Stormwater Pollution Prevention Plan

Naval Base Kitsap Bangor

December 2015

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Stormwater Pollution Prevention Plan

Naval Base Kitsap Bangor

December 2015

Prepared By:

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Portions of this Stormwater Pollution Prevention Plan are withheld from public access. The following materials have been redacted:

- Building names and numbers;
- Personally identifiable information of personnel;
- Facility Descriptions and/or Objectives;
- Facility Maps;
- Outfall Locations; and
- Off-base inflows.

These items are Restricted Information as defined in the Multi-Sector General Permit 2015 Appendix A.

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Certification and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

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NAVAL BASE KITSAP, BANGOR SWPPP 2015
RECORD OF REVIEW AND AMENDMENTS

All reviews and amendments to this plan shall be summarized here.

Date	Revision Number	Section(s)	Reason for Change	Person Making Change

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1 Introduction

1.1 Purpose and Scope

This Stormwater Pollution Prevention Plan (SWPPP) was prepared for Naval Base (NAVBASE) Kitsap Bangor, located in Silverdale, Washington, to comply with the terms and conditions of the Multi-Sector General Permit, Authorization to Discharge Under the National Pollutant Discharge Elimination Systems (NPDES) for Stormwater Discharges Associated with Industrial Activity, United States Environmental Protection Agency (EPA) (2015).

This SWPPP identifies the sources and potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges associated with industrial activities at NAVBASE Kitsap Bangor; defines practices and measures that will help to minimize and control pollutants in those discharges; establishes a plan for the implementation of these practices and measures and a mechanism that will ensure their implementation; and establishes a plan for the evaluation of the effectiveness of the plan in controlling and reducing pollution of stormwater discharges.

Ecology and Environment, Inc., (E & E) originally developed this SWPPP under contract with Naval Facilities Engineering Command (NAVFAC) Northwest. This plan was developed in accordance with EPA guidance (EPA 1992) and includes field work for storm drain verification and mapping, investigation of non-stormwater discharges and illicit connections to the storm drain system, and industrial facility and base-wide site assessments performed during October and November of 1994 and February of 1996. The plan was extensively updated in 2009 and 2015 by NAVFAC Northwest to accommodate facility changes and meet the requirements of the re-issued Multi-Sector General Permits.

1.2 Document Organization

This document is organized into seven sections. Section 1 provides general information regarding this document including a brief summary of the regulatory history of NPDES industrial stormwater permits and specific information regarding EPA's Multi-Sector General Permit for industrial activities. In addition, a comparison to other existing environmental management plans in place at NAVBASE Kitsap Bangor is made to identify overlaps in requirements between the various plans.

Section 2 provides the site characteristics of NAVBASE Kitsap Bangor that affect rainfall runoff including brief descriptions of the hydrometeorological and topographic conditions and a brief land use history. Existing natural and man-made storm drainage features are described. Stormwater outfalls and their corresponding drainage basins are identified including those associated with industrial activities.

Section 3 provides the non-stormwater discharge investigation conducted for NAVBASE Kitsap Bangor along with a plan for illicit discharge elimination and prevention.

Section 4 provides the site-specific pollution prevention assessments for each of the individual or groups of industrial facilities identified at NAVBASE Kitsap Bangor. The assessments include pollutant source identification and a description of existing, Core, Sector-Specific and Site-Specific Best Management Practices (BMPs) for each industrial facility.

Section 5 provides the existing stormwater characterization data for NAVBASE Kitsap Bangor. Future monitoring and reporting requirements for stormwater sampling are discussed in detail.

Section 6 contains the Facility inspection requirements.

Section 7 addresses corrective action and recordkeeping requirements of the Multi-Sector General Permit.

References are provided in Appendix A. A glossary of terms is provided in Appendix B. The permit eligibility determination with respect to Endangered Species and Historic Properties is provided in Appendix C. Appendix D contains a copy of the Notice of INTENTs (NOI) filed by NAVBASE Kitsap Bangor and the EPA coverage letters. A summary of stormwater management practices for meeting requirements of the construction general permit is provided in Appendix E. An index of BMPs potentially applicable to the Bangor stormwater management program is provided in Appendix F. Appendix F includes all existing and site-specific BMPs discussed in Section 6, as well as other BMPs that may be used in the future as the program is implemented. Existing stormwater characterization data for NAVBASE Kitsap Bangor is provided in Appendix G. Stormwater Quality Visual Examination Report and Discharge Monitoring Report forms and instructions are provided in Appendix H. An example form, Authorized Use List (AUL), along with a description of AUL maintenance is provided in Appendix I. This list identifies materials used and stored at NAVBASE Kitsap facilities. A record of spills is provided in Appendix J. Facility inspection and maintenance reports are provided in Appendices K and L. Employee training records are provided in Appendix M. Appendix N is provided for the filing of Annual Comprehensive Site Inspection reports. Corrective action reports are filed in Appendix O. The Stormwater Analytical Monitoring SOP is included as Appendix P. A set of oversize drawings, including the SWPPP base maps, is provided in Appendix Q.

1.3 Regulatory Background

1.3.1 Federal Stormwater Regulations

The 1972 amendments to the Federal Water Pollution Control Act (referred to as the Clean Water Act) stipulated that the discharge of any pollutant to surface waters without a NPDES permit was unlawful. Between 1972 and 1987 national efforts to improve water quality focused on reducing pollutants of industrial process wastewater and municipal sewage. However, during this period several nationwide studies on water quality identified stormwater discharges as a significant source of water pollution. These results and pressure from environmental groups resulted in the reauthorization of the Clean Water Act (CWA) in 1987 with the passage of the Water Quality Act (WQA), which established a framework for regulating municipal and industrial stormwater discharges under the NPDES permit program. Final federal regulations regarding the EPA's NPDES stormwater permit program were published in the Federal Register on November 16, 1990.

Stormwater discharges associated with industrial activity have been divided into two categories: those associated with industrial activity except construction activity and those associated with industrial activity from construction activity. Permit options available for industrial activities excluding construction activity are described below.

Permit Application Options for Non-Construction Activity
The stormwater regulation allows two permit application options for stormwater discharges associated with industrial activity except construction activity. These include an application for an individual NPDES stormwater permit and a NOI to comply with a general permit, including the Multi-Sector general permit. Each of these application options is discussed briefly in the following paragraphs.

Individual NPDES stormwater permits are issued to a specific facility for stormwater discharges related to industrial activity. In most instances the permit is tailored to meet the discharge characteristics of the facility and/or special requirements of the receiving waters. Individual NPDES stormwater permits are issued by states that have been delegated NPDES permitting authority or by the EPA in states that do not have this authority.

The Multi-Sector general permit for industrial activities is the result of the group permitting process initiated by EPA in the late 1980s. The permit was originally issued until September 29, 1995. EPA reissued the permit in 2000, 2008, and most recently in June 2015.

1.3.2 Navy Stormwater Policy

Requirements and policies regarding stormwater discharges for Navy facilities are stipulated in the Department of the Navy's Environmental and Natural Resources Program Manual, OPNAVINST 5090.1D (U.S. Navy 2014). These requirements, which are a part of the Clean Water Ashore Program, state that Navy facilities must comply with all substantive and procedural requirements applicable to point and non-point sources of pollution as required by Executive Order 12088 and the CWA. Navy policy regarding point source stormwater discharges from Navy facilities is that these discharges must meet all applicable federal, state, and local permit requirements, including control requirements for toxic and non-conventional pollutants and best conventional technology (BCT) limits for conventional pollutants. The Navy's policy

on stormwater management and non-point pollution source control requires commands to ensure that all activities comply with stormwater management and pollution prevention requirements, as stipulated in permits under which the activity is covered.

Further, Navy facilities must comply with all requirements of federal, state, interstate, and local laws and regulations respecting the control and abatement of water pollution in the same manner and to the same extent as any non-governmental entity. Navy policy also states that the discharge of any pollutant that does not comply with effluent standards or other procedural requirements is unlawful.

The Navy's stormwater compliance strategy for NAVBASE Kitsap Bangor is discussed in the following section.

1.3.3 Stormwater Compliance Strategy, NAVBASE Kitsap Bangor

The State of Washington is an NPDES-delegated state with general permitting authority. However, industrial stormwater discharges from federal facilities in the State of Washington are handled by the EPA. Federal facilities in Washington State are eligible for coverage under an individual NPDES permit or the Multi-Sector general permit. Construction activities that disturb one or more total acres of land at federal facilities in the state of Washington are eligible for coverage under EPA's construction general permit (General Permit No.WA-R-12000F). Administration of these permits is by EPA, Region X, Water Management Division (WD-134), Seattle, Washington.

This SWPPP, including the BMP plan and stormwater monitoring program, was developed to meet requirements of the Multi-Sector general permit. BMP and monitoring requirements as outlined in the Multi-Sector general permit have been included in this SWPPP.

Existing industrial facilities that intended to be covered by the Multi-Sector general permit were first required to submit a NOI in accordance with Part II of the permit by March 29, 1996. For NAVBASE Kitsap Bangor, a NOI to comply with the Multi-Sector general permit was postmarked on November 13, 1996. NOIs were also submitted in March 2001, May 2009, and December 2015 to obtain coverage under the reissued Multi-Sector General Permits. Copies of the NOI form are provided in Appendix D.

In order to comply with the construction general permit, an NOI must also be submitted for all construction activities at NAVBASE Kitsap Bangor that will disturb more than one acre of land. Compliance with that permit requires the development of a site-specific stormwater management plan not related to this SWPPP document. Please refer to the General Permit for Discharges from Construction Activities for additional guidance and requirements. A summary of Best Management Practices applicable to the stormwater management requirements of the General Permit for Discharges from Construction Activities is provided as Appendix E.

1.4 Comparison to Other Environmental Management Plans

Because NAVBASE Kitsap Bangor is located on the Hood Canal, a natural waterway, hazardous waste reduction while minimizing hazardous waste liability, spill prevention, and cleanup have been a priority. Environmental management plans for NAVBASE Kitsap Bangor are required by other applicable environmental laws and regulations related primarily to the prevention and management of spills and leaks of hazardous materials and minimizing hazardous waste

generation on base. Existing plans of this type for NAVBASE Kitsap Bangor include the Oil Spill Prevention Control and Countermeasure Plan (SPCC) and Oil/Hazardous Substance Integrated Spill Contingency Plan, which are part of the Navy's region-wide spill response plan; and the Navy-wide OPNAVINST 5090 for topics including hazard communications (HAZCOM), hazardous materials control and management, ozone depleting substances, emergency planning and community right-to-know (EPCRA), polychlorinated biphenyls (PCB), pesticides, asbestos, and hazardous waste minimization. Some of the practices identified in this SWPPP for preventing stormwater pollution by the industrial activity at NAVBASE Kitsap Bangor are required or recommended by these plans; some are already in place. Overlaps in the plans are identified in the following paragraphs.

1.4.1 Spill Prevention Control and Countermeasure Plan

A SPCC Plan was completed for NAVBASE Kitsap Bangor in August 1994 (SUBASE 1994a). The most recent plan update was 2013. The SPCC Plan was prepared in accordance with planning standards of Title 40 of the Code of Federal Regulations, Section 112 (40 CFR 112). The plan provides information regarding existing activities related to oil pollution control including equipment testing, required inspections, oil handling procedures, and security measures.

The SPCC also outlines current training programs and requirements related to fuel oil. All civil service, Base Operating Support Contract (BOSC), and fuel contractor personnel involved with fuel handling operations receive the following initial training as a minimum requirement: a summary of SPCC regulation and Navy Policy, a requirement to understand the pertinent sections of the NAVBASE Kitsap Bangor SPCC plan; a discussion of all SOPs contained in the SPCC plan and a discussion of spill reporting and emergency response procedures. Training is the responsibility of the first line supervisors and contractors at each facility that handles or stores petroleum, oil, or lubricants (POL) or related products including waste oil. This includes initial training for new employees and follow-up training on an annual basis. Existing environmental training programs provided under other environmental management plans at NAVBASE Kitsap Bangor are summarized in Table 1-1.

The requirements of the SPCC Plan are compatible with the goals of the SWPPP because several procedures, practices, and measures that are helpful in reducing the potential for stormwater pollution are already in place or recommended/required through the SPCC Plan. These include: periodic inspection and testing of aboveground storage tanks (ASTs) and underground storage tanks (USTs); secondary containment berms for bulk fuel storage tanks and fuel truck loading racks; third party monitoring of fuel transfers; carrying of sorbent material by fuel truck operators; inspection and maintenance programs for fuel transfer and storage equipment; facility security; training programs and requirements; and standard operating procedures for drum and small container handling, oil tank containment area draining operations, fuel spills; loading and unloading procedures for fuel transfer.

Stormwater pollution control BMPs presently either in place and/or recommended by the SPCC Plan are summarized in Table 1-2.

1.4.2 Integrated Contingency Plan

Commander, Navy Region Northwest (COMAVREGNW) has developed a regional Oil/Hazardous Substance (OHS) Integrated Contingency Plan (ICP). The plan was updated in July 2013. The purpose of the ICP is to provide specific direction to be followed by Navy personnel to allow prompt, efficient coordination and response to any OHS spill that occurs in the Navy Northwest Region. All spills at NAVBASE Kitsap Bangor are reported to the Spill Response Team, which implements the ICP to contain and clean up the spill. Potential stormwater pollution BMPs that are in place at NAVBASE Kitsap Bangor and/or are required as a result of the program include: keeping records of all spills and leaks of toxic or hazardous materials; providing adequate spill control/containment material for the control of spills and leaks; properly disposing of any significant materials or contaminated waste; training of personnel for proper storage, use, cleanup, and disposal of materials; and recordkeeping practices. These are summarized in Table 1-2.

1.4.3 Hazardous Waste Management Plan

The Hazardous Waste Management Plan (HWMP) establishes procedures and provides guidance regarding HW generation and accumulation as required by WAC Chapter 173-303 and 40 CFR Hazardous Waste Regulations. This program also meets the requirements of Naval Command Policy, OPNAVINST 5090.1B. The procedures identified in the HWM Plan are designed to maintain NAVBASE Kitsap Bangor's status as a generator and avoid the more stringent requirements of a treatment, storage, and disposal (TSD) facility. In general, this program covers management and operating procedures for collecting, containerizing, labeling, marking, recordkeeping, transferring, storing, and disposing of HW at NAVBASE Kitsap Bangor.

Through this program, satellite accumulation points have been established at locations where HW is generated. These locations are maintained and operated by the West Sound Base Operations Support Contract. They are responsible for compliance with waste regulations through periodic inspections, recordkeeping and reporting requirements, and proper waste accumulation and handling activities.

The training requirements for each job type are included in the HWMP. The plan identifies training requirements and assigns responsibilities for all personnel including tenant commands, contractors, and visitors who generate hazardous waste at facilities under the authority of the Commanding Officer, NAVBASE Kitsap Bangor. The training requirements include Hazardous Waste Originator, HAZWOPER, transportation, and required job- specific specialized training, are summarized in the HWMP.

Table 1-1: Summary of Existing Training Programs Provided Under Other Environmental Management Plans at NAVBASE Kitsap Bangor

Title	Personnel Who Receive Training	Program Provided Under
Hazardous Materials Management	Upper management (Division Managers and higher)	HAZCOM
Worker Right-to-Know	Supervisors and Employees	HAZCOM
Hazardous Waste Originators	Supervisors and Employees, Non-Supervisory Personnel[a]	HWMP
Hazardous Material Awareness	Non-Supervisory Personnel[a]	HAZCOM
Specific Hazard	Non-Supervisory Personnel[a]	HAZCOM
OSHA HAZWOPER 40-hour Training	All Hazardous Waste Operations Personnel	HAZWOPER
Annual OSHA HAZWOPER 8-hour Refresher	All Hazardous Waste Operations Personnel	HAZWOPER
Emergency Response Contingency Training	All Emergency Spill Response Personnel	OPLAN
Initial SPCC Training for New Employees and Annual Updates	All employees of Bangor and its BOSC whose jobs involve the storage or handling of petroleum products	SPCC
NEESA Waterborne Incident Cleanup Training (or equivalent)	Waterborne Incident Response Team Members	OPLAN
24-hour Site-Specific Training for Waterborne Response	Waterborne Incident Response Team Members	OPLAN
24-hour Annual Waterborne Refresher Training	Waterborne Incident Response Team Members	OPLAN
40-Hour Initial Off-site Training plus on-the-job training ($\geq$ 40 hours)	Land-Based Incident Response Team Members, NOSCDR	OPLAN
24-Hour Annual Refresher Training for Land-Based Response	Land-Based Incident Response Team Members, NOSCDR	OPLAN
8-Hour Annual First Responder Training	First Responders	OPLAN
NEESA On-Scene Commanders Course (or equivalent)	NOSCDR, OSOTC, and instructors	OPLAN
Instructor Certification from outside sources	NOSCDR, On-Scene OSOTC, and instructors	OPLAN
8-hour Refresher covering latest advances, technologies in incident response, and related topics	NOSCDR, On-Scene OSOTC, and instructors	OPLAN

[a]For personnel occupationally involved with the use and potential exposure to hazardous materials.

Key:
HAZCOM =Hazard Communication
HWMP=Hazardous Waste Management Plan
HAZWOPER=Hazardous Waste Operations and Emergency Response Standard
NOSCDR =Navy On-Scene Commander.
NEESA=Naval Energy and Environmental Support Activity.
OPLAN=Oil/Hazardous Substance Spill Contingency Annex of the SUBASE Bangor Operations Plan.
OSHA=Occupational Safety and Health Administration.
OSOTC=On-Scene Operations Team Coordinator.
SPCC=Oil Spill Prevention, Control, and Countermeasure Plan.

Table 1-2: Stormwater BMPs in Place and/or Required by Other Environmental Management Plans at NAVBASE Kitsap Bangor

BMP Designator	BMP Title[a]	Management Plan
001	Label all drums, cans, containers, tanks, and valves	HAZCOM
002	Restrict access to area and equipment	SPCC
006	Control spills	SPCC
006A	Keep records of all spills and leaks of toxic or hazardous materials	SPCC, SCP
009	Do not pour liquids wastes into storm drain	SPCC
010	Keep absorbent material on hand	SPCC, SCP
014A	Inspect water accumulated in containment area for oil sheen prior to discharge	SPCC
016C	Regularly inspect storage areas for leaking materials	SPCC
017	Limit significant materials inventory	OPNAVINST 5090
017A	Keep inventory of significant materials	OPNAVINST 5090
031	Conduct refresher courses in operating and safety procedures	SPCC
039A	Recycle or properly dispose of all used vehicle fluids	OPNAVINST 5090
050	Substitute non-toxic or less-toxic cleaning solvents	OPNAVINST 5090
051	Use solvents efficiently	OPNAVINST 5090
053	Protect storage containers from being damaged by vehicles	SPCC
054	Properly store containers	SPCC
057A	Properly dispose of any significant materials or contaminated waste	SCP
061	Employ proper handling procedures to transport materials and waste	SPCC
062	Provide overfill protection	SPCC
064	Monitor major fueling operations	SPCC
065	Provide absorbent booms in unbermed fueling areas	SPCC
066	Eliminate topping off tanks	SPCC
070	Lock fuel tanks when not in use or on standby	SPCC
071	Keep tanks, piping, and valves in good condition	SPCC
072	Protect tanks from being damaged by vehicles	SPCC
073	Protect fill pipe from being damaged by vehicles	SPCC
075	Provide secondary containment for ASTs	SPCC
094	Establish integrated pest control	OPNAVINST 5090
095	Conduct pesticide operations under the supervision of licensed applicator	OPNAVINST. 5090
111	Regularly inspect and test equipment	SPCC
135	Provide good housekeeping practices to minimize pollutants exposure to stormwater	SPCC
144	Train employees on proper loading/unloading techniques	SPCC
161	Train employees on proper filling and transfer procedures	SPCC
192	Label and track the recycling of waste material (i.e., used oil, spent solvents, batteries)	OPNAVINST 5090
203	Educate personnel for proper storage, use, cleanup, and disposal of materials	SPCC, SCP
209	Use appropriate material transfer procedures, including spill prevention and containment procedures	SPCC

Table 1-2: Stormwater BMPs in Place and/or Required by Other Environmental Management Plans at NAVBASE Kitsap Bangor

BMP Designator	BMP Title[a]	Management Plan
216	Keep records of required inspections, maintenance activities, employee training sessions, and chemical application rates and locations	SPCC, SCP

[a]A complete list and detailed description of stormwater BMPs are provided in Appendix F.

Key:
AST=Aboveground Storage Tank.
HAZCOM=Hazard Communication.
SCP=Spill Contingency Plan.
SPCC=Spill Prevention, Control and Countermeasure.
OPNAVINST=Office of the Chief of Naval Operations Instruction

1.5 SWPPP Compliance Requirements

In addition to BMP implementation, ongoing activities related to the SWPPP are required for compliance under the Multi-Sector general permit. These SWPPP compliance requirements are summarized in Table 1-3.

The permit also requires records to be maintained for various compliance activities. These records include facility visual inspection, maintenance records, and employee training. These recordkeeping requirements are also summarized in Table 1-3 and in Chapter 7 of the SWPPP. Copies of these records shall be inserted into Appendices of this SWPPP as also indicated in Chapter 7. These compliance and recordkeeping requirements are discussed below.

1.5.1 Pollution Prevention Team

As required by the Multi-Sector General Permit, this SWPPP identifies staff members that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. NAVBASE Kitsap Bangor Environmental will assume overall responsibility for the SWPPP program and will assign individuals as needed. The Pollution Prevention Team for NAVBASE Kitsap Bangor is organized a follows:

NAVBASE Kitsap Stormwater Program Manager:

- Implements and coordinates overall SWPPP program.
- Ensures that BMPs are implemented.
- Visually examines and monitors outfalls (discharges) and submit reports.
- Completes facility visual inspections and records results.
- Coordinates updates to the facility SWPPP.
- Ensures annual Comprehensive Site Inspections are performed and documented.
- Completes employee training and records.

NAVBASE Kitsap, Bangor Environmental Director:

- Program funding for compliance with SWPPP and stormwater permit requirements including upgrades and corrective actions needed for NAVBASE Kitsap facilities.
- Responsible for DMRs.

Oil and Hazardous Substances Spill Manager:

- Tracks and reports spills.

Public Works:

- Maintain and inspect equipment (conveyance system and oil/water separators) and record.
- Program funding for routine inspection and maintenance of stormwater system and associated structural stormwater pollution control facilities.

NAVFAC Northwest Stormwater Program Manager:

- Provides SWPPP updates, Comprehensive Site Inspections, regulatory assistance, and technical assistance as requested by the NAVBASE Kitsap Bangor Environmental Director.

1.5.2 Spill Response and Reporting Requirements

In the event of a spill of oil or hazardous substances the following contact should be notified immediately:

Regional Dispatch Center [redacted]

1.5.3 Plan Availability

This SWPPP will be kept on-site at NAVBASE Kitsap Bangor by the NAVBASE Kitsap Stormwater Program Manager and will be made available upon request to the EPA regional director or an authorized representative.

Public access to SWPPP information is required by the 2015 Multi-Sector General Permit. If you provide a URL in your NOI where your SWPPP can be found, and maintain your current SWPPP at this URL, you will have complied with the public availability requirements for the SWPPP. If you did not provide a SWPPP URL in your NOI, your NOI must include the information required by Part 7.3 of the Multi-Sector General Permit.

1.5.4 Revisions and Updates

This SWPPP will be reviewed and revised as needed whenever there is a change in design, construction, operation, or maintenance of the facilities at NAVBASE Kitsap Bangor covered by this plan or the addition of a new industrial facility that has a significant effect on the potential for the discharge of pollutants to the waters of the United States. In addition, this SWPPP will be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants from the sources identified or in otherwise achieving the general objectives of controlling pollutants in stormwater associated with industrial activity. (See Part 5.3 of the permit.)

1.5.5 Recordkeeping

Requirements for Retention of SWPPP records are identified in Part 7.8 of the Multi-Sector General Permit. In general, the Navy is required to retain this SWPPP, records of all monitoring information, copies of all reports required by the SWPPP, and records of all data used to complete the NOI until at least three years after coverage under the permit is terminated.

1.5.6 Signatory Requirements

As required by the permit, this SWPPP and all reports required by this SWPPP shall be signed by a principal executive officer. A principal executive officer of a federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency or a duly authorized representative of (1) or (2). If signature authority is delegated to an authorized representative,

the delegation must be in writing, and a copy must be included with this SWPPP. All documents shall have the following certification.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Table 1-3: Summary of SWPPP Compliance Requirements		
SWPPP Compliance Requirement	**SWPPP Section**	**Permit Part**
Form a Stormwater Pollution Prevention Team.	1.5.1	5.2.1
Implement Control Measures/BMPs	4	2
Perform stormwater sampling and prepare reports.	5, 6	6
Routine Facility Inspections	6	3.1
Maintenance records	7	2.1.2.3, 5.5
Employee Training records	4 , 7	2.1.2.8, 5.5
Submit Annual Report	6	7.5
Update SWPPP when a change in industrial facilities occurs or if current SWPPP is ineffective.	1.5.4	4.3, 5.3
Implement and document Corrective Actions	7	4
Retain SWPPP reports and records on site until at least three years after coverage under the permit expires.	1.5.5, 7	7.8
All reports must be signed by an appropriate authority.	1.5.6	B.11

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2 Description of Stormwater Drainage

2.1 Site Characteristics

Site characteristics of NAVBASE Kitsap Bangor are described to provide a framework for understanding its surface hydrologic features. Included are a description of the base's location and mission, climate, and topography.

2.1.1 Location and Mission

NAVBASE Kitsap Bangor is located on the eastern shore of Hood Canal near the town of Silverdale in Kitsap County, Washington. NAVBASE Kitsap Bangor was commissioned in February of 1977. Extensive environmental impact studies were conducted to establish baseline conditions prior to start of construction. NAVBASE Kitsap Bangor employs approximately [redacted] military and civilian personnel, provides housing for [redacted] on-base occupants, and serves as [redacted], and includes the following activities:

- Provide support to the [redacted].
- Maintain and operate facilities for administration and personnel support for [redacted] operations.
- Provide logistic support to other activities in the area.
- Provide other functions as may be directed by competent authority.
- [redacted]

2.1.2 Climate

NAVBASE Kitsap Bangor has a temperate maritime climate with generally mild temperatures and moderate to heavy precipitation. The base receives approximately 47 inches of precipitation annually, including an average annual snowfall of approximately 16 inches. Snowfall is typically light and melts shortly after falling. Approximately 75% of the precipitation falls in the months from October through March. Storms are typically of long duration and low intensity. Temperatures are relatively uniform throughout the year largely due to winds from the Pacific Ocean which are warmer in winter and cooler in summer than air masses from adjacent land areas. Wind velocities generally range from calm to 38 miles per hour. The prevailing wind direction is, on average, from the south or south-southwest 43% of the year and from the north or northeast 27% of the year. The wind is calm approximately 22% of the year.

2.1.3 Topography

NAVBASE Kitsap Bangor is characterized by flat-topped ridges, ranging in elevation from 300 to 500 feet above mean sea level, with steep flanks sloping on the west side of the base down to Hood Canal. The base comprises a 6,785-acre reserve with approximately 4,111 acres of evergreen forests and with some small meadows and a number of streams and lakes. The base has approximately 4.5 miles of shoreline. Natural surface drainage flows through six small streams draining to Hood Canal and two small streams exiting the base to the southeast and discharging to Dyes Inlet via Clear Creek. Drainage areas for the streams range from 0.03 to 3.68 square miles. Three of the streams pass through small lakes and marshes, including Devil's Hole Lake, Cattail Estuary, and Hunter's Marsh before reaching Hood Canal. Some areas of NAVBASE Kitsap Bangor are drained by sheet flow directly into Hood Canal.

2.2 Description of Stormwater Drainage Facilities

Stormwater drainage facilities at NAVBASE Kitsap Bangor include natural drainage conveyance systems (such as streams, creeks, and ditches), constructed drainage conveyance systems (such as swales, open channels, and culverts), and underground storm drain systems (including catch basin inlets, manholes, and outlets). Retention ponds and oil/water separators are also incorporated into the storm drain system. Existing storm drain facilities are shown on the SWPPP maps included in Appendix Q. Two base maps (B-1 and B-2) are included that illustrate primary topography, drainage basins, basin outfalls, streams, lakes, wetlands, and SWPPP industrial facilities.

Stormwater runoff from the western portion of the base either infiltrates the ground or flows westward into Hood Canal. Stormwater runoff from the eastern half of the base either infiltrates the ground or flows eastward off the base. Flow off base is conveyed by either overland flow or within streams, creeks, and underground drain system outfalls. Much of the surface water discharges are intercepted by retention ponds prior to discharge. Retention ponds include:

- Trident Lakes
- Industrial Area Retention Pond ([redacted])
- [redacted] Retention Pond
- Service Pier Retention
- [redacted] Retention Pond
- TPU Parking Lot Pond
- West Family Housing Pond
- Corner of Sturgeon and Escolar
- Corner of Sturgeon and Golet
- Building [redacted] Pond
- Building [redacted] Ponds (two)

The Retention ponds provide stormwater sedimentation and limited attenuation of conventional pollutants.

2.3 Drainage Basin Delineation

Drainage basin boundaries were identified using the SWPPP drainage maps that contain topographic contours and schematic storm system diagrams. The SWPPP drainage maps are based on a grid system of 19 general development maps (GDMs) of NAVBASE Kitsap Bangor. Each map or grid represents an area of approximately 551 acres. Folded drainage maps (Sheets S-1 through S-18) indicating basin boundaries, detailed surface topography, basin outfalls, runoff flow direction, stormwater conveyance system, industrial facilities, and illicit connections are provided in Appendix Q. Grid 19 was excluded since it contains no industrial facilities and does not contain conveyance systems related to industrial facilities.

Boundaries for drainage basins that contained industrial facilities were revised and/or verified during field inspections. Table 2-1 provides a summary of drainage basins and identifies associated outfalls, map grid, receiving water body, area of the drainage basin, and a percent of impervious cover within the basin. Table 2-2 lists the drainage basins for NAVBASE Kitsap Bangor and industrial facilities within each basin.

Most of the drainage basins at NAVBASE Kitsap Bangor flow to a point source discharge such as a stream or a pipe. Two drainage basins, DB18 and DB19, do not have point source discharges within the base boundary. Stormwater in these drainage basins flows overland across the base boundary; there are no identifiable outfalls for the industrial facilities in these drainage basins. Several industrial facilities are located directly adjacent to Hood Canal. Stormwater runoff from these facilities sheet-flows drain directly to Hood Canal. Those facilities were identified separately from their surrounding drainage basins. For the purposes of this SWPPP, sheet-flow areas are industrial areas of concern that do not drain to a point discharge (e.g., catch basin) but drain by overland flow directly to a receiving water body.

Twenty drainage basins, designated DB1 through DB20, were identified at NAVBASE Kitsap Bangor. The following discussion provides a description of the basins, their locations, their drainage patterns, and the types of stormwater conveyance systems used in the basin. Drainage from some facilities does not always reach a basin outfall. Stormwater runoff from these facilities infiltrates the ground before reaching the basin outfall.

Drainage Basin DB1
Drainage basin DB1 is located in the southeast corner of the base and outfalls to an unnamed stream east of the Trigger Avenue gate. The topography in this basin generally slopes moderately down from west to east. Natural vegetation such as grass, forest, and brush covers most of the drainage basin, although approximately 25% of the basin is covered with impervious areas including residential areas, parking lots, and roadways. Land use for the basin includes residential, commercial, and industrial. Stormwater runoff from the basin flows overland and through underground piping systems to the Trident Lakes Retention pond. The northern lake discharges into the southern lake which discharges through a spillway into a marshy area that discharges to an unnamed tributary of Clear Creek.

Drainage Basin DB2
Drainage basin DB2 is located in the southeastern portion of the base and outfalls to Clear Creek. The topography of the basin generally slopes down from north to south and from west to east. Approximately 30% of this basin is covered with impervious areas including roads, parking lots, equipment storage areas, and rooftops; the rest of the basin is vegetated with grasses and small

trees. Most structures in the basin are industrial and commercial facilities, although there are also some administrative and military facilities. Stormwater conveyance in the upper reaches of the basin is generally by overland flow. Runoff reaching the lower areas of the basin is conveyed by underground piping. Runoff flows into Retention pond 1043 before being discharged through a coalescing plate oil/water separator to Clear Creek. Due to the undulating topography, this drainage basin has a marshy area that prevents some runoff from reaching the basin outfall. The marshy area is located west of Trigger Avenue and north of Thresher Road.

Drainage Basin DB3

The very large drainage basin DB3 is in the west central portion of the base. The topography generally slopes down from south to north and east to west. Approximately 20% of the basin is covered with impervious roads, roofs, and parking lots; the rest of the basin is covered with forest or open grass. Structures are mostly industrial. Stormwater conveyance is by overland flow and underground piping systems that discharge to streams leading to Devil's Hole. The basin outfalls from the northern end of Devil's Hole discharge into Hood Canal. In addition to runoff directly associated with the upland drainage basin, runoff from the Service Pier and [redacted] is collected and pumped to Retention ponds in drainage basin DB3. These ponds discharge to outfall OF3. The SWPPP designates the [redacted] as sub-basin DB3A, and the outfall from the detention basin serving DB3A is outfall OF3A.

Drainage Basin DB4

Drainage basin DB4, which is in the northern portion of the base, discharges into Hood Canal. The topography generally slopes from south to north. This basin is almost entirely covered with forest; less than 10% of the basin is covered with impervious areas including roads and access driveways. Stormwater conveyance is by open channel, overland flow, or natural stream. Runoff flows into Hunter's Marsh before discharging into Hood Canal. Drainage basin DB4 has no industrial facilities of concern.

Drainage Basin DB5

Drainage basin DB5 is located in the northeast corner of the base and discharges into Hood Canal. The topography generally slopes down south to north. The basin is almost entirely covered with forest; less than 10% of the basin is covered with impervious roads and access drives. Stormwater conveyance is by overland flow and a natural stream. Runoff flows to Cattail Estuary and exits into Hood Canal via the stream channel flowing under the bridge. Drainage basin DB5 has no industrial facilities of concern.

Drainage Basin DB6

Drainage basin DB6 is located in the west central portion of the base and discharges into Hood Canal. The topography of this basin generally slopes down from east to west. The basin is almost entirely covered with forest; less than 10% of the basin is covered with impervious roads and parking lots. Stormwater conveyance is by open channel and a natural stream. Runoff flows into Marginal Stream, which discharges directly into Hood Canal. Drainage basin DB6 contains only one industrial facility of concern. There are no other structures in the basin.

Drainage Basin DB7

Drainage basin DB7 is located in the western portion of the base and discharges into Hood Canal. The topography of the basin generally slopes down east to west. The basin is primarily covered with grass and trees; approximately 20% of the basin is covered with impervious areas including Wahoo Road, Sealion Road, and a parking lot. Structures in the area are primarily

municipal and administrative. Stormwater conveyance is by overland flow and through underground piping systems. The basin discharges by pipe into the canal just south of Service Pier.

Drainage Basin DB8

Drainage basin DB8 is located in the western portion of the base and discharges into Hood Canal. The topography of the basin generally slopes down from east to west. Although it is primarily covered with grass and trees, approximately 10% of the basin is covered with impervious areas including Sealion Road and a parking area for Building [redacted]. Most of the structures in the basin are industrial and administrative. Stormwater conveyance is by overland flow and through an underground piping system. The basin outfall is an open channel lined with semicircular corrugated metal which outfalls under the [redacted] Pier access bridge.

Drainage Basin DB9

Drainage basin DB9 is located in the western portion of the base and discharges into Hood Canal. The topography of this basin generally slopes down from east to west. Approximately 25% of the basin is covered with impervious areas including Sealion Road, asphalt lots surrounding Building [redacted], and the access road to [redacted] Dock; the rest of the basin is covered with grass and other vegetation. All structures in the basin are industrial. Stormwater conveyance is by open channel and through underground piping. The basin outfall discharges into the canal from the seawall next to Building [redacted].

Drainage Basin DB10

Drainage basin DB10 is located in the western portion of the base, south of [redacted]. The topography of the basin generally slopes down from east to west. Half of the basin is covered with grass and other vegetation; impervious areas, including Sealion Road, parking lots, and loading areas cover the other half. All the structures in this basin are industrial. Stormwater conveyance is by open channel and through an underground piping system. Runoff flows to an open channel that discharges directly into Hood Canal.

Drainage Basin DB11

Drainage basin DB11 is located in the west central region of the base and discharges into Hood Canal. The topography of the basin generally slopes down from east to west and from south to north. The basin is primarily covered with grassy areas and forest; less than 10% of the basin is covered with impervious areas such as roads and military bunker access driveways. Structures in the basin are used for industrial and military purposes. Stormwater conveyance is by open channel and natural streams. The basin outfall is a natural, perennial flowing stream that discharges into Hood Canal.

Drainage Basin DB12

Drainage basin DB12 is located on the south side of the [redacted] in the northwest corner of the base. The topography of this basin slopes to the west and can be very steep. Approximately 40% of the basin is covered with impervious areas that include most of the [redacted] Wharf and a concrete pad; the remaining approximately 60% of the basin is covered with forest, grass, and gravel. Stormwater conveyance is by overland flow and through underground piping and pumping systems. Runoff from the wharf flows to catch basins, which drain to a sump. Stormwater is pumped from the sump into a Retention pond south of the wharf, which is included in this drainage plan. Another sump pump sends stormwater from the Retention pond through an oil/water separator before it discharges into Hood Canal though an

open channel. Construction of a [redacted] wharf is underway and has increased the impervious surface with an additional access road.

Drainage Basin DB13

Drainage basin DB13 is located in the northwest portion of the base and discharges into Hood Canal. The topography of the basin generally slopes down from east to west toward the canal, with some steep bluffs overlooking the canal. Forest covers approximately 80% of the basin. Impervious areas, such as Runner Road, Escolar Road, and the parking lot for Building [redacted], cover the rest of the basin. Stormwater conveyance is by overland flow, open channel flow, and through an underground piping system. The basin's outfall discharges from the rip-rap just west of the [redacted] Wharf seawall.

Drainage Basin DB14

Drainage basin DB14 is located in the [redacted] Wharf complex in the northwest corner of the base. The small basin encompasses a portion of Escolar Road and a parking area. Impervious asphalt and concrete covers the entire basin. The only building in this basin was demolished in 2004 although the concrete slab remains. Stormwater is conveyed through an underground piping system that discharges from the seawall east of [redacted] Wharf directly into Hood Canal.

Drainage Basin DB15

Drainage basin DB15 is in the [redacted] Wharf complex in the northwest portion of the base. A section of Escolar Road and a parking area are encompassed by the basin. The entire basin is covered with impervious asphalt and concrete. The only building in this basin (formerly an industrial facility) was demolished in 2004. Stormwater conveyance is through an underground piping system that discharges to Hood Canal from the seawall just south of [redacted] Wharf.

Drainage Basin DB16

Drainage basin DB16 is located in the [redacted] Wharf complex in the northwest portion of the base. This basin encompasses the intersection of Escolar and Seawolf roads, and the entrance drive to Marginal Wharf. Approximately 80% of the basin is covered by impervious asphalt; the rest of the basin is open with some vegetation. The only building in the basin (formerly an industrial facility) was demolished in 2004. Stormwater conveyance is by overland flow to a catch basin that discharges to Hood Canal from the seawall just north of [redacted] Wharf.

Drainage Basin DB17

Drainage basin DB17 is located in the [redacted] Wharf complex in the northwest portion of the base. The basin consists of a parking lot along the seawall north of [redacted] Wharf and an open channel parallel to Seawolf Road. Most of the parking area is graveled. An impervious area along Seawolf Road covers approximately 10% of the basin. Stormwater conveyance is by open channel and overland flow. The basin outfall discharges from the seawall into Hood Canal.

Drainage Basin DB18

Drainage basin DB18 is located in the southwest portion of the base. The topography of this basin generally slopes down from east to west. Approximately 10% of the basin is covered with impervious roadways, roofs, and parking lots. The rest of the basin is covered by areas of grasses or forests. Land use in the basin is residential and industrial. Stormwater conveyance is primarily by overland flow with some underground piping. No point source outfall was identified for this drainage basin; runoff infiltrates into the ground or flows overland across the western base boundary toward Hood Canal.

Drainage Basin DB19

Drainage basin DB19 is located in the central portion of the base along the eastern base boundary. The topography of this basin generally slopes down from west to east. Restricted access to this portion of the base prevented extensive investigation of this drainage basin. The basin appears to be primarily covered with areas of open grass and forests. Less than 10% of the basin is covered by impervious areas including roads and bunker access driveways. One industrial facility is located in this basin. All runoff from the facility infiltrates the surrounding soils. No point source discharge was identified for this basin; runoff is by open channel and overland flow across the base's eastern boundary.

Drainage Basin DB20

Drainage basin DB20 is located in the southeast corner of the base along the eastern boundary fence. The topography of this basin generally slopes down from north to south and from west to east. Approximately 80% of the basin is covered with grassy areas; the remaining areas (approximately 20%) are covered with impervious roads, roofs, and parking areas. Land use in the basin is residential with very little industrial activity. Stormwater conveyance is by open channel and overland flow. Runoff flows to an open channel along Boundary Road that discharges off base near the base's southeast corner.

2.4 Identification of Stormwater Discharges Associated with Industrial Activities

A total of 18 outfalls were identified at NAVBASE Kitsap Bangor. Two of the 20 drainage basins, DB18 and DB19, do not have outfalls. Stormwater in these drainage basins infiltrates into the ground prior to reaching an outfall. A number of other drainage basins contain industrial areas that drain to sub-basins whose topography limits stormwater runoff from reaching the basin outfall. Stormwater also discharges from several facilities via sheet-flow into Hood Canal.

