	4,125.000	ML
HZLHA015592;HDQMVR	LH33191002	TIRE MOUNTING PASTE,WHITE	171300703	5,000.000	GM
HZ013316110;HCRZBM	LH57012016	ENAMEL, AEROSOL GLOSS RED	171300801	16.000	OZ
HZ013316110;HCRZBM	LH33191001	ENAMEL, AEROSOL GLOSS RED	171300801	16.000	OZ
HZ013316110;HCRZBM	LH33191001	ENAMEL, AEROSOL GLOSS RED	171300801	288.000	OZ
HZ013316114;HCYDGY	LH33191001	ENAMEL	171300801	48.000	OZ
HZ013682633;HCYDFZ	LH62588010	PRIMER COATING YELLOW	171300801	224.000	OZ
HZ002812072;HDPDCY	LH33191001	STAIN	171300802	256.000	OZ
HZ013339450;HDMNXZ	LH33191001	PAINT,LATEX	171300802	640.000	OZ
HZLHA000780;HDFJSD	LH33191001	ENAMEL,ALKYD,IMPERIAL GREEN,GLOSS	171300802	25.000	LI
HZLHA012844;HDLMHH	LH33191001	ENAMEL,ALKYD,SKY BLUE,GLOSS,INT/EXT	171300802	15,000.000	ML
HZLHA001908;HDFYMH	LH33191001	PAINT, ENAMEL, ALKYD, BLACK, 2.5LI	171300803	5,000.000	ML
HZLHA001916;HDFYMV	LH33191001	PRIMER, GRAY 2.5 LI	171300803	10.000	LI
HZLHA001916;HDFYMV	LH33191001	PRIMER, GRAY 2.5 LI	171300803	2.500	LI
HZLHA001928;HDFYPL	LH33191001	GAINT, ENAMEL, ALKYD, YELLOW	171300803	2,500.000	ML
HZLHA008794;HDJMDT	LH33191001	ADHESIVE, PVC-U BONDING, 125 ML	171300803	6.250	ML
HZLHA012175;HDKXST	LH33191001	PAINT,ENAMEL,GREEN VITTORIA,GLOSS	171300803	25,000.000	ML
HZLHA000780;HDFJSD	LH33191001	ENAMEL,ALKYD,IMPERIAL GREEN,GLOSS	171300804	10.000	LI
HZLHA001928;HDFYPL	LH33191001	GAINT, ENAMEL, ALKYD, YELLOW	171300804	5,000.000	ML
HZLHA001928;HDFYPL	LH33191001	GAINT, ENAMEL, ALKYD, YELLOW	171300804	7,500.000	ML
HZ013363980;HCZRVF	LH33191001	ENAMEL, AEROSOL GLOSS GREEN	171300901	736.000	OZ

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLHA001914;HDFYNF	LH33191001	PAINT,ALKYD ENAMEL, ENGLISH GREEN 2.5 LI	171300902	12.500	LI
HZLHA001927;HDFYNX	LH33191001	PRIMER, GRAY 1 LI	171300902	10.000	LI
HZLHA010327;HDPMLK	LH33191001	SEALANT, HYBRID BLACK, 310 ML	171300902	1,550.000	ML
HZ001818080;HCXDMY	LH57012016	THINNER,PAINT PRODUCTS	171300903	1,408.000	OZ
HZLLN011439;HCZWJL	LH33191001	AEROSOL, LUBRICATING OIL	171300903	359.100	OZ
HZLLN043110;HDBGCH	LH33191001	PAINT, BLUE 13 LI CN	171300905	104.000	LI
HZ007822686;HDCJXF	LH62588012	ALCOHOL,DENATURER 1 GL CN	171301001	0.002	EA
HZ007822686;HDCJXF	LH62588012	ALCOHOL,DENATURER 1 GL CN	171301001	19.998	EA
HZ013316118;HCWXLV	LH33191001	ENAMEL, AEROSOL GLOSS BLUE	171301002	192.000	OZ
HZLLN043143;HCZMBS	LH33191001	PAINT, WATER BASE 5 LI CN	171301002	45.000	LI
HZLLN047326;HDBGPL	LH33191001	THINNER	171301002	40.000	LI
HZLHA000781;HDFJSP	LH33191001	PAINT GREY ENAMEL	171301003	9.000	ML
HZLHA000807;HDFKWL	LH33191001	BOERO LITRON RED ENAMEL	171301003	11.000	ML
HZLLN048598;HDBGQG	LH33191001	PAINT, ENAMEL EXT GLOSS WHITE	171301003	4.000	LI
HZLLN049129;HDCJGW	LH33191001	THINNER, ANTI-FOG NITRO	171301003	8.000	LI
HZ013316114;HCYDGY	LH57012016	ENAMEL	171301004	720.000	OZ
HZ013316116;HDDWFD	LH33191002	ENAMEL, AEROSOL GLOSS GRAY	171301004	96.000	OZ
HZ013316116;HDDWFD	LH33191001	ENAMEL, AEROSOL GLOSS GRAY	171301004	384.000	OZ
HZ013316116;HDDWFD	LH33191001	ENAMEL, AEROSOL GLOSS GRAY	171301004	16.000	OZ
HZ013316116;HDDWFD	LH57012016	ENAMEL, AEROSOL GLOSS GRAY	171301004	256.000	OZ
HZLHA009546;HDJRVT	LH33191001	PAINT, BLUE CLEARED 25 KG	171301101	75,000.000	GM