Industries that are affected by stormwater regulations are determined on the basis of definitions provided in the EPA Multi-Sector General Permit and their Standard Industrial Classification (SIC) Codes. Table 2-2 lists the industrial facilities according to the drainage basin(s) or sheet-flow area in which the facility is located. Table 2-2 also provides information about whether stormwater from a given industrial facility discharges via an outfall. As Table 2-2 indicates, industrial facilities discharge through 15 of the 18 outfalls identified at NAVBASE Kitsap Bangor. In addition, there are seven individual facilities whose runoff sheet-flows directly into the Hood Canal.

Table 2-1: Drainage Basin Summary

Drainage Basin	Outfall Number	Outfall Location	Map Grid	Receiving Water	Drainage Area (acres)	Impervious Cover (%)
DB1	OF1	[redacted]	9	Unnamed Creek	413	25
DB2	OF2	[redacted]	15	Clear Creek	1,500	30
DB3	OF3	[redacted]	7	Hood Canal	1,131	20
DB3A	OF3A	[redacted]	7	Devil's Hole	11	100
DB4	OF4	[redacted]	8	Hood Canal	505	<10
DB5	OF5	[redacted]	14	Hood Canal	901	<10
DB6	OF6	[redacted]	8	Hood Canal	136	<10
DB7	OF7	[redacted]	3	Hood Canal	16	20
DB8	OF8	[redacted]	3	Hood Canal	7	10
DB9	OF9	[redacted]	3	Hood Canal	4	25
DB10	OF10	[redacted]	7	Hood Canal	7	50
DB11	OF11	[redacted]	8	Hood Canal	493	10
DB12	OF12	[redacted]	8	Hood Canal	23	40
DB13	OF13	[redacted]	8	Hood Canal	11	20
DB14	OF14	[redacted]	8	Hood Canal	< 1	100
DB15	OF15	[redacted]	8	Hood Canal	< 1	100
DB16	OF16	[redacted]	8	Hood Canal	< 1	80
DB17	OF17	[redacted]	8	Hood Canal	2	10
DB18	None[a]	[redacted]	5	None[a]	1,511	10
DB19	None[a]	[redacted]	17	None[a]	542	<10
DB20	OF20	[redacted]	15	Unnamed channel	15	20
DB21	None[a]	[redacted]	8, 13	None[a]	73	< 10
DB22	None[a]	[redacted]	13, 14	None[a]	338	< 10

a -No outfall identified that discharges to a receiving surface water body, including streams, lakes or the Hood Canal. Runoff infiltrates into the ground before reaching the outfall.

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Table 2-2: Summary of Drainage Basins and Industrial Facilities[a]

Drainage Basin	Outfall Impacted	Facility Number	Facility Description	Map/Grid No.
DB1	OF1	[redacted][b]	Heating Plant	10
DB2	OF2	[redacted]	Oil-Water Separator	15
		[redacted]	Railroad Equipment Maintenance Shop	15
		[redacted]	Warehouse	15
		[redacted]	Public Works Shop	15
		[redacted]	Oil-Water Separator	15
		[redacted]	Public Works Maintenance Shop	15
		[redacted]	Alarm Shop	15
		[redacted]	Supply Support Facility	15
		[redacted]	Small Engine Storage Shed	15
		[redacted]	Pesticide Equipment Shed	15
		[redacted]	SRSS Warehouse	15
		[redacted]	Public Works Vehicle Maintenance	15
		[redacted]	Steam Cleaning Shed	15
		[redacted]	Public Works Filling Station	15
		[redacted]	Small Engine Shop	15
		[redacted]	Locomotive Refueler	10
		[redacted]	EOD Building	10
		[redacted]	Public Works Storage Building	15
		[redacted]	Recycling Center	10
		[redacted]	Solid Waste Transfer Station	15
		[redacted]	Firefighter Trainer	10
		[redacted]	Heating Plant	10
		[redacted]	[redacted]	15
		[redacted]	Fuse Sensing Pad	15
		[redacted]	X-Ray Building	15
		[redacted]	[redacted] Shop	15
		[redacted]	Vertical Launch Systems	16
		[redacted]	[redacted] Building	16

Table 2-2: Summary of Drainage Basins and Industrial Facilities[a]

Drainage Basin	Outfall Impacted	Facility Number	Facility Description	Map/Grid No.
DB2 (Cont.)	None[e]	[redacted]	MK 46 Warshot	16
		[redacted]	Comp. Building with Storage	16
		[redacted]	Comp. Room with Storage	15
		[redacted]	POL Facility	10
		[redacted]	[redacted] Systems	16
	OF2 (Cont.)	[redacted]	MK 46 Warshot	16
		[redacted]	Container Refurbishment	16
		[redacted]	Inert Storage	16
		[redacted]	Environmental Test Facility	15
	None[e]	[redacted]	Waste Storage Facility	10
		[redacted]	Hazardous Waste Facility	10
		[redacted]	Hazardous Waste Storage Area	10
		[redacted]	Oily Waste Storage Facility	10
DB3	OF3	[redacted]	NDT1B1-X-Ray	6
		[redacted]	NDT1B Paint Storage Building	6
		[redacted]	Refit Industrial Facility	2
		[redacted]	Paint Shop Facility	6
		[redacted]	Transportation Facility	6
		[redacted]	Oil-Water Separator	7
		[redacted]	[redacted] Pier Utility Building	3
		[redacted]	Propane Gas SH	2
		[redacted]	Material Turned Into Supply	2
		[redacted]	Gas Cylinder Storage Facility	2
		[redacted]	Metal Cleaning Facility	2
		[redacted]	Hazardous Waste Storage	2
		[redacted]	[redacted] Warehouse	2
		[redacted]	[redacted] Pier	3
		[redacted]	Waterfront Shops	3
		[redacted]	Subsat Building	

Table 2-2: Summary of Drainage Basins and Industrial Facilities[a]

Drainage Basin	Outfall Impacted	Facility Number	Facility Description	Map/Grid No.
		[redacted]	Testing Building	2
		[redacted]	Assembly Building	2
DB3A	OF3	[redacted]	[redacted]	8
		[redacted]	Sail Loft	8
		[redacted]	RP1 Staging Area	8
		[redacted]	[redacted]	8
		[redacted]	RP2 Substation	8
		[redacted]	RP2 Staging Building	8
DB3A (cont.)	OF3 (cont.)	[redacted]	Drydock	8
		[redacted]	Machinist Shop	8
		[redacted]	Storage	8
		[redacted]	Paint Shed	8
		[redacted]	[redacted]	8
		[redacted]	[redacted]	8
		[redacted]	[redacted]	8
		[redacted]	Hazardous Waste Storage Building	8
		[redacted]	[redacted] Support Building	8
DB6	OF6		None	8
DB7	OF7	[redacted]	[redacted] Pier Pump Station	3
		[redacted]	Service Craft Operations Building	3
		[redacted]	Utility Building	3
		[redacted]	Outboard Motor Shop	3
		[redacted]	Welding Shop	3
DB8	DB8	[redacted]	Service Craft Operations Building	3
		[redacted]	Hazardous Waste Storage Facility	3
DB9	OF9	[redacted]	[redacted] Any Undersea WEP	3
		[redacted]	[redacted] Lube Oil Storage	3
DB10	OF10	[redacted]	Controlled Industrial Facility	7
DB10	OF10	[redacted]	Utility Plant Waterfront	7
		[redacted]	Subsat Building	7

Table 2-2: Summary of Drainage Basins and Industrial Facilities[a]

Drainage Basin	Outfall Impacted	Facility Number	Facility Description	Map/Grid No.
DB11	OF11	[redacted]	Sewage Pump Station	7
DB11	None[d]	[redacted]	Oil Water Separator/SOD	7
		[redacted]	Industrial Water Pump Station	7
		[redacted]	Chlorination Building	7
		[redacted]	Industrial Wastewater Treatment	8
		[redacted]	Waste Unloading Facility	8
		[redacted]	Waste Receiving Tank	8
		[redacted]	Industrial Waste Storage Facility	8
DB12	OF12	[redacted]	[redacted] Transfer SW Building	8
		[redacted]	[redacted]	8
		[redacted]	Oil Water Separator	8
		[redacted]	Oil Water Separator/SOD	8
DB13	OF13	[redacted]	Covered Storage	8
		[redacted]	[redacted] Storage Shed	8
		[redacted]	Refit Supply Facility	8
DB14	OF14		None	8
DB15	OF15		None	8
DB16	OF16		None	8
DB18	None[c]	[redacted]	Former Applied Instruction	5
		[redacted]	Battery/Flam Storage	5
		[redacted]	Storage	5
		[redacted]	MSL Parts Warehouse	6
		[redacted]	Equipment Maintenance Building	6
		[redacted]	FSB Flam Storage	6
		[redacted]	Filling Station	6
		[redacted]	Oil/Gas Storage	6
		[redacted]	Tool Storage	5
		[redacted]	Tire Storage	6
		[redacted]	Utility Plant 2	5

Table 2-2: Summary of Drainage Basins and Industrial Facilities[a]

Drainage Basin	Outfall Impacted	Facility Number	Facility Description	Map/Grid No.
	None[e]	[redacted]	SWS Supply Warehouse	5
		[redacted]	Tool Storage	5
		[redacted]	Research Engineering Building	2
		[redacted]	Radio Shop	2
DB19	None[c]	[redacted]	Open Storage	17
DB20	OF20		None	
DB21	None	None	Not Applicable	8, 13
DB22	None	None	Not Applicable	13, 14
Sheet Flow	N/A	[redacted]	Boat Storage Shed	3
		[redacted]	[redacted]	8
		[redacted]	KB Dock Small Craft Berthing	3
		[redacted]	[redacted]	8
		[redacted]	Pure Water Facility	8

a - Only drainage basins with industrial facilities are listed.
b - This facility lies in two drainage basins or a portion of this facility has sheet flow drainage.
c - No outfall identified which discharges to a receiving surface water body including streams, lakes, or the Hood Canal. Runoff infiltrates into the ground before reaching an outfall.
d - Runoff diverted to the Sanitary Sewer.
e - Some stormwater runoff from these facilities could reach a wetland prior to infiltration.

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3 Description of Non-Stormwater Drainage

3.1 Introduction

Stormwater runoff is typically defined as the portion of precipitation that drains from surfaces exposed to precipitation and flows through natural or constructed drainage systems to receiving waters (EPA 1993). Studies (Montoya 1987, Pitt and McLean 1986) have found that a significant portion of the flow and pollutant loadings in stormwater drainage systems arises from illicit and/or inappropriate discharges to those systems. To identify such sources, in 1994 and 1995, an illicit discharge investigation (IDI) was conducted as part of the overall stormwater and wastewater studies performed at the complex. Major objectives of this study were (a) to identify permitted and unpermitted non-stormwater entries into the stormwater system and (b) to identify and evaluate controls to reduce the discharge of unpermitted discharges to the maximum extent practicable. (Note that the term "illicit" also is used to describe unpermitted non-stormwater discharges throughout this plan.) Such controls may include management practices, control techniques, and system design and engineering methods.

As indicated above, not all non-stormwater discharges are considered illicit. The Multi-Sector General Permit authorizes a number of non-stormwater discharges, as identified below. Base-specific permitted non-stormwater discharges are discussed in Section 4.

- Discharges from emergency/unplanned fire-fighting activities;
- Fire hydrant flushing's and potable water sources, including waterline flushing's;
- Uncontaminated condensate from air conditioners, coolers/chillers, and other compressors and from the outside storage of refrigerated gasses or liquids
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizers have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents or hazardous cleaning products are used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonyphenols), and the wash water do not come into contact with oil and grease deposits, sources of pollutants associated with industrial activities (see MSGP part 5.2.3), or any other toxic or hazardous material, unless residues are first cleaned up using dry clean-up methods (c.g., applying absorbent materials and sweeping, using hydrophobic mops/rags) and you have implemented appropriate control measures to minimize discharges of mobilized solids and other pollutants (e.g., filtration, detention; settlement);
- Routine external building washdown/power wash water that does not use detergents or hazardous cleaning products (e.g., those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols);

- Uncontaminated groundwater or spring water;
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of your facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown; drains);
- Fresh water rinsing of boat hulls with no detergent; and
- Fresh water pressure washing of oil containment booms with no detergents

All other non-stormwater discharges are not permitted. Typical unpermitted non–stormwater entries include sanitary wastewater or septic system seepage; non-contact or contaminated industrial process waters; household toxics; glycols, detergents, and POLs from vehicle repair shops and storage areas; and runoff from pesticide or fertilizer applications. The method of entry can be through direct connections (where illicit discharges are plumbed directly to the drainage system), by indirect entry (through below-grade system infiltration), or from spills (through overland flow into catch basins). The IDI was specifically targeted at non–stormwater discharges originating at industrial facilities.

Illicit discharges can be investigated using two categories of methodologies: (1) upstream surveys and (2) dry weather flow samples and analyses. Upstream surveys, such as mapping and industrial facility investigations, are useful in prioritizing areas of concern; locating specific pollutant sources; and identifying direct, illicit connections (using dye or smoke tests). Dry weather flows are characterized through tracer studies (using pH, temperature, conductivity, and other field tests) at stormwater outfalls. Laboratory analyses can be performed on samples taken from the drainage. The relative degree to which each of these methodologies is used depends on site-specific conditions, data availability, and time constraints.

Specific procedures used during the IDI included:

- Review and confirmation of General Development Maps (GDMs) to identify potential non–stormwater illicit discharges or cross-connections to the system;
- Facility inspections of all industrial facilities-of-concern and interviews of facility personnel at each designated industrial area; and
- Dry weather inspection and tracer testing of all outfalls identified in the field.

3.2 Illicit Discharge Investigation Methods

3.2.1 Review of Sanitary and Storm Sewer Facility Maps

Before the field investigation commenced, the NAVBASE Kitsap Bangor general development maps (GDMs) were reviewed to identify potential cross-connections between the sanitary and storm sewer systems, locate direct discharges to the storm sewer lines from industrial sources, and narrow the areas requiring field-testing efforts.

Facility locations were noted on field copies of the GDMs. Stormwater lines and outfalls downstream of each of these industrial areas were considered high priority, while residential and other non-industrial-related stormwater lines were considered minor.

Illicit connections were tentatively identified during the review when the GDM indicated a direct connection from an industrial facility to a storm sewer line. Typically, field inspections revealed that such lines on the drawing indicated permitted roof drain connections, not illicit connections. Other actual illicit discharges or connections were located, however, during field inspections (see Section 4.2.2).

The GDMs were determined to contain inconsistencies and omissions in stormwater and sanitary sewer details, and substantial ground truthing was required. Corrected GDMs were used to produce the drainage base maps that are provided in Appendix Q. The drawings, which represent an area of approximately 551 acres, show drainage basins, outfalls, facilities, roadways, impervious areas related to facilities, and stormwater conveyance systems. A grid legend, defining the area illustrated on the drawing, is included on each drawing.

3.2.2 Facility Inspections and Personnel Interviews

Following review of the base maps, the 148 industrial facilities or groups of facilities were visited to gather information concerning potential illicit discharges. Because illicit discharges are not typically shown on GDMs, facility inspections were performed to ensure that all connections were identified. The facility inspections were completed in conjunction with facility interviews performed for other sections of the SWPPP. Physical inspections of the existing stormwater systems, testing of potential discharges, and personnel interviews were performed whenever appropriate during the facility inspections. Drainage basin boundaries were also checked and revised during the facility inspections.

The existing stormwater conveyance systems (e.g., catch basins, manholes, culverts) were inspected to determine flow directions and look for evidence of illicit flows. Catch basins and manholes draining the industrial areas were visually inspected to check for direct connections from industrial facilities. The source and the fate of suspect connections to the system were determined. The stormwater system was also examined for odors, stains, and colors that might indicate the presence of illicit flows. The industrial facilities were inspected for potential illicit connections, such as floor drains, sumps, sinks, pipes, and other unknowns.

Potential illicit connections discovered during the physical inspection were tested to determine whether they connected to the stormwater system. Flush and dye tests were used to determine the fate of flows through the potential illicit connections. These tests were performed by pouring water, dye, or both into a potential connection and watching for a discharge in potential down

gradient stormwater and sanitary sewer systems. Potential connections determined to drain into the stormwater system were designated illicit connections.

Smoke tests also were used to determine the source of unknown connections to the stormwater system. Smoke from smoke bombs was blown into these connections through manholes and outfalls. Surrounding area and facilities were monitored for smoke emitting from the unknown source. Use of the smoke testing was kept to a minimum during this investigation due to potential disruption of base operations. In addition, the effectiveness of smoke testing is often limited by the presence of water traps and wet wells, which prevent smoke tracing.

During the inspections, the facility operators or building contacts were interviewed to determine whether any known illicit discharges or connections existed. Operators and contacts were questioned regarding the discharge point of potential connections and the history and maintenance of the stormwater system for the facility. Also, the historical and present use of any illicit discharge or connection was discussed as well as potential contaminants of concern that may enter into the connections.

3.2.3 Dry Weather Inspections

Dry weather inspections were conducted at each outfall from NAVBASE Kitsap Bangor identified during the field effort. The purpose of these inspections was to evaluate the likelihood that contaminated stormwater is currently leaving the base through stormwater conveyance systems.

The EPA recommends a 72-hour antecedent dry period before performing dry weather inspections at outfalls. There was no opportunity to complete the inspections during the field investigation from October 24 through November 18, 1994. On January 4, 1995, contracting personnel returned to the field to complete the dry weather inspections. No precipitation had been recorded during the previous 48-hour period. Contracting personnel returned to all outfalls that were found during the previous mobilization. The presence or absence of flow at outfalls was noted. Where flow was observed, a tracer study was conducted to characterize the discharge and to help indicate whether the flow was associated with an illicit discharge.

Both physical and chemical characterizations were performed. The flow rate was estimated using a collection bin and stopwatch. The color, odor, and turbidity were noted along with any indications of sheens, stains, floatable material, vegetation, and damage to outfall structures. Temperature measurements were taken as a primary indicator of sanitary or industrial connections since the inspections were taking place during winter months when stormwater could be expected to be cold. The pH and specific conductivity were measured as well. Specific conductivity is an indicator of dissolved solid content. Conductivities of less than 1000 µS/cm indicate a high concentration of rainwater. A significant deviation in pH from the neutral 7 is indicative of industrial or commercial discharges. Because sanitary wastewater is generally of neutral pH, it will not indicate sanitary cross-connections. However, sanitary flow is characterized by a high turbidity, as well as the color and odor deviation. Field personnel were also prepared to measure total nitrogen and potassium, fluoride, and chlorine, if needed, as further indicators of domestic/sanitary waste streams and potable water, respectively.

3.3 Illicit Discharge Investigation Results

This section reports the results of the dry weather inspections and the facility inspections. Sample results and flow descriptions from the dry weather inspections are presented in Table 3-1. Seven of the 20 outfalls had dry weather flows. The sample results from the flowing outfalls indicated that the flows were from natural sources such as streams and seeps. As a result, the dry weather inspections did not indicate the presence of any illicit discharges. Table 3-2 presents the results of the facility inspections.

3.3.1 Outfall OF1

Outfall OF1 is an unnamed stream that leaves the base just east of the Trigger Avenue gate. The flow was estimated to be 50 liters per minute (L/min). This stream is the outfall for drainage basin DB1. No odor, color, or staining was evident at the time of the inspection. This stream drains Trident Lakes and the marshy area south of Trident Lakes. The sample results indicate that the flow at this outfall is fed by natural surface water and groundwater.

The drainage basin discharging at this outfall supports five industrial facilities.

3.3.2 Outfall OF2

Outfall OF2 is located at Clear Creek next to Southern Boundary Road. This creek receives flow from drainage basin DB2 and was flowing at 5 L/min. The sample results were comparable to the results for flow from groundwater infiltration. No odors or colors were noted during the inspection.

The drainage basin for this outfall contains 54 industrial facilities.

3.3.3 Outfall OF3

Outfall OF3 is the discharge point for drainage basin DB3 and is located between Devil's Hole and Hood Canal. The dry weather flow from this outfall was estimated at 500 L/min. Sample results were comparable to natural surface and groundwater flows. No odors, stains, or colors were noted during the inspection.

Forty-two industrial facilities are located in the drainage basin for this outfall.

3.3.4 Outfall OF4

Outfall OF4 is the outfall for drainage basin DB4 and is located between Hunter's Marsh and Hood Canal. The flow was estimated at 200 L/min during the dry weather inspection. Sample results indicate that the flow is natural surface water and groundwater. No odors, stains, or colors were noted at the outfall. This basin contains no industrial facilities of concern.

3.3.5 Outfalls OF5A and OF5B

Outfalls OF5A and OF5B drain Cattail Estuary and drainage basin DB5. Both outfalls had estimated flows of 400 L/min. Sample results were similar and indicated natural flows. No odors or stains were noted, but a slight yellow color was observed. No industrial areas of concern are located in this drainage basin.

3.3.6 Outfall OF6

Outfall OF6 is the outfall for Marginal Stream and drainage basin DB6. Dry weather flow was estimated at 300 L/min. Sample results indicate natural flows at this outfall. One industrial facility is located in this drainage basin.

3.3.7 Outfall OF7

Outfall OF7 is located southwest of the Service Pier and is the outfall for drainage basin DB7. This outfall was dry during the dry weather inspection. The drainage basin for this outfall contains two industrial facilities.

3.3.8 Outfall OF8

Outfall OF8 is located under the Service Pier entry ramp and drains drainage basin DB8. The outfall was dry during the inspection. The drainage basin contains three industrial facilities.

3.3.9 Outfall OF9

Outfall OF9 is located in the [redacted] Dock seawall and is the outfall for drainage basin DB9. The outfall was dry during the inspection. The drainage basin contains two industrial areas.

3.3.10 Outfall OF10

Outfall OF10 is an open channel that discharges into Hood Canal between [redacted] and Devil's Hole. This is the outfall for drainage basin DB10 and was dry during the inspection. This drainage basin contains three industrial facilities.

3.3.11 Outfall OF11

Outfall OF11 is located along Escolar Road between [redacted] Wharf and [redacted]. This is the outfall for drainage basin DB11. This outfall is an intermittent stream that was not sampled. The basin for this outfall contains eight industrial facilities.

3.3.12 Outfall OF12

Outfall OF12 is located just south of the [redacted] and is the outfall for drainage basin DB12. The outfall was dry during the dry weather inspection. The drainage basin for this outfall contains four industrial facilities.

3.3.13 Outfall OF13

Outfall OF13 is located along Escolar Road just south of the [redacted] Wharf Seawall. This outfall is the discharge point for drainage basin DB13. During the dry weather inspection, this outfall was dry and no odors, colors, or stains were noted at the outfall. The drainage basin for this outfall contains three industrial facilities.

3.3.14 Outfall OF14

Outfall OF14 is located in the seawall at the [redacted] Wharf complex and is the outfall for drainage basin DB14. This outfall had no flow during the dry weather inspection. The basin for this outfall contains one industrial facility.

3.3.15 Outfall OF15

Outfall OF15 is located in the seawall at the [redacted] Wharf complex and is the outfall for drainage basin DB15. This outfall had no flow during the dry weather inspection. The basin for this outfall contains one industrial facility. One illicit connection was found during the facility inspection.

3.3.16 Outfall OF16

Outfall OF16 is located in the seawall at the [redacted] Wharf complex and is the outfall for drainage basin DB16. This outfall had no flow during the dry weather inspection. The basin for this outfall supports no industrial facilities.

3.3.17 Outfall OF17

Outfall OF17 is located in the seawall at the [redacted] Wharf complex and is the outfall for drainage basin DB17. A flow of 50 L/min was observed during the dry weather inspection. No odors, colors, or stains were observed at the outfall. There are no industrial facilities in the basin for this outfall. The flow at this outfall comes from a hillside along Seawolf Road. The sample results are comparable to natural groundwater parameters.

3.3.18 Outfall OF18

Outfall OF18 is located in the southwest portion of the base and is the outfall for drainage area DB18. No industrial areas of concern are located in this drainage basin.

3.3.19 Outfall OF19

Outfall OF19 is located in the central portion of the eastern base boundary. The outfall serves drainage area DB19, which contains no industrial areas of concern.

3.3.20 Outfall OF20

Outfall OF20 is located in the southeast corner of the base and is the outfall for drainage area DB20. This outfall had no flow during the dry weather inspection. The basin for this outfall contains two industrial facilities.

3.3.21 Sheet-Flow Areas

A number of sheet-flow areas exist on NAVBASE Kitsap Bangor. The Pure Water Facility, Building [redacted], located along Escolar Road south of [redacted] Wharf, contains a sheet-flow area.

The facility has a permitted blowoff on a water backflow preventer that is piped directly out of the building to the Hood Canal.

3.3.22 Other Drainage Basins

Two additional drainage basins (DB21 and DB22) have been identified on base. These basins contain no discernable outfall and no industrial facilities.

3.4 Certification of Non-Stormwater Discharge Testing and Evaluation

The results of the non-stormwater discharge investigation are summarized and certified in Table 3-4. The table summarizes the results of the investigation as described in Section 3.3.

3.5 Permitted Non-Stormwater Discharges

As indicated in Section 3.1, the Multi-Sector general permit authorizes certain non-stormwater discharges. A number of site-specific permitted non-stormwater discharges are present. These include:

- Chiller water overflow at Utility Building ([redacted]);
- Drinking water fountain and eye wash station discharges at the Torpedo Building ([redacted]);
- Drinking water blow-off to Hood Canal at the Pure Water Facility ([redacted]);
- Discharges of potable water from eyewash stations; and
- Fresh water pressure washing of oil containment booms to remove marine growth.
- Fresh water rinsing of small boats.

Other permitted non-stormwater discharges similar to those identified above exist at other facilities. In addition, non-detergent building and pavement washing takes place as needed. As part of the potable water supply system, waterlines are flushed to the storm drain system. Lawns are also watered throughout the developed portions of the base resulting in potable water runoff to the storm drain system. Fire-fighting activities, as required, also result in potable water runoff to the storm drain system.

Table 3-1: Summary of 1995 Dry Weather Inspection Results

Outfall	Description of Flow	pH	Temperature (°F)	Conductivity (µs/cm)
OF1	Flowing approximately 50 L/min No color, odor, or staining	6.56	36.8	18.7
OF2	Flowing approximately 5 L/min No color or odor	7.12	52.5	153.0
OF3	Flowing 500 L/min No color or odor	7.35	54.3	59.3
OF4	Flowing 200 L/min No color or odor	6.55	43.6	43.6
OF5A	Flowing 400 L/min No odor, slight yellow color with sediment	6.80	46.2	42.6
OF5B	Flowing 400 L/min No odor, slight yellow color with sediment	7.01	34.6	44.0
OF6	Flowing 300 L/min No color, odor, or staining	7.64	38.8	88.6
OF7	Dry			
OF8	Dry			
OF9	Dry			
OF10	Dry			
OF11	Not sampled			
OF12	Dry			
OF13	Dry			

Table 3-1a: Summary of 2006 Dry Weather Inspection Results

Outfall	Description of Flow	pH	Temperature (°F)	Conductivity (µs/cm)
OF1	Flowing approx. 75 L/min, clear, no odor	7.30	53.7	NA
OF2	Dry			NA
OF3	Inflow to detention pond behind bldg. 7077 checked. Flow approximately 20 L/min, slight yellow stain, no odor/foam/sheen.	7.50	57.3	NA
OF3A (Delta)	Check pier wetwell			NA
OF4	Flowing approx. 55 L/min, clear, no odor	7.19	68.0	NA
OF5A	Flowing approx. 375L/min, clear, no odor	8.08	69.0	NA
OF5B	Flowing approx. 110L/min, clear, no odor	8.04	68.7	NA
OF6	Flowing 75+ L/min, slight color, no odor	8.16	57.0	NA
OF7	Dry			NA
OF8	Dry			NA
OF9	Dry			NA
OF10	Flow approximately 0.06 L/min, clear, no odor.	7.74	58.2	NA
OF11	Flow approximately 350 L/min, clear, no odor	8.06	56.1	NA
OF12	Dry			NA
OF13	Flow approximately 20 L/min, slight color, slight natural organic odor	8.02	59.3	NA

4 Site-Specific Industrial Stormwater Pollution Source Identification, Assessment, and BMPs

4.1 Industrial Facilities and Identified Pollutant Sources

As part of the initial data gathering efforts supporting this SWPPP in 1994-1995, 148 individual or groups of industrial facilities at NAVBASE Kitsap Bangor were inspected. During the 2006 update the original 148 facilities were revisited and an additional 8 facilities were assessed. Some of the original 148 facilities were removed from the SWPPP as part of the 2006 update. Table 4-1 lists the current industrial facilities. Based on information gathered during the inspections, facility activities and functions were compared to the industrial profiles for each of the 29 sectors contained in the Multi-Sector General Permit. Of the 156 facilities inspected discharges from 128 activities are covered under one or more of six sectors contained in the permit. The sector(s) associated with each facility are identified in Table 4-1.

The potential pollutant sources for all industrial facilities inspected are identified in this Section and Section 3 (illicit discharges and illicit connections). These potential pollutant sources were determined based on interviews with facility personnel and a field inspection of significant material inventories, handling procedures, storage practices, and standard operating and safety procedures at each site. In addition, available maps of the sanitary and storm sewer systems were compared to field conditions. In general POLs were the most commonly cited potential contaminants at NAVBASE Kitsap Bangor industrial facilities during the field inspections, followed by metals and suspended solids.

4.2 Identification of Control Measures/Best Management Practices (BMPs)

BMPs are measures or procedures that are used to prevent or reduce the potential for water pollution. Numerous BMPs are available to choose from for achieving this purpose. Some BMPs are more appropriate for an individual site than others, based on site-specific characteristics; some BMPs are readily implemented at all sites.

EPA identifies baseline BMPs (good housekeeping and preventive maintenance practices; inspections; employee training and testing; spill prevention and response; sediment and erosion control; management of runoff; and recordkeeping and reporting) that are required of all facilities and advanced BMPs that specifically address particular pollutant sources or industrial sectors. The Stormwater Management Manual for Western Washington (Ecology 2012) also identifies baseline BMPs and emphasizes source control BMPs as the first and most cost effective method of eliminating or reducing pollution of stormwater.

During the planning stages of this document, various alternative BMP options from the BMP Index described above were considered for each specific location or purpose. These alternatives were then evaluated in terms of existing BMPs in use, pollution reduction effectiveness, ease of

implementation, and other concerns, and those best suited for implementation at NAVBASE Kitsap Bangor were identified.

4.2.1 Core BMPs

Core BMPs are Non-Numeric Technology Based Effluent Limits required in the body of the 2015 MSGP (Section 2.1.2) that generally apply to all industrial areas at Bangor. The Core BMPs for NAVBASE Kitsap Bangor are included in Table 4-2. Additional Core BMPs will be added, as needed.

4.2.2 Sector-Specific BMPs

Sector-specific BMPs contained in part 8 of the 2015 MSGP must be considered for those portions of base that fall into one of the industrial sectors defined in the MSGP. Control measures for NAVBASE Kitsap Bangor Sectors N (Scrap Recycling), P (Land Transportation and Warehousing), Q (Water Transportation), R (Ship Repair) and AA (Fabricated Metal Products), were considered and are presented in Table 4-3.

4.2.3 Facility-Specific BMPs:

New site-specific BMPs identified to help further reduce the potential for stormwater pollution are summarized in Table 4-5.

Table 4-1: Summary of NAVBASE Kitsap Bangor Industrial Facilities and Potential Contaminants

Tenant	Report Section	Facility (Building Number)	Permit Sector	Potential Contaminants
NAVBASE Kitsap Bangor and Base Operating Support Contract (BOSC)	4.1.1	Oil/Water Separator ( )	P – Land Transportation and Warehousing	POL
	4.1.2	Railroad Equipment Maintenance Shop (*) , Locomotive Refueler (1206) and C-Pool ( )	P – Land Transportation and Warehousing	Paint, POL
	4.1.3	Warehouse ( ) and Public Works Storage Building ( )	P – Land Transportation and Warehousing	Paint, POL, Solids, Pesticides
	4.1.4	Public Works Shop ( )	Q - Water Transportation Facilities	Oil, Solids, Acids
	4.1.5	Oil/Water Separator ( )	Q - Water Transportation Facilities	POL
	4.1.6	Public Works Maintenance Shop ( )	Q - Water Transportation Facilities	POL, Paint, Solvents, Pesticides
	4.1.7	Alarm/Crane Shop ( )	Q - Water Transportation Facilities	Paint, Battery Lead/Acid
	4.1.8	Supply Support Facility ( )	Q - Water Transportation Facilities	POL
	4.1.9	Small Engine Storage Shed ( )	P – Land Transportation and Warehousing	POL
	4.1.10	Pesticide Equipment Shed ( )	P – Land Transportation and Warehousing	Pesticides
	4.1.11	SRSS Warehouse ( )	P – Land Transportation and Warehousing	Solids
	4.1.12	Public Works Vehicle Maintenance Shop ( )	P – Land Transportation and Warehousing	Paint, Antifreeze, POL, Battery Lead/Acid
	4.1.13	Steam Cleaning Shed ( )	P – Land Transportation and Warehousing	POL
	4.1.14	Public Works Filling Station ( )	P – Land Transportation and Warehousing	Gasoline
	4.1.15	Small Engine Shop ( )	P – Land Transportation and Warehousing	Solvents, POL
	4.1.16	Explosive Ordnance Disposal Building ( )	Q - Water Transportation Facilities	Oil
	4.1.17	Recycling Center ( )	N - Scrap Recycling and Waste Recycling Facilities	BOD, Solids, Metals
	4.1.18	Solid Waste Transfer Station ( )	P – Land Transportation and Warehousing	BOD, Solids
	4.1.19	Heating Plant ( )	Q - Water Transportation Facilities	pH, Solids, Metals
	4.1.20	POL Facilities ( )	P – Land Transportation and Warehousing	Solids, pH, Metals
	4.1.21	Construction Battalion Unit Facilities ( )	P – Land Transportation and Warehousing	POL, Paint, Solvents
	4.1.22	Hazardous Waste Facilities ( )	Q - Water Transportation Facilities	Solids, POL, Solvents
	4.1.23	Refuse Shed ( )	Q - Water Transportation Facilities	Solids
	4.1.24	Sewage Pump Station (Oil/Water Separator/SOD (7039), Industrial Pump Station ( )	Q - Water Transportation Facilities	Solids, BOD, POL
	4.1.25	Industrial Wastewater Facilities ( )	Q - Water Transportation Facilities	POL
	4.1.26	Oil/Water Separator ( )	Q - Water Transportation Facilities	POL
	4.1.27	Chlorination Building ( )	Q - Water Transportation Facilities	Chlorine

Table 4-1: Summary of NAVBASE Kitsap Bangor Industrial Facilities and Potential Contaminants

Tenant	Report Section	Facility (Building Number)	Permit Sector	Potential Contaminants
NAVBASE Kitsap Bangor and Base Operating Support Contract (BOSC) (Cont.)	4.1.28	[redacted] Pier ([redacted])	Q - Water Transportation Facilities	Ethylene Glycol Solvents, POL Solids, Paint
	4.1.29	Utility Plant Waterfront ([redacted])	Q - Water Transportation Facilities	POL, BOD, Solids
Naval Undersea Warfare Center Bangor Annex (NUWC)	4.2.1	WQEC [redacted]	AA - Fabricated Metal Products	POL, Solvents, Metals, Paint
	4.2.1	Fuse Sensing Pad ([redacted])	AA - Fabricated Metal Products	Metals
	4.2.1	X-Ray Building ([redacted])	AA - Fabricated Metal Products	Metals, Acid
	4.2.2	[redacted] Shop ([redacted]) and Compressor/Storage Building ([redacted])	AA - Fabricated Metal Products	Paint, POL, Detergents
	4.2.3	[redacted]	AA - Fabricated Metal Products	Paint, Solvents, Metals
	4.2.4	[redacted] Building ([redacted]) and RFI Compressor/Storage Building ([redacted])	AA - Fabricated Metal Products	POL
	4.2.5	MK 50 Warshot ([redacted])	AA - Fabricated Metal Products	Paint, Solvents, Metals
	4.2.6	MK 46 Warshot ([redacted])	AA - Fabricated Metal Products	Paint, Solvents, Metals
	4.2.7	Container Refurbishment ([redacted])	AA - Fabricated Metal Products	Paint, Solvents, Metals
	4.2.8	Inert Storage ([redacted])	AA - Fabricated Metal Products	Paint, Metals
	4.2.9	Open Storage ([redacted])	AA - Fabricated Metal Products	Solids, Metals
	4.2.10	Environmental Test Facility ([redacted])	AA - Fabricated Metal Products	Paint, Solvents, Metals, POL
	4.2.11	[redacted] Building ([redacted]*), [redacted] Dock ([redacted]*), and Luhe Oil Storage ([redacted])	Q - Water Transportation Facilities	POL, Detergent, Paint, Solids, Solvents, Metals
	4.2.12	Research Engineering Building ([redacted])	Q - Water Transportation Facilities	POL, Solvents, Paint, Battery Lead/Acids
	4.2.13	Testing Building ([redacted])	Q - Water Transportation Facilities	Paint, Solvents, Metals, POL
	4.2.14	Assembly Building ([redacted])	Q - Water Transportation Facilities	Paint, Solvents, Solids
Strategic Weapons Facility Pacific (SWFPAC)	4.3.1	[redacted] Spares Storage ([redacted]) and Flammable Storage ([redacted])	Q - Water Transportation Facilities	Solvents
	4.3.2	Equipment Maintenance ([redacted]), Oil/Gas Storage Building ([redacted]), and Tire Storage Building ([redacted])	P – Land Transportation and Warehousing	POL, Solids, Solvents, Detergents
	4.3.3	Filling Station ([redacted])	P – Land Transportation and Warehousing	Gasoline, Diesel
	4.3.4	Tool Storage ([redacted])	P – Land Transportation and Warehousing	None
	4.3.5	Utility Plant No. 2 ([redacted])	Q - Water Transportation Facilities	Sulfide, Caustics
	4.3.6	SWS Supply Warehouse ([redacted])	P – Land Transportation and Warehousing	Metals
	4.3.7	Tool Storage Building ([redacted])	P – Land Transportation and Warehousing	None

Table 4-1: Summary of NAVBASE Kitsap Bangor Industrial Facilities and Potential Contaminants

Tenant	Report Section	Facility (Building Number)	Permit Sector	Potential Contaminants
Strategic Weapons Facility Pacific (SWFPAC) Cont.	4.3.8	NDTIB Paint Storage Building ( )	Q - Water Transportation Facilities	POL, Paint, Solvents
	4.3.9	Wharf (*, ,)	Q - Water Transportation Facilities	POL, Paint, Solvent
Puget Sound Naval Shipyard & Intermediate Maintenance Facilities (PSNS&IMF)	4.4.1	Refit Industrial Facility ( )	Q - Water Transportation Facilities R - Ship and Boat Building and Repairing AA - Fabricated Metal Products	Metals, Solvents, Detergents, POL
	4.4.2	Paint Shop Facility ( )	Q - Water Transportation Facilities	Paint, Solvents, Acids
	4.4.3	Transportation Facility ( )	P - Motor Transportation Facilities	Metals, POL
	4.4.4	Propane Gas Storage ( )	Q - Water Transportation Facilities	None
	4.4.5	Material Turn Into Supply ( )	Q - Water Transportation Facilities	Solvents, Paint
	4.4.6	Gas Cylinder Storage Facility ( )	Q - Water Transportation Facilities	None
	4.4.7	Covered Storage (,)	Q - Water Transportation Facilities	POL, Paint, Acids, Ethylene Glycol
	4.4.8	Metal Cleaning Facility ( )	AA - Fabricated Metal Products	POL, Detergents, Metals
	4.4.9	Hazardous Waste Storage Facility ( )	Q - Water Transportation Facilities	Metals, Detergents, Corrosives
	4.4.10	Warehouse ( )	Q - Water Transportation Facilities	Caustics, Acid, Solids, Solvents
	4.4.11	Small Engine Repair Facility ( )	Q - Water Transportation Facilities	POL, Paint, Solvents
	4.4.12	Welding Repair Facility ( )	Q - Water Transportation Facilities	POL, Paint, Solvents
	4.4.13	Waterfront Shops ( )	Q - Water Transportation Facilities	POL, Paint, Solvents
	4.4.14	Wharf Facility (*)	Q - Water Transportation Facilities	POL, Solvents, Metal, Detergents, Ethylene Glycol
	4.4.15	Controlled Industrial Facility ( )	Q - Water Transportation Facilities	Paint
	4.4.16	SUBSAT Facility ( )	Q - Water Transportation Facilities	Lithium Hydroxide, Mono Methylamine
	4.4.17		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing	POL, Paint, Metals, Solids
	4.4.18	Refit Support Facility ( )	Q - Water Transportation Facilities	Oil, Metals
	4.4.19	( )	Q - Water Transportation Facilities R - Ship and Boat Building and Repairing	Paint, Solids, Metal, POL, Wastewater
	4.4.20	Pure Water Makeup Building ( )	Q - Water Transportation Facilities	Acids, Caustics

*:-Only discharges from facilities indicated in group are applicable to sector.
NA:-Permit Sector not applicable to facility based on sector activity definition.