HZLLN047399;HDBWWS	LH33191001	LUBRICATING OIL, REFRIGERATION 5 LI C	171301101	40.000	LI
HZ002812072;HDDSTP	LH33191001	WOOD STAIN, DARK OAK 1 GL CN	171301102	384.000	OZ
HZ013316106;HDFNXZ	LH33191001	ENAMEL, AEROSOL FLAT WHITE	171301102	176.000	OZ
HZ013316114;HCQZLY	LH33191001	ENAMEL, AEROSOL GLOSS YELLOW	171301102	304.000	OZ
HZ013505239;HCZDXZ	LH62588008	ENAMEL BLACK	171301102	128.000	OZ
HZLHA009954;HDJVTY	LH33191001	PRIMER,ANTICORROSIVE SEMI-GLOSS 2.5 LI	171301102	7,500.000	ML
HZLHA015017;HDPPZC	LH33191002	LUBRICANT,AUTOMOTIVE GREASE	171301103	2,100.000	ML
HZ013316105;HCWWNK	LH33191002	ENAMEL	171301104	272.000	OZ
HZ013316107;HDFNYK	LH33191002	ENAMEL, AEROSOL GLOSS BLACK	171301104	16.000	OZ
HZ013316107;HDFNYK	LH57012016	ENAMEL, AEROSOL GLOSS BLACK	171301104	48.000	OZ
HZ013316111;HCXFZB	LH33191001	ENAMEL, GLOSS OLIVE DRAB	171301104	352.000	OZ
HZ013316121;HCWXLT	LH33191001	ENAMEL, FLAT GRAY 36375	171301104	352.000	OZ
HZ013682632;HCZLSV	LH62588010	PRIMER COATING, AEROSOL GREEN	171301104	192.000	OZ
HZLLN047477;HDCQWM	LH33191001	PAINT, TRAFFIC WHITE 1 LI CN	171301105	3.000	LI
HZLHA009767;HDJTNH	LH33191001	CEMENTITIOUS FLOOR PROTECTION TREATMENT	171301201	25,000.000	ML
HZ013599246;HCXGRT	LH33191001	ENAMEL	171301202	16.000	OZ

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZ013682633;HCYDFZ	LH33191001	PRIMER COATING YELLOW	171301202	96.000	OZ
HZLHA002622;HDGFDL	LH33191001	SEALING COMPOUND, GREEN 450 GM	171301202	4,950.000	GM
HZLLN048597;HDDTJR	LH33191001	LITRON ALKYD ENAMEL RED	171301202	27.000	LI
HZLLN055061;HDCSSS	LH33191001	PAINT, ENAMEL EXT GLOSS GRAY 2.5 LI	171301202	7.500	LI
HZ013316105;HDMWVS	LH33191001	PAINT ENAMEL AERO GLOSS WHITE 17875	171301203	576.000	OZ
HZ013316106;HDMXCV	LH33191001	ENAMEL	171301203	576.000	OZ
HZ013316108;HDMHGK	LH33191001	PAINT ENAMEL,AEROSOL FLAT BLACK 37038	171301203	768.000	OZ
HZ013316107;HDMTXB	LH33191001	ENAMEL	171301204	512.000	OZ
HZ013316115;HDMHJG	LH33191001	ENAMEL	171301204	384.000	OZ
HZ013599246;HCXGRT	LH33191001	ENAMEL	171301204	384.000	OZ
HZ013682633;HDNNPD	LH33191001	PRIMER COATING	171301204	576.000	OZ
HZLHA007856;HDJDTC	LH33191001	PAINT, TRAFFIC BLACK 13 KG CN	171301205	65,000.000	GM
HZLHA014929;HDPPMD	LH33191001	PAINT,ENAMEL,TERRA OBBRA SCURA,SATIN	171301301	45,000.000	ML
HZ013268110;HDHMRX	LH62588008	GLASS CLEANER	171301302	140	EA
HZ013316110;HCXLDY	LH33191001	ENAMEL, AEROSOL GLOSS RED	171301303	208.000	OZ
HZ013316111;HCQCYJ	LH33191001	ENAMEL	171301303	192.000	OZ
HZ013316116;HDNMWD	LH33191001	ENAMEL	171301303	192.000	OZ
HZ013316118;HCWXLV	LH33191001	ENAMEL, AEROSOL GLOSS BLUE	171301303	384.000	OZ
HZ013316121;HDMWYW	LH33191001	ENAMEL	171301303	384.000	OZ
HZ013323744;HCVCHH	LH33191001	ENAMEL	171301303	24	EA
HZLLN022702;HDHNYR	LH66096015	1LEANER, DEGREASER 1 LI BT	171301305	36,000.000	ML
HZ005581111;HCWGHZ	LH57012016	DETERGENT,GENERAL PURPOSE	171301401	160.000	OZ
HZ006641403;HDDZTP	LH3818A017	ANTIFREEZE	171301401	384.000	OZ
HZLHA003845;KDGPSF	LH3818A017	SEALER, WOOD CLEAR 1 LI KT	171301401	2	KT
HZ002813267;HCZCFQ	LH30829011	POLISH,AUTOMOBILE	171301402	42.000	OZ
HZLLN054673;HDDSTZ	LH3818A017	ALTURA UV VARNISH	171301402	750.000	ML
HZ014907282;HDGDNP	LH3818A017	DISHWASHING COMPOUND,HAND	171301403	4	EA
HZLLN000329;HDCMYM	LH33191002	HAND CLEANER	171301403	1,024.000	OZ