NA[1]:-Permit not applicable. Sector definition applicable, however no discharge to receiving water body.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
Base wide Core BMPs			
C-1	Good Housekeeping	The MSGP requires implementation of good housekeeping practices. Blasting debris and grit have been noted on the ground and in catch basins during past inspections. The [redacted] is an area that requires additional emphasis.	• Prevent stormwater from coming into contact with polluting materials. • Use control measure in combination to enhance minimization. • Assess the type and quantity of pollutants, including impact to receiving waters. • Explore utilizing less impervious areas and infiltrate onsite (such as Bioretention cells, pervious pavement, etc.) • Attenuate flow through use of open vegetated swales and natural depressions. • Conserve and/or restore riparian buffers to protect streams. • Explore using treatment interceptors such as swirl separators, sand filters, where appropriate.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-2	Minimize Exposure	Minimizing exposure of pollutants to stormwater is a core BMP required under the MSGP. Uncontained outdoor vehicle washing can be a problem. Scrap metal collection dumpsters throughout the facility are missing or have damaged lids. Stormwater flowing through these containers picks up inorganic and petroleum contamination before entering the storm sewer system. Obsolete equipment, unused metal stock, and significant materials including petroleum are stored outside exposed to the weather at times.	Minimize the exposure of all processes to rain, snow, snowmelt, and runoff: • Use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas. • Locate materials, equipment, and activities so that potential leaks and spills are contained or able to be contained or diverted before discharge. • Clean up spills and leaks promptly using dry methods. • Store leaky vehicles and equipment indoors, or use drip pans/absorbents. • Use spill/overflow protection equipment. • Perform all vehicle/equipment cleaning indoors, under cover, or in bermed areas to collect water (for drainage to sanitary sewer systems). • Drain fluids from decommissioned vehicles and equipment.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-3	Maintenance	Preventative maintenance is one of the core BMPs required under the MSGP. Many of the storm drain catch basins throughout Bangor were in need of cleaning at the time of the site visits. The [redacted] should be an area of emphasis.	All exposed areas must be kept clean: • Sweep or vacuum at regular intervals; wash down and collect water for proper disposal. • Store materials in appropriate containers. • Keep all dumpster and recycling lids closed (except when in use) • Minimize potential for waste, floatable debris to be discharged – keep area clean or intercept before discharge.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-4	Spill Prevention and Response	Spill prevention and response measures are required as a core BMP under the MSGP. Spill prevention and response procedures are thoroughly addressed in the NAVBASE Kitsap Bangor SPCC Plan and OHS Response Plan. The "SPCC plan establishes minimum spill prevention procedures, methods, equipment and facility design requirements to prevent and control the spillage of all types of oil (Petroleum Oils and Lubricants (POL) and Non-Petroleum Oils) This Plan also includes evaluations and recommended actions for oil storage facilities at Bangor where spills may have a negative impact on the environment."	The Bangor SPCC and OHS Response plans are active and effective in preventing and responding to spills. No significant actions with regard to spill prevention and response procedures are included or necessary in this plan. The plan does, however, require that regular (monthly and annual) inspections include consideration of spill potential. Spill response numbers are included in SWPPP section 1.5.2. Routine spill containment and cleanup measures applicable throughout Bangor include: • Applicable personnel shall be trained in spill response. • Adequate spill response kits and absorbent will be stationed near potential spill locations. • All liquid significant materials with the potential to contact stormwater shall be stored within secondary containment (including ASTs, drums, small containers, batteries). • Liquid storage areas will be inspected regularly. • All spills regardless of size will be cleaned up immediately. • Seal interior floor drain in industrial areas. • Use drip pans under leaking equipment.
C-5	Erosion and Sedimentation Controls	The MSGP requires that the SWPPP identify areas of the facility that have the potential for erosion and implement BMPs to control that erosion.	No significant areas of erosion were noted during the site visits. Discharges from construction sites are controlled in accordance with contract requirements. Practices for controlling erosion from new construction are included in Appendix E.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-6	Management of Runoff	The MSGP requires that stormwater runoff management practices such as permanent structural BMPs be described in the SWPPP	Divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff to minimize pollutants to discharges. Consult EPA's internet-based resources relating to run-off management.
C-7	Salt Storage Piles	Control measures including covering piles must be described and implemented through the SWPPP.	Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other industrial purposes, including maintenance of paved surfaces, in order to minimize pollutant discharges. Implement appropriate measures to minimize exposure resulting from adding or removing materials from the pile.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-8	Employee Training	Employee training is required as a core BMP under the MSGP.	Train employees that work in areas where industrial materials or activities are exposed to stormwater, and include employees that are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people), as necessary: • Personnel who are responsible for the design, installation, maintenance, and/or repair of controls • Personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges. • Personnel who are responsible for conducting and documenting monitoring and inspections. • Personnel who are responsible for taking and documenting corrective actions as required in Part 4. Training will focus on the components and goals of the SWPPP: • Spill response procedures, good housekeeping, maintenance requirements, material management practices. • Location of all controls on the site as required by this permit, and how they are to be maintained. • Proper procedures to follow with respect to the permit's pollution prevention requirements. • When and how to conduct inspections, record applicable findings, take corrective actions. Training will be conducted on an annual basis. Mark storm drains in industrial areas.

Table 4-2: NAVBASE Kitsap Bangor Core BMPs

BMP Number	BMP Name	Issue	BMP Text
C-9	Non-Stormwater Discharges.	Permittees must eliminate non-stormwater discharges not authorized by an NPDES permit. See MSGP Part 1.1.3 for a list of non-stormwater discharges authorized by this permit.	Non-Stormwater discharges are addressed in SWPPP section 3.
C-10	Dust Generation and Vehicle Tracking of Industrial Materials.	Permittees must minimize generation of dust and off-site tracking of raw, final, or waste materials.	Minimize generation of dust and off-site tracking of raw, final, or waste materials in order to minimize pollutant discharges.
C-11	Facility Inspections	Routine facility inspections should be conducted as discussed in Section 6 of the SWPPP. At least one member of the Pollution Prevention Team must participate in routine facility inspections. Inspections will be documented as required by the permit.	• Inspect storage areas for leaking materials. • Check vehicles and materials for leaks. • Inspect all industrial areas for exposed materials, housekeeping lapses which could contribute to stormwater contamination and proper implementation of BMPs.

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
Sector N BMPs (Scrap Recycling)			**(Applies to Recycle Center, [redacted])**
N-1	Inbound Recyclable and Waste Material Control Program	Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials.	All inbound materials will be inspected for potential spillable materials.
N-2	Scrap and Waste Material Stockpiles and Storage (Outdoor).	Minimize contact of stormwater runoff with stockpiled materials, processed materials, and non-recyclable wastes.	All stored materials will be covered to the maximum extent practicable. Metals will be covered or stored in dumpsters with weatherproof lids.
N-3	Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage)	Minimize contact of surface runoff with residual cutting fluids	Metal turnings will be covered or otherwise protected from exposure.
N-4	Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage)	Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff.	Materials will be stored in containers or on pallets to minimize contact with runoff.
N-5	Scrap and Recyclable Waste Processing Areas.	Minimize surface runoff from coming in contact with scrap processing equipment.	All scrap processing is conducted indoors.
N-6	Scrap Lead-Acid Battery Program.	Properly handle, store, and dispose of scrap lead-acid batteries.	NA - Batteries are not processed at the facility.
N-7	Spill Prevention and Response Procedures.	Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.	N/A – No outdoor systems/equipment with more than 150 gallons capacity are located at the recycle yard.
N-8	Supplier Notification Program	As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.	NBK Recycle provides guidance to served Navy commands on acceptable materials.

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
Sector P BMPs (Land Transportation and Warehousing)			**See Tables 4-1 or 6-1 for covered facilities**
P-1	Good Housekeeping Measures	*Vehicle and Equipment Storage Areas:* Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance.	Vehicles awaiting maintenance will be checked at least weekly. Drip pans will be used to collect spillage from leaky vehicles and equipment.
		Fueling Areas: Minimize contamination of stormwater runoff from fueling areas.	Fueling station is bermed directing runoff to an oil/water separator.
		Material Storage Areas: Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.).	All material storage containers will be labeled and protected from contact with stormwater.
		Vehicle and Equipment Cleaning Areas: Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning.	All vehicle or equipment cleaning will be conducted at approved NAVBASE Kitsap, Bangor washracks draining to the sanitary or operating on a closed loop basis.
		Vehicle and Equipment Maintenance Areas: Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance.	Sector P vehicle and equipment maintenance will be conducted inside to the maximum extent practicable.
P-2	Locomotive Sanding (Loading Sand for Traction)	Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the off-site transport of sanding material by stormwater.	Locomotive sanding is not considered a significant source at Bangor. Minimal rail operation and sanding is conducted and most trackage is located in heavily vegetated areas.
P-3	Employee Training.	Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.	Addressed under Core BMP C-9.

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
Sector Q BMPs (Water Transportation)			**See Tables 4-1 or 6-1 for covered facilities**
Q-1	Good Housekeeping Measures	*Pressure Washing Area:* If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Collect or contain the discharges from the pressures washing area so that they are not co-mingled with stormwater discharges authorized by this permit. *Blasting and Painting Area:* Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems. *Material Storage Areas:* Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials.	Pressure washing shall only take place only in areas that drain to the sanitary sewer or in contained locations which can be pumped out for disposal. Outdoor blasting or painting will be contained by appropriate covers and tarps. Accumulated particulates will be swept and vacuumed at the conclusion of the work day. Cyclone Grit collection locations will be inspected monthly and cleaned as necessary. The dry dock itself is considered an appropriate blasting area since overspray is contained and stormwater is collected, treated, and discharged into the sanitary sewer. All containerized materials will be labeled and stored in contain areas. Hazardous material inventory will be controlled through Navy programs..
Q-1	Good Housekeeping Measures	*Engine Maintenance and Repair Areas:* Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. *Material Handling Area:* Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels).	Engine maintenance will be conducted indoors or at the small engine shop on NAVBASE Kitsap Bangor. Material handling will be conducting indoors to the maximum extent practicable. Operations at the [redacted] are conducted in accordance with the

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
		Drydock Activities: Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding, and at final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock.	[redacted] Manual. While work is being performed, all drainage from inside the drydock is directed to the industrial waste treatment plant. The drydock will be properly cleaned with rinse water directed to the treatment plant prior to flooding.
Q-2	Employee Training.	As part of your employee training program, address, at a minimum, the following activities (as applicable): Used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.	Addressed under Core BMP C-9.
Q-3	Preventive Maintenance.	As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.	Addressed under Core BMP C-3.
Sector AA BMPs (Fabricated Metals Products)			**See Tables 4-1 or 6-1 for covered facilities**
AA-1	Good Housekeeping Measures.	*Raw Steel Handling Storage:* Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas. *Paints and Painting Equipment*: Minimize exposure of paint and painting equipment to stormwater.	All metal fines will be swept or vacuumed from areas with the potential to contact stormwater at least weekly. Painting will be conducted indoors to the maximum extent feasible.

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
AA-2	Spill Prevention and Response Procedures.	Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed: *Metal Fabricating Areas:* Maintain clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques. *Storage Areas for Raw Metal*: Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials. Consider the following (or their equivalents): Maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents. *Metal Working Fluid Storage Areas:* Minimize the potential for stormwater contamination from storage areas for metal working fluids. *Cleaners and Rinse Water:* Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible. *Lubricating Oil and Hydraulic Fluid Operations:* Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. *Chemical Storage Areas:* Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.	Spill prevention and response procedures are addressed in the NAVBASE Kitsap Bangor SPCC, and OHS Response plans (See Core BMP C-4).

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
AA-3	Spills and Leaks.	In your spill prevention and response procedures, required by Part 2.1.2.4, pay attention to the following materials (at a minimum): Chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.	Addressed under Core BMP C-4.
Sector R - Ship and Boat Building and Repair Yards			**See Tables 4-1 or 6-1 for covered facilities**
R-1	Good Housekeeping Measures	*Pressure Washing Area:* If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.	Addressed under BMP Q-1.
		Blasting and Painting Area: Minimize the potential for spent abrasives, paint chips, and overspray to discharging into the receiving water or the storm sewer systems.	Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.
		Material Storage Areas: Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility.	Consider implementing an inventory control plan to limit the presence of potentially hazardous materials on-site.
		Engine Maintenance and Repair Areas: Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair.	
R-1	Good Housekeeping	*Material Handling Area:* Minimize the contamination of	

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
	Measures	precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). *Drydock Activities:* Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff.	Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area. Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.
R-2	Employee Training.	As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.	Addressed under C-9

Table 4-3 Sector-Specific BMPs

BMP Number	BMP Description	Issue	Action
R-3	Preventive Maintenance	As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.	Addressed under C-3

4.3 Individual Facility Assessments

This section presents the results of the site-specific industrial facility stormwater pollution source identification and assessment activities conducted at NAVBASE Kitsap Bangor industrial facilities including new site-specific BMPs. Industrial facilities are grouped by major tenants into the following four subsections:

[redacted]

These subsections are further divided into individual facilities, which are arranged numerically by building number in ascending order. Discussions for a number of closely associated facilities have been combined in this Section. For each industrial facility, the following items are presented:

Facility Description: The facility's location, capabilities, and layout are described. A 50-scale or 100-scale site map is provided. In addition, the Appendix Q SWPPP map sheet number which includes the facility is identified.

Facility Objective: The facility's objective with respect to station operations is stated.

Stormwater Drainage Description: The drainage patterns at the facility are described in detail. Drainage facilities, structural pollution control measures, and surface water bodies (including wetlands) are identified. These features are also shown on the facility site map and SWPPP base map.

Material Inventory: This section provides the primary materials used, produced, or stored at each facility (SWPPP facility assessment activities focused on quantities of materials stored). Whenever possible, information regarding quantities used or produced was obtained from the tenant's Authorized Use List (AUL). Handling practices and procedures, materials management practices, storage activities, physical features of the site, and the potential to contribute pollutants to stormwater runoff are discussed and evaluated for significant materials. The inventory and the results of the assessment are provided in tabular form (Table 4-xxxA, where xxx is the building number). Information about whether a quantity of each material is currently exposed or has been exposed in the last three years and the potential for future exposure is also included in the table. This table includes an estimate of the quantities of materials at the facility during the inspection. Additional information regarding quantities used is provided in a copy of the AUL contained in Appendix I. Materials are typically not produced at NAVBASE Kitsap Bangor industrial facilities.

For those materials identified in the material inventory (Table 4-xxxA) as having been exposed to stormwater in the last three years, an estimate of the quantity exposed and the period of exposure are provided in tabular form (Table 4-xxxB). The method and location of on-site storage or disposal of these materials and a description of material management practices is also included in the table. The text identifies for each facility if no significant materials are currently

exposed or if none have been exposed in the past three years, and a blank Table 4-xxxB is included for that facility to facilitate the entry of this type of information in the future.

Significant Spills and Leaks: Significant spills or leaks of toxic or hazardous pollutants that have occurred within the last three years at each facility are listed in Table 4-xxxC. Historical records of past spills and leaks at NAVBASE Kitsap contain limited facility specific location information. Where data were available, the information was included in Table 4-xxxC for that facility. Where no information was available, a blank spill summary table was included to facilitate entry of future spill information. A summary of all available spill and leak data for the base including information on spills and leaks that have occurred at facilities or locations on base other than at one of the facilities included in Section 6, is included in Appendix J. As discussed in Section 2, spill and leak information for the preceding three years are required as part of this SWPPP.

Site Assessment Inspection: A narrative of the findings during the site assessment inspection is provided. Specifically, potential pollutant sources were identified that may or may not potentially pose a risk to stormwater quality. The following high risk waste generating areas and activities were included as sources: long-term vehicle parking; treatment, storage or waste disposal areas; liquid storage tanks; processing areas; loading/unloading areas; garbage dumpsters; vehicle washing; maintenance areas; and exposed significant materials. These stormwater pollutant sources have been included in Table 4-xxxD.

Core BMPs: Core BMPs are those required in the body of the MSGP (Section 2) that generally apply to all industrial areas at Bangor.

Sector-Specific BMPs: Sector-specific BMPs contained in part 8 of the 2015 MSGP must be considered for those portions of NAVBASE Kitsap Bangor that fall into one of the industrial sectors defined in the MSGP.

Facility-Specific BMPs: New BMPs for each facility and their associated pollutant sources are summarized in Table 4-xxxD.

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4.4 NAVBASE Kitsap Bangor Facilities

Fifty-four NAVBASE Kitsap related facilities were inspected during this SWPPP effort. Table 4-6 lists the name and building number(s) for each facility; as well as the section number.

Table 4-6

NAVBASE Kitsap Bangor Facilities Listing

Facility Name	Building No.	Section No.
Oil/Water Separator	[redacted]	4.4.1
Railroad Equipment Maintenance Shop, Locomotive Refueler, C-Pool	[redacted]	4.4.2
Warehouse, Public Works Storage Bldg	[redacted]	4.4.3
Public Works Shop	[redacted]	4.4.4
Oil/Water Separator	[redacted]	4.4.5
Public Works Maintenance Shop	[redacted]	4.4.6
Alarm Shop	[redacted]	4.4.7
Supply Support Facility	[redacted]	4.4.8
Small Engine Storage Shed	[redacted]	4.4.9
Pesticide Equipment Shed	[redacted]	4.4.10
SRSS Warehouse	[redacted]	4.4.11
Public Works Vehicle Maintenance Shop	[redacted]	4.4.12
Steam Cleaning Shed	[redacted]	4.4.13
Public Works Filling Station	[redacted]	4.4.14
Small Engine Shop	[redacted]	4.4.15
[redacted] Building	[redacted]	4.4.16
Recycling Center	[redacted]	4.4.17
Solid Waste Transfer Station	[redacted]	4.4.18
Heating Plant	[redacted]	4.4.19
POL Facilities	[redacted]	4.4.20
Construction Battalion Unit Facilities	[redacted]	4.4.21
Hazardous Waste Facilities	[redacted]	4.4.22
Refuse Shed	[redacted]	4.4.23
Sewage Pump Station, Oil/Water Separator/SOD, Industrial Water Pump Station	[redacted]	4.4.24
Industrial Wastewater Facilities	[redacted]	4.4.25
Oil/Water Separator	[redacted]	4.4.26
Chlorination Buildings	[redacted]	4.4.27

Table 4-6

NAVBASE Kitsap Bangor Facilities Listing

Facility Name	Building No.	Section No.
[redacted] Pier Facilities	[redacted]	4.4.28
Utility Plant Waterfront	[redacted]	4.4.29

The following sections provide descriptions of these facilities as they were observed during an inspection in 2005. As in any inspection, the information only represents a point in time since changes in materials use could occur daily.

4.4.1 [redacted] ([redacted])

Facility Description: The [redacted] (Facility [redacted]) is located in the industrial area near the [redacted] end of the Base by [redacted] as shown on Sheet S-15 of the SWPPP base maps. This facility includes an oil/water separator, which was investigated as part of the storm sewer survey. The separator is covered by a large metal plate, and receives flow from the trench drains in Building Nos. [redacted] and [redacted]. This water flows to the industrial sewer.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] generally percolates into the grassy area surrounding the facility. Some runoff may reach catch basin [redacted]. This facility lies in drainage basin DB2 because very little runoff would reach the drainage outfall.

Materials Inventory: Waste oil is the only material stored and produced at this facility. A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/02/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Waste Oil	Waste oil storage from separator/in ground	-	-	500 gal	None	Yes, when emptying waste oil tank or if overflow.		X

Key: gal=gallon.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Broken riding mower	2013 - Current	1	Near separator		

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources, And BMPs	
Stormwater Pollutant Sources	**BMPs**
Oil/Water Separator Maintenance and Cleaning	Core BMPs Sector P BMPs
Oil/Water Separator Operation	

Figure 4-[redacted]: [redacted]

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4.4.2 [redacted] ([redacted]), [redacted] ([redacted]) and [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]), [redacted] (Building [redacted]) and [redacted] (Building [redacted]) are located in the industrial area near the south end of the Base by Scorpion Avenue and Sculpin Circle as shown on Sheets S-10 and S-15 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

- [redacted] ([redacted]),
- [redacted] ([redacted]),
- [redacted] ([redacted]).

The [redacted] ([redacted]) consists of a concrete slab sloping to two grates, railroad tracks and pump located in center of concrete slab. Building [redacted] consists of a 4-bay garage with brick walls and concrete floor, no door skirt or seal, and compressor room located on south side of building. [redacted] consists of a paved slab and a small office building used for parking and dispatch of heavy equipment used throughout the station. A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figures [redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the [redacted] drains to two catch basins at the low points of the concrete slabs. The slab is graded to contain all stormwater that falls on the facility. The catch basins drain to an oil/water separator ([redacted]), which discharges to the sanitary sewer. This facility lies in drainage area DB2 but no runoff would reach this outfall.

Runoff from the southern part of the [redacted] drains to catch several catch basins while the northern part of the slab drains via sheet flow to surrounding swales. Both the swales and catch basins flow to the Retention pond ([redacted]) and through an oil/water separator before discharging at outfall OF2.

Stormwater runoff from the [redacted] drains to the south. Catch basins around the shop building colleet runoff and direct it to the Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. All of these facilities lie in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at these facilities in 2009 are provided in Table 4-[redacted]. Table 4-[redacted] was compiled using information obtained from the SWPPP site assessment inspection and the BOSC AUL. Materials stored at the facility primarily included hydraulic fluids, ethylene glycol, paint, and cleaners, which were stored indoors.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/02/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Antifreeze	Vehicle maintenance/ Inside building	AUL[1]	-	(2) 55-gal drums	None	No, stored inside		X
Used Batteries	Temporary storage/ Inside building	-	NAV	2	None	No, stored inside		X
Paint	Vehicle maintenance/ Inside in flam locker	AUL[1]	-	< 10 gal	None	No, stored inside in flammable locker		X
Hydraulic Fluid	Vehicle maintenance/ Inside building	AUL[1]	-	(2) 55-gal drums, (3) 275-gal USTs	None	Yes, if spilled could leak outside building		X
Other POL- motor oil, grease, starting fluid, transmission fluid, cooling system treatment, anti-seize lubricant, power steering fluid, cutting oil, brake fluid.	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	Yes, if maintenance conducted outside	X	
Cleaners- electronic cleaner, comet, battery protector/cleaner, carburetor/choke cleaner, sodium hydroxide, agitene	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	Yes, if maintenance conducted outside	X (oil)	
Other- adhesive, copper gasket compound, flush mix, silicone, gasket sealant	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	Yes, if maintenance conducted outside		X

Key:
[1]–Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] Shop, [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Old outboards stored outside	Current			On asphalt	None
Garbage truck with oil leak	Current			On asphalt	
Radiator and two engines stored outside	Current			On asphalt	

Table 4-[redacted]: [redacted] Shop, [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] Shop, [redacted] ([redacted])[C] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Flammable Storage and Handling	Core BMPs Sector P BMPs
Indoor Antifreeze Storage and Handling	
Indoor Flammable Storage	
Indoor Hazardous Waste Storage	
Indoor Vehicle Maintenance	
Outdoor Drum Storage Area	
Outdoor Vehicle Maintenance/Parking	
Unlabeled 55-Gallon Drums - Stored Outside, Adjacent to Flammable Room	

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Figure 4-[redacted]: [redacted]

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Figure 4-[redacted]: [redacted]

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4.4.3 Warehouse ([redacted]) and [redacted] Building ([redacted])

Facility Description: The [redacted] (Building [redacted]) and [redacted] Building (Building [redacted]) are located in the center of the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes two warehouses that are connected by a raised concrete decking. Building [redacted] is located south and consists of a large warehouse with offices located on the west end of the building. Building [redacted] has a concrete floor, and a loading dock is located along the south wall and consists of a raised concrete deck that is partially covered. Building [redacted] is located on the north side and consists of several storage bays.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from facilities [redacted] and [redacted] drains to the southwest into several catch basins in the asphalt lot surrounding these buildings. These catch basins direct flows to the Retention pond ([redacted]) where flows go through an oil/water separator before discharging at outfall OF2. These facilities lie in the DB2 drainage basin. Runoff from the east side of Facility [redacted] infiltrates into the grass on this side of the building.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using the NAVBASE Kitsap AUL, BOSC AUL, and SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/10/94 and 11/14/94 on Buildings [redacted] and [redacted]. The site has been reassessed regularly since 2005 by NAVFAC NW personnel.

Potential pollutant sources are listed in Table 4-[redacted].

Existing BMPs: Existing BMPs for each potential pollutant source activity are provided in Table 4-[redacted].

New BMPs: New BMPs for this facility are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] Buildings ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
[redacted]								
Janitorial supplies - bleach, cleaner (carpet, wood, oven), lime away, disinfectants, floor wax	Storage/Inside Building	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
Flammables - paints, solvents, primer, degreaser, wood finish	Storage/Inside Building	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.	X (paint)	
POL - lube oil, mineral oil, cooking oil	Storage/Inside Building	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
Other - toner	Storage/Inside Building	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
[redacted]								
Paints, paint thinner, primer, MEK, Rust transformer, cleaners, and pretreatments	Storage/Inside Building in paint bays	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
Herbicide, insecticide	Storage/Inside Building in bay	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
Acetylene, helium, O_2, N_2, CO_2 compressed gas	Storage/Inside Building in compressed gas bays	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X
Other - Ethanol, Hydrogen sulfide, silicone, sodium hypochlorite, glues	Storage/Inside Building	AUL[1]	-	AUL[1]	None	Stored inside, however, possible when unloading.		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] ([redacted]) and [redacted] Building ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) and [redacted] Building ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) and [redacted] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
[redacted]- Indoor Material Storage and Handling	Core BMPs Sector P BMPs
[redacted]- Outdoor Material Storage	
[redacted]- Southern Loading/Unloading Area	
[redacted]- Trench Drain on Concrete Decking	
[redacted]- Ceremony Equipment Storage	
[redacted]- Compressed Gas Storage and Handling	
[redacted]- East Loading/Unloading Area	
[redacted]- Indoor Paint Storage	
[redacted]- Lumber Storage Area	
[redacted]- Outdoor Drum Storage Area	
[redacted]- Pesticide and Herbicide Storage and Handling	

Figure 4-[redacted]: [redacted]

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4.4.4 [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one building with office space, a [redacted] indoor storage room, and an outdoor covered storage area.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the south. Runoff flows to catch basins in the asphalt lot surrounding the building. The catch basins direct flow to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the BOSC AUL and the SWPPP site assessment inspection. Primary materials stored at the facility included salt, grass seed, fertilizers, and tires.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source activity are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Salt	Melt ice/Inside building	AUL[1]	—	200 lbs	None	No, material stored inside		X
Grass Seed	Seeding/Inside building	AUL[1]	—	200 lbs	None	No, material stored inside		X
Fertilizer	Fertilizing/Inside building	AUL[1]	—	200 lbs	None	No, material stored inside		X
Muriatic Acid	Cleaning/Flammable locker	AUL[1]	—	(15) 1-gal	None	No, material stored inside		X
Tire	Vehicle/Covered area	AUL[1]	—	~100	None	No, material stored inside		X
Calcium Chloride	Melt ice/Inside building	AUL[1]	—	200 lbs		No, material stored inside		X
Lubricant Spray	General/Inside building	AUL[1]	—	Spray cans	None	No, material stored inside		X
Motor Oil	Vehicle/Inside building	AUL[1]	—	35 gal	None	No, material stored inside		X
Spray Paint	General/Inside building	AUL[1]	-	-	None	No, material stored inside		X
Detergent	General/Inside building	AUL[1]	-	-	None	No, material stored inside		X

Key:
[1]=Data can he obtained from the Authorized Users List (AUL), which is provided as an Appendix.
gal=Gallon.
lbs=Pounds.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Old blast equipment	2014		Outside	On asphalt	

Key:
TBD=To be determined.

Table 4-[redacted]C: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted] D: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
4-Bay Garage- Indoor Material Storage and Maintenance	Core BMPs Sector Q BMPs
5-bay garage- Indoor Material Storage and Handling	
Outdoor Covered Storage	
Outdoor Material Storage in Flammable Locker	
Outdoor Vehicle Parking/Storage of Buses and Trucks	

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Figure 4-[redacted]: [redacted]

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4.4.5 [redacted] ([redacted])

Facility Description: The [redacted] ([redacted]) is located in the industrial area near the south end of the Base by Scorpion Avenue and Sculpin Circle as shown on Sheet S-15 of the SWPPP base maps. [redacted].

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from facility [redacted] generally flows to the east. Runoff flows across the asphalt surrounding the facility to catch basin [redacted]-[redacted]. This catch basin drains to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: Waste oil is the only material stored and produced at this facility in 2009 as listed in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported (spill list) significant spills and leaks associated with the facility.

Site Assessment Inspection: The original field survey was conducted 11/02/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Waste Oil	Waste oil storage from separator/in ground	-	NAV	8,000 gal	None	Yes, when emptying waste oil tank or if overflow.		X

Key:
NAV=Not available.
gal=gallon.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted])
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted])
Pollutant Sources And BMPs

Stormwater Pollutant Sources	New BMPs
Oil/Water Separator Maintenance and Cleaning	Core BMPs
Oil/Water Separator Operation	Sector P BMPs

Figure 4-[redacted]: [redacted]

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4.4.6 [redacted] ([redacted])

Facility Description: The [redacted] facility ([redacted]) is located in the industrial area as shown on Sheets S-10 and S-15 of the SWPPP base maps. This facility includes one U-shaped building with offices, two covered storage areas, and various maintenance shops: sheet metal, pipe, and plumbing; machine; welding; carpenter; water/wastewater; housing maintenance; electrical; crane maintenance; paint/sign; heating, ventilation, and air conditioning (HVAC); waterfront services; and pesticide control.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the south. Runoff flows to catch basins in the asphalt lot surrounding this building. The catch basins direct flow to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using the BOSC AUL and information obtained from the SWPPP site assessment inspection. Primary materials stored at the facility include paints, POL, batteries, caustics, solvents, and cleaners.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The initial field survey was conducted 11/10/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] Shop ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Sodium Hydroxide	Maintenance/Welding shop	AUL[1]	-	20 gal	None	Yes, no secondary containment		X
Sodium Phosphonate	Maintenance/Welding shop	AUL[1]	-	20 gal	None	Yes, no secondary containment		X
Sodium Polyacylate	Maintenance/Welding shop	AUL[1]	-	20 gal	None	Yes, no secondary containment		X
Paint	Maintenance/Welding shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker	X	
Waste POL	Equipment leaks/Welding shop	AUL[1]	NAV	-	None	Yes, leaks tracked outside if not cleaned up		X
Degreaser	Maintenance/ Machine shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		X
Grease	Maintenance/ Machine shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		X
Motor Oil	Maintenance/ Machine shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		X
Adhesive	Maintenance/ Machine shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		
Aerosol Cans	Temporary storage/Machine shop	AUL[1]	-	One 35-gal drum	None	No, stored inside building		X
Paint Cans	Temporary storage/Machine shop	AUL[1]	-	One 35-gal drum	None	No, stored inside building	X	
Alkaline Batteries	Temporary storage/Machine shop	AUL[1]	NA	One 35-gal drum	None	No, stored inside building		X
Waste POL	Leaking equipment/Sheet Metal Shop	AUL[1]	AUL1	-	None	Yes, leaks can be tracked outside if not cleaned up		X
Paint	Maintenance/Water and wastewater shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building	X	
Lubricant	Maintenance/Water and wastewater shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		X
Bacteria Digestant	Maintenance/Water and wastewater shop	AUL[1]	-	< 10 gal	None	No, stored inside flammable locker inside building		X
Gravel	Maintenance/Covered storage area	AUL[1]	-	~ 100 60-lb bags	None	Yes, no secondary containment		X

Table 4-[redacted]: [redacted] Shop ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Aluminum and Roof Coating	Maintenance/Covered storage area	AUL[1]	-	~ 50 gal	None	Yes, no secondary containment		X
Motor Oil	Maintenance/Covered storage area	AUL[1]	-	Four 55-gal drums	None	Yes, no secondary containment		X
Gasoline	Maintenance/ Flammable locker in covered storage area	AUL[1]	-	15 gal	None	No, stored in flammable locker	X	
Motor Oil	Maintenance/ Flammable locker in covered storage area	AUL[1]	-	< 5 gal	None	No, stored in flammable locker		X
Hazardous Waste	Temporary storage/Outside hazardous waste staging area	-	AUL1	Three 55-gal, two 35-gal drums	None	Yes, gap in containment		X
Propylene Glycol	Maintenance/HVAC covered storage area	AUL[1]	-	55-gal drum	None	Yes, no secondary containment		X
POL	Maintenance/HVAC covered storage area	AUL[1]	-	20 gal	None	Yes, no secondary containment		X
Trichlorofluoromethane (TCFM)	Maintenance/HVAC covered storage area	AUL[1]	-	~ 30 gal	None	Yes, no secondary containment		X
Motor Oil	Maintenance/HVAC covered storage area	AUL[1]	-	Six 55-gal drums	None	Yes, poor housekeeping and no secondary containment		X
Freon	Maintenance/HVAC covered storage area	AUL[1]	-	20 canisters	None	Yes, no secondary containment		X
Plywood	Maintenance/Housing shop	AUL[1]	-		None	No, stored inside building		X
Paint	Maintenance/Housing shop	AUL[1]	-	~ 30 gal	None	No, stored in flammable locker inside building	X	
Methyl Ethyl Ketone (MEK)	Maintenance/Housing shop	AUL[1]	-	1 gal	None	No, stored in flammable locker inside building		X
Acetone	Maintenance/Housing shop	AUL[1]	-	1 gal	None	No, stored in flammable locker inside building		X
Fiberglass Resin	Maintenance/Housing shop	AUL[1]	-	3 al	None	No, stored in flammable locker inside building		X
Carpet Pad Adhesive	Maintenance/Housing shop	AUL[1]	-	10 gal	None	No, stored in flammable locker inside building		X

Table 4-[redacted]: [redacted] Shop ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint	Maintenance/Electrical shop	AUL[1]	-	< 10 gal	None	No, stored in flammable locker inside building	X	
Degreaser	Maintenance/Crane maintenance shop	AUL[1]	-	< 10 gal	None	No, stored in flammable locker inside building		X
Brake Fluid	Maintenance/Crane maintenance shop	AUL[1]	-	< 10 gal	None	No, stored in flammable locker inside building		X
Grease	Maintenance/Crane maintenance shop	AUL[1]	-	< 10 gal	None	No, stored in flammable locker inside building		X
Motor Oil	Maintenance/Crane maintenance shop	AUL[1]	-	~ 5 gal	None	No, stored in flammable locker inside building		X
Lubricant	Maintenance/Crane maintenance shop	AUL1	-	Five 55-gal drums	None	Yes, no secondary containment		X
Spray Paint	Maintenance/Crane maintenance shop	AUL[1]	-	~ 20 spray cans	None	No, stored in flammable locker inside building		X
Solvent	Maintenance/Crane maintenance shop	AUL[1]	-	One parts cleaner unit	None	Yes, no secondary containment		X
Waste POL	Leaking equipment/Crane shop outdoor storage	AUL[1]	-	-	None	Yes, leaks can be tracked outside if not cleaned up		X
POL	Maintenance/Crane shop outdoor storage	AUL[1]	-	19 5-gal, 7 55-gal drums	None	Yes, no secondary containment		X
Gasoline	Maintenance/Crane shop outdoor storage	AUL[1]	-	20 gal	None	No, stored in flammable locker	X	
Paint	Maintenance/Paint shop	AUL[1]	-	~ 100 gal	None	No, stored in flammable locker in building	X	
TCFM	Maintenance/HVAC shop	AUL[1]	-	~ 20 gal	None	Yes, no secondary containment		X
Degreaser	Maintenance/HVAC shop	AUL[1]	-	5 gal	None	Yes, no secondary containment		X
Refrigeration Oil	Maintenance/HVAC shop	AUL[1]	-	~ 20 gal	None	Yes, no secondary containment		X
Machine Cleaner	Maintenance/HVAC shop	AUL[1]	-	~ 20 gal	None	Yes, no secondary containment		X
Solvent	Parts cleaning/HVAC shop	AUL[1]	-		None	Yes, no secondary containment		X

Table 4-[redacted]: [redacted] Shop ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Lubricant	Maintenance/Waterfront services shop	AUL[1]	-	5 gal	None	Yes, no secondary containment		X
Gasoline	Maintenance/Waterfront services shop	AUL[1]	-	5 gal	None	Yes, no secondary containment	X	
POL	Maintenance/Waterfront services shop	AUL[1]	-	20 gal	None	Yes, no secondary containment		X
Other Miscellaneous- Flux, solder, adhesive, windshield deicer, epoxy resin, activated alumina, glue, silicone, coppery hydroxide, grout, cement, grease, leak lock, rust inhibitor	Maintenance activities-Inside building	AUL[1]	-	AUL[1]	None	No, material stored indoors		X
Cleaners- bleach, disinfectant, battery cleaner, carpet cleaner	Cleaning/Inside building	AUL[1]	-	AUL[1]	None	No, material stored indoors		X
Compressed Gases- Nitrogen, hydrogen sulfide in nitrogen, isobutane, propane	Maintenance/Inside building	AUL[1]	-	AUL[1]	None	No, material stored indoors		X
Other Flammables- acetone, primer, isopropyl alcohol, toluene	Maintenance/Inside building	AUL[1]	-	AUL[1]	None	No, material stored indoors		X

Key:
gal=Gallon.
lb=Pound.
AUL1=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Crane Maintenance Shop Equipment Storage and Leaking Compressors	Core BMPs Sector Q BMPs
Crane Maintenance Shop Flammable Locker Storage	
Crane Maintenance Shop Lubricant Drum Storage	
Crane Maintenance Shop Outdoor Flammable Storage and Handling	
Crane Maintenance Shop Outdoor Material Storage	
Electrical Shop Battery Room	
Electrical Shop Flammable Storage and Handling	
Housing Maintenance Shop Storage and Handling	
HVAC Fenced, Covered Storage	
HVAC Parts Cleaning	
HVAC POL Storage and Handling	
HVAC Shop Material Storage and Handling	

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Machine Shop Flammable Storage and Handling	Core BMPs Sector Q BMPs
Machine Shop Hazardous Waste Storage and Handling	
Paint/Sign Shop Flammable Storage	
Paint/Sign Shop Operations	
Pesticide Control Shop Mixing	
Sheet Metal/Pipe/Plumbing Shop Indoor Material Storage and Handling	
Surrounding Paved Areas	
Water/Wastewater Fenced. Covered	
Water/Wastewater Shop Flammable Storage	
Water/Wastewater Shop Non-Fenced. Covered Storage Area	
Waterfront Services Shop Storage	
Welding Shop Hazardous Waste Staging	

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Figure 4-[redacted]: [redacted]

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4.4.7 [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. Building [redacted] consists of office space and a one bay shop for equipment repair, and additional office space for crane testing work.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] generally drains to the south. This building is surrounded by grass on the south, west, and north. Most runoff drains overland to open ditches flowing to the Retention pond ([redacted]). Some runoff from the east side of the building drains across the asphalt lot to catch basins on Sculpin Road. These catch basins also flow to the Retention pond ([redacted]). Some of the runoff that drains across the grass will percolate into the ground before reaching outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using the NAVBASE Kitsap AUL and information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint	Painting/Inside flammable locker	AUL1	-	<10 gal	None	No, stored in flammable locker inside building.		X
Gasoline	Fueling/Flammable locker	AUL1	-	<10 gal	None	No, stored in flammable locker inside building.		X
Propanol	Fueling/Flammable locker	AUL1	-	<10 gal	None	No, stored in flammable locker inside building.		X
Solvent	Cleaning/Flammable locker	AUL1	-	<10 gal	None	No, stored in flammable locker inside building.		X
Batteries, alkaline	Temporary storage/Inside building	AUL1	—	(8) 5-gal buckets	None	No, stored in secondary containment inside building		X
Gel batteries	Temporary storage/Inside building	AUL1	—	(1) 35-gal drum	None	No, stored in secondary containment inside building		X
Isopropyl Alcohol	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Dishwashing Soap	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Cement	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Sealing Compound	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Magnaflux Powder	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Electrical Coating	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Cutting/Penetrating Oil	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Silver Nitrate	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Denatured Alcohol	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Thinner	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Silicone	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Turpentine	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Solder	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Developer	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X
Deicing Fluid	NAV-data obtained from AUL	AUL1	-	AUL1	None	NAV-data obtained from AUL		X

Key:
AUL=Authorized Users List.
gal=Gallon.
NAV=Not available.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Flammable Material Storage and Handling	Core BMPs Sector Q BMPs
Hazardous Waste Storage	
Maintenance	

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Figure 4-[redacted]: [redacted]

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4.4.8 [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]) is located in the industrial area as shown on Sheets S-10 and S-15 of the SWPPP base maps. This facility includes one building with office space and a large warehouse with four loading/unloading areas.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the facility [redacted] area drains to the south. Catch basins around the building collect runoff and direct it to the Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. Some runoff west of the building will percolate into the ground before reaching the catch basins. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Antifreeze	Temporary storage/inside building	—	—	AUL[1]	None	No, stored inside in large building	X	
Hydraulic Fluid	Temporary storage/inside building	—	—	AUL[1]	None	No, stored inside in large building	X	
Motor oil	Vehicle maintenance/inside building	—	—	(5) 55-gal drums	None	No, stored inside in large building. However, possible when unloading	X	
Acid	Temporary storage/inside building	—	—	AUL[1]	None	No, stored inside in large building	X	
Agitene	Cleaning/Inside building	—	—	(5) 55-gal drums	None	No, stored inside in large building		X

Key:
[1]=Data obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Loading/Unloading Area	Core BMPs Sector Q BMPs
Material Storage and Handling	

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Figure 4-[redacted]: [redacted]

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4.4.9 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one building with covered and uncovered outdoor storage areas.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the east to a grassy, open channel. Runoff in the open channel flows to the Retention pond ([redacted]), where the runoff goes through an oil/water separator before discharging at outfall OF2. A portion of the runoff will percolate into the ground before reaching the outfall. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] Shed ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Gasoline	Fueling/Flammable locker in covered area	AUL[1]	-	2.5 gal	None	No, stored in flammable locker under cover		X

Key:
gal=Gallon.
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] Shed ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Rusted flammable lockers	2014-current		Outside		

Table 4-[redacted]: [redacted] Shed ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Table 4-[redacted]: [redacted] Shed ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Indoor Equipment and Material Storage	Core BMPs Sector P BMPs
Outdoor Covered Storage	
Outdoor Uncovered Storage	

Figure 4-[redacted]: [redacted] Shed

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4.4.10 [redacted] Shed ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one corrugated metal building surrounded by a gravel lot.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (see Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the east, across a gravel parking lot and into a grassy, open channel. Runoff in the open channel flows to a Retention pond ([redacted]), where runoff goes through an oil/water separator before discharging at outfall OF2. Some runoff from this facility will percolate into the ground before reaching the outfall. This facility lies in drainage basin DB2.

Materials Inventory: There are no materials used, stored, or produced at this facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future. The materials inventory list was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Vehicle and material storage was the only potential SWPPP pollutant sources identified at the facility, as described below and listed in Table 4-[redacted].

Vehicle and material storage is conducted inside building. Four-bay garage had clean concrete floor that sloped to two floor s. Three fertilizer application trucks were parked in the building, with drip pans underneath the engine blocks. Spill prevention material located in the building.

Existing BMPs: Existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

New BMPs: New BMPs for this facility are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.
lb=Pound.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Vehicle and Material Storage	Core BMPs Sector P BMPs

4.4.11 [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one corrugated metal building with an unloading/loading area.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the Facility [redacted] area drains to the south. Catch basins in the asphalt and the vegetated areas around the building collect the runoff. These catch basins direct flows to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. Most runoff in the vegetated areas will reach the catch basins before percolating into the ground. This facility lies in drainage basin DB2.

Materials Inventory: All materials stored at this facility are food products as shown in Table 4-[redacted]. [redacted]rines.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source and provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Food	Storage/Inside building	-	-	AUL1	None	No, material is stored inside.		X

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
										-

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Loading/Unloading Material Storage and Handling	Core BMPs Sector P BMPs

Figure 4-[redacted]: [redacted]

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4.4.12 [redacted]

Facility Description: The [redacted] facility (Building [redacted]) is located in the industrial area as shown on Sheet S-15 of the SWPPP base maps. [redacted]

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the south. Runoff flows to catch basins in the asphalt lot surrounding the building. The catch basins direct flow to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the BOSC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			Yes	No
Antifreeze	Vehicle maintenance/Inside building	AUL[1]	-	(2) 55-gal drums	None	No, located inside building		X
Lubricant	Vehicle maintenance/Inside building	AUL[1]	-	(2) 55-gal drums	None	No, located inside building		X
Paint	Vehicle painting/Flammable locker inside building	AUL[1]	-	<20 gal	None	No, located inside building		X
Other POL- hydraulic oil, motor oil, transmission fluid, degreaser, starting fluid, anti-seize lubricant, grease, power steering fluid, brake fluid, leak stop	Vehicle maintenance/Inside building	AUL[1]	-	AUL[1]	None	Unknown, data obtained from AUL	X (oil)	
Other- Adhesive/Sealer, asphalt filler	NAV- data obtained from AUL	AUL[1]	-	AUL[1]	None	Unknown, data obtained from AUL		X
Flammables- Rust transformer, primer, thinner, urethane	NAV- data obtained from AUL	AUL[1]	-	AUL[1]	None	Unknown, data obtained from AUL		X
Cleaners- carburetor and choke cleaner, disinfectant, sodium hydroxide, agitene	NAV- data obtained from AUL	AUL[1]	-	AUL[1]	None	Unknown, data obtained from AUL		X

Key:
[1]=Data obtained from Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.

Table 4-[redacted]: [redacted] Shop ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Scrap metal dumpster leaking oil	2014	1 dumpster			Cover; prohibit oily materials disposal
Auto parts exposed	2014				Cover
Old vehicles stored outside	2014				Remove
Open scrap metals bins with oily compressors exposed	Current	1 bin			Cover, prohibit oily materials disposal

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted])[C] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
[redacted]	Core BMPs Sector P BMPs
Outdoor Vehicle Parking and Storage	
[redacted]	

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Figure 4-[redacted]: [redacted]

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4.4.13 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located in the industrial area near the south end of the Base by Scorpion Avenue and Sculpin Circle as shown on Sheet S-15 of the SWPPP base maps. This facility included the [redacted] ([redacted]) structure, which was investigated as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the [redacted] drains to the west into two catch basins. These catch basins direct flows to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. Some runoff may flow to four wash-water catch basins that are located under the roof of Facility [redacted]. These basins flow to oil/water separator [redacted] before discharging to the sanitary sewer. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: Existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Unmarked	Prevent freezing pressure washer/East of 1203	AUL[1]	—	(1) 55-gal	55-gal	Yes, drum is not covered; no secondary containment		X

Key:
gal=Gallon.
[1]–Data obtained from Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Location of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Open scrap metals bin with oily compressors exposed	2014 - Current	1 bin			

Key:
gal=Gallons.
TBD=To be determined.

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Outdoor Material Storage	Core BMPs Sector P BMPs
Steam Cleaning	
Vehicle Washing	

[b]Entry refers to relevant section in either the Multi-Sector General Permit or *Stormwater Management for Industrial Activities* (USEPA 1992).
[c]This facility falls under Sector P of the Multi-Sector Permit; the BMPs presented address those BMP requirements applicable to Sector P.

Figure 4-[redacted]: [redacted]

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4.4.14 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located near the center of the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one roof structure, [redacted] respectively.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] flows to a trench drain. Runoff in the trench drain flows through an oil/water separator ([redacted]) before discharging to the sanitary sewer. The facility's concrete pad is graded to collect stormwater and spills in the trench drain. The roof drains for this facility discharge to catch basins. The catch basins direct flow through an oil/water separator prior to discharging to a Retention pond ([redacted]) and outfall OF2. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted]. [redacted]

Site Assessment Inspection: The original field survey was conducted 11/10/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Diesel	Fueling/UST	AUL[1]	—	20,000 gal	None	Yes, diesel pump not covered	X	
Unleaded gas	Fueling/UST	AUL[1]	—	45,000 gal	None	Yes, one unleaded pump not covered	X	

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
N/A=Not applicable.
UST=Underground Storage Tank.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Location of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Key:
gal=Gallons.
TBD=To be determined.

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Tank Filling and Storage	Core BMPs Sector Q BMPs
Tanker Fueling	
Vehicle Fueling	
Biodiesel tank	

Figure 4-[redacted]: [redacted]

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4.4.15 [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]) is located near the southwest corner of the industrial area as shown on Sheet S-15 of the SWPPP base maps. This facility includes one building consisting of a one-bay garage and office.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] generally flows to catch basins to the east and the north. These catch basins direct flow to a Retention pond ([redacted]), where flows go through an oil/water separator before discharging at outfall OF2. Stormwater runoff from the car wash pad collects in a trench drain at the low point of the pad. Runoff in the trench drain flows through an oil/water separator ([redacted]) before discharging to the sanitary sewer. This facility lies in drainage basin DB2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the BOSC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/14/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Oil	Vehicle maintenance/ Inside building	AUL[1]	-	65 gal	None	No, stored inside		X
Waste Oil	Vehicle maintenance/ Outside building	AUL[1]	NAV	55 gal	55 gal	Yes, if spilled no containment		X
Agitene	Vehicle cleaning/ Outside building	AUL[1]	-	55 gal	55 gal	Yes, no cover or drip pans		X
Used oil filters	Vehicle maintenance/ Outside building	-	NAV	10 gal	None	No, material is covered		X
Flammables- paint	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	No, material stored inside	X	
Other POL- Transmission fluid, lithium grease	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	No, material stored inside		X
Other- epoxy, rust transformer, rubber cement	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	No, material stored inside		X
Compressed gases- Propane	Vehicle maintenance/ Inside building	AUL[1]	-	AUL[1]	None	No, material stored inside		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=gallon

Table 4-[redacted]: [redacted] Description of Exposed Significant Material				
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Exposed anodes and batteries & no containment	2013	12 batteries		
Discarded pressure washer stored outside	Current	1		
Graduated measuring cylinder and pesticide concentrate stored outside near hose bib. (Mixing occurring outside)	2014	55 gal	—	No containment

Key:
gal=gallons

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	
										-

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted])[C] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Indoor Flammable Storage	Core BMPs Sector P BMPs
Indoor Hazardous Waste Staging	
Indoor Maintenance and Repair	
Outdoor Agitene Storage	
Outdoor Flammable Storage	
Outdoor Used Oil Filter Storage	
Outdoor Vehicle and Equipment Storage	
Outdoor Waste Oil Storage	
Vehicle Washing	

Figure 4-[redacted]: [redacted]

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4.4.16 [redacted] Building ([redacted])

Facility Description: The [redacted] Building (Building [redacted]) is located in the area near the southeast area of the Base just off Trigger Avenue as shown on Sheet S-10 of the SWPPP base maps. This facility consists of one building, which was investigated as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Runoff from the [redacted] Building (Building [redacted]) flows to the west to an open channel. Runoff in the open channel flows north along Trigger Avenue. There are no other designed stormwater systems in the area; all runoff flows overland across the gravel parking lot surrounding the building. The [redacted] building is in drainage basin DB2, which outfalls at OF2.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the NAVBASE Kitsap AUL.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/02/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] Building ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Motor Oil	Equipment maintenance/ Flam locker outside	AUL[1]	-	< 2 gal	None	No, stored in flammable locker		X
Gasoline	Equipment maintenance/ Flam locker outside	AUL[1]	-	20 gal	None	No, stored in flammable locker		X
Acetylene	Equipment maintenance/ Flam locker outside	AUL[1]	-	3 cylinders	None	No, stored in flammable locker outside		X
Other POL- grease, camping fuel, lube oil, hydraulic fluid	Equipment maintenance/ Inside	AUL[1]	-	AUL[1]	None	No, stored inside		X
Other flammables- paint, dry cleaning solvent	Equipment maintenance/ Inside	AUL[1]	-	AUL[1]	None	No, stored inside		X
Other- silicone, corrosion preventative, leak test compound, neoprene cement, iodine, epoxy	Equipment maintenance/ Inside	AUL[1]	-	AUL[1]	None	No, stored inside		X
Cleaners- detergent, cleaning compound, bleach, battery cleaner/protector, chlorinating granules, sodium bicarbonate	Equipment maintenance/ Inside	AUL[1]	-	AUL[1]	None	No, stored inside		X
Other compressed gases- propane	Equipment maintenance/ Inside	AUL[1]	-	AUL[1]	None	No, stored inside		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=gallon.

Table 4-[redacted]: [redacted] Building ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Soil around new shed is eroding	2013				

Table 4-[redacted]: [redacted] Building ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Outdoor Material Storage	Core BMPs Sector Q BMPs

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Figure 4-[redacted]: [redacted]

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4.4.17 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located just west of the industrial area as shown on Sheet S-10 of the SWPPP base maps. This facility includes a building with a 2-door garage and an outdoor covered area.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: Building [redacted] is used for recycling. In addition vehicles and equipment are washed.

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the southwest. Catch basins in the asphalt lot around the building collect runoff and direct it to a wooded area southwest of the facility. Although this facility lies in drainage basin DB2, most runoff will percolate into the ground before reaching the outfall. Some water flow from the entrance area will flow toward Silversides Road rather than into the catch basins.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the NAVBASE Kitsap AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/10/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Contents of plastic bottles	Recyclable/Outside bin	—	—		Varies	Yes, not covered and holes in bin floor		X
Tin cans and contents	Recyclable/Outside bin	—	—		Varies	Yes, not covered and holes in bin floor		X
Cardboard boxes	Recyclable/Outside bin	—	—		Varies	Yes, not covered		X
Wash water	Vehicle and equipment washoff/Inside and outside	—		—	Varies	Yes, wash water allowed to flow into storm drain		X
Drum with scrap metal	Recyclable/Outside bin				Varies	Yes, no secondary containment or cover		X
Grease	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Paint Markers	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-done obtained from AUL		X

Key:
AUL=Authorized Users List.
NAV= Not available.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Location of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Metals outside in open bin	2013-Current				
Storm drains need cleaning and marking	2013-Current				

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted])[C] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**New BMPs**
Aluminum Crushing	Core BMPs Sector N BMPs Provide Roof to Cover Metal Sorting Area
Side Slope Erosion	
Loading/Unloading Outdoor Recycling Storage	
Scrap Metal Storage	
Vehicle and Equipment Washing	

Figure 4-[redacted]: [redacted]

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4.4.18 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located south of the industrial area across Sculpin Circle as shown on Sheet S-15 of the SWPPP base maps. The facility consists of a metal structure with a hopper, the upper level is used to dump waste, which goes through the hopper, where it is compressed and placed into trucks in the lower level.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the east. A single catch basin downhill from the facility collects runoff from the east side of the facility. This catch basin discharges to a wooded area south of the catch basin. Although this facility lies in drainage basin DB2, most of the runoff will percolate into the ground before reaching the outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The initial field survey was conducted 11/10/94 and 11/14/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006 - 2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Solid waste	Temporary storage/Inside truck	NAV	N/A	1 truckload	1 truckload	Yes, truck parked outside and has leaked		X

Key:
NAV=Not available.
N/A=Not applicable.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Location of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Truck-trailer leaking oil from hydraulic system	2014-2015				

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Leachate from Compacted Waste Storage	Core BMPs Sector P BMPs
Leachate Collection System	
Solid Waste Compaction	
Trash Dumpster Storage	
Unloading	

Figure 4-[redacted]: [redacted]

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4.4.19 [redacted] ([redacted])

Facility Description: The [redacted] facility (Building [redacted]) is located near the south end of the Base by Thresher Avenue as shown on Sheet S-10 of the SWPPP base maps. This facility includes one building, which was investigated as part of the storm sewer survey. Building [redacted] is a 4-story utility building with concrete floors in the basement and grated floors on all other floors, the area surrounding the building is paved with parking on the front side and railroad tracks on back side of building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-2800).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The area around the [redacted] drains to the south and the east. This facility is within drainage basin DB1, which outfalls at OF1. The only designed stormwater conveyance is a catch basin south of the building, which collects runoff from the southwestern portion of the building and discharges to the south. The remainder of the runoff drains by overland flow to the southeast.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the BOSC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/01/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]
[redacted] ([redacted])
MATERIALS INVENTORY

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Salt	Water softener/ Basement on pallets	AUL[1]	-	(30) 50-lb bags	None	No, stored and used in basement		X
Flammables- paint	Maintenance/ Basement in flammable locker	AUL[1]	-	< 20 gal	None	No, stored and used inside		X
Motor oil	Maintenance/ Basement in drums	AUL[1]	-	(2) 55-gal drums	None	No, stored and used inside		X
Hydraulic oil	Maintenance/ Basement in drums	AUL[1]	-	(6) 55-gal drums	None	No, stored and used inside		X
Cleaner	Maintenance/ Basement in flammable locker	AUL[1]	-	<20 gal	None	No, stored and used inside		X
Sodium Hydroxide	Boiler chemical/ Basement in drums	AUL[1]	-	(3) 55-gal drums	None	No, stored and used inside		X
Ammonia	Boiler chemical/ Basement in drums	AUL[1]	-	(3) 55-gal drums	None	No, stored and used inside		X
Diesel	Fuel/Two underground storage tanks	AUL[1]	-	(2) 20,000-gal USTs	None	Yes, possible when POL facility pumps diesel to USTs, could leak out vent pipe		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Discarded water softener, clothes dryer, generator exposed outside	2013-15	Several items			Cover or remove
Scrap metals bin without lid	2013	1			

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted])[C] Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Diesel Storage	Core BMPs Sector Q BMPs
Flammable Storage	
Hazardous Waste Storage	
POL Storage	
Salt Storage	
Sodium Hydroxide and Ammonia Storage	
Unloading	

Figure 4-[redacted]: [redacted]

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4.4.20 [redacted] ([redacted])

Facility Description: The [redacted] are located near the south end of the Base just off Thresher Avenue as shown on Sheet S-10 of the SWPPP base maps. This facility includes the following areas, which were investigated as part of the stormwater survey.

[redacted] ([redacted]);
[redacted] ([redacted]);
[redacted] ([redacted]);
[redacted] ([redacted]); and
[redacted] ([redacted]).

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the former coal unloading facility and surrounding area generally drains to the northeast to catch basin [redacted]. The former coal pile area is sloped and bermed so that runoff flows to this catch basin, which discharges into a sedimentation basin and pond in the northeastern corner of the facility. Stormwater flows through the basin and into a Retention pond before discharging to a wooded area below the coal yard. The western portion of the facility (across railroad lines) drains via several catch basins that discharge to the same wooded area below the former coal yard. The berm around the paved area is breached in several places allowing runoff to bypass the pond and discharge directly into the wooded area. A portion of the runoff from the access driveway drains to the south towards Thresher Road. This facility lies in drainage basin DB2, but the runoff would infiltrate into the ground before reaching the basin outfall. Runoff from upland areas to the southwest of the former coal storage area is diverted through the area by a storm drain system, which discharges into the eastern wooded area via manhole [redacted].

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility; however, coal and coal dust were evident in 1995 throughout the site outside of the bermed areas. Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/01/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel.

Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Diesel	Fuel for heating/ASTs	NAV	N/A	1,000,000 gal		No, secondary containment exists		X

Key:
AST=Aboveground storage tank.
gal=Gallon.
NAV=Not available.
N/A=Not applicable.
PCB=Polychlorinated biphenyl.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Location of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted] ([redacted])

List Of Significant Spills And Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Diesel Storage	Core BMPs Sector Q BMPs
Diesel Unloading/Loading	
Oil/Water Separator Operation and Maintenance	
Oil/Water Separator Waste Oil Storage	
Paint Storage	
Temporary Bilge Water Storage	
Underground Diesel Transfer	

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Figure 4-[redacted]: [redacted]

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4.4.21 [redacted] Facilities ([redacted])

Facility Description: The [redacted] facilities ([redacted]) are located near the south end of the Base off Thresher Avenue as shown on Sheet S-5 of the SWPPP base maps. These facilities include the following structures, which were investigated as part of the stormwater survey:

[redacted]

Building [redacted] consists of administrative offices, a 2-bay garage, cutting and welding shop, wood shop, and storage areas. All of the facilities, except one uncovered storage area, are enclosed by a chain link fence. In addition, Building [redacted] is enclosed by an additional inner chain link fence which includes outdoor covered and uncovered storage areas. A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the facility [redacted] area generally drains to the south. Runoff flows to catch basins in the asphalt lots around the building or flows overland toward Thresher Road (the southern sides of facilities [redacted] and [redacted]). The catch basins drain to a grassy, open channel along Thresher Road. Runoff in the open channel flows through a culvert under Thresher Road and discharges down a hillside. These facilities lie in drainage basin DB18, but runoff will percolate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the NAVBASE Kitsap AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Signifieant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 10/31/94 at the areas listed below. The facility has been reasscssed regularly since 2005 by NAVFAC NW personnel.

Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for cach potential pollutant source are provided in Tables 6-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
Used oil	Temporary storage/Inside building	AUL[1]	—	(1) 55-gal drum	None	No, secondary containment, located inside		X
Motor oil	Vehicle maintenance/Inside building	AUL[1]	—	(4) 55-gal drums	None	Yes, no secondary containment, could get washed outside		X
Degreaser	Vehicle maintenance/Inside building	AUL[1]	—	(1) 55-gal drum	None	Yes, no secondary containment, could get washed outside		X
Used oil filters	Temporary storage/Inside building	AUL[1]	—	~20	None	No, secondary containment, located inside		X
Paint	Vehicle maintenance/Inside building	AUL[1]	—	<50 gal	None	No, located inside		X
Diesel	Building heat/UST in front of building	AUL[1]	—	300 gal	None	Yes, potential of spills when filling tank		X
[redacted]								
Diesel	Boiler/UST	AUL[1]	—	300 gal	None	Yes, if spilled when filling tank		X
Small engines	Construction activities/In shed	AUL[1]	—	~10	None	No		X
Lumber	Construction/Inside shed on pallets	AUL[1]	—	3 pallets	None	No		X
Used oil filters	Temporary storage/	AUL[1]	—	(1) 55-gal drum		Yes, if spilled; no cover provided		X
Oily rags	Temporary storage/Hazardous waste staging area	AUL[1]	—	(1) 55-gal drum	AUL[1]	Yes, if spilled; no cover provided		X
Lumber	Construction activities/Outside in fenced area	AUL[1]	—	3 piles	AUL[1]	Yes, no cover		X
[redacted]								
Grout	Construction activities/Inside on shelves	AUL[1]	—	150 lb	None	No		X
Paint	Construction activities/Inside on shelves	AUL[1]	—	100 gal	None	No		X
Paint thinner	Construction activities/Inside on shelves	AUL[1]	—	15 gal	None	No		X
Cement sealant	Construction activities/Inside on shelves	AUL[1]	—	50 gal	None	No		X

Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Batteries	Construction activities/Inside on shelves	AUL[1]	—	30	None	No		X
Oil-water sludge	Temporary storage/Outside building	AUL[1]	—	(2) 55-gal drums	None	Yes, if spilled; no cover or secondary containment		X
[redacted]								
Acetylene	Construction activities/Outside along fence	AUL[1]	—	~5 cylinders	None	No		X
Argon	Construction activities/Outside along fence	AUL[1]	—	~5 cylinders	None	No		X
Helium	Construction activities/Outside along fence	AUL[1]	—	~5 cylinders	None	No		X
Hydraulic fluid	Vehicle maintenance/In covered shed and outside shed on pallets	AUL[1]	—	(7) 55-gal drums	None	Yes, has drip pan but no cover or secondary containment		X
Sawdust bags	Construction activities/On hillside	AUL[1]	—	1 pile	None	Yes, located outside, uncovered; no secondary containment		X
Railroad ties	Construction activities/On hillside	AUL[1]	—		None	Yes, located outside, uncovered; no secondary containment		X

Key:
gal=Gallon.
lb=Pound.
UST=Underground storage tank.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Location of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Open scrap metals bin	2013				
Metal and pipe racks exposed to weather	2013				
Building vacated	2015				

Key:
gal=Gallon.

Table 4-[redacted]
[redacted] ([redacted])

LIST OF SIGNIFICANT SPILLS AND LEAKS

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
										-

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
[redacted]- Diesel Storage	Core BMPs Sector P BMPs
[redacted]- Indoor Degreaser and Used Oil Filters Storage	
[redacted] Indoor Oil Storage and Handling	
[redacted]-Indoor Paint and Degreaser Storage	
[redacted]- Indoor Used Oil Storage and Handling	
[redacted] Indoor Vehicle Maintenance	
[redacted]- Sewer Sump Pumps	
[redacted]- Vehicle Washing	
[redacted]- Wood Working	
[redacted]- Flammable Storage	
[redacted]- Indoor Battery Storage	
[redacted]- Outdoor Oil/Water Sludge Storage	
[redacted]- Diesel Storage	
[redacted]- Outdoor Covered Storage	
[redacted]- Tool, Lumber, and Equipment Storage	
[redacted]- Uncovered Hazardous Waste Storage	Core BMPs

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
	Sector P BMPs
[redacted]- Uncovered Material Storage	
Chain and Tire Storage	
Covered Outdoor Compressed Gas Storage	
Hydraulic Fluid Shed Storage	
Outdoor Hydraulic Fluid Storage	
Outdoor Raw Material Storage	
Outdoor Vehicle Parking	

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Figure 4-[redacted]: [redacted]

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4.4.22 [redacted] ([redacted])

Facility Description: The [redacted] (Buildings [redacted]) is located near the south end of the Base near the intersection of Trigger Avenue and Silversides Road as shown on Sheet S-10 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

All of the structures are enclosed in a chain link fence. A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-6074).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the facility ([redacted]) generally drains to the west. Catch basins collect stormwater that flows into these bermed storage areas. These catch basins drain to Retention basin [redacted] where flows are pumped through an oil/water separator and into the sanitary sewer. A trench drain at the Building [redacted] loading area discharges to a 7,000 gallon tank to the west which is periodically pumped out and taken to the industrial waste treatment plant for disposal. The remainder of the loading area, drains overland across grass and asphalt to the surrounding woods. This facility lies in drainage basin DB2, but runoff will infiltrate before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the BOSC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/01/94 which included Buildings [redacted] and other storage areas as discussed below. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
None- historically contained batteries	Temporary storage/ Inside structure	-	-	-	None	No, storage inside building		X
[redacted]								
Hazardous materials- paint, compressed gases	Temporary storage/ Inside building	AUL[1]	-	AUL[1]	None	Possible during unloading activities		X
PCB Wastes	Temporary storage/On loading dock	-	-	[2]	None	No, any spills would be contained		X
Flammable Wastes	Temporary storage/ Inside building	-	-	[2]	None	No, any spills would be contained		X
Corrosive Wastes	Temporary storage/ Inside building	-	-	[2]	None	No, any spills would be contained		X
Empty compressed gas cylinders	Temporary storage/ Outside building	-	-	[2]	None	No, any spills would be contained		X
Outside Storage Areas								
55-gallon drums	Temporary storage/Outside within bermed area	-	-	2	None	No, although stored outside and not covered, area is bermed and drains to [redacted]		X
Soil Stockpile	Temporary storage/ Outside in pile	-	-	1 pile	1 pile	No, although stored outside and not covered, area is bermed and drains to [redacted]		X
[redacted]								
Oily Waste Liquid	Temporary storage/ Within contained area	-	-	(3) 10,000-gal ASTs (1) 7,500-gal AST	None	No, tanks are within secondary containment		X

Key: [1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
AST = Above ground storage tank.
gal=Gallon.
lb = Pound.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- [redacted] Storage	Core BMPs Sector P BMPs
[redacted]- [redacted] Loading	
[redacted]- [redacted] Storage	
[redacted]- [redacted] Storage	
[redacted]- Oily Waste Liquid Handling	
[redacted]- Oily Waste Liquid Storage	
[redacted] Loading	
Outdoor 55-gallon Drum Storage	
Outdoor Bermed Storage Areas	
Outdoor Compressed Gas Cylinder Storage	
Outdoor Covered Soil Stockpile Storage and Treatment	

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Figure 4-[redacted]: [redacted]

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4.4.23 [redacted] ([redacted])

Facility Description: The [redacted] ([redacted]) is located near the south end of the Base near the intersection of Trigger Avenue and Silversides Road as shown on Sheet S-10 of the SWPPP base maps. This facility includes concrete pad covered by a fabric Shed and a surrounding paved area used for storage of materials and empty dumpsters. The covered area is open on the north and south ends for equipment access.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the areas surrounding Building [redacted] flows into dead-end ditches surrounding the facility. A catch basin which, appears to discharge to the ditch west of the facility, is located inside the south entry of the covered area. This facility lies in drainage basin DB2, but runoff will infiltrate before reaching the basin outfall.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the [redacted] that have been exposed to stormwater during the last three years are shown in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted on 11/29/05. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. The potential pollutant sources described below and listed in Table 4-[redacted] were identified at the facility and include materials entering the storm drain inside the structure and tracking materials outside the covered area.

- The west and east walls of the interior of the Shed are divided into cells using concrete ecology blocks. Various materials waiting recycling or disposal are stored in the cells. Material present during the site visit include: used sandblast grit, petroleum contaminated soil, street sweepings, pallets and scrap wood, broken asphalt and concrete.
- Used sandblast grit stored on the north end of the Shed was being tracked outside the covered area by equipment. Tracked grit was washing towards the ditch on the west side of the facility.
- A catch basin is located in the south end of the covered area. Materials stored inside the structure can be tracked into the catch basin.
- Used tires are stored in a cell outside the Shed on the south side of the facility.

Existing BMPs: Existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

New BMPs: New BMPs for this facility as shown in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Broken Asphalt			NA		None	No		X
Broken Concrete			NA		None	No		X
Street Sweepings			NA		None	No		X
Petroleum Contaminated Soil			NA		None	Yes, could be tracked into catch basin		X
Used Blast Grit			NA		None	Yes, tracked outside		X
Vehicle Tires			NA		None	Yes, stored in weather		X

Key:
NAV=Not available.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Used tires stored outside	2014	Large quantity			

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Material Storage and Handling	Core BMPs
Catch Basin	Sector P BMPs

[b]Entry refers to relevant section in either the Multi-Sector General Permit or *Stormwater Management for Industrial Activities* (USEPA 1992).

Figure 4-[redacted]: [redacted]

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4.4.24 [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted])

Facility Description: The [redacted] (Building [redacted]), [redacted] ([redacted]), and [redacted] (Building [redacted]) facilities are located at the north end of the Base by Delta Pier on Escolar Road as shown on Sheet S-7 of the SWPPP base maps. The sewage pump station consists of the pumps, high level alarm ([redacted]), and an emergency generator ([redacted]). Facility [redacted] consists of a 35,000-gallon SOD surge tank, 3,000-gallon oil/water separator, and waste oil holding tank. The industrial water pump station ([redacted]) is located under an approximate 20-foot diameter concrete pad. All facilities were investigated as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The sewage pump station ([redacted]) is used to pump sewage from [redacted] facilities. The [redacted] ([redacted]) is used to treat SOD and normal fuel oil compensating water that is pumped from [redacted]. In addition, portable 5,000-gallon SOD tanks are frequently brought to the facility for treatment. Facility [redacted] is used to pump industrial water from [redacted] to the wastewater treatment facility.

Stormwater Drainage Facility Description: Stormwater runoff from facilities [redacted], [redacted], and [redacted] drains into an open ditch and flows north along Escolar Road. The open ditch eventually discharges at outfall OF11. These facilities, which lie in drainage basin DB11, are surrounded on all sides by gravel. A significant portion of the runoff will percolate into the ground before reaching the drainage basin outfall.

Materials Inventory: There are no materials identified at this facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The initial field survey was conducted 10/27/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Facilities [redacted] were surveyed. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
None	-	-	-	-	-	-		X
[redacted]								
Oily Wastewater	Temporary storage/UST	-	NAV	(1) 35,000-gal UST (1) 5,000-gal tanker	None	Yes, portable 5,000-gallon tanker truck could have hose failures		X
Waste Oil	Waste from oil/water separator/In separator and waste oil UST	-	NAV	3,000-gal separator	None	Yes, possible when emptying tank		X
[redacted]								
None	-	-	-	-	-	-		X

Key: [1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
AST=Above ground storage tank.
UST=Underground storage tank.
gal=Gallon.
lb=Pound.

Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted])

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
[redacted]- Pump Station Operation and Maintenance	Core BMPs Sector Q BMPs
[redacted]- Oil/Water Separator Operation and Maintenance	
[redacted]- SOD Storage	
[redacted]- Temporary Tanker Truck SOD Storage	
[redacted]- Industrial Pump Station Operation and Maintenance	

[b]Entry refers to relevant section in either the Multi-Sector General Permit or *Stormwater Management for Industrial Activities* (USEPA 1992).

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Figure 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] Station ([redacted])

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4.4.25 [redacted] ([redacted])

Facility Description: The [redacted] (Buildings [redacted]) are located near the north end of the Base on Runner Road as shown on Sheet S-8 of the SWPPP base maps. These facilities include the following structures, which were investigated as part of the storm sewer survey:

[redacted]

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater from the Industrial Wastewater facilities drains to the west. These facilities lie in the DA11 drainage area, which outfalls at OF11 to Hood Canal. The entire facility is surrounded by a berm and all stormwater flows to two catch basins in the bermed area. The catch basins drain to a 200,000-gallon tank to await treatment and separation before discharge to the sanitary sewer system. The only stormwater to leave the site drains from the roof to an open ditch along Runner Road. The ditch flows southwest along Runner Road and eventually discharges at outfall OF11.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the 1994 BOSC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Reported significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 10/27/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Buildings [redacted] were surveyed. Potential pollutant sources are listed in Table 4-[redacted].

Existing BMPs: Existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

New BMPs: New BMPs for this facility are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
7030								
Miscellaneous wastewater	Temporary storage/ UST in basement	-	-	20,000 gal UST	None	No, tank located inside building in basement		X
Waste oil	Temporary storage/ UST in basement	-	NAV	500-gal tank, and 500-gal separator	None	No, tank and oil/water separator located inside building in basement		X
Detergent	Wastewater treatment/ Outside east wall	AUL[1]	-	(1) 55-gal drum	None	No, material stored outside however drains to UST		X
Alum Liquid	Wastewater treatment/ Outside east wall	AUL[1]	-	(3) 55-gal drums	None	No, material stored outside however drains to UST		X
Hydrogen Peroxide	Wastewater treatment/ Outside east wall	AUL[1]	-	(2) 55-gal drums, (6) 5-gal	None	No, material stored outside however drains to UST		X
Ferric Chloride	Wastewater treatment/ Outside east wall	AUL[1]	-	(3) 55-gal drums	None	No, material stored outside however drains to UST		X
Chlorine	Wastewater treatment/ Outside east wall	AUL[1]	-	(6) 55-gal drums	None	No, material stored outside however drains to UST		X
Calcium chloride	Wastewater treatment/ Outside east wall	AUL[1]	-	(2) 5-gal buckets	None	No, material stored outside however drains to UST		X

Key:
[1]=Data can be obtained from the Authorized Use List, which is provided as an Appendix.
AUL=Authorized Use List.
gal=Gallon.
lb=Pound.
NAV=Not available.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]: [redacted] ([redacted]), [redacted] ([redacted]), [redacted] ([redacted]), and [redacted] ([redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] Facilities ([redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Compressor Leaks	Core BMPs Sector Q BMPs
[redacted] Indoor Material Disposal via Floor Drains	
[redacted]- Indoor Wastewater Storage	
[redacted]- Indoor Wastewater Treatment Activities	
[redacted]- Outdoor Hazardous Material Storage	
[redacted]- Outdoor Unloading	
[redacted] - Oily Waste Storage in Temporary Storage Tanks	
[redacted]- Batch Treatment	
[redacted]- Emulsified Oily Waste Permanent Storage Tanks	
[redacted]- Equipment Washing	
[redacted]- Neutralization	
[redacted]- Outdoor Unloading Area	
[redacted]- SCBA Refurbishing	
[redacted]- Solvent Distillation and Covered Material Storage and Handling	
[redacted]- Uncovered Material Storage and Handling	

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Figure 4-[redacted]: [redacted] ([redacted])

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4.4.26 [redacted] ([redacted])

Facility Description: The [redacted] ([redacted]) is located at the [redacted] stormwater detention pond as shown on Sheet S-7 of the SWPPP base maps. This facility includes an oil/water separator with an approximate 500-gallon waste oil aboveground storage tank, which was investigated as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facility is used for separation of oil from water retained in the [redacted] stormwater detention pond, which empties into Devil's Hole. At the time of the 2005 site visit station personnel indicated that the separator had not been functioning for some time. However, discharge from the pond still passes through the separator and it is periodically checked for sheen. The pond is drained from below the surface and is also periodically visually checked for oil sheen.

Stormwater Drainage Facility Description: Stormwater runoff from facility [redacted] generally flows to the east. Runoff would generally percolate into vegetation surrounding the facility. This facility lies in drainage basin DB10.

Materials Inventory: Waste oil was the only material stored and produced at this facility in 2009 as listed in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported (spill list) significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted 10/27/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted] ([redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Waste Oil	Temporary storage/In separator and AST	-	NAV	500 - gal when in use	None	Yes, if AST leaks		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.
AST=Above ground storage tank.

Table 4-[redacted]: [redacted] ([redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted] ([redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted] ([redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	BMPs
Oil/Water Separator Maintenance and Cleaning	Core BMPs Sector Q BMPs
Oil/Water Separator Operation	

Figure 4-[redacted]: [redacted]

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[redacted]

Facility Description: [redacted] is located in the north end of the base by [redacted] near the intersection of Escolar and Greenling Roads as shown on Sheet S-7 of the SWPPP base maps. [redacted] is located at the east end of Greenling Road. These facilities, which consist of one building each, were investigated as part of the storm sewer survey. A detailed map showing the site layout and surrounding area is provided on the SWPPP site maps (Figure 4-[redacted] and 6-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The area around the [redacted] drains to the west and north. Runoff flows to an open channel flowing west along Greenling Road. The open channel is culverted under the facility access drive and discharges to a stream, which discharges at OF11. The [redacted] and the surrounding area are within drainage basin DA11.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted] The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey of [redacted] was conducted 10/28/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Building [redacted] was assessed in 2005. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Chlorine	Water treatment/Inside building	AUL[1]	-	12 tanks	None	No, stored inside		X

Key:

[1] Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.

Table 4-[redacted]
[redacted]

DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL

Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]: [redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]: [redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	BMPs
Indoor Material Storage	Core BMPs
Operation and Maintenance	Sector Q BMPs

Figure 4-[redacted]

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Figure 4-[redacted]

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4.4.28 [redacted])

Facility Description: The [redacted] complex is located on Hood Canal just off Wahoo Road as shown on Sheet S-3 of the SWPPP base maps. The complex includes the following structures, which were investigated as part of the storm sewer survey:

- [redacted]

In addition, construction is ongoing for additional submarine support docks. A map showing the site layout and surrounding area is provided on the SWPPP site map (Figures 6-[redacted] and 6-[redacted]).

Facility Objective: [redacted]

- [redacted]

Stormwater Drainage Facility Description: The upper [redacted] complex includes the parking areas, [redacted], and Buildings [redacted]. Drainage for the upper complex flows to the northwest into Hood Canal. The large parking lot, [redacted] and the southern half of [redacted] are within drainage basin DB7, which drains to outfall OF7. The [redacted] boat ramp is within DB7 and sheet flows into Hood Canal. The small parking lot, [redacted], and the northern half of [redacted] are within drainage basin DB8, which drains to outfall OF8.

The lower complex includes the [redacted]. Stormwater from [redacted] and [redacted] is collected in a tank that receives flow from a trench drain that collects all runoff from the [redacted]. The tank is pumped by the [redacted] to a retention pond behind Building [redacted] in drainage basin DB3. The retention pond eventually drains to OF3. Runoff from [redacted] sheet-flows directly into Hood Canal.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection and the NAVBASE Kitsap AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the [redacted] Pier are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 10/24/94-10/25/94 on Buildings [redacted]. The facilities were revisited in fall 2005 as part of the 2006 SWPPP update. The facilities have been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Facility [redacted]								
Construction Materials (Rebar, lumber, concrete, misc. machinery)	Temporary Construction/North end of pier	NAV	NA	4 piles	4 piles	Yes, stored outside and not covered		X
Diesel	Vessel Fueling/South of [redacted]	AUL	NA	10,000 gal.	None	No, stored in USTs		X
Building [redacted]								
Lubricating Oil		AUL	NA	AUL	None	No, stored in building.		
Paint		AUL	NA	AUL	None	No, stored in building.		
Detergent		AUL	NA	AUL	None	No, stored in building.		
Penetrant		AUL	NA	AUL	None	No, stored in building.		
Anti Seize Compound		AUL	NA	AUL	None	No, stored in building.		
Acrylic Spray Coating		AUL	NA	AUL	None	No, stored in building.		
Silicone Compound		AUL	NA	AUL	None	No, stored in building.		
Grease		AUL	NA	AUL	None	No, stored in building.		
Joint Sealer		AUL	NA	AUL	None	No, stored in building.		
Cleaner		AUL	NA	AUL	None	No, stored in building.		
Ethylene Glycol		AUL	NA	AUL	None	No, stored in building.		
Primer Coating		AUL	NA	AUL	None	No, stored in building.		
Thinner		AUL	NA	AUL	None	No, stored in building.		
Epoxy		AUL	NA	AUL	None	No, stored in building.		
Isopropyl Alcohol		AUL	NA	AUL	None	No, stored in building.		
Soldering Paste		AUL	NA	AUL	None	No, stored in building.		
Corrosion Preventative		AUL	NA	AUL	None	No, stored in building.		
Adhesive		AUL	NA	AUL	None	No, stored in building.		
Developer		AUL	NA	AUL	None	No, stored in building.		
Xylene		AUL	NA	AUL	None	No, stored in building.		
Stoddard Solvent - Dry Cleaning		AUL	NA	AUL	None	No, stored in building.		
Sodium Phosphate		AUL	NA	AUL	None	No, stored in building.		
Copper Sulfate		AUL	NA	AUL	None	No, stored in building.		
Hydraulic Fluid		AUL	NA	AUL	None	No, stored in building.		
Bleach		AUL	NA	AUL	None	No, stored in building.		
Talcum Powder		AUL	NA	AUL	None	No, stored in building.		
Diesel Fuel		AUL	NA	AUL	None	No, stored in building.		

Table 4-[redacted]: [redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Petroleum Naphtha		AUL	N/A	AUL	None	No, stored in building.		
Betadine		AUL	N/A	AUL	None	No, stored in building.		
Floor Polish		AUL	N/A	AUL	None	No, stored in building.		
Compressed Asbestos Sheet		AUL	N/A	AUL	None	No, stored in building.		
Oxygen		AUL	N/A	AUL	None	No, stored in building.		
Argon		AUL	N/A	AUL	None	No, stored in building.		
Propane		AUL	N/A	AUL	None	No, stored in building.		
Acetylene		AUL	N/A	AUL	None	No, stored in building.		
Mineral Oil		AUL	N/A	AUL	None	No, stored in building.		
Cupric Sulfate		AUL	N/A	AUL	None	No, stored in building.		
Sulfuric Acid		AUL	N/A	AUL	None	No, stored in building.		

Key:
gal=Gallon.
lb=Pound.
NAV=Not available.
N/A=Not applicable.