HZLLN000329;HDCMYM	LH33191001	HAND CLEANER	171301404	512.000	OZ
HZ002411203;HCWQBM	LH30829011	CUPRIC SULFATE,ACS	171301405	500.000	GM
HZ009012088;HCZYSV	LH70294013	GLASS CLEANER ANTI-FOGGING	171301405	5	EA
HZ013936747;HDBHCG	LH57012016	CLEANER,INDUSTRIAL,MULTI PURPOSE	171301405	12	EA
HZLHA000784;HDFJSQ	LH33191001	HAND CLEANER, HEAVY DUTY 1 GL	171301405	640.000	OZ
HZLHA000808;HDFKFQ	LH33191001	CYA- TEST	171301405	250	EA
HZLHA000808;HDFKFQ	LH33191001	CYA- TEST	171301405	500	EA
HZLHA000808;HDFKFQ	LH33191001	CYA- TEST	171301405	1,500	EA
HZLHA000808;HDFKFQ	LH33191001	CYA- TEST	171301405	500	EA

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLHA000810;HDFKFW	LH33191001	TOTAL CHLORINE DPD 3 TABLET 250 PG	171301405	250	EA
HZLHA000810;HDFKFW	LH33191001	TOTAL CHLORINE DPD 3 TABLET 250 PG	171301405	500	EA
HZLHA000810;HDFKFW	LH33191001	TOTAL CHLORINE DPD 3 TABLET 250 PG	171301405	250	EA
HZLHA000810;HDFKFW	LH33191001	TOTAL CHLORINE DPD 3 TABLET 250 PG	171301405	500	EA
HZLHA004438;HDGSVY	LH33191001	ELECTROLYTE, HYPOCHLOROUS CHLORINE, 100	171301405	100.000	ML
HZLHA012293;HDKZPH	LH33191001	COLORANT,CONCENTRATE,WATER BASED,BROWN	171301405	500.000	ML
HZLHA012296;HDKZPD	LH33191001	COLORANT,WB COATINGS,YELLOW OCHRE	171301405	500.000	ML
HZLHA015417;HDQGPB	LH33191001	SEALING CORD,THREADED PIPE	171301405	80.000	OZ
HZLLN047524;HDCTSC	LH33191001	BUFFER SOLUTION, PH 4 250 EA	171301405	250.000	ML
HZLLN047524;HDCTSC	LH33191001	BUFFER SOLUTION, PH 4 250 EA	171301405	250.000	ML
HZLLN047526;HDFKGN	LH33191001	PHENOL RED INDICATOR REAGENT 250 EA PG	171301405	500	EA
HZLLN047526;HDFKGN	LH33191001	PHENOL RED INDICATOR REAGENT 250 EA PG	171301405	250	EA
HZLLN047526;HDFKGN	LH33191001	PHENOL RED INDICATOR REAGENT 250 EA PG	171301405	500	EA
HZLLN047549;HDCRMM	LH33191001	BUFFER SOLUTION, PH 7 250 ML	171301405	250.000	ML
HZLLN047549;HDCRMM	LH33191003	BUFFER SOLUTION, PH 7 250 ML	171301405	500.000	ML
HZLLN047549;HDCRMM	LH33191003	BUFFER SOLUTION, PH 7 250 ML	171301405	250.000	ML
HZLLN057644;HDCSSP	LH33191001	DPD FREE CHLORINE REAGENT 6.25 ML	171301405	12.500	ML
HZ000592761;HDJBCF	LH70294013	ANTISEIZE COMPOUND	171301502	112.000	OZ
HZ012390571;HDCDVX	LH62588008	CLEANING COMPOUND,AIRCRAFT SURFA	171301502	128.000	OZ
HZ013780693;HDCJTK	LH62588008	GREASE,AIRCRAFT	171301502	70.400	OZ
HZ014416147;HDHVWV	LH70294013	HAZE GRAY ENAMEL	171301502	640.000	OZ
HZLHA007856;HDJDTC	LH33191001	PAINT, TRAFFIC BLACK 13 KG CN	171301503	52,000.000	GM
HZLLN043144;HDKWXN	LH33191001	PAINT, WHITE	171301601	105.000	LI
HZLLN047477;HDCQWM	LH33191001	PAINT, TRAFFIC WHITE 1 LI CN	171301601	5.000	LI
HZ001178510;HDFSJT	LH70294013	ADHESIVE	171301602	6.000	OZ
HZ001178791;HDGCTH	LH30829011	LUBRICATING OIL,ENGINE 2-CYCLE 1 PT	171301602	320.000	OZ
HZ002921102;HDDFPT	LH58744021	ANTISEIZE COMPOUND	171301602	120.000	OZ
HZ002940860;HDFPFG	LH30829011	SILICONE COMPOUND	171301602	21.200	OZ
HZ002940860;HDFPFG	LH30829011	SILICONE COMPOUND	171301602	21.200	OZ
HZ011586070;HDJRHZ	LH70294013	SEALING COMPOUND	171301602	50.000	CC
HZLHA006585;HDHRVW	LH3818A017	PAINT, ANTIFOULING, BLACK , 1 LI	171301602	2,000.000	ML
HZLHA007893;HDJDWG	LH33191001	PAINT, TRAFFIC YELLOW 13 LI CO	171301603	130,000.000	ML