Table 4-[redacted]: [redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Uncovered scrap metal dumpster on pier.	2013-2014	1 dumpster			
Diesel fuel dripping from fill port on south end of [redacted].	Current				

Table 4-[redacted]: [redacted]) List of Significant Spills and Leaks										
Date (month/day/ year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Indoor Material Storage and Handling	Core BMPs Sector Q BMPs
[redacted]- Outdoor Material Storage	
[redacted]- SOD and Waste Oil Transfer Operations	
[redacted]- SOD Storage and Handling	
[redacted]- Storm Sewer and Sanitary Pump Operation	
[redacted]- Boat and Submarine Docking	
[redacted]- Crack in Pier at Expansion Joint	
[redacted]- Fuel Storage	
[redacted]- Fueling for Marine Vessels	
[redacted] Garbage Dumpster Storage	
[redacted] New Construction Oily Equipment Parts Storage	
[redacted]- New Construction Outdoor Storage	
[redacted]- Storm Drain Maintenance	
[redacted]- Vehicle Parking	
[redacted]- Material Storage	
[redacted]- Welding and other Activities	

Table 4-[redacted] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
[redacted]- Indoor Material Storage	Core BMPs Sector Q BMPs
[redacted]- Loading/Unloading	
[redacted]- Outdoor Flammable Storage and Handling	
[redacted]- Outdoor Flammable Storage and Handling (continued)	
[redacted]- Outdoor POL Storage	

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Figure 4-[redacted]

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4.4.29 Utility Plant Waterfront ([redacted])

Facility Description: The [redacted]) is located at the north end of the Base by [redacted] on Sealion Road as shown on Sheet S-7 of the SWPPP base maps. This facility includes one building, which was investigated as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facility provides heat utilizing natural gas.

Stormwater Drainage Facility Description: Stormwater runoff from facility [redacted] generally drains to the west. Runoff flows across grassy areas to an open ditch that discharges to Hood Canal at outfall OF10. Some runoff from the access drive flows to the south to Devil's Hole (drainage basin DB3).

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 10/28/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutants are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Salt	Operation and maintenance/Inside	AUL[1]	-	(20) 50-lb bags	None	No, stored and used inside		X
Freon	Operation and maintenance/ Inside	AUL[1]	-	10 large cylinders	None	No, stored and used inside		X
Waste Oil	Operation and maintenance/ Inside	-	NAV	(1) 55-gal drum	None	No, stored and used inside		X
Waste Oil with Freon	Operation and maintenance/ Inside	-	NAV	(1) 55-gal drum	None	No, stored and used inside		X
Ethylene Glycol	Operation and maintenance/ Inside	AUL[1]	-	(1) 55-gal drum	None	No, stored and used inside		X
Turbine Oil	Operation and maintenance/ Inside	AUL[1]	-	(5) 55-gal drums	None	No, stored and used inside		X
Polymer Water	Operation and maintenance/ Inside	AUL[1]	-	(10) 30-gal drums	None	No, stored and used inside		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.
lb=Pound.
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage	Core BMPs Sector Q BMPs
Operations and Maintenance	

Figure 4-[redacted]

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4.5 Naval Undersea Warfare Center (NUWC)

Fourteen NUWC facilities were inspected during this SWPPP effort. Table 4-7 lists, for each facility, the facility name, building number(s), and section numbers.

Table 4-7

Naval Undersea Warfare Center Facilities Listing

Facility Name	Building No.	Section No.
[redacted]	[redacted]	4.5.1
[redacted]	[redacted]	4.5.2
[redacted]	[redacted]	4.5.3
[redacted]	[redacted]	4.5.4
[redacted]	[redacted]	4.5.5
[redacted]	[redacted]	4.5.6
[redacted]	[redacted]	4.5.7
[redacted]	[redacted]	4.5.8
[redacted]	[redacted]	4.5.9
[redacted]	[redacted]	4.5.10
[redacted]	[redacted]	4.5.11
[redacted]	[redacted]	4.5.12
[redacted]	[redacted]	4.5.13
[redacted]	[redacted]	4.5.14

[redacted]

Facility Description: The [redacted] complex ([redacted]) is located near the southeast end of the Base between Dace Road and Scorpion Avenue as shown on Sheet S-15 of the SWPPP base maps. Administrative offices, a machine shop, testing cells, and work benches are located on the main floor of Building [redacted]. A compressor, a hot water heater, and a boiler are on the second floor. The [redacted]) is located approximately 100' south of Building [redacted]. This facility consists of an asphalt pad with two wooden poles.

The [redacted]) is located just north of Building [redacted]. This facility, which consists of a structure partially covered by sod on its south side, contains a testing bay, a developing room, and a restroom.

A detailed map illustrating the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff in the Building [redacted] complex generally drains to the south. Grass surrounds the facility on all sides except the between Building [redacted], which bracket an asphalt parking lot. A catch basin in the parking lot receives stormwater flow from the lot and the building roof drains, and discharges to an open channel west of the building.

This facility lies in drainage basin DB2. Very little runoff from this facility reaches the drainage basin outfall due to percolation into the ground. There is no point source outfall for drainage from this facility.

Materials Inventory: Materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from a January 1993 Hazardous Material Inventory List, the 1994 NUWC AUL and the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are identified in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original SWPPP field survey was conducted 11/16/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted] Material Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Adhesive super bonder	Cable repair/indoors	4 oz/year	-	NAV	None	No, material stored indoors		X
Adhesive spray	Attaching labels/indoors	6 cans/year	-	NAV	None	No, material stored indoors		X
Isopropyl alcohol	Cleaning/indoors	1 quart/ week	-	NAV	None	No, material stored indoors		X
Alodine	Aluminum treatment/indoors	1 oz/year	-	NAV	None	No, material stored indoors		X
Alumiprep	Aluminum pretreatment/indoors	1 pint/year	-	NAV	None	No, material stored indoors		X
Glass lens cleaner	Glass cleaning/indoors	1 pint/year	-	NAV	None	No, material stored indoors		X
Re-Nu contact solution	Parts cleaning/indoors	1 can/month	-	NAV	None	No, material stored indoors		X
Epoxy resin	Repair/indoors	1 kit/year	-	NAV	None	No, material stored indoors		X
Flux	Soldering/indoors	1 pint/year	-	NAV	None	No, material stored indoors		X
Glyptal	Repair/indoors	½ pint/year	-	NAV	None	No, material stored indoors		X
Ink	Stenciling/indoors	48 cans/year	-	NAV	None	No, material stored indoors		X
Lacquer	Painting/indoors	24 cans/year	-	NAV	None	No, material stored indoors		X
LPS lubricant	Lubricating containers/indoors	12 cans/year	-	NAV	None	No, material stored indoors		X
Citra Safe solvent cleaner	Cleaning/indoors	-	-	NAV	None	No, material stored indoors		X
Paint	Painting various torpedo components/indoors	61 gal/year	-	NAV	None	No, material stored indoors		X
Paint remover	Paint stripping/indoors	2 gal/year	-	NAV	None	No, material stored indoors		X
Potting	Cable repair/indoors	16 gal/year	-	NAV	None	No, material stored indoors		X
Primer wash	Pretreatment/indoors	12 kits/year	-	NAV	None	No, material stored indoors		X
Clorox Soft Scrub	Cleaning/indoors	78 oz/year	-	NAV	None	No, material stored indoors		X
Metal Scrap	Recycling/outdoors	-	NAV	1 dumpster	1 dumpster	Yes, stored in open dumpster		X
Metal containers (5002)	Storage/Asphalt pad	-	-	5 piles	5 piles	Yes, stored outside with no cover		X

Table 4-[redacted]) Material Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Metal parts ([redacted])	Storage/Asphalt pad	-	-	1 dumpster	None	No, stored in covered dumpster		X
Developer ([redacted])	Film developing/Inside building	10 gal/year	-	30 gal	None	No, any spill would flow to floor drain connected to sanitary sewer		X
Fixer ([redacted])	Film developing/Inside building	10 gal/year	-	30 gal	None	No, any spill would flow to floor drain connected to sanitary sewer		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.
oz=Ounce.

Table 4-[redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Excess material including electronics stored outside	2013-2015				
Scrap metals dumpster without lid	2013-2015				

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Building [redacted]	Core BMPs Sector AA BMPs
Floor Drains Near Compressor	
Indoor Material Handling	
Outdoor Flammable Material Storage and Handling	
Spray Painting	
Outdoor Trash and Metal Scrap Storage	
[redacted]	
Outdoor Material Storage	
Water Ponding	
[redacted]	
Floor Drain in Developing Room	
Indoor Material Storage	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located near the southeast end of the Base on Scorpion Avenue as shown on Sheet S-15 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the facility (Buildings [redacted]) drains to the west and to the south. A catch basin to the west collects stormwater from the asphalt area in front of the buildings and discharges to an open ditch along Scorpion Avenue. Grass and a wooded area surround the other three sides of the facility. The facility lies in drainage basin DB2 but all stormwater drainage will percolate into the ground before reaching the drainage area outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from a hand-written inventory list provided by NUWC personnel, the 1994 NUWC AUL, and the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey of the facility was conducted 11/16/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted] Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Lubricating spray	[redacted]	NAV	-	(6) 1-pint spray cans	None	No, stored inside building		X
Soap	Cleaning/Inside Building [redacted]	NAV	-	1 gal	None	No, stored inside building		X
Cleaner spray	Cleaning/Inside Building [redacted]	NAV	-	—	None	No, stored inside building		X
Petrolatum	Equipment maintenance/Inside Building [redacted]	NAV	-	1 quart	None	No, stored inside building		X
Silicone spray	Equipment maintenance/Inside Building [redacted]	NAV	-	NAV	None	No, stored inside building		X
Pump oil	Equipment maintenance/Inside Building [redacted]	NAV	-	6 quarts	None	No, stored inside building		X
Grease	Equipment maintenance/Inside Building [redacted]	NAV	-	NAV	None	No, stored inside building		X
Hydraulic fluid	Equipment maintenance/Inside Building [redacted]	NAV	-	(12) 1-gal cans	None	No, stored inside building		X
Silicone compound	Equipment maintenance/Inside Building [redacted]	NAV	-	NAV	None	No, stored inside building		X
Silicone grease	Equipment maintenance/Inside Building [redacted]	NAV	-	NAV	None	No, stored inside building		X
Mineral spirits	Cleaning/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, stored inside building		X
Isopropyl alcohol	Cleaning/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, stored inside building		X
Spray paint	Painting/Outdoor flammable locker	NAV	-	Several cans	None	No, stored inside flammable locker		X

Key:
gal=Gallon.
N/A=Not applicable.
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Scrap metal dumpster missing lid	2013				

Table 4-[redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]) Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Indoor Material Handling	Core BMPs Sector AA BMPs
[redacted]- Loading/Unloading	
[redacted]- Compressor Leaks	
[redacted]- Indoor Material Storage and Handling	
Floor Drain in Material Storage Area	
Outdoor Flammable Material Storage and Handling	

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Figure 4-[redacted]

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4.5.3 [redacted] ([redacted])

Facility Description: The [redacted] Building (Facility [redacted]) is located near the southeast end of the Base on the NUWC [redacted] along Scorpion Avenue as shown on Sheet S-16 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

Building [redacted] is a sod-covered concrete structure with a concrete deck at the front (west side) of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from this facility drains to the west and to the south. A catch basin collects stormwater runoff from the asphalt area in front of the building and discharges to an open ditch flowing south along Scorpion Avenue. The remainder of the facility is surrounded by grass and trees. This facility lies in drainage basin DB2 but all stormwater runoff will likely percolate into the ground before reaching an outfall.

Materials Inventory: A materials inventory for 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are shown in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted on 1/9/2006. The facility has been reassessed regularly since 2006 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Solvents	Flammable Locker	NA	NA		None	No		X
Oil	Flammable Locker	NA	NA		None	No		X
Paint	Flammable Locker	NA	NA		None	No		X
		NA	NA		None			X
		NA	NA		None			X
		NA	NA		None			X

Key:
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Uncovered scrap metal dumpster	2013				

Table 4-[redacted] List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	BMPs
[redacted]- Indoor Material Handling	Core BMPs Sector AA BMPs
[redacted]- Loading/Unloading	
[redacted]- Material Storage and Handling	

Figure 4-[redacted] Building

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[redacted]

Facility Description: The facility is located near the southeast end of the Base near the [redacted] as shown on Sheet S-16 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

Building [redacted] is a sod-covered brick structure with a concrete deck at the front (west side) of the building. Building [redacted] houses a compressor at its east end and a covered material storage area at its west end.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from this facility drains to the west and to the south. A catch basin collects stormwater runoff from the asphalt area in front of the building and discharges to an open ditch flowing south along Scorpion Avenue. The remainder of the facility is surrounded by grass and trees. This facility lies in drainage basin DB2 but all stormwater runoff will percolate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection. No materials were listed for either building in the 1994 NUWC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/16/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. At the time of the 2005 site visit operations at the facility had halted indefinitely. The building was retained in the SWPPP to cover the possibility that operations may resume in the future. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Alcohol	Cleaning/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, area is bermed and covered		X
Mineral spirits	Cleaning/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, area is bermed and covered		X
Refined oil	Equipment maintenance/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, area is bermed and covered		X
Hazardous wastes	Storage/Inside Building [redacted]	-	NAV	~100 gal	None	No, area is bermed and covered		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.

Table 4-[redacted] Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4- [redacted]

LIST OF SIGNIFICANT SPILLS AND LEAKS

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.
Key:
gal=Gallons.
NAV=Data not available.

Table 4- [redacted] **) Pollutant Sources And BMPs**

Stormwater Pollutant Sources	BMPs
[redacted]- Illicit Discharge [redacted]	Core BMPs Sector AA BMPs
[redacted]- Indoor Material Handling	
[redacted]- Loading/Unloading	
[redacted]- Compressor Leaks	
[redacted]- Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] Building (Facility [redacted]) is located near the southeast end of the Base on the NUWC [redacted] at the corner of Pargo and Dace Roads as shown on Sheet S-16 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

[redacted]

Building [redacted] is a sod-covered concrete structure with a concrete deck at the front (west side) of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from this facility drains to the east and to the south. Stormwater runoff flows from the asphalt area in front of the building and discharges to an open ditch flowing south along Dace Road. The remainder of the facility is surrounded by grass and trees. This facility lies in drainage basin DB2 but all stormwater runoff will likely percolate into the ground before reaching an outfall.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the [redacted] Building that have been exposed to stormwater during the last three years are shown in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted on 1/9/2006. The facility has been reassessed regularly since 2006 by NAVFAC NW personnel. In general the facility appeared clean and well managed. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Solvents	Flammable Locker	NAV	NAV		None	No		X
Oil	Flammable Locker	NAV	NAV		None	No		X
Paint	Flammable Locker	NAV	NAV		None	No		X

Key:
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	BMPs
[redacted]- Indoor Material Handling	Core BMPs Sector AA BMPs
[redacted]- Loading/Unloading	
[redacted]- Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] Building (Facility [redacted]) is located near the southeast end of the Base on the [redacted] as shown on Sheet S-16 of the SWPPP base maps. This facility includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

Building [redacted] is a sod-covered concrete with a concrete deck at the front (west side) of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from this facility drains to the west and to the south. A catch basin collects stormwater runoff from the asphalt area in front of the building and discharges to an open ditch flowing south along Scorpion Avenue. The remainder of the facility is surrounded by grass and trees. This facility lies in drainage basin DB2 but all stormwater runoff will likely percolate into the ground before reaching an outfall.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from SWPPP site assessment inspections.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the [redacted] Building that have been exposed to stormwater during the last three years are shown in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted on 1/9/2006. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted] Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Solvents	Flammable Locker	NA	NA		None	No		X
Oil	Flammable Locker	NA	NA		None	No		X
Paint	Flammable Locker	NA	NA		None	No		X

Key:
NAV Not available.

Table 4-[redacted] Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Scrap metal dumpster missing lid	2014-Current	1 dumpster			

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]) Pollutant Sources And BMPs		
Stormwater Pollutant Sources	**BMPs**	
[redacted]- Indoor Material Handling		Core BMPs Sector AA BMPs
[redacted]- Loading/Unloading		
[redacted]- Material Storage and Handling		

Figure 4- [redacted] Building

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[redacted]

Facility Description: The [redacted]) is located at the east end of the Base in the [redacted] as shown on Sheet S-16 of the SWPPP base maps. The facility consists of a one-story concrete structure that houses offices, a storage room, and a large work area that takes up most of the space in the building. A paint booth, drying booth, sandblast booth, and welding area are located inside the work area. Two propane tanks are located on a grassy ridge behind (i.e., to the west of) the building. Except for a small grassy area to the north where the facility's septic UST used to be, an asphalt lot surrounds the other three sides of Building [redacted].

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

[redacted]

[redacted]

[redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] generally drains to the east and to the south. A catch basin collects stormwater from the northeastern portion of the asphalt lot surrounding the building and discharges to a ditch along [redacted]. Runoff from the parking lot not captured by the catch basin flows east to the same ditch. Stormwater runoff from the grassy ridge behind the northern half of the building generally ponds in depressions observed on the west and north sides of the building, although a 12-inch corrugated pipe connected to the parking lot catch basin was observed on the north side. Runoff from the southern portion of the grassy ridge flows into an open ditch bordering the asphalt lot to the south of Building [redacted].

This facility lies in drainage basin DB2, but all stormwater runoff will percolate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the facility's material inventory sheets and from the February 1996 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted 2/22/96. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Waste sandblast grit	Storage/Beneath hopper on building's south side	-	NAV	(1) 55-gal drum	(1) 55-gal drum	Yes, if drum is punctured from the side		X
Paint	Painting/Inside flammable locker	NAV	-	~ 12 1-gal cans	None	No, stored in flammable locker inside building		X
Alcohol	Cleaning/Inside flammable locker	NAV	-	(6) 1-gal cans	None	No, stored in flammable locker inside building		X
Spray stencil ink, paints, and varnish	Painting/Inside flammable locker	NAV	-	11-oz, 12-oz, and 16-oz cans	None	No, stored in flammable locker inside building		X
Lube oil	Maintenance/Inside flammable locker	NAV	-	12-oz cans	None	No, stored in flammable locker inside building		X
DyKem spray remover	Maintenance/Inside flammable locker	NAV	-	11-oz cans	None	No, stored in flammable locker inside building		X
Adhesives and contact cement	Maintenance/Inside flammable locker	NAV	-	16-oz, 1-qt, 1-gal and 5-gal cans	None	No, stored in flammable locker inside building		X
Gray paint	Painting/Inside Building [redacted]	NAV	-	(1) 55-gal drum	None	No, stored well inside building		X
Red oxide primer	Painting/Inside Building [redacted] Bulk Paint Room	NAV	-	(1) 5-gal can	None	No, stored in room inside building		X
White paint	Painting/Inside Building [redacted] Bulk Paint Room	NAV	-	(1) 5-gal can	None	No, stored in room inside building		X
Toluene	Painting/Inside Building [redacted] Bulk Paint Room	NAV	-	(1) 5-gal can	None	No, stored in room inside building		X
Spray booth coating	Painting/Inside Building [redacted] Bulk Paint Room	NAV	-	(1) 5-gal can	None	No, stored in room inside building		X
Strippable booth coating	Painting/Inside Building [redacted] Bulk Paint Room	NAV	-	(1) 5-gal can	None	No, stored in room inside building		X
Empty 55-gallon drums	Storage/Outside at south side of Building [redacted]	-	NAV	<10 drums	<10 drums	Yes, stored on asphalt lot with no cover		X
Compressed gas	Welding/In covered space between sandblast booth and welding area	NAV	-	<10 cylinders	None	No, stored in a covered area		X

Key:
gal=Gallon.oz=Ounce.

-=Not applicable.qt= Quart.
NAV=Not available.

Table 4-[redacted] Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Uncovered scrap metal dumpster	2013	1		Dumpster	
Pile of rusted debris on pavement	2013			Pile	

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Floor Drain in the Southeast Corner of the Work Area	Core BMPs Sector AA BMPs
Illicit Discharge [redacted]	
Indoor Flammable Material Storage	
Indoor Material Handling	
Indoor Paint Storage	
Loading/Unloading	
Other Indoor Material Storage	
Outdoor Material Storage	
Painting and Drying	
Oily Compressor Condensate	
Sandblasting	
Sewage ASTs Outside at Parking Lot	

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Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] Storage facility ([redacted]) is located at the east end of the Base in the [redacted] as shown on Sheet S-16 of the SWPPP base maps. The facility consists of a one-story structure that is essentially one large work area. Work benches with tools line the east and west walls. A paint booth that is no longer used sits in a portion of the north end of the work area that is partitioned off with a curtain of plastic flaps; this space is now used for storing equipment. A small shed containing a machine for cutting steel strapping is located outside at the southwest corner of the building. Two propane tanks marked off with barrier posts are located behind (to the west of) Building [redacted]. An asphalt lot is located on the east and south sides of the building, a gravel surface is at the northeast corner, and grass surrounds the rest of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] generally drains to the east and to the south. A 12-inch corrugated pipe connected to two catch basins to the northeast collects stormwater from the northern portion of the building. The catch basins discharge to the east to a ditch along [redacted], which in turn flows south. Runoff from the parking lot flows overland to the same ditch. Stormwater runoff from the grassy ridge behind the southern half of the building flows into a ditch bordering the asphalt lot to the south of Building [redacted].

This facility lies in drainage basin DB2, but all stormwater runoff will percolate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the facility's material inventory sheets and the February 1996 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 2/22/96. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Spray paint	Painting/Inside flammable locker	NAV	-	<10 spray cans	None	No, stored in flammable locker inside building		X
Acetone/paint thinner	Painting/Inside flammable locker	NAV	-	(3) 5-gal cans	None	No, stored in flammable locker inside building		X
Desiccant	Equipment maintenance/Inside Building 5095	NAV	-	<10 190-lb cardboard drums	None	No, stored well inside building		X
Scrap metal (from cut steel strapping)	Recycling/Outside at south side of Building 5095	-	NAV	2 dumpsters	2 dumpsters	Yes, dumpsters have no lids		X
Metal containers (empty) and metal shelf parts	Storage/Outside on parking lot at south side	-	-	Half of parking lot	Half of parking lot	Yes, no cover provided		X

Key:
gal=Gallon.
NAV=Not available.
lb=Pound.

Table [redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Old equipment stored on pavement	2013			Pile	
Two scrap metal dumpsters missing lids	2013 + Current	1-2		Dumpster	

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.
Key:
lb=Pounds.
NAV=Data not available.

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Indoor Flammable Material Storage	Core BMPs Sector AA BMPs
Indoor Material Handling	
Loading/Unloading	
Other Indoor Material Storage	
Outdoor Material Storage	

Figure 4-[redacted]

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4.5.9 [redacted])

Facility Description: The [redacted]) is located at the east end of the Base in the [redacted] as shown on Sheet S-17 of the SWPPP base maps. This facility, which does not have a cover, encompasses approximately 250,000 square feet. Half of the area has a gravel surface; the other half has metal matting and is fenced.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] infiltrates into the vegetated areas around this facility. Some stormwater ponds on the metal matting but most flows off of the matting and percolates into the ground. This facility does not drain to a specific outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted 11/16/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for the identified potential pollutant sources are provided in Table 4-[redacted].

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Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Metal containers, empty	Storage/Outdoors	NAV	-	2,500 ft^2	2,500 ft^2	Yes, stored outside with no cover		X

Key:
ft^2=Square feet.
-=Not applicable.
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**

Key:
ft^2=Square feet.

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Outdoor Material Storage	Core BMPs Sector AA BMPs

Figure 4-[redacted]

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4.5.10 [redacted])

Facility Description: The [redacted]) is located along [redacted] as shown on Sheet S-15 of the SWPPP base maps. This facility includes two buildings (approximately 20,000 and 7,000 square feet). The smaller building has an attached covered canopy attached on the southern end. The facility is used to [redacted].

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from the areas surrounding Buildings [redacted] flows into a set of catch basins on the paved surfaces surrounding the facility. The facility storm sewer system discharges into a bio-swale west of the facility. The swale expands at the downstream end to allow for a small amount of stormwater detention. Flow from the swale likely infiltrates into the forested area to the south however, during period of heavy runoff discharges may reach a culvert under [redacted] and ultimately discharge through OF2. This facility lies in drainage basin DB2.

Materials Inventory: A materials inventory for 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials exposed to stormwater in the past three years are listed on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted on 1/9/2006. The facility has been reassessed regularly since 2006 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Fuel Oil	Heating		NAV	2,500 gal	None	No		X
Paint	Maint.		NAV		None	No		X
Solvent	Maint		NAV		None	No		X

Key:
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Two open scrap metals dumpsters	2013-Current	1-2		Dumpster	
Magnesium castings on the ground	2014			Pile	

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Table 4-[redacted]) Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Indoor Flammable Material Storage	Core BMPs Sector AA BMPs
Fuel Oil Storage	
Loading/Unloading	
Outdoor Material Storage	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located at the west side of the Base [redacted] as shown on Sheet S-3 of the SWPPP base maps. This facility consists of the following components, which were investigated as part of the storm sewer survey:

[redacted]

The [redacted] surrounded by an approximately 1-foot berm. Holes have been drilled at intervals along the berm and act as scuppers. The [redacted] houses administrative offices and is surrounded by numerous lockers containing materials used in, and wastes produced as a result of, the maintenance of boats docked at the facility. The [redacted] is a small metal storage shed that is actually to store equipment and materials.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted] drains by sheet flow directly into Hood Canal. Stormwater runoff flows over the sides of the dock or through holes (scuppers) along the bermed edges of the dock.

The [redacted] drain to the north and to the west. Catch basins in the asphalt surrounding the buildings collect all stormwater runoff and discharge to Hood Canal at outfall OF9.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from a weekly facility inventory/use report of hazardous material dated 11/01/94 through 12/01/94 and from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/16/94. The site was revisited on 8/23/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

BMPs: The BMPs for the potential pollutant sources are provided in Table 4-[redacted].

Table 4-[redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint waste, inert solids, and aerosol cans	Storage/Outside in Locker 1	-	NAV	(1) 55-gal drum each	None	No, stored inside locker with secondary containment		X
Mineral spirits	Cleaning brushes/Outside in Locker 2	NAV	-	(1) 30-gal drum	None	No, stored inside locker with secondary containment		X
Various POLs (grease, petrolatum, lube oil, auto transmission fluid, motor oil)	Equipment maintenance/ Outside in Locker 3	NAV	-	(2) 55-gal drums lube oil, ~ 20 gal of other POLs	None	No, stored inside locker with secondary containment	X	
Paint	Painting/Outside in Locker 4	NAV	-	~30 gal total	None	No, stored inside locker with secondary containment		X
Metal scraps	Recycling/Outside adjacent to lockers	-	NAV	3 dumpsters	3 dumpsters	Yes, no lids provided		X
Diesel	Fueling/UST	NAV	-	(1) 2,500-gal UST	None	Yes, if spilled or overflows	X	
Innerbond sealant	Maintenance/Inside garage storage unit	40 oz	-	NAV	None	No, stored inside building		X
Formula 409 cleaner	Cleaning/Inside garage storage unit	110 oz	-	NAV	None	No, stored inside building		X
Non-ionic detergent	Cleaning/Inside garage storage unit	1 gal.	-	NAV	None	No, stored inside building		X
Metal polish	Maintenance/Inside garage storage unit	64 lbs	-	NAV	None	No, stored inside building		X
Carbon dioxide cartridge	Maintenance/Inside garage storage unit	60 cartridges	-	NAV	None	No, stored inside building		X
Batteries - alkaline	Maintenance/Inside garage storage unit	30	-	NAV	None	No, stored inside building		X
Oily waste (bilge water)	Storage in ASTs on [redacted] dock	-	NAV	2 ASTs	2 ASTs	Yes, no secondary containment provided		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.
lb=Pound.
UST=Underground storage tank.

Table 4-[redacted] Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Used anodes exposed on pavement	2013		Near array	Pile	
Scrap metals bin missing lid	2013	1		Bin	

Table 4-[redacted])

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
3/13/15	X		[redacted] docks	Oil	< 1 oz	USCG boat	During motor startup		True	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.
Key: NAV = Data not available.

Table 4-[redacted])[C]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	New BMPs
[redacted]- Diesel UST	Core BMPs Sector Q BMPs
[redacted]- Garage Unit Storage	
[redacted]- Metal and Other Recycling Dumpsters	
[redacted]- Outdoor Boat/Equipment Storage	
[redacted]- Outdoor Hazardous Material Storage	
[redacted]- Oily Waste Storage	
[redacted]- Painting and Maintenance Activities	
[redacted]- Equipment and Materials Storage	

[b]Entry refers to relevant section in either the Multi-Sector General Permit or *Stormwater Management for Industrial Activities* (USEPA 1992).
[c]This facility falls under Sector Q of the Multi-Sector Permit: the BMPs presented address those BMP requirements applicable to Sector Q.

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Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located at [redacted] as shown on Sheet S-2 of the SWPPP base maps. The facility is [redacted]. It contains offices, electronics labs, workshops, a mechanical room (containing boilers and other utility equipment), and a large material storage area in the back with a "high bay." Building [redacted], [redacted], is located behind Building [redacted] but was not inspected as part of the storm sewer survey.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the facility generally drains to the west. Catch basins in the asphalt lot to the south of the building drain runoff from the south and east sides of the building. These catch basins drain to the wooded area west of the facility. The north and west sides of the building drain across the asphalt lot into the wooded area to the west. This building lies in drainage basin DB18 but runoff will infiltrate into the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the 1994 NUWC AUL and the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/09/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint	Maintenance/Inside flammable locker in material storage area	NAV	-	NAV	None	No, stored in flammable locker well inside building		X
Bleach	Maintenance/Inside flammable locker in material storage area	NAV	-	< 5 gal	None	No, stored in flammable locker well inside building		X
Methyl Ethyl Ketone (MEK)	Maintenance/Inside flammable locker in material storage area	NAV	-	< 5 gal	None	No, stored in flammable locker well inside building		X
Acetone	Maintenance/Inside flammable locker in material storage area	NAV	-	< 5 gal	None	No, stored in flammable locker well inside building		X
Lube Oil	Maintenance/Inside high bay flammable locker	NAV	-	~ 20 gal	None	Yes, any spill could flow out garage door		X
Spray Paint	Maintenance/Inside high bay flammable locker	NAV	-	Several spray cans	None	No, likelihood of contact with stormwater minimal		X
Deicing Fluid	Maintenance/Inside high bay flammable locker	NAV	-	Several spray cans	None	No, likelihood of contact with stormwater minimal		X
MEK	Maintenance/Inside Machine Shop flammable locker	NAV	-	5 gal	None	No, stored in flammable locker inside building		X
Tetrahydrofuran	Maintenance/Inside Machine Shop flammable locker	NAV	-	<½ gal	None	No, stored in flammable locker inside building		X
Adhesives	Maintenance/Inside Machine Shop flammable locker	NAV	-	~ 1 gal	None	No, stored in flammable locker inside building		X
Spray paint	Maintenance/Inside Machine Shop flammable locker	NAV	-	NAV	None	No, stored in flammable locker inside building		X
Thinner	Maintenance/Inside Machine Shop flammable locker	NAV	-	2 gal	None	No, stored in flammable locker inside building		X
Hydraulic Fluid	Maintenance/Inside material storage area	NAV	-	(4) 55-gal drums	None	No, stored indoors with secondary containment		X
Waste POL	From leaking equipment/Inside mechanical room	-	NAV	-	None	Yes, spills could be tracked outside if not cleaned		X
Gasoline	Maintenance/Outdoor flammable locker on east face of high bay	NAV	-	~ 20 gal	None	Yes, locker is not in covered area		X
Diesel	Maintenance/Outdoor flammable locker on east face of high bay	NAV	-	~ 20 gal	None	Yes, locker is not in covered area		X
Paint	Maintenance/Outdoor flammable locker at SW corner of Building [redacted]	NAV	-	~ 5 gal	None	Yes, locker is not in covered area		X

Table 4-[redacted] Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Deicing fluid	Maintenance/Outdoor flammable locker at SW corner of Building [redacted]	NAV	-	~ 5 gal	None	Yes, locker is not in covered area		X
Metal Parts and Equipment	Temporary storage/Outside, southwest of Bldg. [redacted]	-	-	Several large piles	Several large piles	Yes, stored outside on pavement with no cover		X
Used Batteries	Temporary storage/Outside, southwest of Bldg. [redacted]	-	NAV	2	2	Yes, stored outside on pavement with no cover		X
Release Agent (TFE)	Maintenance/Outside, southwest of Bldg. [redacted]	NAV		(2) 55-gal drums	110 gallons	Yes, no secondary containment or cover provided		X
Unknown	Unknown/East end of Building [redacted]	NAV	NAV	250 gal AST	250 gallons	Yes, no secondary containment provided		X
Diesel	Equipment fuel/Front side of [redacted]	NAV	-	UST	NAV	Yes, no overfill protection for UST and fueling area not bermed		X
Empty Spray Cans	Temporary storage/Hazardous waste staging area	NAV	-	Two 35-gal drums	None	No, stored in drums inside covered area		X
Release Agent (TFE)	Maintenance/Hazardous waste staging area	NAV	-	< 5 gal	None	No, stored in flammable locker inside covered area		X
Lubricant	Maintenance/Hazardous waste staging area	NAV	-	< 5 gal	None	No, stored in flammable locker inside covered area		X
Spray Paint	Maintenance/Hazardous waste staging area	NAV	-	< 5 gal	None	No, stored in flammable locker inside covered area		X
Toner	Maintenance/Hazardous waste staging area	138 cartridges	-	NAV	None	No, stored in flammable locker inside covered area		
Cleaners-Simple green, Clorox Soft Scrub, Wisk detergent, Formula 409	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X
Batteries-Gel cell, alkaline, lithium, nickel-cadmium, mercury, free lead acid	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X
Other flammables-primer, silicone sealant, denatured alcohol, styguard curing/elastomer agents	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X
Cement, adhesive, epoxy, paste	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X

Table 4-[redacted]) Materials Inventory								
Material	**Purpose/Location**	**Quantity (units)**			**Quantity Exposed in 2006-2009**	**Likelihood of Contact with Stormwater**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**			**Yes**	**No**
Compressed gases-oxygen, propane, liquid argon, acetylene, carbon dioxide cartridges	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X
Other POLs-silicone grease, bearing grease, lubriplate	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X
Other miscellaneous-flame retardant, Weld-On 705 for PVC, desiccant, metal polish, wax, betadine solution, corrosion block, WD-40, Steelgard, chloride, anti-fog liquid	NAV-data obtained from AUL	AUL[1]	-	NAV	NAV	NAV-data obtained from AUL		X

Key:
[1]=Data can be obtained from the Authorized User List (AUL), which is provided as an appendix.
gal=Gallon.
lbs=Pounds.
oz=Ounces.
cf=Cubic feet.
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Three-four scrap metal dumpsters without lids	2013-2014	3-4		Dumpsters	
Pipe rack uncovered.	2013-Current	1 rack		Rack	

Table 4-[redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.
Key:
pt=Pints
NAV=Data not available.

Table 4-[redacted] Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Equipment Leaks	Core BMPs Sector Q BMPs
Indoor Flammable Material Storage and Handling in High Bay	
Indoor Flammable Material Storage and Handling in Material Storage Area	
Indoor Material Storage and Handling in Machine Shop	
Indoor POL Storage	
Other Outdoor Material Storage	
Outdoor Flammable Material Storage	
Outdoor Hazardous Waste Staging	
Outdoor Material Storage at AST-1	
Outdoor Material Storage at AST-2 Outdoor POL Storage in UST	
Painting	
Three Floor Drains	

Figure 4-[redacted]

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4.5.13 [redacted])

Facility Description: The [redacted]) is located within a fenced, paved area at [redacted] as shown on Sheet S-2 of the SWPPP base maps. The building contains an [redacted]. A covered storage area is located outside at the northwest face of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the south and to the west. Runoff from the northern half of the building drains to catch basins in the asphalt lot surrounding the building. These catch basins discharge to a wooded area west of the building. This portion of the facility lies in drainage basin DB3. The southern half of this facility drains to a catch basin to the east and by overland flow to a wooded area to the south. This catch basin discharges to the same wooded area to the south. The southern half of the building lies in drainage basin DB18. The runoff from this facility would infiltrate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the 1994 NUWC AUL and the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/09/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

Existing BMPs: The existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

New BMPs: New BMPs for this facility are provided in Table 4-[redacted].

Table 4-[redacted] Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Desiccant	Torpedo maintenance/Inside Building [redacted]	NAV	-	(5) 30-gal cans	None	No, stored well inside building		X
Spray Paint	Torpedo maintenance/Inside flammable locker in hallway	NAV	-	NAV	None	No, stored in flammable locker inside building		X
Alcohol	Torpedo maintenance/Inside flammable locker in hallway	NAV	-	NAV	None	No, stored in flammable locker inside building		X
Household Cleaners	Facility maintenance/Inside flammable locker in hallway	NAV	-	NAV	None	No, stored in flammable locker inside building		X
Motor Oil	Torpedo maintenance/Inside torpedo work area	NAV	-	(4) 5-gal cans	None	Yes, stored next to door without secondary containment		X
Waste paint	Storage/Inside hazardous waste locker	-	NAV	(7) 35-gal drums	None	No, stored inside flammable locker with secondary containment		X
Miscellaneous Equipment	Storage/In outdoor covered storage area	NAV	-	NAV	None	No, stored in covered area		X
Batteries	Storage/In outdoor covered storage area	NAV	-	2 batteries	None	Yes, no secondary containment provided		X
Storage Canisters	Torpedo storage/Outside on pavement	NAV	-	10 canisters	10 canisters	Yes, stored outside on pavement and no cover		X
Denatured Alcohol	NAV-data obtained from AUL	55 gal	-	NAV	None	NAV-data obtained from AUL		X
Nitrogen, Liquid Air	NAV-data obtained from AUL	(10) 184 cf cylinders	-	NAV	None	No, likelihood of contact with stormwater minimal		X

Key:
cf=Cubic feet.
gal=Gallon.
NAV=Not available.

Table 4-[redacted]) Description of Exposed Significant Material					
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location (as indicated on the site map)**	**Method of Storage or Disposal (e.g., pile, drum, tank)**	**Description of Material Management Practice (e.g., pile covered, drum sealed)**
Scrap metal dumpster with damaged lid	2014	1		Dumpster	

Table 4-[redacted]) List of Significant Spills and Leaks										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include. but are not limited to. releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted] Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Battery Storage	Core BMPs Sector AA BMPs
Floor Drain in boiler Room	
Indoor Flammable Material Storage	
Miscellaneous Outdoor Equipment Storage	
Other Indoor Material Storage	
Outdoor Hazardous Waste Staging	
Torpedo Storage Canister and Fuel Tank Storage Canister Storage	

Figure 4-[redacted]

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4.5.14 [redacted])

Facility Description: The [redacted]) is located within a fenced, paved area at the end of Plunger Street, just northeast of Building [redacted], as shown on Sheet S-2 of the SWPPP base maps. The building contains offices, a boiler room, a compressor room, a work shop, a drying room for painted items, two paint booths, and a chemical storage room.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from facility [redacted] drains to the west. Runoff flows across the asphalt lot in front of the building to a wooded area to the west. Some flow from the eastern portion of the building may flow to an open ditch that also drains to the wooded area to the west. This facility lies in drainage basin DB3 but runoff will infiltrate the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection. No materials were listed for the facility in the 1994 NUWC AUL.

Significant materials are defined in the glossary included as Appendix B of this document. Materials exposed to stormwater during the last three years are presented in Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/09/94. The site was revisited on 8/30/05 as part of the 2006 SWPPP update. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted] Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint waste	Temporary storage/Outside UST	—	NAV	1 UST	None			X
Paint	Torpedo maintenance/Inside chemical storage room	NAV	—	~spray cans	None	No, stored in flammable locker		X
Mineral oil	Torpedo maintenance/Inside chemical storage room	NAV	—	~20 gal	None	Yes, no secondary containment provided		X
Denatured alcohol	Torpedo maintenance/Outdoor covered storage area behind Building [redacted]	NAV	—	(1) 55-gal drum	None	No, stored in covered and bermed area		X
Agatine	Torpedo maintenance/Outdoor covered storage area behind Building [redacted]	NAV	—	(1) 55-gal drum	None	No, stored in covered and bermed area		X
Mineral spirits	Torpedo maintenance/Outdoor covered storage area behind Building [redacted]	NAV	—	(1) 55-gal drum	None	No, stored in covered and bermed area		X
Solids/silt	In catch basin near outdoor covered storage area	—	NAV	—		Yes, silted catch basin		X

Key:gal=Gallon.
NAV=Not available.

Table 4-[redacted] Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Location of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Scrap metal dumpsters without lids	2013				
Steel stock exposed outside	2014				

Table 4-[redacted] LIST OF SIGNIFICANT SPILLS AND LEAKS										
Date (month/day/year)	**Spill**	**Leak**	**Location (as indicated on site map)**	**Description**				**Response Procedure**		**Preventive Measures Taken**
				Type of Material	**Quantity**	**Source, if known**	**Reason**	**Amount of Material Recovered**	**Material No Longer Exposed in Stormwater (True/False)**	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted] Pollutant Sources And BMPs	
Stormwater Pollutant Sources	**BMPs**
Hazardous Waste UST	Core BMPs Sector AA BMPs
Indoor Material Storage	
Outdoor Material Storage	
Painting	
Silted Catch Basin	

Figure 4-[redacted]

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[redacted]

Table 4-8 lists for each facility, the name and building number(s); as well as the section number.

Table 4-8
[redacted]

Facility Name	Building No.	Section No.
[redacted]	[redacted]	4.6.1
[redacted]	[redacted]	4.6.2
[redacted]	[redacted]	4.6.3
[redacted]	[redacted]	4.6.4
[redacted]	[redacted]	4.6.5
[redacted]	[redacted]	4.6.6
[redacted]	[redacted]	4.6.7
[redacted]	[redacted]	4.6.8
[redacted]	[redacted]	4.6.9

4.6.1 [redacted])

Facility Description: The facility is located near [redacted] the Base in the [redacted] as shown on Sheet S-6 of the SWPPP base maps. This facility consists of the following two structures, which were investigated as part of the storm sewer survey:

[redacted]

The [redacted] structure with a concrete floor. Offices are located in the southwest corner; the rest of the building is used for storage. The original SWPPP included a Building [redacted] on this site. Building [redacted] was damaged in a snowstorm and has since been replaced with a slightly smaller Building [redacted]. The [redacted] concrete structure.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-6575).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Buildings [redacted] generally drains to the west. Runoff from Building [redacted] drains to catch basins in the asphalt lot

around the building, which in turn drain to a wooded area west of the facility. Runoff from most of Building [redacted] flows south to an open ditch that flows to the west, discharging into the same wooded area.

Runoff from the western side of Building [redacted] and some runoff from the north side of Building [redacted] drain northwest [redacted] to catch basins in front of Building [redacted]. These catch basins also discharge to the wooded area [redacted].

Both buildings lie in drainage basin DB18 but runoff will percolate into the ground before reaching an outfall discharging to a receiving water body.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. No significant materials were identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]) Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Missile parts	Missile repair/Inside Building [redacted]	NAV	-	NAV	None	No, stored well inside building		X
Empty containers	Storage/In covered area on south side of Building [redacted]	-	-	NAV	None	No, stored in covered area		X
Flammables and corrosives	Missile maintenance/Inside Building [redacted]	NAV	-	NAV	None	No, any spill would flow to floor drain, which discharges to UST		X
Hazardous waste	Storage/Outdoor UST	-	NAV	250-gal UST	None	Yes, any spill that occurs during the pumping of the tank will not be contained		X

Key:

gal=Gallon.

UST=Underground storage tank.

NAV=Not available.

Table 4-[redacted]:

[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:

[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:

[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Indoor Material Storage and Handling	Core BMPs Sector Q BMPs
[redacted]- Loading/Unloading	
[redacted]- Outdoor Material Storage	
[redacted]- Indoor Material Disposal via Floor Drain	
[redacted]- Indoor Material Storage	
[redacted]- Loading/Unloading	
[redacted]- Underground Storage Tank	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is [redacted] the Base in the [redacted] as shown on Sheet S-6 of the SWPPP base maps. Building [redacted] building. The main floor consists of the following separate areas, from north to south: Area/Bay 1, which is divided into two rooms (east and west), is used for battery charging in the east half, and vehicle washing and maintenance in the west half; Areas/Bays 2 and 3 are bays used for vehicle maintenance; Area 4 is used as a machine shop, tire storage area, and office area; and Area 5, which consists of three bays, is used for vehicle maintenance. Administrative offices are located on the upper level, a compressor room is on the east side of the building, a covered vehicle washing pad is at the north side of the building, and an oil/water separator exists at the northwest corner. Building [redacted] is a metal shed located along the east wall of [redacted]. Building [redacted] is a 1-story structure with an enclosed portion on its west end and a covered area on its east end.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] drains to catch basins in the asphalt lot surrounding the building. Stormwater runoff from Building [redacted] flows east across the asphalt lot to catch basins [redacted] and [redacted], while runoff from Building [redacted] drains to the north to catch basin [redacted]. All of the catch basins discharge to an open ditch to the west, which in turn flows northwest to [redacted].

All three buildings lie in drainage basin DB18 but runoff will infiltrate the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are listed on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each facility are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Sulfuric acid	Battery maintenance/ East side of Area 1, Building [redacted]	NAV	-	(2) 20-gal plastic drums	None	No, any spill would flow into the concrete sump in the room		X
Hydraulic fluid	Vehicle maintenance/ West side of Area 1, Building [redacted]	NAV	-	(1) 55-gal drum	None	No, any spill would flow into the floor drains or trench drain, which are connected to sanitary		X
Alkaline cleaner	Vehicle washing/West side of Area 1, Building [redacted]	NAV	-	(1) 100-gal container	None	No, any spill would flow into the floor drains or trench drain, which are connected to sanitary		X
Agitene	Degreasing/West side of Area 1, Building [redacted]	NAV	-	1 parts cleaner	None	No, any spill would flow into the floor drains or trench drain, which are connected to sanitary		X
Grease	Vehicle maintenance/ West side of Area 1, Building [redacted]	NAV	-	(2) 30-gal containers	None	No, any spill would flow into the floor drains or trench drain, which are connected to sanitary		X
Agitene	Degreasing/In Area 3 flammable locker, Building [redacted]	NAV	-	Small quantity	None	No, any spill would flow into the nearby trench drain, which is connected to sanitary		X
Sulfuric acid	Battery maintenance/In Area 3 flammable locker, Building [redacted]	NAV	-	Small quantity	None	No, any spill would flow into the nearby trench drain, which is connected to sanitary		X
Car wash soap	Vehicle washing/In Area 3 flammable locker, Building [redacted]	NAV	-	Small quantity	None	No, any spill would flow into the nearby trench drain, which is connected to sanitary		X
Tires	Vehicle maintenance/In Area 4, Building [redacted]	NAV	-	Several shelves	None	No, stored well inside building		X
Lube oil	Vehicle maintenance/In Area 5, Building [redacted]	NAV	-	(1) 55-gal drum	None	No, any spill would flow into the floor drains or trench drains, which are connected to sanitary		X

Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Water soluble degreaser	Degreasing/In Area 5, Building [redacted]	NAV	-	(1) 55-gal drum	None	No, any spill would flow into the floor drains or trench drains, which are connected to sanitary		X
Agitene	Degreasing/In Area 5, Building [redacted]	NAV	-	(1) 35-gal drum, (1) 55-gal drum, and 1 parts cleaner	None	No, any spill would flow into the floor drains or trench drains, which are connected to sanitary		X
Various POLs	Vehicle maintenance/On workbench in Area 5, Building [redacted]	NAV	-	Several small containers	None	No, any spill would flow into the floor drains or trench drains, which are connected to sanitary		X
Various POLs	Vehicle maintenance/In Building [redacted]	NAV	-	(10) 55-gal drums	None	Yes, any spill could flow out the door		X
Tires	Vehicle maintenance/In Building [redacted]	NAV	-	Several shelves	None	No, stored inside building		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.

Table 4-[redacted]: [redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Uncovered scrap metal dumpster	2013	1		Dumpster	

Table 4-[redacted]: [redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include. but are not limited to. releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Compressor Leaks	Core BMPs Sector P BMPs
[redacted]- Flammable Material Storage and Handling in Area 3	
[redacted]- Indoor Material Storage and Handling in Area 4	
[redacted]- Indoor Material Storage and Handling in Area 5	
[redacted]- Indoor Material Storage and Handling in the East Side of Area 1	
[redacted]- Indoor Material Storage and Handling in the West Side of Area 1	
[redacted]- Trench Drains	
[redacted]- Vehicle Maintenance	
[redacted]- Vehicle Washing	
[redacted]- Indoor Material Storage and Handling	
[redacted]- Indoor Material Storage	
[redacted]- Vehicle Parking	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located [redacted] of the Base in the [redacted] as shown on Sheet S-6 of the SWPPP base maps. This facility has two gasoline pumps and one diesel pump on an uncovered concrete pad located just north of Building [redacted].

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the west. Runoff flows across an asphalt lot to catch basin [redacted]. This catch basin discharges to an open channel that drains to a wooded area [redacted]. Some runoff from the southern pad of the filling station flows to catch basin [redacted]. This catch basin drains to the same wooded area [redacted]. The facility lies in drainage basin DB18 but runoff will percolate into the ground before reaching an outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are presented in Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Gasoline	Storage/USTs to the southeast of [redacted]	NAV	-	(2) 10,000-gal USTs	None	Yes, any spill that occurs during filling of tanks will not be contained	X	
Diesel	Storage/UST to the southwest of [redacted]	NAV	-	(1) 8,000-gal UST	None	Yes, any spill that occurs during filling of tanks will not be contained	X	

Key:
gal=Gallon.
NAV=Not available.
UST=Underground storage tank.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4- [redacted]

List Of Significant Spills And Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	New BMPs [a]
Automotive Fueling	Core BMPs Sector P BMPs
Diesel UST	
Fuel Pumping Operations	
Unleaded Gasoline UST	

Figure 4-[redacted]

(See 6-[redacted])

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[redacted]

Facility Description: The facility is located [redacted] shown on Sheet S-5 of the SWPPP base maps. The facility consists of a small storage building with a concrete floor.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facility is used for [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] generally drains to the east. A catch basin in a grassy low-lying area to the east of the building receives most of the runoff. This catch basin discharges to a wooded area [redacted]. Runoff from the western side of the building will infiltrate the ground before reaching the catch basin. This facility lies in drainage basin DB18 but runoff will infiltrate the ground before reaching the basin outfall.

Materials Inventory: There are no materials used, stored, or produced at this facility in 2009, other than tools and instruments. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. The potential pollutant source described below and listed in Table 4-[redacted] was identified at the facility and included indoor material storage.

Indoor material storage consisted of tools stored neatly on shelves. No floor drains were observed inside the building, and no materials were stored outside.

BMPs: BMPs for the identified potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage	Core BMPs Sector P BMPs

Figure 4-[redacted]

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[redacted]

Facility Description: [redacted] is located [redacted] in the [redacted] as shown on Sheet S-5 of the SWPPP base maps. This facility consists of a one-story building separated into two rooms (east and west). The east room houses boilers; the west room houses air conditioning equipment. A walled courtyard with no cover exists on the northwest face of the building and contains two cooling towers.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facility is used for [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] generally drains to the north. This building has no designed stormwater control system. Runoff flows across the parking lot to a wooded area [redacted]. Runoff from the west and south sides of the building infiltrates into the grassy area around the facility. This building lies in drainage basin DB18 but runoff would percolate into the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Amines	Boiler maintenance/Inside building	NAV	-	60-gal tank	None	No, any spill would flow to a nearby floor drain, which is connected to sanitary		X
Sulfites	Boiler maintenance/Inside building	NAV	-	60-gal tank	None	No, any spill would flow to a nearby floor drain, which is connected to sanitary		X
Corrosives	Boiler maintenance/Inside building	NAV	-	(2) 60-gal tanks	None	No, any spill would flow to a nearby trench drain, which is connected to sanitary		X

Key:
gal = Gallon.
NAV = Not available.

Table 4-[redacted]) Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Boiler Leaks	Core BMPs Sector Q BMPs
Floor Drains	
Indoor Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located [redacted] as shown on Sheet S-5 of the SWPPP base maps. This facility consists of a large one-story structure used mostly for storage; a carpentry shop is located in the southwest corner of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the west. Runoff flows to catch basins around the building. These catch basins discharge to a wooded area [redacted]. Runoff from the southern and western portions of the building will infiltrate into vegetated areas before reaching any catch basins.

This facility lies in drainage basin DB18 but runoff will infiltrate the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are shown on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are listed in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Metal parts	Storage/Outside at east side of Building [redacted]	NAV	-	Several boxes and pallets	Several boxes and pallets	Yes. stored with no cover		X
Metal tanks	Storage/Outside at east side of Building [redacted]	NAV	-	2	2	Yes. stored with no cover		X

Key:
NAV=Not available.

Table 4-[redacted]: [redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage and Handling	Core BMPs Sector P BMPs
Loading/Unloading	
Outdoor Material Storage	

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Figure 4-[redacted]

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[redacted]

Facility Description: This [redacted] building is located [redacted] as shown on Sheet S-5 of the SWPPP base maps. This facility consists of a small storage shed with a garage door.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] generally drains to the east and to the north. Runoff from the north side of the building flows to a catch basin in an asphalt lot to the northeast. Runoff from the rest of the building infiltrates the grassy areas surrounding the building. Some runoff may reach a catch basin in the grass to the east of the building. The catch basins discharge to a wooded area [redacted]. This facility lies in drainage basin DB18 but runoff will percolate into the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are shown on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for the identified potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Sodium Hydroxide 60%	Submarine Maint.	-	-	Qts	No	No, stored inside		x

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]) List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage	Core BMPs Sector P BMPs

Figure 4-[redacted]

(See 6-[redacted])

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheet S-6 of the SWPPP base maps. This facility consists of a small cinderblock building with a concrete floor.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the west. Runoff flows to a grassy open channel flowing west. The building is surrounded by grass on all sides. This facility lies in drainage basin DB3, but runoff will infiltrate the ground before reaching the basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the November 1994 SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/15/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for the identified potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Solid hazardous waste (i.e., oily rags, PPE)	Temporary storage/Inside Building [redacted]	-	NAV	(10) 55-gal drums	None	No, material stored inside		X

Key:
gal=Gallon.
NAV=Not available.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage and Handling	Core BMPs Sector Q BMPs

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] is located [redacted] as shown on Sheet S-8 of the SWPPP base maps. The complex includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

Building consists of a two-story building attached to [redacted]. The upper level of the building consists of offices; the lower level consists of several rooms, including locker, hose cleaning, electrical service (dry transformers), compressor, and storage rooms.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figures 6-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted]) lies within drainage basin DB12. Stormwater runoff in this area flows to outfall OF12. Stormwater that falls on the [redacted]) flows into catch basins and is collected in two tanks. Contents of the two tanks are pumped into the stormwater Retention pond to the southeast. Stormwater in the Retention pond is pumped through an oil-water separator for treatment before discharging to Hood Canal at outfall OF12. Runoff on small sections of the wharf sheet flow directly into Hood Canal; runoff from the northwestern corner, the southwestern corner, and the lightning tower base all sheet-flow directly into Hood Canal.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 10/25/94-10/26/94. The site has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
Paint	Maintenance/ Inside building	AUL[1]	-	< 20 gal	None	No, material stored and used inside		X
Salt	Maintenance/ Inside bay	AUL[1]	-	20 50-lb bags	None	No, material stored under cover		X
Diesel	Fuel for emergency generator/Inside building	AUL[1]	-	1,000-gal	None	Yes, possible when filling tank	X	
Oil	Transformer fluid/ Inside transformer	-	-	NAV	None	Yes, possible if transformer leaks because containment is breached		X
[redacted]								
Waste Oil	Temporary storage/ In separator and AST	-	NAV	(1) 500-gal AST	None	Yes, if AST leaks, there is no cover or containment		X
[redacted]								
SOD	Temporary storage/ Inside surge tank	-	NAV	22,000-gal tank	None	Yes, possible if overfilling the SOD tank		X
Waste Oil	Temporary storage/ In oil/water separator and waste oil UST	-	NAV	2,000-gal separator, 2,000-gal UST	None	Yes, possible when emptying waste oil tank since containment connected to storm drain		X

Key:
[1]=Data can be obtained from the Authorized Use List (AUL), which is provided as an Appendix.
gal=Gallon.
lb = Pound.
UST = Underground storage tank.
AST=Above ground storage tank.
NAV=Not available.

Table 4-[redacted]:

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
2/4/15	X			Hydraulic fluid	1 qt	Broken line			True	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted]- Compressor Room Leaks	Core BMPs Sector Q BMPs
[redacted]- Covered Storage	
[redacted]- Diesel Storage	
[redacted]- Indoor Hazardous Material Storage	
[redacted]- Indoor Hazardous Material Storage	
[redacted]- Outdoor Equipment Leaks	
[redacted]- Transformer Storage	
[redacted]- Oil/Water Separator Operation and Maintenance	
[redacted]- Waste Oil Storage	
[redacted]- Oil/Water Separator Operation	
[redacted]- Oil/Water Separator Operation	

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Figure 4-[redacted]

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[redacted]

Twenty facilities [redacted] were inspected during this SWPPP effort. Table 4-9 lists for each facility, the name and building number(s); as well as the section number.

Table 4-9

[redacted]

Facility Name	Building No.	Section No.
[redacted]	[redacted]	4.7.1
[redacted]	[redacted]	4.7.2
[redacted]	[redacted]	4.7.3
[redacted]	[redacted]	4.7.4
[redacted]	[redacted]	4.7.5
[redacted]	[redacted]	4.7.6
[redacted]	[redacted]	4.7.7
[redacted]	[redacted]	4.7.8
[redacted]	[redacted]	4.7.9
[redacted]	[redacted]	4.7.10
[redacted]	[redacted]	4.7.11
[redacted]	[redacted]	4.7.12
[redacted]	[redacted]	4.7.13
[redacted]	[redacted]	4.7.14
[redacted]	[redacted]	4.7.15
[redacted]	[redacted]	4.7.16
[redacted]	[redacted]	4.7.17
[redacted]	[redacted]	4.7.18
[redacted]	[redacted]	4.7.19
[redacted]	[redacted]	4.7.20

[redacted]

Facility Description: The [redacted]) is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of one large, 2-story metal structure with a concrete floor. The upper floor consists of offices while the main floor is divided into four functional areas: Industrial Shop, Electrical/Electronics Shop, TIRIS, and Material Division. The Industrial Shop is further divided into various work centers (e.g., welding, grinding, milling, pressure washing, painting, cleaning, sand blasting, and metal plating). Also, three storage trailers were observed on the south side of the building; one storage trailer and lumber storage shelves were observed on the east side.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted] area generally drains to the north. This facility lies in drainage basin DB3, which outfalls at OF3 from Devil's Hole. There are two separate stormwater collection systems for the facility; both discharge to a stream flowing to Devil's Hole.

The first system includes the stormwater structures (catch basins, manholes, and outfalls) labeled [redacted]-OF34 through [redacted]-CB75 on the base maps. This system receives flow from Building [redacted] roof drains and catch basins and trench drains immediately surrounding the building. The majority of the stormwater from Building [redacted] collects in this system that will most likely collect runoff from areas potentially impacted by facility pollutants. Drainage from this system discharges at a point northeast of Building [redacted] directly to a stream flowing to Devil's Hole. This system bypasses the stormwater Retention pond that receives flow from the rest of the area.

The second stormwater system drains those impervious surfaces beyond the immediate perimeter of the building. This second system receives flow from the parking lots to the west and to the east and from a portion of Building [redacted]. This system discharges to the stormwater Retention pond behind Building [redacted]. This Retention pond discharges to Devil's Hole via the same stream that receives flow from the first stormwater system.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the [redacted] AUL and the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are listed in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

.

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Alkaline water	Storage/Southwest corner of Building [redacted]	-	NAV	1 AST	1 AST	Yes, no secondary containment provided		X
Metal sheets and bars	Storage/South side of Building [redacted]	NAV	-	Several piles	Several piles	Yes, no cover provided		X
Accelerator	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acetic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acetone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acetonitrile	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acetylene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acid Blue	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
D-Tartaric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethanoic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Activated Alumina H-152	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Activator	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Antibacterial Additive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Cement	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Plating Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Denatured Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Alcohol Pads	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Isopropyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aloxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aluminum Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aluminum	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Paint	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ammonium Acetate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ammonium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Ammonia	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ammonium persulfa	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Antifreeze	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL	X	
Methylene Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Anti Fog Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Anti-Seize	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Addition Agent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Antimony	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Argon	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
PCB Standard	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
PCB Hydraulic Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
PCB Transformer Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Arsenic	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Asbestos	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Autobody Filler	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Barium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Barium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Barium Hydroxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Hypochlorite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Benzalkonium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Benzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Benzophenone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Beryllium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Curing Agent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Bismuth Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Bleach Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Laundry Bleach	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Hypochloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Boric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Boron	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Mineral Spirits	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
5,5'-Dibromo-o-Cresol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Bromofluorobenzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
3,3'-Dibromethymol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Buffing Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone Dioxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cadmium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Calcium Carbonate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Calcium Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Calcium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Calibration Gas	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Carbon Dioxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Carbon Disulfide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Carbon Tetrachloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Activated Carbon	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Resin & Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cement	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Chlorobenzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aqueous Ammonium-Dichromate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Chromotopic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dichlorodifluoromethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Solvent Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Citric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Clean and Lube	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Chromium Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Window Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethyl Alcohol - Lens	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Cleaner								
Liquid Oxygen	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Protective Coating - Methylene Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Metal Coating	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cobalt	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Coloring	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Molding compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Insulating Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Super Glue	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Coolant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Copalite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Copper	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Corrosion Inhibiting Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Corrosion Prevention Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Petroleum Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Benzoyl Peroxide Catalyst	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Copper Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Copper Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cuprous Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Curing Agent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
1,1,1-Trichloroethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cutting Oil - isobutane, propane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mineral Spirits	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Solution (Cu)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Plating Solution (Ni)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Solution (Tn)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Defoamer	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Degreaser	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Desiccant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nonionic Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Disinfectant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Developer & Replenisher	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Developer Starter	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Isobutyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
2.6-Di-t-Buthylphenol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Diallyl Phthalate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Diaminocyclohexane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
1.2-Dichloroethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dimethyl Phthalate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dimethyl Sulfoxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dimethylglyoxime	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
S-Diphenylcarbazi	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Disodium Salt	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dry Imager	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Layout Dye (Blue)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aluminum Oxide (Brown)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethylene Tetra Acetic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Brightener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Electrolyte	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dielectric Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Emulsifier	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4- [redacted]:
[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Hydrochloric Acid Plating Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Hydroxide Plating Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethyl Ethanoate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ethylxanthic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cellulose	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Eyewash Preservative	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Iron Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Iron Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ferric Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ferrous Ammonium Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ferrous Sulfate Heptahydrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Finishing Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Floor Wax	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Coating	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Primer	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyurethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Floor Finish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Magnesium Oxide Silicate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Fluorescein Green Concentrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Teflon Etching Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
2-Fluorobiphenyl	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Flux	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Freon	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Diesel Fuel	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Gage Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
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Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Solvent - Isobutane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Unleaded Gasoline	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL	X	
Gear Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Pyridine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Glass Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Glycerol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Corrosion Preventative	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Graphite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cupric Nitrate/ Nickel Sulfate Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hand Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Heptane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methenamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hexane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
1.6-Hexanediamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
2-Methodyethanol Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydraulic Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL	X	
Hydrazine Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydrogen Gas	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydroxylamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Amine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Indicator Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ink	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Phenoxyethanol Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Insulating Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cellular Glass	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Calcium Silicate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Internal Standard (Methanol)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Banana Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Isocyanate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4- [redacted]:
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Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Petroleum Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lapping Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lead Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lead Tetraoxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Leak Detection Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydrocarbon Gas	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Argon Gas	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Bleach	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Vinyl	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Lining	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Nitrogen	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lithium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lithium Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lithium Tetraborate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lithium Carbonate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Soap (EDTA)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Motor Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Iron Oxide Powder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
White Mineral Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Magnesium Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Manganous Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Manna Sugar	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methylene Ketone Peroxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methylene Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methyl Ethyl Ketone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mercuric Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mercuric Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mercuric Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mercury	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methoxyethyl Acetate 2	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methyl Isobutyl Ketone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
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Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Methyl Stearate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
M-Pyrol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methylene Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
2,6-Di-t-Butyl-4-Methylpenol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ammonium Hydroxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Molybdenum Disulfide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydrochloric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Dodecane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Eicosane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Hexadecane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Hexane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Tetracosane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Triacontane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Tricosane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
N-Undecane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Naphthalenediamine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Dissolver	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Plating Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Carbonate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Formate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Carbonate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nitric Acid Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nitrogen	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Methylene Chloride Standard	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
O-Dichlorobenzene. Liquid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Molykote R	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Oxygen Liquid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
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Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
P-Diphenylbenzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Conductive Coating	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyester Paste	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Thermoplastic RBR	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Kerosene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Petrolatum	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ether	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Inhibitor	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Petroleum	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Phenanthroline, Monohydrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Phosphoric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Phosphorus	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Propylene Glycol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Solution (cobalt)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Nickel Sulfamate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Solution (copper sulfate)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Plating Sol (Ni-Sulfamate)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Platinum in HCl	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Wax Polish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Magnesium Oxide Polish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Poly Gel Coat	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyether Polyol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polymer Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polyurethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cement	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Bisulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Chromate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Dichromate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Potassium Hydrogen Phthalate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Iodate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Iodide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Permanganate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Persulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Potassium Phosphate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Povidone-Iodine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polymethyl Methacrylate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
1,1,1-Trichloroethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Propane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL	X	
Putty	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sulfamic Acid Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Marshalls Reagent (N-1-Naphthylethyletediamine)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Alloy	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Flux	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Selenium in HNO3	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silver Plating Solution	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silver in HNO3	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silver Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silver Oxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Iron Powder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Stannic Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Azide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Bismuthate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Tetraborate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Borate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Carbonate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
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Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Sodium Dichromate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Hydroxide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Nitrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Nitrite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Oxalate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Phosphate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Silicate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Sulfide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Sulfite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Tartrate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Thiosulfate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Solder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Stannous Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Starch	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Xylene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Strontium in HNO3	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sulfamic Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sulfuric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Surfacing Agent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Thinner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Talc Powder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Fluorocarbon Resin Dispersion	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Tetrahydrofuran	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Thinner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Thiocarbamide	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Titanium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Toluene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Toner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ink Remover	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:
[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Triacetin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Trifluoromethylbenzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
1,2,3-Trimethylbenzene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Penetrating Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Urethane	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Vanadium	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Varnish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Pyridine	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Volatile Mix	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Coolant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL	X	
Ethanol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Xylene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Zinc in HNO3	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Key:
AUL=Authorized Users List.
-NAV=Not available.

Table 4-[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Pipe rack exposed to weather	2013	1		Rack [redacted]	
Open scrap metals bins	2014		South side of [redacted]	Bins	
Metal stock exposed outside	2013-2014			Pile	

Table 4-[redacted]:
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs	
10,000-Gallon UST For Pump Testing		
500-Gallon Tank (South Side of [redacted])		
Alkaline Water AST		
East Side of [redacted] - Loading/Unloading		Core BMPs
East Side of [redacted] - Outdoor Material Storage and Handling		Sector Q BMPs
Floor Drains Inside 7000		Sector R BMPs
Illicit Discharge [redacted]-ID1		
Illicit Discharge [redacted]-ID2		Sector AA BMPs
Illicit Discharge [redacted]-ID3		
Indoor Material Storage and Handling		
Machine Shop Equipment		
Metal Plating		
Painting and Sandblasting		
Pressure Washing (At Deck Sump)		
South Side of [redacted] - Sheet Metal and Metal Bar Storage		
South Side of [redacted] - Loading/Unloading		

[b]This facility falls under Sectors Q, R, and AA of the Multi-Sector Permit; the BMPs presented address those BMP requirements applicable to Sectors Q, R, and AA.

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheets S-2 and S-6 of the SWPPP base maps. This facility consists of a one-story building. Only the [redacted] portion (the east end) of the building was investigated as part of the storm sewer survey. [redacted] relocated to this building from Building [redacted] in January 1995.

[redacted] portion of the building consists of a main storage area and a small storage room to the north called the [redacted] Area. A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted]) is located in the west central portion of drainage basin DB3. Surface water runoff from the facility collects in a storm drain system before discharging to a stream that runs directly to Devil's Hole.

The primary impervious surfaces associated with potential pollutant sources are located along the southern perimeter of the facility, which contains a vehicle parking area and a loading dock. The loading dock drains to a catch basin at the bottom of the loading ramp. This catch basin discharges to a storm drain system that runs west and connects to catch basins in the vehicle parking area. The drain system runs along the west portion of the building and discharges to an open drainage way that connects to the stream discharging to Devil's Hole.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted]. Table 4-[redacted] was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at this facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 2/20/96. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
POLs	Storage/On shelves inside main storage area	-	-	Several tubes and containers	None	No, stored well inside storage area		X
Corrosion preventative compound	Storage/On shelves inside main storage area	-	-	Several containers	None	No, stored well inside storage area		X
Household cleaners	Storage/On shelves inside main storage area	-	-	Several containers	None	No, stored well inside storage area		X
Sodium hypochlorite	Storage/Inside flammable locker next to door on east side of Building [redacted]	-	-	(24) 1-gal plastic jugs	None	Yes, a spill could flow out the door		X
Paint	Storage/Inside flammable locker in Flam Area	-	-	(~ 12) 1-pt cans	None	No, stored away from doors		X
Naphtha	Storage/Inside flammable locker in Flam Area	-	-	(6) 1-gal cans	None	No, stored away from doors		X
Spray paint	Storage/On shelf in Flam Area	-	-	Several dozen cans	None	No, stored away from doors		X
Deicing fluid	Storage/On shelf in Flam Area	-	-	Several dozen cans	None	No, stored away from doors		X
Ink remover	Storage/On shelf in Flam Area	-	-	Several dozen cans	None	No, stored away from doors		X
Alkaline batteries	Storage/Inside flammable lockers at driveway to loading/unloading area	-	-	Several boxes in 2 flammable lockers	None	No, likelihood of contact with stormwater minimal		X
Solid waste	Storage/Outside at east side of Building [redacted]	-	-	1 dumpster	None	No, lid was closed		X

Key:
gal=Gallon.
pt=Pint.

Table 4-[redacted]:
[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Collection UST	Core BMPs Sector Q BMPs
Flam Area Material Storage and Handling	
Loading/Unloading	
Main Storage Area Material Storage and Handling	
Outdoor Material Storage and Handling	

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Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located [redacted] as shown on Sheet S-6 of the SWPPP base maps. This facility consists of an approximately 50-foot by 20-foot trailer that serves as the office for [redacted], with covered areas on its north and south ends. Two smaller trailers adjacent to the north covered area contain tools, chains, and hard hats.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted]) is located within the north central portion of drainage basin DB3. Surface water runoff from the facility drains immediately into a storm drain system that opens into ditches and streams draining to the north. The collecting stream runs directly into Devil's Hole which discharges to the Hood Canal through outfall OF3. The facility is situated on the eastern edge of a parking lot that slopes to the west and drain to catch basins. The catch basin drain system crosses [redacted] before opening into the ditch located northwest of the facility.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 2/21/96. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Metal equipment	Storage/Outside on lot adjacent to north covered area	-	-	Several pieces	Several pieces	Yes, no cover provided		X

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Outdoor Material Storage (Metal Equipment)	Core BMPs Sector P BMPs A Wash Facility Plumbed to Sanitary Sewer is needed
Vehicle Parking and Washing	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of a fenced area with storage tanks of argon, liquid oxygen, and liquid nitrogen on a concrete pad to the east, one covered area containing a propane tank, and an additional propane tank with no cover within the south edge of the fence.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: The [redacted] area generally drains to the north and lies within drainage basin DB3. The majority of the stormwater runoff enters catch basin [redacted]-CB75, which flows through the storm drainage system and empties into the stream northeast of Building [redacted] on the way to OF3. A portion of the runoff may flow south to an open ditch which flows to the Retention pond behind Facility [redacted], which also eventually outfalls at OF3.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]: [redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Argon	Storage/On concrete pad to the east	-	-	1 tank	None	No, any spill or leak is more likely to enter the atmosphere		X
Liquid oxygen	Storage/On concrete pad to the east	-	-	1 tank	None	No, any spill or leak is more likely to enter the atmosphere		X
Liquid nitrogen	Storage/On concrete pad to the east	-	-	1 tank	None	No, any spill or leak is more likely to enter the atmosphere		X
Propane	Storage/One within covered area, other at south fence	-	-	2 tanks	None	No, any spill or leak is more likely to enter the atmosphere		X

Table 4-[redacted]: [redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Material Storage	Core BMPs Sector Q BMPs

Figure 4-[redacted]

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4.7.5 [redacted])

Facility Description: The facility is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of one building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facility [redacted].

Stormwater Drainage Facility Description: The [redacted] lies in drainage basin DB3 and drains to the east into catch basins [redacted]. These catch basins empty into the stream northeast of Building [redacted] and eventually discharging at OF3.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection and the [redacted] AUL.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-7052D.

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted]

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Table 4-[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
MEKP	Plastic work/In flammable locker inside Building [redacted]	NAV	-	Small quantity	None	No, stored in flammable locker away from doors		X

Key:
AUL=Authorized Users List
NAV=Not available.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted])

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Flammable Material Storage	Core BMPs Sector Q BMPs

Figure 4-[redacted]

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4.7.6 [redacted])

Facility Description: The facility is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of a fenced area with a covered structure.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (see Figure 4-[redacted].

Facility Objective: [redacted].

Stormwater Drainage Facility Description: The [redacted]) area lies in drainage basin DB3 and drains to the east into an open channel [redacted]. The open channel flows to catch basin [redacted]. Some stormwater infiltrates into the grassy area [redacted]. The portion of the runoff reaching the catch basin flows into the stream northeast of Building [redacted] eventually discharging at OF3.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted] which was compiled using information obtained from the [redacted] AUL and the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Compressed gas	Storage/In covered area of 7058	NAV	-	Several dozen cylinders	None	No. any leak is more likely to enter the atmosphere		X

Key:
NAV=Not available.

Table 4-[redacted]
[redacted])
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Material Storage	Core BMPs Sector Q BMPs

[redacted]

Facility Description: The facilities are located on an asphalt lot off Runner Road, in the same area as the [redacted]), as shown on Sheet S-8 of the SWPPP base maps. Building [redacted] is a corrugated metal shed with a gravel floor and a chain-link fence as its east face. It is divided into seven bays, with each bay belonging to a different tenant. A trailer used as temporary storage is located [redacted]. Building [redacted] is a corrugated metal shed with a gravel floor and a chain-link fence as its southwest face, and contains three bays that store mostly rigging supplies.

A detailed map showing the site layout and surrounding area is provided in the SWPPP site map (Figure 4-[redacted]).

Facility Objective: The facilities [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from Facility [redacted] drains to the west. Runoff from the eastern side of the building flows to catch basins in the asphalt lot in front of the building. These catch basins discharge to a hillside to the west where most of the runoff percolates into the ground. The other sides of the building are surrounded by grass. Runoff from these portions of the building also will percolate into the ground before reaching an outfall. This facility lies in drainage basin DB13.

Stormwater runoff from Facility [redacted] drains to the west. Runoff from the south side of the facility flows to a catch basin in the asphalt lot in front of the building. This catch basin discharges to a vegetated hillside to the west where most runoff will percolate into the ground. The north, west, and east sides of the facility are surrounded by grass. Runoff in those directions will percolate into the ground before reaching an outfall. This facility lies in drainage basin DB13.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are presented in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/08/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each facility are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted])
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Chain and cable conditioner	Storage/In Bay 1 of Building [redacted]	-	-	(3) 35-gal drums	None	No, any spill or leak will seep into the ground		X
Lube oil	Storage/In Bay 3 of Building [redacted]	-	-	(4) 55-gal drums and (2) 5-gal drums	None	No, any spill or leak will seep into the ground		X
Isofoam	Storage/In Bays 5,6, and 7 of Building [redacted]	-	-	~ (10) 55-gal drums	None	No, any spill or leak will seep into the ground		X
Aluminum oxide	Storage/In Bays 5, 6, and 7 of Building [redacted]	-	-	Several hundred lbs in bags	None	No, any spill or leak not likely to travel far		X
Machine oil	Storage/In temporary storage trailer	-	-	Several gallons	None	Yes, any spill or leak can be tracked outside and/or flow outside the door		X
Ethylene glycol	Storage/In temporary storage trailer	-	-	Several gallons	None	Yes, any spill or leak can be tracked outside and/or flow outside the door		X
Lube oil	Storage/In Bay 3 of Building [redacted]	-	-	(1) 55-gal drum	None	No, any spill or leak will seep into the ground		X

Key:
gal=Gallon.
lb=Pound.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Sonar skid module leaking hydraulic fluid (small amount)	2013				
Open scrap metals bin	2013-2014	1		Bin	

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted] - Material Storage and Handling	Core BMPs Sector Q BMPs
[redacted] - Material Storage and Handling	
Temporary Storage Trailer - Material Storage and Handling	

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Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of one building with a covered area at the east end for steam cleaning. The building has a concrete floor and contains offices and a welding/equipment work area. A trench drain runs alongside the north face of the building.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted]) area lies in drainage basin DB3 and drains to the north. Stormwater runoff flows to trench drain [redacted]-TD60B and to several catch basins [redacted]. The stormwater flows through the storm system, [redacted] discharging to a small stream which leads to Devil's hole and OF3.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the [redacted] AUL and the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Acetone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Denatured Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Formula 409 Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Disinfectant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Layout Dye	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Edge	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Fiberglass	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Asbestos Gasket	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Waterless Hand Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ink	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Ion Exchange Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Isopropyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lapping Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Leak Detection Compound (Surfac/Etha)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Turbine Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Vacuum Pump Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Paint	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Penetrating Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cutting Oil (Mineral Oil)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Degreaser	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Super Glue	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cutting Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Coolant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Key:
AUL=Authorized Users List. NAV=Not available.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted] Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
AST	Core BMPs Sector AA BMPs
Floor Drain in Work Area	
Indoor Flammable Material Storage	
Steam Cleaning	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheet S-2 of the SWPPP base maps. This facility consists of a one-story building with covered storage areas flanking its east and west sides. The building itself has a concrete floor that slopes to the center of the building. A garage door is located on its north side. The east covered storage area consists of three bays surrounded by a 4.5-foot cinderblock wall, with holes drilled approximately one foot above ground surface. Each bay has a sump covered with a metal grate. A trench drain exists just inside the storage area's gated entrance. The west storage area consists of a concrete pad surrounded by a chain-link fence.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Building [redacted] lies in drainage basin DB3. Stormwater runoff from the facility would enter the ditch to the south and east sides of [redacted]. The ditch flows north and east to a small wetland [redacted]. The wetland drains into the small stream that flows to OF3.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection and the [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]: [redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
POLs	Storage/Inside Building [redacted]	-	-	~ (50) 55-gal drums	None	No, any spill or leak will flow to the center of the building		X
Flammable debris	Storage/In east storage area of Building [redacted]	-	-	Several bags	None	No, secondary containment provided		X
Sandblast grit	Storage/In east storage area of Building [redacted]	-	-	(10) 55-gal drums	None	No, stored on top of a concrete sump		X
Acid waste	Storage/In east storage area of Building [redacted]	-	-	(8) 5-gal plastic buckets	None	No, secondary containment provided		X
Compress gas	Storage/In east storage area	-	-	Several cylinders	None	No, any leak more likely to enter atmosphere		X

Key:
gal=Gallon.
lb=Pound.

Table 4-[redacted]: [redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
East Storage Area - Material Storage and Handling	Core BMPs Sector Q BMPs
Inside Building [redacted] - Material Storage and Handling	
West Storage Area - Material Storage and Handling	

Figure 4- [redacted]

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[redacted]

Facility Description: The facility is located [redacted] as shown on Sheets S-2 and S-3 of the SWPPP base maps. Building [redacted] is a warehouse structure with cinder block walls and a concrete floor, and it is separated into 11 bays for storing acids, alcohols, caustics, flammables, and class 1-A flammables. It also contains one small room for cold storage of chemicals and a mechanical room.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The facility lies in drainage basin DB3 and drainage is generally to the east. The facility is surrounded by grass on all sides except for the loading/unloading areas on the north side and east side of the building. Each loading/unloading area has a trench drain that collects stormwater. Both trench drains flow to the Retention pond behind [redacted] before discharging to outfall OF3 at Devil's Hole. The stormwater runoff from the rest of the facility probably percolates into the grassy areas.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection and the [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/03/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted]

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Bearing Mount	NAV-data obtained from AUL	-	-	NAV	None	No, any spill would drain to spill containment UST		X
Acids	Storage/Inside building	-	-	NAV	None	No, any spill would drain to spill containment UST		X
Alcohols	Storage/Inside building	-	-	NAV	None	No, any spill would drain to spill containment UST		X
Caustics	Storage/Inside building	-	-	NAV	None	No, any spill would drain to spill containment UST		X
Flammables	Storage/Inside building	-	-	NAV	None	No, any spill would drain to spill containment UST		X
Class 1-A Flammables	Storage/Inside building	-	-	NAV	None	No, any spill would drain to spill containment UST		X

Key:
AUL=Authorized Users List.
NAV=Not available.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
East Side of [redacted] - Loading/Unloading	Core BMPs Sector Q BMPs
Material Storage and Handling	
North Side of [redacted] - Loading/Unloading	
North Side of [redacted] (continued)	
Spill Containment UST	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located [redacted] as shown on Sheet S-3 of the SWPPP base maps.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the east side of Facility [redacted] enters a trench drain in front of the service bay doors which discharges to the ditch running south [redacted]. Runoff from the gravel parking lot flows west over the hillside into a ditch and catch basins around building [redacted]. This facility lies in drainage basin DB7 and discharges through OF-7.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained during the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted 11/29/05. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Marine Grease	Boat Maintenance	AUL	NA	24-8oz tubes	No	No, stored inside locker		X
Corrosion Guard	Boat Maintenance	AUL	NA	2-8oz tubes	No	No, stored inside locker		X
Anti-Corrosion Grease	Boat Maintenance	AUL	NA	5-8oz tubes	No	No, stored inside locker		X
Mercury Dri-Fuel	Boat Maintenance	AUL	NA	4-12oz cans	No	No, stored inside locker		X
Engine Cleaner/Tuner	Boat Maintenance	AUL	NA	15-12oz cans	No	No, stored inside locker		X
Seal Compound	Boat Maintenance	AUL	NA	2-4oz cans	No	No, stored inside locker		X
Ring Free Fuel Additive	Boat Maintenance	AUL	NA	7-12oz bottles	No	No, stored inside locker		X
Gear Lube	Boat Maintenance	AUL	NA	1-12oz tube	No	No, stored inside locker		X
Fuel Stabilizer/Conditioner	Boat Maintenance	AUL	NA	24-12oz cans	No	No, stored inside locker		X
Power Trim/Steering Fluid	Boat Maintenance	AUL	NA	20-12oz bottles	No	No, stored inside locker		X
AP Grease	Boat Maintenance	AUL	NA	1 tube	No	No, stored inside locker		X
RV Silicone Gasket Maker	Boat Maintenance	AUL	NA	1-20oz tube	No	No, stored inside locker		X
Engine Degreaser	Boat Maintenance	AUL	NA	1-12 oz can	No	No, stored inside locker		X
Fogging Oil	Boat Maintenance	AUL	NA	4-12oz cans	No	No, stored inside locker		X
Choke Cleaner	Boat Maintenance	AUL	NA	6-12oz cans	No	No, stored inside locker		X
Loquil Primer	Boat Maintenance	AUL	NA	2 cans	No	No, stored inside locker		X
Adhesive Type M	Boat Maintenance	AUL	NA	1-4oz tube	No	No, stored inside locker		X
Gel Seal II	Boat Maintenance	AUL	NA	1 can	No	No, stored inside locker		X
Moly Lube	Boat Maintenance	AUL	NA	1-16oz tub	No	No, stored inside locker		X
Form-a-Gasket Seal	Boat Maintenance	AUL	NA	2-8oz tubes	No	No, stored inside locker		X
OMC Starter Lube	Boat Maintenance	AUL	NA	4 tubes	No	No, stored inside locker		X

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Loc-Tite	Boat Maintenance	AUL	NAV	3-2oz bottles	No	No, stored inside locker		X
Bostik Never Seez	Boat Maintenance	AUL	NAV	2-4oz bottles	No	No, stored inside locker		X
3M Scotch Grip	Boat Maintenance	AUL	NAV	1 can	No	No, stored inside locker		X
Battery Acid	Boat Maintenance	AUL	NAV	2 gallons	No	No, stored inside locker		X
10w-30 Four Stoke Oil	Boat Maintenance	AUL	NAV	60 gallons	No	No, stored inside locker		X
Lead-Acid Batteries	Boat Maintenance	AUL	NAV	6	No	No, stored in garage bay		X

Key:
NAV=Not available.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Vehicle/Boat Storage	Core BMPs Sector Q BMPs
Indoor Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted]) is located [redacted] as shown on Sheet S-3 of the SWPPP base maps.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the entry to Facility [redacted] (north side) flows south and west into a ditch [redacted]. The ditch ends at a catch basin that drains to OF-7. Runoff from the other three sides of the building flows into ditches and catch basins surrounding the facility. These catch basins also drain through outfall OF-7. The maintenance bay entry, at the north side of the building, is covered by a canopy.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained during the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the facility that have been exposed to stormwater during the last three years are presented in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: A field survey was conducted 11/29/05. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
WD-40 Lubricant	Maintenance	AUL	NAV	1-12oz can	None	No, stored in flam locker		X
Sealant, Leak Lock Joint	Maintenance	AUL	NAV	1-2oz tube	None	No, stored in flam locker		X
Sealant, Permatex	Maintenance	AUL	NAV	1-2oz tube	None	No, stored in flam locker		X
Penetrating Oil	Maintenance	AUL	NAV	1-12oz can	None	No, stored in flam locker		X
Marvel Mystery Oil	Maintenance	AUL	NAV	1-16oz can	None	No, stored in flam locker		X
Grease, Termaline #2	Maintenance	AUL	NAV	-	None	No, stored in flam locker		X
Liquid Electrical Tape	Maintenance	AUL	NAV	4oz bottle	None	No, stored in flam locker		X
Propane	Maintenance	AUL	NAV	4oz cart.	None	No, stored in flam locker		X
Simple Green hand Cleaner	Maintenance	AUL	NAV	2 gal.	None	No, stored in flam locker		X
Loctite 242 Threadlocker	Maintenance	AUL	NAV	1-2oz bottle	None	No, stored in flam locker		X
Lead-Acid Battery	Maintenance	AUL	NAV	6	None	No, stored in flam locker		X
Carbon and Choke Cleaner	Maintenance	AUL	NAV	1-12oz can	None	No, stored in flam locker		X
Brake Fluid	Maintenance	AUL	NAV	32 oz	None	No, stored in flam locker		X
Orange Pumice Hand Cleaner	Maintenance	AUL	NAV	1-gallon	None	No, stored in flam locker		X
2-4-C Marine Lubricant with Teflon	Maintenance	AUL	NAV	Several 8ox tubes	None	No, stored in flam locker		X
EP Wheel Bearing Grease	Maintenance	AUL	NAV	1-gallon	None	No, stored in flam locker		X
Delo 400 Motor Oil	Maintenance	AUL	NAV	Several qts	None	No, stored in flam locker		X
Power Trim and Steering Fluid	Maintenance	AUL	NAV	Several qts	None	No, stored in flam locker		X
Brake Cleaner Non-Chlorinated	Maintenance	AUL	NAV	Several cans	None	No, stored in flam locker		X
Waste Oil	Maintenance	AUL	NAV	2-55 gallon drums	None	No, stored under canopy on containment pallet		X

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Agitene	Parts Cleaning	AUL	NAV	10 gallons	None	No, in parts washer		X

Key:
NAV=Not available.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Open dumpster with oily scrap metal	2014	1 dumpster		Dumster	
Open dumpster with scrapped boat parts and metal shavings	2013 + Current	1 dumpster		Dumpster	

Table 4-[redacted]:

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]:

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Material Storage and Handling	Core BMPs Sector Q BMPs
Outdoor Waste Oil Storage	
Trailer Washing	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] is located [redacted] as shown on Sheet S-3 of the SWPPP base maps. This facility includes a [redacted] building divided up to provide shop and office space for a number of different trades [redacted]. A parking lot east of the building is used for storage of vehicles and boats used by the shop. The facility was constructed in 2005 to replace shops formerly located near the [redacted] in Buildings [redacted].