HZ013738845;HDCGGW	LH66096015	CLEANING COMPOUND, POWER GREEN 5 GL	171301701	3,200.000	OZ
HZ002056513;HDDYLV	LH70294013	ISOPROPYL ALCOHOL,USP	171301702	473.000	ML
HZ006646518;HCYQWG	LH70294013	LUBRICATING OIL,INSTRUMENT	171301702	3.000	OZ
HZ014425892;HDDMLY	LH57012016	CLEANER,INDUSTRIAL,GAS PATH	171301702	1,280.000	OZ
HZ009857099;HDHPWY	LH57012016	LUBRICATING OIL,AIRCRAFT TURBINE ENGINE	171301703	3,840.000	OZ

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZ007232746;HDHKBW	LH57012016	SEALING COMPOUND	171301801	4.000	OZ
HZLHA001017;HDFNWZ	LH33191001	CLEANER, SANITIZER AC, 7.5KG	171301801	30,000.000	GM
HZLHA001017;HDFNWZ	LH33191001	CLEANER, SANITIZER AC, 7.5KG	171301801	7,500.000	GM
HZLLN011204;HCTJNF	LH33191001	CLEANER, ALL PURPOSE	171301801	48.000	OZ
HZ002319071;HDKHKB	LH62588008	BRAKE FLUID,AUTOMOT 1	171301802	128.000	OZ
HZ002633490;HCYGKR	LH62588008	LUBRICATING OIL,GENERAL PURPOSE	171301802	160.000	OZ
HZ008807616;HCWZBN	LH62588008	SILICONE COMPOUND	171301802	16.000	OZ
HZ012101938;HCTGZP	LH57012016	LUBRICATING OIL,HELICOPTER TRANSMISSION	171301802	768.000	OZ
HZ013313349;HCYSJS	LH62588008	CLEANING COMPOUND,SOLVENT	171301802	640.000	OZ
HZ001818079;HDDFTC	LH57012016	THINNER,PAINT PRODU	171301803	7,680.000	OZ
HZ001178510;HCSMLC	LH57012016	ADHESIVE	171301902	9.000	OZ
HZ002732389;HDBYMG	LH57012016	LUBRICATING OIL,GENERAL PURPOSE	171301902	72.000	OZ
HZ010796124;HDCJLM	LH57012016	CLEANER,LUBRICANT AND PRESERVATI	171301902	32.000	OZ
HZ013328877;HDCDMJ	LH57012016	ADHESIVE	171301902	4.000	OZ
HZ013456449;HCXYJX	LH57012016	GREASE,AIRCRAFT	171301902	168.000	OZ
HZ013982473;HDJHBD	LH57012016	DUST REMOVER,COMPRESSED GAS	171301902	3	EA
HZ012659137;HDCRPL	LH57012016	POLYURETHANE COATING	171301903	16.000	OZ
HZ012659137;HDCRPL	LH57012016	POLYURETHANE COATING	171301903	32.000	OZ
HZ012659144;KDHZDH	LH57012016	POLYURETHANE COATIN,GRAY CODE 36320	171301903	2	KT
HZ013456449;HCXYJX	LH57012016	GREASE,AIRCRAFT	171301903	378.000	OZ
HZ014191142;KCRYGQ	LH57012016	EPOXY COATING KIT	171301903	9	KT
HZ013313349;HCYSJS	LH30829011	CLEANING COMPOUND,SOLVENT	171301904	8,960.000	OZ
HZ002745421;HDBQJW	LH57012016	CLEANING COMPOUND,SOLVENT 5 GL	171302001	640.000	OZ
HZ005468637;HDKMVZ	LH57012016	CORROSION PREVENTIVE COMPOUND	171302002	272.000	OZ
HZ009857099;HDBMSJ	LH57012016	ROYCO 899 AIRCRAFT ENGINE OIL 1 QT CN	171302002	96.000	OZ
HZ009857099;HDBMSJ	LH57012016	ROYCO 899 AIRCRAFT ENGINE OIL 1 QT CN	171302002	1,248.000	OZ
HZ009381947;HCMQBW	LH57012016	CORROSION PREVENTIVE COMPOUND	171302003	736.000	OZ
HZ014416011;KCZZWW	LH57012016	POLYURETHANE COATING	171302003	24	EA
HZ014500381;HDJTBL	LH57012016	SEALING COMPOUND, CA-1000	171302003	30.000	OZ
HZ004089635;HDBSVN	LH57012016	GREASE,AIRCRAFT	171302004	28.000	OZ
HZ004580075;HDFNZS	LH57012016	LUBRICATING OIL,GENERAL PURPOSE	171302004	144.000	OZ
HZ005468637;HCXTBM	LH57012016	CORROSION PREVENTIVE COMPOUND TYPE III	171302004	496.000	OZ
HZ011977689;HDDWDS	LH62588008	GREASE,AUTOMOTIVE A	171302004	312.000	OZ
HZ014188759;HCQVBN	LH57012016	E-Z GRIPPING COMPOUND 3 FL OZ BT	171302004	18	EA
HZ014188759;HCQVBN	LH57012016	E-Z GRIPPING COMPOUND 3 FL OZ BT	171302004	12	EA
HZ002234134;HDJJZX	LH57012016	HYDRAULIC FLUID,PET	171302005	896.000	OZ