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

Facility Objective: [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from the areas surrounding Building [redacted] flows into a set of catch basins surrounding the facility. The facility storm sewer system discharges into a wet pond northeast of the building. Overflow from the wet pond would flow into the forested area to the east of the pond. Although the majority of runoff from the site likely infiltrates, during heavy rainfall events some stormwater may flow down the slope into Devils Hole. This facility lies in drainage basin DB3.

Materials Inventory: A materials inventory from 2009 is provided in Table 4-[redacted]. The table was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials identified at the [redacted] that have been exposed to stormwater during the last three years are shown in Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted in fall 2005. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

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Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
2-stoke oil	Boat operation	NAV	NAV	55 gal.	None	No, stored in locker		X
Quicksilver Fuel Stabilizer	Boat operation	NAV	NAV	10 pints	None	No, stored in locker		X
Quicksilver Fuel Dryer	Boat operation	NAV	NAV	20 pints	None	No, stored in locker		X
Quicksilver Engine Treatment	Boat operation	NAV	NAV	10 pints	None	No, stored in locker		X
Glass Cleaner	Maintenance		NAV	4 quarts	None			X
Wood Patch	Maintenance		NAV	2 pints	None			X
Deck Coating	Maintenance			4-5 gallon				
Ceramic Tile Adhesive	Maintenance			20-1gallon				
Floor Tile Adhesive	Maintenance			20-1gallon				

Key:
NAV=Not available.

Table 4-[redacted]:
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Table 4-[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Vehicle/Boat Storage	Core BMPs Sector Q BMPs
Indoor Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] complex is located [redacted] as shown on Sheets S-8 of the SWPPP base maps. The complex includes the following structures, which were investigated as part of the storm sewer survey:

[redacted]

Three other facilities were included in the original SWPPP; the [redacted] were demolished in 2004 and those functions relocated to the newly constructed Building [redacted].

[redacted]

Detailed maps showing the site layout and surrounding area are provided on the SWPPP site maps (Figures 6-[redacted] and 6-[redacted]).

Facility Objective: [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Stormwater Drainage Facility Description: Stormwater runoff from the [redacted] area generally drains to the west. The facility lies in several drainage areas but all drainage areas discharge to Hood Canal.

[redacted] drains by sheet-flow directly to Hood Canal. The [redacted] drains through 6-inch drop drains and by sheet-flow over the edge of the wharf. The area between the seawall and the former location of Buildings [redacted] and [redacted] sheet flows directly into Hood Canal.

Stormwater from the former location of Building [redacted], on the north side of the pier entrance, flows to catch basin [redacted]-CB20, which outfalls at OF16. This area constitutes drainage basin DB16.

The eastern half of the former Building [redacted] and the asphalt in front of the building slabs drain into catch basins that outfall at OF15. Two of these catch basins ([redacted]-CB8 and [redacted]-CB11) have gravity oil/water separators that are not properly maintained. This area constitutes drainage basin DB15.

The eastern half of former Building [redacted] and the asphalt lot in front of the slab drain into catch basins that outfall at OF14. These areas lie in drainage basin DB14 and generally drain to the south.

A more detailed discussion of stormwater drainage for [redacted] is provided in Section 7 of this SWPPP.

Materials Inventory: All materials used, stored, or produced at this facility from 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection, [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: A field survey was conducted 10/26/94-10/27/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

Existing BMPs: The existing BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
Cleaning compound	NAV/Flammable locker on north arm of pier	NAV	-	6 gal	None	No, stored in flammable locker with secondary containment		X
Oil	NAV/Flammable locker on north arm of pier	NAV	-	~ 10 gal	None	No, stored in flammable locker with secondary containment		X
Charcoal lighter	NAV/Flammable locker on north arm of pier	NAV	-	1 pt	None	No, stored in flammable locker with secondary containment		X
Gasoline	NAV/Flammable locker on north arm of pier	NAV	-	< 20 gal	None	No, stored in flammable locker with secondary containment		X
Synthex Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Underlay Powder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Motor oil	Maintenance/Inside flammable locker in east side of building	NAV	-	5 gal	None	No, stored inside flammable locker away from doors		X
Grease	Maintenance/Inside flammable locker in east side of building	NAV	-	5 gal	None	No, stored inside flammable locker away from doors		X
Metal equipment	Storage/Outside on east side of building	-	-	Several pieces	Several pieces	Yes, stored on pavement with no cover		X
Marking Chalk	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Chlorox 2	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Granular Charcoal Pwdr	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Tempera	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Handcut Mast Film	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Degreaser	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Citric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Toner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Film Blue	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Varnish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Xylene	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Leak detection compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Key: AUL=Authorized Users List, qt=Quart, NAV=Not available, AST=Aboveground Storage Tank, gal=Gallon.

Table 4-[redacted]:
[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Two rusted flammable lockers stored outdoors	2013	2		Flammable lockers	
Trash dumpster missing lid	2014	1 dumpster		Dumpster	

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted] - Material Storage and Handling [redacted] - Material Storage and Handling	Core BMPs Sector Q BMPs
[redacted] - POL Leaks From The Crane	
[redacted] - Vehicle Parking	

[b] This facility falls under Sector Q of the Multi-Sector Permit: the BMPs presented address those BMP requirements applicable to Sector Q.

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Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted], as shown on Sheet S-7 of the SWPPP base maps. Building [redacted] is a large concrete building containing offices, a material supply room, and [redacted].

A detailed map showing the site layout and surrounding area is provided in Figure 4-[redacted].

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from Building [redacted] drains to the southwest. Catch basins in the asphalt lot surrounding the building collect the runoff. These catch basins discharge to an open ditch that discharges into Hood Canal at OF10. Some of the runoff will percolate into the ground before reaching the outfall. This facility lies in drainage basin DB10.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection and the [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at the facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table [redacted].

Site Assessment Inspection: The original field survey was conducted 11/08/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. [redacted] Potential pollutant sources identified in those accessible areas are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table [redacted].

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Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Acetone	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Amino Acid Solution	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Antifogging Kit	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Aquaseal Urethane Perpolym	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Benzalkonium Chloride Solution	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
pH = 7 Buffer	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Cement	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Charcoal	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Chloride Indicator	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Chloride Solution	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Citric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Formula 409 Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Window Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Cobalt Chloride Solution	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Colloidal Graphite	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Silicone Compound	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Super Glue	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Copperas, Iron Sulfate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Methyl Benzene	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Windshield Deicer	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Activated Dessicant	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Developer	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Dioctyl Phthalate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Dishwashing Compound	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Ethylene Tetra Aceticacid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Epoxy Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Epoxy Resin	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Unleaded Gasoline	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X

Table 4-[redacted]:

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Electronics Cleaner (chlorodifluoromethane)	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Hydrated Lime	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Hydrochloric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Hydrogen Peroxide	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Ink	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Ion Exchange Resin	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Isopropyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Kerosene	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Laundry Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Leak Test Compound	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Lubricant Kit	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Disinfectant	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Mercuric Nitrate Solution	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Neodysium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Nitric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Motor Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Turbine Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Vacuum Pump Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Oxalic Acid Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Paint	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Penetrating Oil	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Perchloroethylene	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Petroleum USP	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Metal Polish	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Potassium Acid Phthalate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X

Table 4-[redacted]: [redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Potassium Chloride	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Potassium Chromate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Potassium Iodide Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Silicate Primer	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Reagent Molybdate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Titrator Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Resin	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Scouring Powder Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Silica	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Silicate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Silver Nitrate, Nitric Acid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Degreaser	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Bicarbonate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Citrate Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Hydroxide	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Silicate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Sodium Thiosulfate	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Spic & Span Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Starch	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Super Glue Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Floor Sealer	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Talcum Powder	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Tapping Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Ink Remover	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Hand Soap	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
1,1,1-Trichloroethane	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Wax	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X
Charcoal Lighter	NAV-data obtained from AUL	NAV	-	NAV	None	No, materials stored indoors		X

Key: AUL=Authorized Users List. NAV=Not available.

Table 4-[redacted]:
[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs

Flammable Material Storage	Core BMPs Sector Q BMPs
Other Material Storage (Batteries)	

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Figure 4-[redacted]

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[redacted]

Facility Description: [redacted]) is located [redacted] as shown on Sheet S-7 of the SWPPP base maps. The facility is a warehouse-type structure with two garage doors on its east face and one garage door on its west. Offices occupy the northern third of the building and storage space comprises the rest. The storage portion of Building [redacted] contains nine "cages" (with dimensions of approximately 20 feet by 20 feet) set aside [redacted]. A room called the "vault," shelves for storing dry goods such as coats and jackets, and a cage for office supplies also exist in the storage portion.

A detailed map showing the site layout and surrounding area is provided in Figure 4-[redacted].

Facility Objective: [redacted]

Stormwater Drainage Facility Description: The [redacted]) is located within the northwestern portion of drainage basin DB3. Surface water runoff associated with the facility drains west to Devil's Hole, which discharges to the Hood Canal through outfall OF3.

The west and east sides of the building contain impervious surfaces that generate surface runoff and are potentially in contact with pollutants. The eastern side of the building contains a loading ramp that is served by a trench drain. A vehicle parking area, also on the east side, drains away from the building to catch basins located on adjacent grassy areas. The trench drains and the catch basins are connected to a storm drain system that runs [redacted] and opens to a ditch before entering Devil's Hole. The west side of the building sheetflows away from the building and runs over a grassy area or down the loading drive before migrating overland to Devil's Hole.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at this facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey was conducted 2/20/96. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted]

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Acetylene gas	Temporary storage/ Nevada cage flammable locker	-	-	2 small empty cylinders	None	No, material is more of a fire hazard than a stormwater pollutant		X
Ion exchange compound	Temporary storage/ Nevada cage flammable locker	-	-	(4) 5-gal canisters	None	No, stored in flammable locker away from building doors		X
Lithium hydroxide	Temporary storage/ Alaska cage	-	-	~ 12 boxes of containers	None	No, stored well inside building		X
Chlorate candles (oxidizer)	Temporary storage/ Alaska cage	-	-	~ 12 boxes of containers	None	No, stored well inside building		X
Grease	Temporary storage/ Alaska cage flammable locker	-	-	(1) 5-gal drum	None	No, stored in flammable locker away from building doors		X
Lube oil	Temporary storage/ Alaska cage flammable locker	-	-	(1) 1-gal can	None	No, stored in flammable locker away from building doors		X
Rosin flux	Temporary storage/ Alaska cage flammable locker	-	-	(1) 1-pt can	None	No, stored in flammable locker away from building doors		X
Hazardous waste (paint)	Temporary storage/ Alaska cage flammable locker	-	-	4 cans	None	No, stored in flammable locker away from building doors		X
Corrosives	Temporary storage/ Alabama cage	-	-	2 boxes of containers	None	No, stored well inside building		X
Ammonium hydroxide	Temporary storage/ Alabama cage	-	-	2 boxes of containers	None	No, stored well inside building		X
Epoxypolyamide kits	Temporary storage/ Alabama cage	-	-	3 boxes of kits	None	No, stored in flammable locker away from building doors		X
Developer	Temporary storage/ Henry M. Jackson cage shelf	-	-	6 boxes of containers	None	No, stored well inside building		X
Lithium hydroxide	Temporary storage/ Henry M. Jackson cage	-	-	9 boxes of containers	None	No, stored well inside building		X
40% Morpholine	Temporary storage/ Henry M. Jackson cage	-	-	2 boxes of containers	None	No, stored well inside building		X
Monoethanolamine	Temporary storage/ Henry M. Jackson cage, on pallet	-	-	(1) 55-gal drum	None	No, stored well inside building		X

Table 4-[redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Lube oil	Temporary storage/ Henry M. Jackson cage, on pallet	-	-	(2) 55-gal drums	None	No, stored well inside building		X
Dichloromethane	Temporary storage/ Georgia cage flammable locker	-	-	5 empty cylinders	None	No, material is more of a fire hazard than a stormwater pollutant		X
Lube oil	Temporary storage/ Georgia cage shelf	-	-	(6) 5-gal cans	None	No, stored well inside building		X
Lithium hydroxide	Temporary storage/ Florida cage shelf	-	-	~12 boxes of containers	None	No, stored well inside building		X
Lube oil	Temporary storage/ Michigan cage, in box on pallet	-	-	~(12) 5-gal cans	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Miscellaneous chemicals (e.g., ammonium hydroxide)	Temporary storage/ Michigan cage, in box on pallet and in nylon duffel bags on pallet	-	-	Several containers in box, several boxes of containers in duffel bags	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Adhesives (flammable)	Temporary storage/ Michigan cage shelf	-	-	(2) 1-pt cans	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Lube oil	Temporary storage/Ohio cage	-	-	(7) 5-gal cans	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Scale preventative compound	Temporary storage/Ohio cage, on pallet	-	-	(1) 5-gal plastic drum	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Monoethanolamine	Temporary storage/Ohio cage, on pallet	-	-	(1) 55-gal drum	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X
Adhesives	Temporary storage/Ohio cage, on shelves	-	-	Several pt containers	None	No, any spill would flow to nearby floor drain, which is connected to sanitary sewer		X

Table 4-[redacted]:
[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Canisters for Navy oxygen breathing apparatus	Temporary storage/ Flammable locker near middle garage door on east side of building	-	-	~24 units	None	No, likelihood of contact with stormwater is minimal		X
Potassium hydroxide	Temporary storage/ Flammable locker next to Florida cage	-	-	(12) 2-gal plastic jugs	None	No, stored inside flammable locker away from garage door		X
Lithium hydroxide	Temporary storage/ Outdoor storage cage	-	-	(324) 1-gal containers	None	No, secondary containment and cover provided		X
Monoethanolamine	Temporary storage/ Outdoor storage cage	-	-	(2) 55-gal drums	None	No, secondary containment and cover provided		X
Floor wax	Temporary storage/ Outdoor storage cage	-	-	(2) 5-gal drums	None	No, secondary containment and cover provided		X

Key:
gal=Gallon.
pt=Pint.
-=Not applicable.

Table 4-[redacted]:
[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Flammable Material Storage and Handling	Core BMPs Sector Q BMPs
Floor Drains in Storage Area	
Loading/Unloading of Materials for Indoor Storage	
Outdoor Material Storage, Handling, and Loading/Unloading	
Submarine Cages - Material Storage and Handling	

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[redacted]

Facility Description: The [redacted] facility is located [redacted] as shown on Sheet S-8 of the SWPPP base maps.

The facility includes the following buildings, which were inspected for the SWPPP:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

The [redacted]), which physically abuts [redacted] and looks as if it were physically attached, is discussed separately [redacted]

The [redacted] facility is constructed in Hood Canal and connects to the mainland (Kitsap Peninsula) by [redacted]

[redacted]

The four [redacted] Buildings are identical 1-story concrete structures, [redacted] The [redacted] houses an electrical shop, modular storage for [redacted], a men's room with two floor drains, and an antenna shop. The [redacted] provides temporary storage of hazardous waste until it can be transported to an appropriate disposal facility.

The [redacted] is a 2-story structure located approximately in the middle of [redacted] The first floor contains industrial facilities. The second floor contains offices. An observa-

tion room extends above the second floor. The first floor of the facility is functionally divided into the following shops: Rigging, Woodworking, Paint, Dry Stores, Shop 38B, Pipe, and Dry stores. Additionally, there is a small machine shop at the north end of the central bay. Most of the central bay is used by all the shops. Separate men's and women's restrooms are located at the south end of the central bay.

A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]). The structures listed above are discussed in the Site Assessment Inspection section.

[redacted] contains other structures that were not inspected for the SWPPP. These include the [redacted].

Facility Objective: [redacted]

Stormwater Drainage Facility Description: All stormwater from the [redacted], west of the seismic expansion joint, collects in catch basins throughout the pier. Berms prevent any sheet flows over the sides of the pier and roof drains empty onto the deck and do not sheet flow to the canal. The catch basins flow by gravity to a sump pump that pumps the stormwater to the Retention pond southeast [redacted]. The Retention pond discharges through an oil/water separator ([redacted]) to Devil's Hole where it outfalls at OF3[redacted] lies in drainage basin DB3. A minor amount of stormwater could flow into Hood Canal by leaking through the expansion joints on the pier.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspections, and the [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

[redacted]

The [redacted] group has established a system to handle hazardous materials throughout their area of responsibility. The [redacted] hazmat system is designed, with exceptions noted below, to remove the need for storage of hazardous materials and waste at more than one location. Each facility has a standing order, which may be augmented by daily requests, for hazardous materials needed for performing its mission. These hazardous materials are delivered in the quantity needed each morning and the unused amount along with any hazardous waste generated, are picked up each evening. While this system increases the handling and transportation of hazardous materials, these functions are performed by well-trained personnel. Additionally, there is no accumulation of half-filled and forgotten containers of hazardous materials and the inventory and storage requirements of these materials are better controlled.

The exception is at shops that require a significant amount of hazardous materials daily, such as the paint shop at the [redacted]). These shops continue to order, store, use, and dispose of materials themselves.

Significant Spills and Leaks: Significant spills and leaks associated with the facility are provided in Table 4-[redacted].

Site Assessment Inspection: The original field survey of the facility was conducted 11/07/94 and 2/12/96. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources identified at each building are listed in Table 4-[redacted].

BMPs: BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]:

[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
[redacted]								
POL Leaks	From docked submarines	—	NAV	—	NAV	No, oil boom surrounds each submarine		X
Bilge waste	Temporary storage/Outside on pier	—	NAV	3 tanker trailers	3 tanker trailers	Yes, no secondary containment	X	
Waste water with TSP	Temporary storage/Outside on pier	—	NAV	3 tanker trailers	3 tanker trailers	Yes, no secondary containment	X	
Miscellaneous metal equipment	Temporary storage/Outside on pier	—	—	NAV	Varies	Yes, no cover		X
Diesel	Maintenance/Outside on pier	NAV	—	500-gal AST	None	No, has secondary containment and cover		X
POL (Diesel?)	Boiler fuel/Outside on pier	NAV	—	500-gal AST	500 gal	Yes, no secondary containment	X	
Waste POL	Crane fuel/Outside on pier	-	NAV	(2) 500-gal ASTs	1,000 gal	Yes, stains on tanks and no secondary containment		X
[redacted]								
Adhesive	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Aqua-Seal	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Urethane Perpolum Protectant	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Methyl Benzene	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Leather Dye	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Glass Cleaner	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Lube Oil	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Lead-Loaded Vinyl	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Propane	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Polyurethane	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Oil	NAV-data obtained from AUL	NAV	—	NAV	None	NAV-data obtained from AUL		X
Vinyl Cement	NAV-data obtained from AUL	NAV		NAV	None	NAV-data obtained from AUL		X
[redacted]								
Paint remover	Maintenance/Inside Building [redacted]	NAV	—	<10 gal	None	No, stored inside a flammable locker in building		X
Lube oil	Maintenance/Inside Building [redacted]	NAV	—	(10) 5-gal	None	No, stored on shelves inside building		X

Table 4-[redacted]:

[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
				cans				
Paint	Maintenance/Inside [redacted]	NAV	—	<10 gal	None	No, stored on shelves inside building		X
Cleaner	NAV-data obtained from AUL	NAV	—	NAV	N	NAV-data obtained from AUL		X
Oil	NAV-obtained from AUL	NAV	—	NAV	N	NAV-data obtained from AUL		X
[redacted]	[redacted]	—	NAV	NAV	None	Yes, no containment curb		X
[redacted]								
Silicon fluid coolant	Maintenance/Inside Transformer Building	NAV	—	(1) 55-gal drum	None	No, building has secondary containment		X
Lead/acid batteries	Maintenance/Inside Transformer Building	NAV	—	NAV	None	No, stored in secondary containment		X
[redacted]								
Paint	Maintenance/Inside Waterfront Electrical Shop	NAV	—	<10 gal	None	No, stored in flammable locker		X
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Anti-seize	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Metal Coating	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Disinfectant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Layout Dye	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dielectric Solvent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Floor Wax	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Flux	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Form-A-Gasket	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Freon	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hand Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hexane in Air	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydrogen Sulfide in	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:

[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Nitrogen								
Isopropanol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Soap	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Dissolver	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Penetrant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Tin/Lead Solder	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Polish Remover	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aliphatic Petroleum Distillate	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Toluene in Air	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Paint	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Penetrating Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Windshield Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Wax	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
[redacted]								
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Adhesive/Sealant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aircraft Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Denatured Ethyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Anti-seize	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Citra Soak Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Formula 409 Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cleaner	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Copalite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Corrosion Preventative Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:

[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Cutting Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
General Purpose Detergent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Dishwashing Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Layout Dye	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy Kit	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Teflon Spray	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Permatex Form-A-Gasket	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Graphite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Hydraulic Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Toolmakers Ink	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Isopropyl Alcohol	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Leak Detection Compound (Ethyl. Glyc.)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Solid Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Vacuum Pump Lube Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mineral Spirits	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rock Drill Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Honing Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Linseed Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Penetrating Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Paint	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Penetrating Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Adhesive	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Aerosol Gasket Remover (Cleaner)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Inhibitor	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Surface Activator - Primer	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Table 4-[redacted]:

[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Aerosol Primer	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Epoxy Hardener	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealer	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone Rubber	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Rust Remover	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sealing Compound	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Silicone	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Degreaser	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Solvent (ethyl- and methyl-triacetoxysilane)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Oil Treatment	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cutting Fluid	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
[redacted]								
[redacted]								
Paint	Storage/Inside Paint Storage Building	NAV	—	NAV	None	No, stored inside building with containment curb		X
Paint	Storage/Outside Paint Storage Building	NAV	—	~(60) 5-gal cans	300 gal	Yes, no cover or secondary containment		X
Xylene	Storage/Inside Paint Storage Building	NAV	—	NAV	None	No, stored inside building with containment curb		X
Methyl isobutyl ketone	Storage/Inside Paint Storage Building	NAV	—	(1) 55-gal drum	None	No, stored inside building with containment curb		X
[redacted]								
Paint chips	Temporary storage/Inside Hazardous Waste Storage Building	—	NAV	(4) 50-lb bags	None	No, stored inside building with secondary containment		X
Heavy metal waste	Temporary storage/Hazardous Waste Storage Building	—	NAV	(1) 55-gal drum	None	No, stored inside building with secondary containment		X
"Rust Lick" solid waste	Temporary storage/Hazardous Waste Storage Building	—	NAV	(10) 5-gal drums	None	No, stored inside building with secondary containment		X

Table 4-[redacted]:

[redacted])

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
PCB waste	Temporary storage/Hazardous Waste Storage Building	—	NAV	(1) 55-gal drum	None	No, stored inside building with secondary containment		X
[redacted]								
Caustic polish	Maintenance/Inside Woodworking Shop	NAV	—	NAV	None	No, stored in flammable locker inside building		X
Paint	Maintenance/Inside Woodworker Shop	NAV	—	5 gal	None	No, stored in flammable locker inside building		X
Gasoline	Maintenance/Inside Woodworker Shop	NAV	—	5 gal	None	No, stored in flammable locker inside building		X
Paint	Maintenance/Outside Paint Shop	NAV	—	(10) 5-gal cans	50 gal	Yes, no cover and no secondary containment		X
Paint	Maintenance/Inside Paint Shop	NAV	—	(10) 5-gal cans	None	Yes, poor housekeeping and no secondary containment		X
Ethyl alcohol	Maintenance/Inside Paint Shop	NAV	—	NAV	None	No, stored in flammable lockers		X
Thinner	Maintenance/Inside Paint Shop	NAV	—	NAV	None	No, stored in flammable lockers		X
Paint	Maintenance/Inside Central Bay	NAV	—	NAV	None	No, stored in flammable lockers		X
Waste water (with oil and detergent)	Temporary storage/Inside Central Bay	—	NAV	(1) 55-gal drum	None	No, stored inside building		X

Key:
AST=Above Ground Storage Tank.
-=Not applicable.
gal=Gallon.
PCB=Polychlorinated biphenyl
lb=Pound.
POL=Petroleum, oil, and lubricants.
NAV=Not available.
TSP=Trisodium phosphate.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)
Scrap dumpsters exposed to weather	2013 - Current		South side [redacted]		
New zincs exposed to weather	Current		South side [redacted]		

Table 4-[redacted]:

[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
[redacted]										
6/5/12		X		Engine oil	0.25 gal	Loose drain plug			True	
1/3/14	X		Ship to Hood Canal	Oily water	12 gal	During hose disconnection			True	
2/10/14	X			Oily water	800 gal	SOD system failure			True	
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										
[redacted]										

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]

([redacted])

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted] - Expansion (Seismic) Joints	
[redacted] - Pier Deck	
[redacted] - Hose Trenches	
[redacted] - Outdoor Miscellaneous ASTs	
[redacted] - Outdoor Miscellaneous Equipment Storage	
[redacted] - POL Leaks from Cranes	
[redacted] - POL Leaks from Docked Submarines	
[redacted] - Rectifiers	
[redacted] - Tanker Trailers Containing Bilge Waste and TSP Water	Core BMPs Sector Q BMPs Sector R BMPs
[redacted] - Temporary Storage Structures	
[redacted] - Floor Drain	
[redacted] - Indoor Material Storage and Handling	
[redacted] - Floor Drain	Plug Floor Drains Connected to the Storm or Sanitary Sewer
[redacted] - Indoor Material Storage and Handling	
[redacted] - Indoor Material Storage and Handling	Plug Holes Extending Through Pier Deck
[redacted] - Equipment Leaks	
[redacted] - Indoor Material Storage and Handling	
[redacted] - Floor Drain	Provide Collar Around Drain
[redacted] - Indoor Material Storage and Handling	
[redacted] - Material Handling	
[redacted] - Material Handling	
[redacted] - Flammable Storage (55-Gal Drum of MEK)	

Table 4-[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
[redacted] - Indoor Material Storage and Handling	Core BMPs
[redacted] - Outdoor Material Storage and Handling	
[redacted] - Indoor Hazardous Waste Storage	Sector Q BMPs
[redacted] - Indoor Hazardous Waste Storage	Sector R BMPs
[redacted] - Indoor Floor Drains	
[redacted] - Material Storage and Handling in Paint Shop	
[redacted] - Material Storage and Handling in Rest of Building	
[redacted] - Operations in Paint Shop	

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Figure 4-[redacted]

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[redacted]

Facility Description: The [redacted] is located [redacted] as shown on Sheet S-8 of the SWPPP base maps. The building is a long, one-story structure with a fenced area at its north end.

A detailed map showing the site layout and surrounding area is provided in the SWPPP site map (Figure 4-[redacted].

Facility Objective: This facility supports [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from facility [redacted] drains to the west. Catch basins in the asphalt lot west of the building collect the runoff. These catch basins discharge to a grassy hillside to the west where flow continues down towards Hood Canal. This facility lies in drainage basin DB13 but most of the runoff would percolate into the ground before reaching basin outfall.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted] which was compiled using information obtained from the November 1994 SWPPP site assessment inspection and the February 1996 [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted 11/08/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

Existing BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table 4-[redacted]

Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint	Maintenance/In outdoor flammable locker at north end of Building [redacted]	NAV	-	Several containers	None	Yes, flammable locker is not located in a covered area		X
Household cleaner	Maintenance/In outdoor flammable locker at north end of Building [redacted]	NAV	-	Several containers	None	Yes, flammable locker is not located in a covered area		X
Welding Flux	Maintenance/In outdoor flammable locker at north end of Building [redacted]	NAV	-	NAV	None	Yes, flammable locker is not located in a covered area		X
Premalube	Maintenance/In outdoor flammable locker at north end of Building [redacted]	NAV	-	Several containers	None	Yes, flammable locker is not located in a covered area		X
Grease	Maintenance/In outdoor flammable locker at north end of [redacted]	NAV	-	Several containers	None	Yes, flammable locker is not located in a covered area		X
Hydrochloric acid	Maintenance/In outdoor acid locker at north end of Building [redacted]	NAV	-	(1) 5-gal container	None	Yes, flammable locker is not located in a covered area		X
Sodium bicarbonate	Acid neutralizer/Inside Building [redacted]	NAV	-	NAV	None	No, stored inside building		X
Lube oil (gear oil)	Maintenance/Outside at north end of Building [redacted]	NAV	-	(1) 55-gal drum	55 gal	Yes, no secondary containment provided		X
Metal equipment	Storage/Outside at north end of Building [redacted]	-	-	Several pieces	Several pieces	Yes, stored with no cover		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Outdoor Flammable Material Storage and Handling	Core BMPs Sector Q BMPs
Outdoor Metal Equipment Storage and Handling	
Outdoor POL Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is located [redacted], as shown on Sheet S-8 of the SWPPP base maps. A detailed map showing the site layout and surrounding area is provided on the SWPPP site map (Figure 4-[redacted]).

The [redacted] is constructed of steel sheet pile cofferdam cells with a concrete stem wall along the interior ([redacted] side) and a concrete floor slab. The north end of the [redacted] is open when the dock is empty. The opening is sealed by a steel caisson that is floated into place and flooded with seawater to secure it in place. When not in use, the caisson is stored at [redacted]). A spare caisson also exists. On the day of the inspection, a finger pier was being constructed at the northeast corner of [redacted]. The finger pier will provide more secure mooring facilities for the caissons. The overall effective interior dimensions of the [redacted] are 690 feet long and 90 feet wide. The floor slab is 43 feet below mean low water (MLLW), while the top of the [redacted] is 20 feet above MLLW. A movable cover extends over about one third of the [redacted].

During excavation for the [redacted], an artesian fresh water aquifer was encountered. If the [redacted] floor slab, which is about 18 feet thick, were placed directly on the soil without drainage facilities to relieve the artesian pressure, the resulting uplift would have displaced the slab. Therefore a sub-drainage system was installed beneath the floor slab. Fresh water from this sub-drainage system is pumped directly into Hood Canal. If the sub-drainage system were to lose power for an extended time, emergency outlets with flapgates will discharge the artesian water directly into the [redacted].

Drydock Operation: Control of the hydraulics of the drydock is relatively complex. [redacted]

[redacted] Any rainwater or contaminants entering the drydock enter the sump and are discharged to the industrial sewer.

[redacted]:

- The entire [redacted] is inspected very carefully for any foreign debris.
- The entire [redacted] is hosed down very carefully. The effluent is discharged to the industrial wastewater sewer.
- The evacuation pumps are shut down and associated valving is closed.
- The dock is flooded through the flooding inlets by gravity.
- The caisson is pumped out to Hood Canal and the caisson is floated and removed. [redacted]

Facility Objective: The facility provides [redacted].

Stormwater Drainage Facility Description: Stormwater runoff from the [redacted] (Building [redacted], east of the seismic expansion joint, collects in catch basins throughout the pier. Berms prevent sheet flow over the side of the pier and roof drains empty onto the deck instead of into the canal. Stormwater that falls into the actual [redacted] collects in catch basins and is pumped to [redacted] for treatment as industrial waste. Stormwater that falls on the remainder of the [redacted] collects in catch basins and gravity flows to a sump pump tank. The stormwater in the tank is purged to the Retention pond southeast of the pier where it discharges through an oil/water separator ([redacted]) to Devil's Hole, which outfalls at OF3. [redacted] lies in drainage basin DB3.

Hose trenches adjacent to the [redacted] extend toward it and open on the side above a gallery that extends along each side. This gallery has floor drains that discharge to the industrial wastewater sewer. Scuppers along the sides of the [redacted] drain the top of the pier. Spilled material would pass directly into the [redacted]. If the dock were full, and the caisson not in place, there would be a direct connection to Hood Canal.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted] Table 4-[redacted] was compiled using information obtained from the SWPPP site assessment inspection and the [redacted].

Significant materials are defined in the glossary included as Appendix B of this document. There are no significant materials identified at this facility that have been exposed to stormwater during the last three years. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey was conducted on 11/07/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted]

BMPs: The BMPs for each potential pollutant source are provided in [redacted]

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Table [redacted]:
[redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Paint	Maintenance/On floor of [redacted]	NAV	-	~(50) 5-gal cans	None	No, paint stored over the dewatering inlets, which discharge to the industrial sewer		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.

Table 4-[redacted]
[redacted]
Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]:
[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	

Definition:Significant spills include. but are not limited to. releases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]

Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Boiler Operations	Core BMPs Sector Q BMPs Sector R BMPs
Boiler Discharge [redacted]	
General [redacted] Operations	
Material Storage and Handling	

Figure 4-[redacted]

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[redacted]

Facility Description: The facility is a single building located [redacted], as shown on Sheet S-8 of the SWPPP base maps. The facility uses drinking water as influent, microfilters it, removes anions and cations using strong acids and bases, and then stores it in a nitrogen (air-free) environment.

A detailed map showing the site layout and surrounding area is provided in the SWPPP site map (Figure 4-7604).

Facility Objective: [redacted]

Stormwater Drainage Facility Description: Stormwater runoff from facility drains to the west into Hood Canal. Runoff flows from the facility across a small, vegetated area and over a bluff on the banks of Hood Canal. Building [redacted] roof drains extend through the facility in a closed system and discharge at the top of the bluff directly into Hood Canal. This facility is located in a sheet flow area.

Materials Inventory: All materials used, stored, or produced at this facility in 2009 are provided in Table 4-[redacted], which was compiled using information obtained from the SWPPP site assessment inspection.

Significant materials are defined in the glossary included as Appendix B of this document. Significant materials that have been exposed to stormwater during the last three years are indicated on Table 4-[redacted].

Significant Spills and Leaks: There are no reported significant spills and leaks associated with the facility. However, Table 4-[redacted] has been reserved to update the SWPPP in the future.

Site Assessment Inspection: The original field survey inspection was conducted on 11/08/94. The facility has been reassessed regularly since 2005 by NAVFAC NW personnel. Potential pollutant sources are listed in Table 4-[redacted].

BMPs: The BMPs for each potential pollutant source are provided in Table 4-[redacted].

Table [redacted]
Materials Inventory

Material	Purpose/Location	Quantity (units)			Quantity Exposed in 2006-2009	Likelihood of Contact with Stormwater	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Sodium Hydroxide	Water treatment/Inside Building [redacted]	NAV	-	1 tank	None	Yes, a spill could flow out the nearby door		X
Sulfuric Acid	Water treatment/Inside Building [redacted]	NAV	-	1 tank	None	Yes, a spill could flow out the nearby door		X
High pH wastewater	Storage/In tank outside Building [redacted]	-	NAV	1 tank	1 tank	Yes, no secondary containment provided		X
Acetone	Maintenance/In flammable locker on second floor of Building [redacted]	NAV	-	(1) 5-gal can	None	No, stored in flammable locker well inside the building		X
Degreaser	Maintenance/In flammable locker on second floor of Building [redacted]	NAV	-	(1) 5-gal can	None	No, stored in flammable locker well inside the building		X
Granular Activated Carbon	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lubricant	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Oil	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Chlorine Reagent	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Liquid Polish	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Mixed Bed Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Cation Resin	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Grease	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Sodium Sulfite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Wax	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Vermiculite	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X
Lube (non-haz)	NAV-data obtained from AUL	NAV	-	NAV	None	NAV-data obtained from AUL		X

Key:
gal=Gallon.
-=Not applicable.
NAV=Not available.
AUL=Authorized Users List.

Table 4-[redacted]

Description of Exposed Significant Material

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Table 4-[redacted]

List of Significant Spills and Leaks

Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, if known	Reason	Amount of Material Recovered	Material No Longer Exposed in Stormwater (True/False)	
								-	-	-

Definition:Significant spills include, but are not limited to, relcases of oil or hazardous substances in excess of reportable quantities.

Table 4-[redacted]:
[redacted]
Pollutant Sources And BMPs

Stormwater Pollutant Sources	BMPs
Indoor Chemical Storage and Handling	Core BMPs Sector Q BMPs
Indoor Flammable Material Storage and Handling	
Wastewater Holding Tank	

Figure 4-[redacted]

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5 Stormwater Analytical Monitoring

Section 5 provides the basis for characterizing stormwater discharges at Naval Base Kitsap Bangor. The objective of the stormwater monitoring program is to collect stormwater discharge samples that are representative of the conditions at outfalls that drain industrial areas at Naval Base Kitsap Bangor in order to identify types and amounts of pollutants present. A stormwater monitoring program has been developed for Naval Base Kitsap Bangor based on the sampling requirements outlined in the Multi-Sector General Permit. Existing stormwater sampling data are also provided. The results of the monitoring program will allow for the characterization of the stormwater discharges and pollution prevention targeting at the base.

The stormwater permitting strategy for Naval Base Kitsap Bangor is to obtain coverage under the Multi-Sector general permit. The nature of this stormwater permit and the permitting strategy are discussed in detail in Section 1.

Monitoring requirements were developed for Naval Base Kitsap Bangor upon review of the Multi-Sector General Permit. Monitoring requirements are dependent upon the types of industrial activities occurring in the drainage basin for each stormwater outfall.

Previous Stormwater Data Past monitoring conducted under the Multi-Sector General Permit is summarized in Table 5-1.

5.1 Multi-Sector General Permit Requirements

The Multi-Sector General Permit (MSGP) contains several different types of monitoring provisions:

- Visual examination,
- Benchmark analytical monitoring,
- Effluent limitations monitoring,
- Discharges to impaired receiving waters monitoring
- Discharges to Puget Sound Sediment Cleanup Sites

Overviews of these monitoring provisions are presented in this section. Specific sampling, collection and reporting requirements associated with these provisions are provided in Sections 5.3, 5.4, and 5.5, respectively.