HZ002865435;HDJWDS	LH57012016	ISOPROPYL ALCOHOL TECHNICAL 1 GL	171302005	640.000	OZ

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZ012101938;HDJLRV	LH57012016	LUBE OIL HELICOPTER TRANSMIS, ROYCO 555	171302005	1,152.000	OZ
HZ013863877;HCWYMF	LH57012016	CORROSION PREVENTIVE COMPOUND	171302005	512.000	OZ
HZ143600749;HDGSRP	LH57012016	SEALING COMPOUND, MASTINOX	171302005	5.750	OZ
HZ001605788;HDHFDYD	LH30829011	THINNER,PAINT PRODU	171302101	5,120.000	OZ
HZ001817594;HCSKHG	LH57012016	CLEANING COMPOUND, ENG GAS PAT 5 GL TY I	171302101	640.000	OZ
HZ014211424;HDFQJC	LH57012016	LUBRICATING OIL,ENG	171302101	1,280.000	OZ
HZ001178510;HCSMLC	LH57012016	ADHESIVE	171302102	6.000	OZ
HZ009353794;HCRMMT	LH57012016	POLISH,PLASTIC,LIQUID 1PT	171302102	8	EA
HZ013316109;HDMVVM	LH57012016	PAINT ENAMEL,AEROSOL GLOSS RED 11136	171302103	192.000	OZ
HZ013317133;HDNQXT	LH57012016	ADHESIVE	171302103	15.000	OZ
HZ013863877;HDCFWZ	LH57012016	FLUID FILM LIQUID A, CPC 1 GL CN	171302103	1,024.000	OZ
HZ013863877;HDCFWZ	LH57012016	FLUID FILM LIQUID A, CPC 1 GL CN	171302103	1,408.000	OZ
HZ014439003;HDCTHR	LH57012016	LUBRICANT,FLUOROCAR	171302103	48.000	OZ
HZ014500381;HDFWZQ	LH57012016	SEALING COMPOUND, CA1000	171302103	12.000	OZ
HZ002865435;HCNGTB	LH57012016	ISOPROPYL ALCOHOL,TECHNICAL	171302104	384.000	OZ
HZ002865435;HCNGTB	LH57012016	ISOPROPYL ALCOHOL,TECHNICAL	171302104	256.000	OZ
HZ013470980;HDDBRX	LH57012016	CORROSION PREV COMP, AML GUARD	171302105	132.000	OZ
HZ013023606;HDLJXG	LH30829011	EPOXY COATING KIT	171302201	2,560.000	OZ
HZ014416147;HDHVWV	LH30829011	HAZE GRAY ENAMEL	171302201	3,840.000	OZ
HZ001848953;HDJPLJ	LH62588008	SOLDER,LEAD-TIN ALL	171302202	32.000	OZ
HZ008807616;HCWZBN	LH62588008	SILICONE COMPOUND	171302202	8.000	OZ
HZ010744229;HZZLXT	LH62588008	LIGHT,CHEMILUMINESC	171302202	10	EA
HZ012101938;HBYXKQ	LH57012016	LUBRICATING OIL,HELICOPTER TRANSMISSION	171302202	1,152.000	OZ
HZ002513980;HDCTZX	LH57012016	ANTISEIZE COMPOUND	171302203	48.000	OZ
HZ006631770;HCYDGG	LH57012016	GREASE,GEN PURPOSE,LUBRIPLATE	171302203	192.000	OZ
HZ007542595;HDDSGJ	LH57012016	GREASE,MOLYBDENUM DISULFIDE k069	171302203	28.000	OZ
HZ011079169;HDKQXY	LH57012016	DETERGENT,GLASSWARE	171302203	1	EA
HZ013863871;HDCFXC	LH57012016	CORROSION PREVENTIVE COMP, NAS	171302203	512.000	OZ
HZ014171215;KDCWNF	LH57012016	EPOXY PRIMER COATIN	171302203	1	KT
HZ014171215;KDCWNF	LH57012016	EPOXY PRIMER COATIN	171302203	2	KT
HZ004089635;HDBSVN	LH57012016	GREASE,AIRCRAFT	171302204	140.000	OZ
HZ002500933;HCXDDF	LH70294013	PETROLATUM,TECHNICAL	171302301	120.000	OZ
HZ002500933;HDHDZL	LH62588008	PETROLATUM,TECHNICA	171302301	120.000	OZ
HZ002865435;HCNGTB	LH62588008	ISOPROPYL ALCOHOL,TECHNICAL	171302301	128.000	OZ
HZ010355391;HDCKRX	LH62588008	LUBRICATING OIL,GEAR	171302301	1,920.000	OZ
HZ013780698;HCXHSG	LH62588008	BREAKTHROUGH CLEANING COMP 15 GL CN	171302301	1,920.000	OZ
HZ015823708;HCZCTJ	LH62588008	CLEANING COMPOUND,A	171302301	640.000	OZ

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZ015823708;HCZCTJ	LH62588008	CLEANING COMPOUND,A	171302301	640.000	OZ
HZ004580075;HBVWYG	LH30829011	LUBRICATING OIL,GENERAL PURPOSE	171302302	256.000	OZ
HZ008368641;HDGNGF	LH30829011	LUBRICATING OIL,GEN	171302302	8	EA
HZ008387789;HDGGNN	LH62588008	CORROSION PREVENTIVE COMPOUND	171302302	192.000	OZ
HZ013470980;HDDBRX	LH30829011	CORROSION PREV COMP, AML GUARD	171302302	132.000	OZ
HZ013982473;HDHCGD	LH62588008	DUST REMOVER,COMPRESSED GAS	171302302	12	EA
HZ143600749;HCTMHX	LH57012016	SEALING COMPOUND	171302303	5.750	OZ
HZ006878056;HCSZJX	LH62588010	METHANOL,ACS	171302401	256.000	OZ
HZ006878056;HDBCWF	LH62588010	METHANOL,ACS	171302401	896.000	OZ
HZ006878056;HDBCWF	LH62588010	METHANOL,ACS	171302401	896.000	OZ
HZ006878056;HDBCWF	LH62588010	METHANOL,ACS	171302401	3,968.000	OZ
HZ000922816;KDBHHV	LH62588008	ADHESIVE, HARDMAN DOUBLE BUBBLE	171302402	100	EA
HZ002513980;HDCNQP	LH62588008	ANTISEIZE COMPOUND	171302402	32.000	OZ
HZ002627358;HCXRHW	LH62588008	CORROSION PREVENTIVE COMPOUND	171302402	640.000	OZ
HZ002627358;HCXRHW	LH62588008	CORROSION PREVENTIVE COMPOUND	171302402	640.000	OZ
HZ005421430;HDCSSV	LH62588008	LUBRICATING OIL,GEN	171302402	24.000	OZ
HZ002319045;HDFTVJ	LH62588008	LUBRICATING OIL,GENERAL PURPOSE	171302403	128.000	OZ
HZ002319045;HDFTVJ	LH62588008	LUBRICATING OIL,GENERAL PURPOSE	171302403	128.000	OZ
HZ009857099;HCVBXG	LH62588008	LUBRICATING OIL,AIRCRAFT TURBINE	171302403	256.000	OZ
HZLLN043144;HCZMCK	LH33191001	PAINT, WHITE	171302501	120.000	LI
HZ002617899;HDBPTZ	LH62588008	PENETRATING OIL	171302502	16.000	OZ
HZ002929657;HCNGYH	LH30829011	LUBRICATING OIL,REFRIGERANT COMP	171302502	512.000	OZ
HZ012674346;HCXDTX	LH57012016	FUNGICIDE	171302502	8	EA
HZ013863871;HDFMLT	LH62588008	CORROSION PREVENTIVE COMP,NAS	171302502	128.000	OZ
HZ012101938;HCTGZP	LH57012016	LUBRICATING OIL,HELICOPTER TRANSMISSION	171302503	1,280.000	OZ
HZ013316107;HCVXRG	LH62588008	ENAMEL, AEROSOL GLOSS BLACK	171302503	96.000	OZ
HZ014390859;HDBGBC	LH57012016	LUBRICATING OIL,WEAPONS 1.5 OZ TU	171302503	25.500	OZ
HZLLN043144;HDKWXN	LH33191001	PAINT, WHITE	171302601	150.000	LI
HZLLN043144;HDKWXN	LH33191001	PAINT, WHITE	171302601	15.000	LI
HZ002316689;HDCSFM	LH57012016	LUBRICATING OIL,UTILITY	171302602	640.000	OZ
HZ002812785;HDCDNS	LH62588008	METHYL ETHYL KETONE,TECHNICAL	171302602	768.000	OZ
HZ013682632;HCYDGS	LH62588008	PRIMER COATING, AEROSOL GREEN	171302603	160.000	OZ
HZ001497432;HCXLJR	LH57012016	HYDRAULIC FLUID,FIRE RESISTANT	171302702	1,536.000	OZ
HZ006878056;HCSZJX	LH62588010	METHANOL,ACS	171302801	2,560.000	OZ
HZLHA001147;HDFQGT	LH33191001	DESCALING DISPERSANT BOILER SPERSE 20 KG	171302901	40,000.000	GM
HZLHA001147;HDFQGT	LH33191001	DESCALING DISPERSANT BOILER SPERSE 20 KG	171302901	80,000.000	GM
HZLHA001147;HDFQGT	LH33191001	DESCALING DISPERSANT BOILER SPERSE 20 KG	171302901	80,000.000	GM

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLLN043139;HDBGCC	LH33191003	DEODORIZER, DISINFECTANT 30 LI	171302901	60.000	LI
HZLLN043139;HDBGCC	LH33191001	DEODORIZER, DISINFECTANT 30 LI	171302901	30.000	LI
HZLLN043139;HDBGCC	LH33191001	DEODORIZER, DISINFECTANT 30 LI	171302901	90.000	LI
HZLLN043139;HDBGCC	LH33191001	DEODORIZER, DISINFECTANT 30 LI	171302901	30.000	LI
HZLLN043138;HCZMBW	LH33191001	BIOCIDE, SWIMMING POOL	171302902	420.000	LI
HZLLN046116;HDQHYL	LH33191002	FUEL ADDITIVE, DIESEL	171302903	500.000	LI
HZLLN039004;HCZMCL	LH33191001	DIATOMS FILTER AID SAND 25 LB BG	171302904	275.000	KG
HZLLN043320;HDHLQJ	LH33191001	MAPEI LAMPOCEM 25KG	171302904	500.000	KG
HZLLN043100;HDBGBM	LH33191001	DEGREASER	171303001	120.000	KG
HZLLN043100;HDBGBM	LH33191001	DEGREASER	171303001	120.000	KG
HZLLN043100;HDBGBM	LH33191001	DEGREASER	171303001	30.000	KG
HZLLN047379;HDBGKB	LH33191001	WATER TREATMENT, BOILER 20 LI CN	171303001	200.000	KG
HZ001071510;HCWRVX	LH62588010	DISTILLED WATER,ACS	171303002	4,480.000	OZ
HZ001071510;HCWRVX	LH62588010	DISTILLED WATER,ACS	171303003	9,600.000	OZ
HZLLN039004;HCZMCL	LH33191001	DIATOMS FILTER AID SAND 25 LB BG	171303004	450.000	KG
HZLLN043118;HCZMJC	LH33191001	ACID SOLUTION 18 LI	171303101	160.000	LI
HZLLN043132;HCZMSN	LH33191001	CHLORINE 30 KG CO	171303101	210.000	KG
HZLLN043132;HCZMSN	LH33191001	CHLORINE 30 KG CO	171303101	30.000	KG
HZLLN043137;HCZMSW	LH33191001	ANTI-OXIDANT 30 L	171303101	50.000	KG
HZLLN043141;HCZWFS	LH33191001	ANTI-BACTERIAL SOLUTION 30 LI D	171303101	90.000	LI
HZLLN043141;HCZWFS	LH33191001	ANTI-BACTERIAL SOLUTION 30 LI D	171303101	90.000	LI
HZLHA001147;HDFQGT	LH33191001	DESCALING DISPERSANT BOILER SPERSE 20 KG	171303102	100,000.000	GM
HZLLN043100;HDBGBM	LH33191001	DEGREASER	171303102	120.000	KG
HZLLN043135;HCZMBR	LH33191001	DEODORIZER 30 KG DR	171303102	60.000	LI
HZLLN043135;HCZMBR	LH33191001	DEODORIZER 30 KG DR	171303102	60.000	LI
HZLLN047379;HDBGKB	LH33191001	WATER TREATMENT, BOILER 20 LI CN	171303102	100.000	KG
HZLLN047379;HDBGKB	LH33191001	WATER TREATMENT, BOILER 20 LI CN	171303103	200.000	KG
HZLLN047577;HCZMBW	LH33191001	BIOCIDE, SWIMMING POOL 20 LI CN	171303103	200.000	LI
HZLHA005347;HDHDCV	LH33191001	PLASTER, FINISH OR BASE, 25 KG	171303104	750,000.000	GM
HZLLN043118;HCZMJC	LH33191001	ACID SOLUTION 18 LI	171303201	40.000	LI
HZLLN043118;HCZMJC	LH33191001	ACID SOLUTION 18 LI	171303201	360.000	LI
HZLLN043112;HCZMCS	LH33191001	ANTI CORROSION COATING 20 KG CO	171303202	280.000	LI
HZLLN043112;HCZMCS	LH33191001	ANTI CORROSION COATING 20 KG CO	171303202	400.000	LI
HZLHA001147;HDFQGT	LH33191001	DESCALING DISPERSANT BOILER SPERSE 20 KG	171303203	40,000.000	GM
HZLLN043132;HCZMSN	LH33191001	CHLORINE 30 KG CO	171303203	240.000	KG
HZLLN043133;HCZMTB	LH33191001	ANTI CORROSIVE SOLUTION 30 K	171303203	120.000	LI
HZLLN043135;HCZMBR	LH33191001	DEODORIZER 30 KG DR	171303203	40.000	LI

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLLN043139;HDBGCQ	LH33191001	DEODORIZER, DISINFECTANT 30 LI	171303203	60.000	LI
HZLLN043141;HCZWFS	LH33191001	ANTI-BACTERIAL SOLUTION 30 LI D	171303203	60.000	LI
HZ009012088;HCZYVS	LH70294013	GLASS CLEANER ANTI-FOGGING	171303204	24	EA
HZ009012088;HCZYVS	LH70294013	GLASS CLEANER ANTI-FOGGING	171303204	6	EA
HZ009012088;HCZYVS	LH70294013	GLASS CLEANER ANTI-FOGGING	171303204	12	EA
HZLLN043137;HCZMSW	LH33191001	ANTI-OXIDANT 30 L	171303301	25.000	KG
HZLLN043137;HCZMSW	LH33191001	ANTI-OXIDANT 30 L	171303301	100.000	KG
HZLLN043137;HCZMSW	LH33191001	ANTI-OXIDANT 30 L	171303301	75.000	KG
HZLLN043137;HCZMSW	LH33191001	ANTI-OXIDANT 30 L	171303301	25.000	KG
HZLLN043133;HCZMTB	LH33191001	ANTI CORROSIVE SOLUTION 30 K	171303302	60.000	LI
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303302	100.000	KG
HZLLN046116;HDCPVR	LH33191002	FUEL ADDITIVE, DIESEL	171303303	250.000	LI
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303304	1,000.000	KG
HZLLN043133;HCZMTB	LH33191001	ANTI CORROSIVE SOLUTION 30 K	171303401	160.000	LI
HZLLN043133;HCZMTB	LH33191001	ANTI CORROSIVE SOLUTION 30 K	171303401	60.000	LI
HZLLN043133;HCZMTB	LH33191001	ANTI CORROSIVE SOLUTION 30 K	171303401	60.000	LI
HZLLN049564;HDDQLC	LH33191001	ZEP WINTER POOL	171303401	260.000	KG
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303402	100.000	KG
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303402	250.000	KG
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303403	250.000	KG
HZLLN046116;HDQHLY	LH33191002	FUEL ADDITIVE, DIESEL	171303404	500.000	LI
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303405	500.000	KG
HZ014407774;HZZTGX	LH62588008	BATTERY, NONRECHARGEABLE	171303501	128	EA
HZLHA011441;HDKKNV	LH33191002	BATTERY, LEAD ACID, 12V, 45AH	171303501	3	EA
HZLHA011464;HDKKTK	LH33191002	BATTERY, LEAD ACID, 12V, 74AH	171303501	1	EA
HZLHA011504;HDKKYB	LH33191002	BATTERY, LEAD ACID, ADSORPTIVE GLASSFIBER	171303501	2	EA
HZLHA011537;HDKLHM	LH33191002	BATTERY, AGM, LEAD ACID, 12 V, 100AH	171303501	2	EA
HZLHA011537;HDKLHM	LH33191002	BATTERY, AGM, LEAD ACID, 12 V, 100AH	171303501	6	EA
HZLLN011258;HDBGMM	LH33191001	CLEANER, ICE MACHINE	171303602	15.000	LI
HZ000650957;HCZFBF	LH57012016	CORROSION RESISTANT COATING, CHEMICALLY T	171303603	64.000	OZ
HZ010925313;HCXQRW	LH66096015	CLEANING COMPOUND, SOLVENT-DETERG	171303604	4	EA
HZLLN000270;HDBGBH	LH66096015	FLOOR CLEANER	171303701	512.000	OZ
HZLLN000270;HDBGBH	LH66096015	FLOOR CLEANER	171303702	5,120.000	OZ
HZLLN038212;HDHNYT	LH66096015	DETERGENT, LAUNDRY BLEACH 2	171303703	300.000	LI
HZLLN043134;HCZMBM	LH33191001	CHLORINE GRANULES 50 KG DR	171303801	250.000	KG
HZLLN047379;HDBGKB	LH33191001	WATER TREATMENT, BOILER 20 LI CN	171303901	100.000	KG
HZLLN047379;HDBGKB	LH33191001	WATER TREATMENT, BOILER 20 LI CN	171303902	80.000	KG

Material	Special Stock Number	Material Description	Storage Bin	Available stock	Base Unit of Measure
HZLHA004437;HDGSWP	LH33191002	LUBRICATING OIL, 10W-40 208 LI	17130BLK01	832.000	LI
HZLHA004437;HDGSWP	LH33191002	LUBRICATING OIL, 10W-40 208 LI	17130BLK01	832.000	LI
HZLHA009248;HDJPZQ	LH33191001	WATERPROOFING MEMBRANE, 10 MIL , 66 LB	17130BLK01	36,960.000	OZ
HZLLN025766;HBKBHV	LH33191002	LUBRICATING OIL, 10W-40 55 GL DR	17130BLK01	21,120.000	OZ
HZLLN025766;HBKBHV	LH33191002	LUBRICATING OIL, 10W-40 55 GL DR	17130BLK01	28,160.000	OZ
HZLLN047858;HDDDWS	LH70294013	LUBRICATING OIL, 15W-40 DIESEL 55 G	17130BLK01	42,240.000	OZ
HZ010355394;HCWZZH	LH33191002	LUBRICATING OIL,GEAR	17130BLK02	7,040.000	OZ
HZ001071510;HCWRVX	LH62588010	DISTILLED WATER,ACS	17130BLK03	12,800.000	OZ
HZ014649137;HDHVPH	LH30829011	ANTIFREEZE	17130BLK04	17,920.000	OZ
HZLHA000674;KDFFRX	LH33191001	REAGENT POOL KIT, 2 LI KT	17130BLK05	3	KT
HZLHA000674;KDFFRX	LH33191001	REAGENT POOL KIT, 2 LI KT	17130BLK05	5	KT
HZ015326748;HDKLNK	LH70294013	ANTIFREEZE	17130BLK09	70,400.000	OZ
HZ015326748;HDKLNK	LH70294013	ANTIFREEZE	17130BLK09	7,040.000	OZ
HZLLN047858;HDDDWS	LH70294013	LUBRICATING OIL, 15W-40 DIESEL 55 G	17130BLK09	56,320.000	OZ
HZLLN026836;HDKPHJ	LH33191001	DRAIN CLEANER, LIQU	17130BLK10	126.000	LI

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