For the next permit cycle, which will begin when Naval Base Kitsap Bangor receives permit coverage under the 2015 MSGP, quarterly Benchmark monitoring will start during the first year. Following the first year, quarterly data may be evaluated in an effort to waive further sampling. If the average concentration of a pollutant at an outfall is less than the Benchmark values shown in Table 5-8, monitoring the outfall for that pollutant is not required during the following years.

If the average of the four monitoring values for any parameter exceeds the benchmark, you must, in accordance with Part 4, review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary, and either:

- Make the necessary modifications and continue quarterly monitoring until you have completed four additional quarters of monitoring for which the average does not exceed the benchmark; or
- Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in Parts 2.1 and 2.2 of this permit. In that case, you must continue monitoring once per year. You must also document your rationale for concluding that no further pollutant reductions are achievable, and retain all records related to this documentation with your SWPPP.

Analytical monitoring is designed to provide some feedback for facility operators to assess the effectiveness of their SWPPP. The benchmark values listed in Table 5-2 are pollutant concentrations that, when exceeded, could impair water quality or affect human health. Facilities with average pollutant concentrations that exceed the benchmark must review and revise their SWPPP and continue monitoring their discharges on a quarterly basis. Analytical monitoring results must be submitted electronically via EPA's NetDMR.

An additional type of monitoring required is for those discharges subject to numeric stormwater effluent limits under stormwater effluent limitation guidelines. Compliance monitoring is required to ensure that a facility's pollutant discharge concentration is less than or equal to the numeric limits established for that pollutant. Results of the annual compliance monitoring must be submitted to the appropriate EPA regional office. At Naval Base Kitsap Bangor, discharges [redacted] were monitored as part of the Effluent Limitations Monitoring. Coal has not been used at Bangor since 2000 and Effluent Limitation Monitoring is no longer required.

The 2015 MSGP requires that discharges to impaired receiving waters be monitored annually for pollutants causing the impairment. Receiving waters are considered impaired if they are listed on the EPA approved 303(d) list or if a Total Maximum Daily Load has been established for the water body. Portions of Hood Canal on the west side of Bangor are listed on the 303(d) list for low dissolved oxygen. Clear Creek, which drains the east side of Naval Base Kitsap Bangor, is included on the 303(d) list for high fecal coliform counts.

The 2015 MSGP outlines new requirements for monitoring discharges to Puget Sound Sediment Cleanup Sites, either directly or indirectly through a stormwater drainage system. Portions of the Hood Canal on the west side of Bangor are listed as impaired (Category 4B) for multiple parameters. In addition to sampling the discharges to Puget Sound Sediment Cleanup Sites, the MSGP also requires permittees to remove accumulated solids from the storm drain infrastructure and conduct line cleaning operations at least once during the term of the MSGP. Prior to removing storm drain solids, permittees must sample and analyze storm drain solids in accordance with Table 9.10.7.3.3 in the 2015 MSGP.

5.1.1 Facility Specific Monitoring Requirements

The Multi-Sector General Permit regulates stormwater discharges from 29 industrial sectors or industry types. Industries that fall under one or more of these 29 sectors are eligible for coverage under the permit.

Naval Base Kitsap Bangor has a total of 148 industrial facilities that fall into one or more of six different sector types covered under the Multi-Sector General Permit and discharge stormwater into a receiving water body. Each of these 1248 facilities are identified in Table 5-3, along with the associated sector and outfall.

Runoff from the entire portion of a number of facilities sheet-flows drain directly into Hood Canal. In general, runoff from sheet-flow areas does not concentrate and cannot be sampled. [redacted] sheet-flow to receiving waters and do not form concentrated flow which can be sampled. These facilities are not included in the analytical monitoring plan; however, these facilities are inspected quarterly as discussed in Section 6.

A number of facilities perform activities that are covered by a sector; however, stormwater from these facilities never reaches receiving surface water. Stormwater from these facilities either percolates into the ground prior to reaching an outfall discharging into a receiving water body, is intercepted by catch basins and routed to retention basins where it is pumped into tanker trucks for treatment as waste, is diverted to a sanitary sewer, or has no discrete point source discharge into a receiving water body. Stormwater discharges from these facilities are not covered by the Multi-Sector general permit.

Following is a description of each of the six industrial sector types present at Naval Base Kitsap Bangor, a list of the Navy facilities subject to stormwater monitoring requirements by sector, and a summary of sector-specific monitoring requirements, including compliance monitoring. Table 5-3 provides a summary of facilities at Naval Base Kitsap Bangor, including industrial facilities subject to Multi-Sector general permit monitoring requirements.

Sector N - Scrap and Waste Material Processing and Recycling Facilities
Description of Facilities Covered: The requirements listed under this section are applicable to stormwater discharges from facilities that are engaged in the processing, reclamation, and wholesale distribution of scrap and recyclable waste materials, including facilities classified by SIC 5093. The permit distinguishes between three sub-sectors of recycling facilities: 1) scrap recycling and waste recycling facilities (non-liquid recyclable wastes) and 2) liquid recyclable waste facilities. Scrap recycling and waste recycling facilities reclaim, process, and provide wholesale distribution of a diversity of materials and products which typically include recycled ferrous and non-ferrous metals, paper, cardboard, animal hides, glass, and plastic. Liquid waste recycling facilities typically reclaim or recycle such liquid wastes as spent solvents, used oil, and used ethylene glycol.

Navy Facilities Covered:

[redacted]

Monitoring Requirements: Monitoring is required under the Multi-Sector General Permit for the sub-sector recycling facilities. Facility [redacted] engages primarily in the recycling of source-separated materials; therefore, monitoring is required. Quarterly sampling is required during the first year of the permit term. Sampling during subsequent years is dependent on whether average concentrations exceed the EPA benchmarks as discussed earlier in Section 5.2. Grab samples only are required. Samples must be collected in accordance with requirements outlined in Sections 5.3.3, 5.4.1, and 5.4.3 below. Analytical parameters to be monitored are:

- Total recoverable aluminum
- Total copper
- Total recoverable iron
- Total lead
- Total zinc
- COD
- TSS
- Hardness

Sector P – Land Transportation and Warehousing Facilities
Description of Facilities Covered: The requirements discussed in this section apply to stormwater discharges from vehicle and equipment maintenance shops or cleaning operations at ground transportation facilities and rail transportation facilities, from petroleum bulk oil terminals, and from U.S. Postal Service facilities. This includes public works types of vehicles at Navy installations such as those involved in garbage collecting and transporting, carting, debris removal, dump truck hauling, local trucking, local transfer and collecting of refuse. Typical activities at vehicle and equipment maintenance and cleaning facilities include vehicle and equipment rehabilitation, mechanical repairs, painting, fueling, lubrication, and equipment and vehicle cleaning.

- Navy Facilities Covered:

[redacted]

[redacted]

Proposed Monitoring Requirements: No analytical monitoring is required for Sector P facilities.

Sector Q - Water Transportation Facilities

Description of Facilities Covered: Sector Q requirements apply to water transportation facilities engaged in vehicle and equipment maintenance and cleaning. Examples of vehicle and equipment maintenance activities include fluid changes, mechanical repairs, parts cleaning, sanding, welding, refinishing, painting, fueling, and storage of the related materials and waste materials.

Navy Facilities Covered:

[redacted]

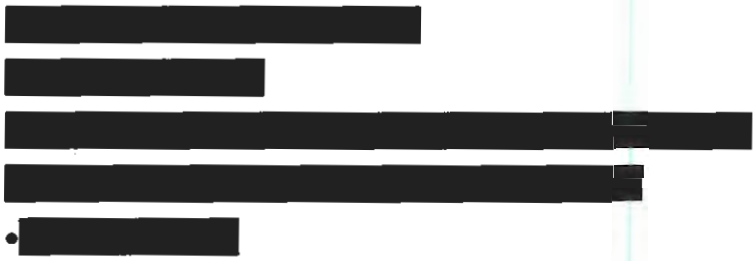
[redacted]

Monitoring Requirements: [redacted] are not included in the monitoring plan since they do not generate concentrated runoff which can be sampled. Quarterly sampling is required for the remaining facilities during the first year of the permit term. Sampling during subsequent years is dependent on whether average concentrations exceed the EPA benchmarks as discussed earlier in Section 5.2. Grab samples only are required. Samples must be collected in accordance with requirements outlined in Sections 5.3.3, 5.4.1, and 5.4.3 below. Analytical parameters to be monitored are:

- Total aluminum
- Total iron
- Total lead
- Total zinc

Sector R - Ship and Boat Building or Repairing Yards
Description of Facilities Covered: Sector R requirements apply to facilities engaged in building or repairing boats and ships.

Navy Facilities Covered:



- Monitoring Requirements: No analytical monitoring is required for Sector R facilities.

Sector AA - Fabricated Metal Products Industry
Description of Facilities Covered: Fabricated metal products industries include those industries engaged in the fabrication of ferrous and non-ferrous metal products such as metal cans, tinware, general hardware, automotive parts, tanks, road mesh, structural metal products, and non-electrical equipment. Such industries are commonly included under the following Standard Industrial Codes: 3429, 3441, 3442, 3443, 3444, 3449, 3451, 3452, 3462, 3471, 3479, 3494, and 3496.

Navy Facilities Covered:

Monitoring Requirements: Quarterly sampling, is required during the first year of the permit term. Sampling during subsequent years is dependent on whether average concentrations exceed the EPA benchmarks as discussed earlier in Section 5.2. Grab samples only are required.

Samples must be collected in accordance with requirements outlined in Sections 5.3.3, 5.4.1, and 5.4.3 below. Analytical parameters to be monitored are:

- Total aluminum
- Total iron
- Total zinc
- Nitrate plus nitrite nitrogen
- Hardness

5.2 Naval Base Kitsap Bangor Stormwater Monitoring Requirements

The strategy for outfall sampling is based on the presence of the types of industrial facilities located within the outfall's drainage basin. The outfalls selected for monitoring, as well as the type and frequency of monitoring required for each outfall, are discussed below.

5.2.1 Outfall Selection

As discussed in Section 5.2.1 above, a total of 148 facilities included, less than six sector types discharge stormwater through outfalls to a receiving water body at Naval Base Kitsap Bangor. Monitoring is required at the outfalls receiving stormwater from the 148 facilities identified in Table 5-3 unless reduced sampling can be justified on the basis of:

- Representative discharges, and/or Alternative certification.

Representative Discharges: Representative discharge is a discharge or outfall, which based on consideration of industrial activity, significant materials, size of drainage areas and management practices within the area drained by the outfall, is substantially identical to other outfalls. In this case, the one representative discharge or outfall can be sampled and reported such that the quantitative data also applies to the substantially identical outfalls. Representative monitoring can be used for visual monitoring, benchmark monitoring, impaired receiving waters monitoring, and Puget Sound Sediment Cleanup Sites monitoring, but, does not apply to compliance monitoring required for effluent limitations. The use of substantially identical outfalls does not apply to the removal and analysis of accumulated solids or line cleaning operations required by Section 9.10.7.3.2 of the 2015 MSGP.

Two separate groups of outfalls were found to consist of substantially identical facilities. The first group of substantially identical outfalls included OF7, OF8, OF10, and OF13. The second group of substantially identical outfalls consisted of OF3A and OF12. The facilities located within each outfall, significant materials, management practices, and basin characteristics are summarized in Table 5-4.

As shown, the first group of outfalls, consisting of outfalls OF7, OF8, OF10, and OF13 receives runoff from facilities involved in Sector Q materials storage. Materials management in the basins is similar (indoor material storage and proper containment of outdoor materials). The drainage basin served by outfall OF8 contains a somewhat higher amount of hazardous material/waste storage and will be sampled as representative of the group.

The second group of outfalls, OF3A and OF12, contain facilities whose function primarily includes submarine berthing and maintenance. Both outfalls serve highly impervious pier areas

that drain to detention ponds prior to discharge. Management practices consisting of indoor material storage and the use of flammable material lockers are similar. The drainage basin served by outfall OF3A contains a higher level of industrial activity and will be sampled as representative of the group. Representative discharge outfalls to be included in the monitoring program will include:

- OF8
- OF3A

Alternative Certification: Any outfall identified herein as requiring analytical monitoring is not subject to the monitoring requirements if it can be certified on a pollutant-by-pollutant basis, under penalty of law, and signed within the signatory requirements outlined in Section 2, that material handling equipment or activities, raw products, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility that are within the drainage area of the outfall are not presently exposed to stormwater and will be exposed for the period of certification. No facilities at Naval Base Kitsap Bangor qualified for the alternative certification exemption.

5.2.2 Quarterly Benchmark Monitoring Requirements

Analytical requirements for those outfalls subject to analytical sampling are summarized in Table 5-5.

Stormwater discharging from the seven outfalls must be sampled on a quarterly basis during the first year of permit coverage. Periods for the quarterly analytical sampling of stormwater discharges are identical to those for visual examination as follows:

- January through March
- April through June
- July through September
- October through December

The first quarterly sample is to be collected in the first full quarter following the quarter that Naval Base Kitsap Bangor is granted permit coverage.

Following the first full year of monitoring, quarterly data may be evaluated in an effort to waive further sampling. I f the average concentration of a pollutant at an outfall is less than the benchmark values shown in Table 5-3, monitoring the outfall for that pollutant is not required during the following years. If more than the four quarterly samples are collected from an outfall in the first year, then the average must be calculated from all of the samples analyzed.

For averaging purposes, a value of zero should be used for an individual sample parameter if results are less that the method detection limit. For sample results that fall between the method detection limit and the quantitation limit a value equal to one-half the quantitation limit should be used. A benchmark monitoring flow chart is included at the end of this section as Figure 5-1.

Analytical requirements for those outfalls subject to analytical sampling are summarized in Table 5-5.

5.2.3 Effluent Limitations Monitoring

The Multi-Sector general permit provides coverage for stormwater discharges from several types of facilities that are subject to numeric effluent limitations. At Bangor, discharges from the coal handling areas associated with the Heating Plant ([redacted]) were subject to compliance monitoring. Coal handling at Bangor ceased in the year 2000 and compliance monitoring is no longer required.

5.2.4 Discharges to Impaired Receiving Waters and Puget Sound Sediment Cleanup Sites Monitoring

The 2015 MSGP requires that discharges to impaired receiving waters be monitored annually for pollutants causing the impairment. Receiving waters are considered impaired if they are listed on the EPA approved 303(d) list or if a Total Maximum Daily Load has been established for the water body. Portions of Hood Canal on the west side of Bangor are listed on the 303(d) list for low dissolved oxygen. Clear Creek which drains the east side of Naval Base Kitsap Bangor is included on the 303(d) list for high fecal coliform. Figure 5-2 shows the water bodies near Naval Base Kitsap Bangor that are currently included as impaired on the 303(d) list. Table 5-6 shows monitoring that will be conducted at Naval Base Kitsap Bangor's industrial outfalls discharging to impaired waters.

The 2015 MSGP also requires that discharges to Puget Sound Sediment Cleanup Sites be monitored quarterly for TSS in accordance with Table 9.10.7.3.2 in the 2015 MSGP. Portions of the Hood Canal on the west side of Bangor are classified as Puget Sound Sediment Cleanup Sites (Category 4B), which is illustrated in Figure 5-2. Outfalls 9, 10, and 11 discharge into these areas. Table 5-6 outlines the monitoring required for the impacted and representative outfalls. The MSGP requires the Navy to remove accumulated solids from storm drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) at least once during the permit term. Removed storm drain solids and liquids shall be disposed of in accordance with applicable laws and regulations and documented in the SWPPP. Prior to removing storm drain solids, the Navy must sample and analyze storm drain solids in accordance with Table 9.10.7.3.3 in the 2015 MSGP.

5.3 Sample Collection Procedures

5.3.1 Documentation of Storm Event

The MSGP sampling guidelines require that the storm event sampled be large enough to produce measureable runoff and occur a minimum of 72 hours from the previously measurable storm event. In addition to collecting stormwater samples the duration (in hours) of the rainfall event, rainfall amount, the duration between the storm event sampled and the end of the previous measurable storm event must be documented.

Precipitation data for the sampling period should be documented using a rain gauge and should be supplemented with data obtained from the local weather station at Naval Base Kitsap Bangor.

5.3.2 Sample Location

Outfalls identified in Table 5-5 and 5-6 will be sampled. The exact stormwater sampling points should be located as close as possible to the outfall location. When the outfall is not accessible, the nearest accessible point upstream of the outfall should be sampled. Considerations in choosing sampling locations should include:

- Proximity to conveyance outfall,
- Ease of accessibility to potential sampling location, and
- Suitability of location for flow measurement.
- The actual sample location should be documented and marked for future sampling efforts. The outfall locations are shown on the SWPPP base maps provided in Appendix Q.

Storm drain solids sampling must be collected from a representative catch basin, sump, pipe, or other feature within the storm drain system that corresponds to the discharge point where TSS samples are collected. The samples must be representative of the storm drain solids generated and accumulated in the facility's drainage system and be collected from a location that is not affected by tidal influence.

5.3.3 Sample Collection Procedure

Grab samples should be collected within the first 30 minutes from a discharge resulting from a measurable storm event or as soon as practical thereafter. In the event that the sample cannot be collected in the first 30 minutes, a written explanation should be submitted with the monitoring report explaining why it was not practicable to sample within the first 30 minutes. Where stormwater is mixed with non-stormwater, the outfall should be sampled upstream where the flow is purely stormwater, if possible. The samples should be manually collected by submerging the sample container in the middle of the flow. The samples should be collected in a manner which minimizes agitation of the water. The flow description, a flow estimate, sample location, the date and time of sample collection, weather conditions, and any other pertinent information should be documented for each sample collected. All samples should be collected and handled as outlined in the NPDES Stormwater Sampling Guidance Document (EPA 1992b).

5.3.4 Quality Assurance/Quality Control

QA/QC samples can be collected to detect potential errors introduced during sampling, handling, shipping, and analysis. The QA/QC samples should be collected and handled in the same manner as actual samples and in accordance with the procedures outlined in the NPDES Guidance Document (EPA 1992b). Sample chain of custody also should be maintained as prescribed in the NPDES Guidance Document.

All laboratory analyses should be performed in accordance with EPA Methods for Chemical Analysis of Water and Wastewater and EPA Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater, as indicated on Table 5-5 and 5-6. The analytical data should be reviewed to assess data quality and usability based on the EPA Functional Guidelines

for Data Validation. The data should be evaluated for use in stormwater characterization and regulatory decision making.

5.4 Reporting Requirements

Reporting requirements include discharge monitoring reports, visual examination reports, compliance monitoring reports and adverse conditions sampling waivers. The schedule for reporting requirements is based on the effective date of the permit. These reporting requirements as well as requirements for Retention of records are described below. These requirements correspond to those specified in the EPA Multi-Sector General Permit.

5.4.1 Quarterly Analytical Monitoring Reports

Naval Base Kitsap Bangor is required to submit all monitoring results obtained within 30 days of receiving the complete laboratory results. EPA is requiring permittees to submit results using the online NetDMR system www.epa.gov/netdmr unless a waiver from electronic reporting has been granted. The date and duration in hours of the rainfall event, measurement or estimate of the total rainfall and time interval since previous storm event must be recorded for each sampling event.

5.4.2 Effluent Limitations Monitoring Reporting Requirements

Naval Base Kitsap Bangor is no longer required to conduct effluents limitation monitoring of stormwater discharging from the coal handling areas of the Heating Plant ([redacted]). Coal has not been handled at Bangor since the year 2000.

5.4.3 Storm Drain Solids Sampling

All storm drain solids sampling data shall be reported to the EPA no later than the DMR due date for the reporting period in which the solids were sampled. A copy of the lab report shall be submitted to the EPA.

5.4.4 Adverse Conditions Sampling Waiver

When adverse weather conditions as described in Part 6.1.5 prevent the collection of samples according to the relevant monitoring schedule, you must take a substitute sample during the next qualifying storm event even if the quarter has passed.

The condition or events that precluded the sampling should be documented. Adverse weather conditions that preclude the collection of samples are those that create dangerous working conditions for field personnel (e.g., local flooding, high winds, hurricane, tornado, electrical storms, etc.) or otherwise make the collection of a sample impracticable (e.g., drought, freezing conditions, etc.). Documentation of the reason for not performing the sampling should be maintained with this plan.

5.4.5 Retention of Records

The permit requires that records of all inspections and monitoring information, including certification reports, noncompliance reports, calibration and maintenance records and all original

records for continuous monitoring instrumentation; copies of all reports; and supporting data be retained for a minimum of 3 years after coverage under the permit expires.

Table 5-1: Stormwater Water Quality Analyses

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Table 5-2
WASHINGTON DEPARTMENT OF ECOLOGY
SURFACE WATER QUALITY STANDARDS
AND EPA BENCHMARK VALUES

Analyte	WDOE Surface Water Quality Standards1	EPA Multi-Sector Benchmarks
Aluminum, Total (mg/L)	0.75 (fresh)	0.75
Ammonia[c] (un-ionized) (mg/L)	0.233 (marine as NH3)	2.14 (as N)
Arsenic, Total [c] (mg/L)	0.36 (fresh), 0.069 (marine) [c]	0.15 (fresh), 0.069 (marine)
Cadmium, Totalb, [c] (mg/L)	0.001 (fresh), 0.042 (marine)	(fresh)[d], 0.04 (marine)
Copper, Totalb, [c] (mg/L)	0.00547 (fresh), 0.0048 (marine)	(fresh)[d], 0.0048 (marine)
Cyanide (mg/L)	0.022 (fresh), 0.001 (marine)	0.022(fresh), 0.001 (marine)
Iron, Total (µg/L)	No Standard	1.0
Lead, Totalb,[c] (µg/L)	0.01704 (fresh), 0.21 (marine)	(fresh)[d], 0.21 (marine)
Magnesium, Total (mg/L)	No Standard	0.064
Mercury Total [c] (mg/L)	0.0021 (fresh), 0.0018 (marine)	0.0014 (fresh), 0.0018 (marine)
Silver, Total (mg/L)	0.00043 (fresh)[a], 0.0019 (marine)[a]	(fresh)[d], 0.0019 (marine)
Zinc, Totalb, [c] (mg/L)	0.04126 (fresh), 0.090 (marine)	(fresh)[d], 0.09 (marine)
BOD5 (mg/L)	No Standard	30
COD (mg/L)	No Standard	120
Dissolved Oxygen (DO) (mg/L)	Class AA: > 7.0 mg/L Class A: > 6.0 mg/L (When natural conditions, such as upwelling, occur, causing the DO to be depressed near or below value stated above for particular class, natural DO levels may be degraded by up to 0.2 mg/L by human caused activities.)	No Value
Nitrate + Nitrite as N (mg/L)	No Standard	0.68
Oil & Grease (mg/L)	No Standard	No Value
Total Phosphorus (mg/L)	No Standard	2.0
Total Suspended Solids (mg/L)	No Standard	100
pH	7.0 to 8.5 with a human caused variation of less than 0.2 units (Class AA) or 0.5 units (Class A)	6.0 - 9.0
Fecal Coliform	< 100 colonies/100ml geometric mean. Standard is for "Primary Contact Recreation" and applies to fresh water outfalls on east side of base	

1. WDOE standards for Cadmium, Copper, Lead, Silver and Zinc are hardness dependent. State shown in this table assume a hardness of 30 mg/L. Benchmark values as defined in EPA's Multi-Sector General Permit, 2015.
a. An instantaneous concentration not to be exceeded at any time.
b. A 1-hour average concentration not to be exceeded more than once every three hours.
c. The WDOE criteria are based on the dissolved fraction of the metal. The criteria will be applied as total recoverable values to calculate effluent limits unless data is made available regarding seasonal partitioning of the dissolved metal. See 173-201A Washington Administrative Code (WAC). EPA concentrations are total recoverable fraction.
d. Hardness dependent Benchmarks shown below. Hardness of receiving water must be calculated in accordance with Appendix J of the permit.

Table 5-2
WASHINGTON DEPARTMENT OF ECOLOGY
SURFACE WATER QUALITY STANDARDS
AND EPA BENCHMARK VALUES

Water Hardness Range	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Silver (mg/L)	Zinc (mg/L)
0-24.99 mg/L	0.0005	0.0038	0.014	0.0007	0.04
25-49.99 mg/L	0.0008	0.0056	0.023	0.0007	0.05
50-74.99 mg/L	0.0013	0.0090	0.045	0.0017	0.08
75-99.99 mg/L	0.0018	0.0123	0.069	0.003	0.11
100-124.99 mg/L	0.0023	0.0156	0.095	0.0046	0.13
125-149.99 mg/L	0.0029	0.0189	0.122	0.0065	0.16
150-174.99 mg/L	0.0034	0.0221	0.151	0.0087	0.18
175-199.99 mg/L	0.0039	0.0253	0.182	0.0112	0.20
200-224.99 mg/L	0.0045	0.0285	0.213	0.0138	0.23
225-249.99 mg/L	0.0050	0.0316	0.246	0.0168	0.25
250+ mg/L	0.0053	0.0332	0.262	0.0183	0.26

Table 5-3: Industrial Facility and Permit Sector Requirements[a]

Drainage Basin	Outfall Impacted	Facility Number	Map No.	Facility Description	Permit Sector(s)
DB1	OF1		10		Q - Water Transportation Facilities
DB2	OF2		15		P – Land Transportation and Warehousing
			10/15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		Q - Water Transportation Facilities
			15		P – Land Transportation and Warehousing
			15		Q - Water Transportation Facilities
			15		Q - Water Transportation Facilities
			10/15		Q - Water Transportation Facilities
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			15		P – Land Transportation and Warehousing
			10		P – Land Transportation and Warehousing
			10		Q - Water Transportation Facilities
			15		P – Land Transportation and Warehousing
			10		N - Scrap Recycling and Waste Recycling Facilities
			15		P – Land Transportation and Warehousing
			10		Q - Water Transportation Facilities
			10		Q - Water Transportation Facilities
	None[c]		10		P – Land Transportation and Warehousing
			15		AA - Fabricated Metal Products
			15		AA - Fabricated Metal Products
			15		AA - Fabricated Metal Products
			15		AA - Fabricated Metal Products
			16		AA - Fabricated Metal Products
			16		AA - Fabricated Metal Products
			16		AA - Fabricated Metal Products
			16		AA - Fabricated Metal Products
			16		Q - Water Transportation Facilities
			15		Q - Water Transportation Facilities
			16		AA - Fabricated Metal Products
			16		AA - Fabricated Metal Products
			15		AA - Fabricated Metal Products
	Wetland [k]		10		Q - Water Transportation Facilities
	None[c]		10		Q - Water Transportation Facilities
			10		Q - Water Transportation Facilities
			10		Q - Water Transportation Facilities

Table 5-3: Industrial Facility and Permit Sector Requirements[a]

Drainage Basin	Outfall Impacted	Facility Number	Map No.	Facility Description	Permit Sector(s)
	Wetland [k]		10		Q - Water Transportation Facilities
			10		Q - Water Transportation Facilities
			10		Q - Water Transportation Facilities
DB3	OF3		6		Q - Water Transportation Facilities
			6		Q - Water Transportation Facilities
			2		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing AA - Fabricated Metal Products
			2/6		Q - Water Transportation Facilities
			6		P - Land Transportation and Warehousing
			7		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			2		Q - Water Transportation Facilities
			2		Q - Water Transportation Facilities
			2		Q - Water Transportation Facilities
			2		AA - Fabricated Metal Products
			2		Q - Water Transportation Facilities
			2		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			7		Q - Water Transportation Facilities
			2		AA - Fabricated Metal Products
			2		AA - Fabricated Metal Products
DB3A	OF3A		8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities with Vehicle/Equipment Maintenance/Cleaning R - Ship and Boat Building and Repairing
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing
			8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing
			8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing
DB3A (cont.)	OF3A		8		Q - Water Transportation Facilities R - Ship and Boat Building and Repairing

Table 5-3: Industrial Facility and Permit Sector Requirements[a]

Drainage Basin	Outfall Impacted	Facility Number	Map No.	Facility Description	Permit Sector(s)
			8		Q - Water Transportation Facilities
DB6	OF6				NA
DB7	OF7		3		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
DB8	OF8		3		Q - Water Transportation
			3		Q - Water Transportation Facilities
DB9	OF9		3		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
DB10	OF10		7		Q - Water Transportation Facilities
			7		Q - Water Transportation Facilities
			7		Q - Water Transportation Facilities
DB11	OF11		7		Q - Water Transportation Facilities
			7		Q - Water Transportation Facilities
			7		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
DB12	OF12		8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
DB13	OF13		8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
DB14	OF14				
DB15	OF15				
DB16	OF16				
DB18	None[c]		5		P – Land Transportation and Warehousing
			5		P – Land Transportation and Warehousing
			5		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			5		P – Land Transportation and Warehousing
			6		P – Land Transportation and Warehousing
			5		Q - Water Transportation Facilities
			5		P – Land Transportation and Warehousing

Table 5-3: Industrial Facility and Permit Sector Requirements[a]

Drainage Basin	Outfall Impacted	Facility Number	Map No.	Facility Description	Permit Sector(s)
DB18	None[c]		5		P – Land Transportation and Warehousing
	None[d]		2		Q - Water Transportation Facilities
	OF18		2		Q - Water Transportation Facilities
DB19	None[c]		17		Q - Water Transportation Facilities
DB20	OF20				NA
Sheet Flow	Direct to Hood Canal		3		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			3		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities
			8		Q - Water Transportation Facilities

[a]-Only drainage basins with industrial facilities are listed.
[b]-This facility lies in two drainage basins or a portion of this facility has sheet flow drainage.
[c]-No outfall identified which discharges to a receiving surface water body including streams, lakes, wetlands, or the Hood Canal. Runoff infiltrates into the ground prior to reaching surface water body.
[d]-Some stormwater runoff from these facilities could reach a wetland prior to infiltration.
[e]-No concentrated flow available to sample prior to reaching water body.
Key:
NA-Permit sector applicable to facility based on sector facility definition.

Table 5-4: Representative Discharges

Group	Outfall	Industrial Activity Activity	Significant Materials	Management Practices	Basin Size (acres)	Relative Runoff Coefficient
1	OF7	Welding	Metals	Materials Kept in Building	16	High
	OF8	Dry Material Storage Welding Material Storage	None Metals Flammable Materials, Oil	Materials Kept in Building Oil Stored Contained Outdoors	7	High
	OF10	Material Storage Steam Generation	Metals POLs	Flammable Lockers Indoor Storage	7	High
	OF13	Material Storage	Metals POLs	Materials Kept in Building	11	High
2	3A	Vessel Maintenance	Metals, Flammable Materials, Oil	Flammable Lockers	11	High
	12	Vessel Maintenance	Metals, Flammable Materials, Oil	Flammable Lockers Indoor Storage	23	High

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Table 5-5: Benchmark Monitoring Requirements for NAVBASE Kitsap, Bangor Stormwater Outfalls[a]

Analytical Parameter	Method	Outfall						
		OF1	OF2	OF3	OF3A	OF8	OF9	OF11
Applicable Industrial Sectors		Q	N,P, AA	Q,R,AA	Q,R	Q	Q	Q
Aluminum[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Copper[b]	200.8		Q					
Iron[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Lead[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Zinc[b]	200.8	Q	Q	Q	Q	Q	Q	Q
COD	410.4		Q					
Nitrate-Nitrite	353.2		Q	Q				
TSS	160.2		Q					
Hardness[c]		Q	Q	Q	Q	Q	Q	Q

[a] All analytical sampling to be conducted on a quarterly basis except where otherwise intended.
[b] Metal analyses to include total fraction.
[c] Hardness samples required during the first quarter of the permit term.
Key
Q-Quarterly analytical sampling as defined in SWPPP Section 5.2 5.3.3.

Table 5-6: Discharges to Impaired Water Bodies Monitoring Requirements for NAVBASE Kitsap, Bangor

Analytical Parameter	Method	Outfall				
		OF1	OF2	OF8	OF9	OF11
COD	410.4			A		A
Ammonia	SM4500-NH3 G			A		A
Fecal Coliform	MF 9222D	A	A			
TSS				Q	Q	Q

Key

A-Annual sampling during years 1 - 5 as defined in Section 6.2.4 of the MSGP.

Q – Quarterly sampling as defined in Section 9.10.7.3.2 of the MSGP.

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Figure 5-1: Benchmark Monitoring Flow Chart

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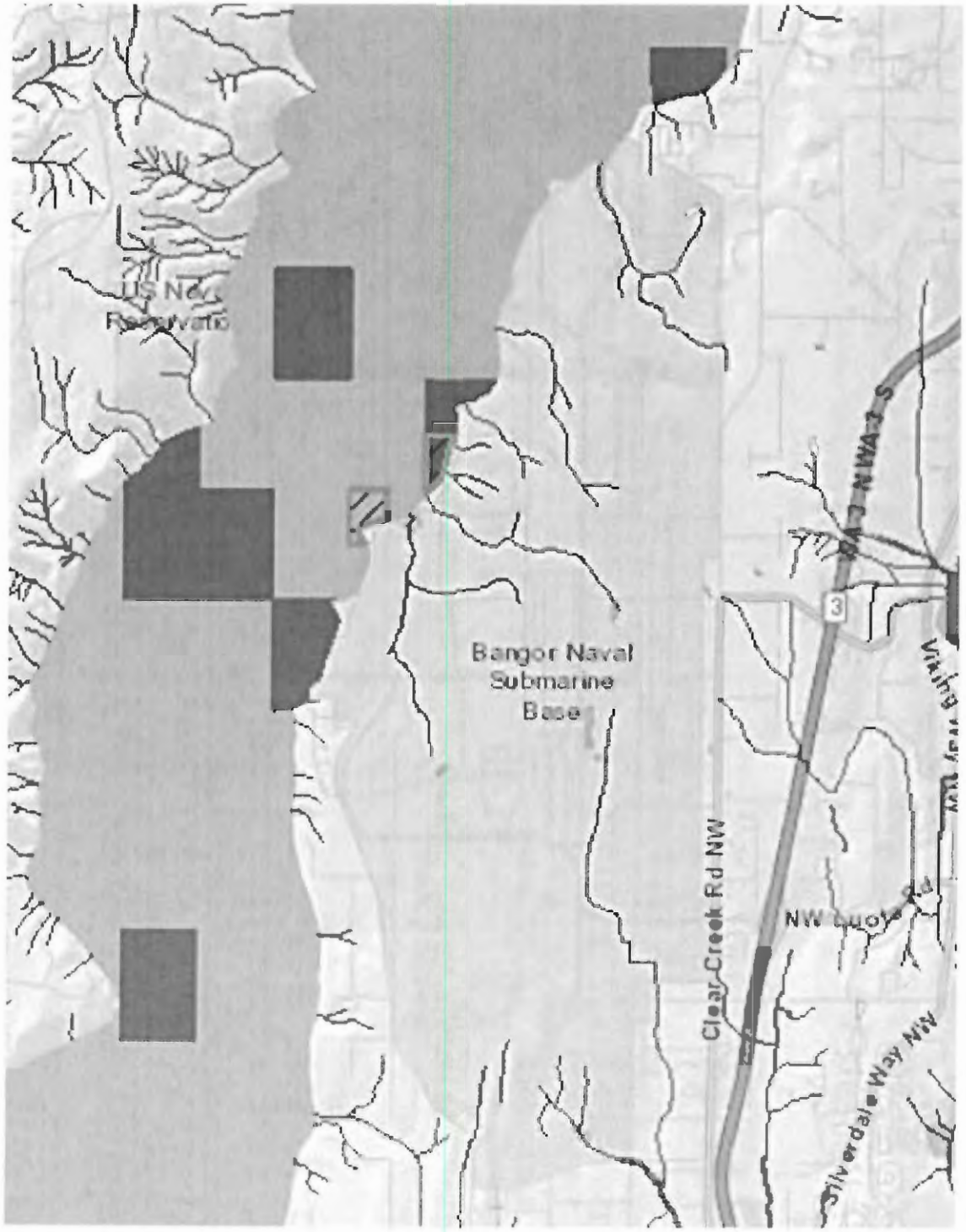

Figure 5-2: Impaired Water Bodies

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6 Facility Inspections

6.1 Routine Facility Inspections

Periodic routine facility visual inspections are required by part 3.1 of the permit. Inspections must be conducted at least quarterly. Certain industrial sectors or activities may require more frequent inspection. The facilities requiring inspection, applicable sector, and inspection frequency are listed in Table 6-1.

At least one member of the stormwater pollution prevention team must participate in the facility visual inspections. Inspections must be conducted when the facility is operating and at least one of the inspections during the year must be accomplished while stormwater is discharging. The one annual inspection conducted during stormwater discharge must look at control measures and discharge points or outfalls.

Tracking of inspection results is required, and follow-up actions must be conducted. The focus of the inspection shall be on facility-specific pollutant sources. The measures implemented as a result of this plan and the measures previously in place to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the MSGP. The need for additional measures must be identified. Structural stormwater and pollution prevention measures shall be observed to ensure that they are operating as intended. Visual inspection of equipment needed to implement the plan, such as spill kits, shall be made.

Forms used to document routine facility inspections are included in Appendix K.

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Table 6-1 ROUTINE FACILITY INSPECTION REQUIREMENTS

Sector	Inspection Schedule	Facility Number	Facility Name	Outfall	Inspection Requirements
N – Scrap Recycling	Quarterly	[redacted]	[redacted]	OF2	Inspect all areas of the facility and equipment identified in the plan monthly. Check for liquids stored without secondary containment or significant materials exposed to stormwater. Inspect for application of Core and Sector N BMPs contained in Table 4-1.
P- Land Transportation	Quarterly	[redacted]	[redacted]	OF2	Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas, and loading/unloading areas. Inspect for application of Core, Sector P, and site-specific BMPs contained in Tables 6-1, 6-2, and 6-3.
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	OF2	

Table 6-1 ROUTINE FACILITY INSPECTION REQUIREMENTS

Sector	Inspection Schedule	Facility Number	Facility Name	Outfall	Inspection Requirements
Q- Water Transportation	Quarterly			OF2	Inspect pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area. Inspect for application of Core, Sector Q, and site-specific BMPs contained in Tables 6-1, 6-2, and 6-3.
				OF2	
				OF2	
				OF2	
				OF2	
				OF2	
				OF2	
				OF2	
				OF11	
				OF11	
				OF3	
				OF11	
				OF3	
				OF10	
				DB9	
				None	
				None	
				None	
				OF3	
				OF12	
				OF3	
				OF3	
				OF3	
				OF3	
				OF3	
				OF3	
				OF3	
				OF7	

Table 6-1 ROUTINE FACILITY INSPECTION REQUIREMENTS

Sector	Inspection Schedule	Facility Number	Facility Name	Outfall	Inspection Requirements
Q- Water Transportation	Quarterly	[redacted]	[redacted]	OF7	Inspect pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area. Inspect for application of Core, Sector Q, and site-specific BMPs contained in Tables 6-1, 6-2, and 6-3.
		[redacted]	[redacted]	OF3	
		[redacted]	[redacted]	Direct to Hood Canal	
		[redacted]	[redacted]	OF10	
		[redacted]	[redacted]	OF3	
		[redacted]	[redacted]	OF3A	
		[redacted]	[redacted]	OF13	
		[redacted]	[redacted]	OF3A	
		[redacted]	[redacted]	OF11	
		[redacted]	[redacted]	OF2	
AA–Fabricated Metal Products	Quarterly	[redacted]	[redacted]	OF2	At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas. Inspect for application of Core, Sector AA, and site-specific BMPs contained in tables 6-1, 6-2, and 6-3.
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	None	
		[redacted]	[redacted]	OF2	
		[redacted]	[redacted]	OF3	
		[redacted]	[redacted]	OF3	

Table 6-1 ROUTINE FACILITY INSPECTION REQUIREMENTS

Sector	Inspection Schedule	Facility Number	Facility Name	Outfall	Inspection Requirements
R- Shop and Boat Building and Repair Yards	Quarterly	[redacted]	[redacted]	OF3A	Include the following in all quarterly routine facility inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.
		[redacted]	[redacted]	OF3A	
		[redacted]	[redacted]	OF3	

6.2 Quarterly Visual Assessment of Stormwater Quality

The MSGP requires quarterly visual assessment of stormwater discharges at outfalls associated with industrial activity. The permit allows for the grouping of substantially identical outfalls and monitoring of a single representative of that group. However, visual examination of each outfall within a substantially identical group must be conducted on a rotating basis throughout the permit period. An analysis of substantially identical outfalls at Naval Base Kitsap Bangor was conducted in SWPPP section 4.3.1 for analytical monitoring. The same groupings will be used for visual monitoring. Table 6-2 presents the Stormwater Visual Assessment program for NAVBASE Kitsap, Bangor.

Quarterly periods for the visual examination of stormwater quality are as follows:

- January through March
- April through June
- July through September
- October through December

Observations should be made of grab samples collected within the first 30 minutes (or as soon as practical thereafter) of when runoff begins to discharge. The storm event sampled should be large enough to produce measurable flow and occur at a minimum of 72 hours from the previously measurable storm event. Assessment should be conducted in a well-lit area using a clean, clear container. Observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of stormwater pollution should be made in well-lit areas.

6.2.1 Visual Examination Reports

Documentation of the examination date and time, examining personnel, visual quality of the stormwater, and suspected sources of any observed pollution should be completed and maintained on-site with the pollution prevention plan. The documentation should also include an explanation of why a sample could not be collected within the first 30 minutes of discharge, if applicable. Reports of the visual examinations should include: the examination date and time, examination personnel, visual quality of the stormwater discharge, and probable sources of any observed stormwater contamination. Reports must be maintained on-site with the SWPPP. A blank copy of a Stormwater Quality Examination Report form is provided in Appendix H.

6.2.2 Adverse Weather Conditions

When adverse weather conditions as described in Part 6.1.5 prevent the collection of samples according to the relevant monitoring schedule, a substitute sample must be taken during the next qualifying storm event even if the quarter has passed.

The condition or events that precluded the sampling should be documented. Adverse weather conditions that preclude the collection of samples are those that create dangerous working conditions for field personnel (e.g., local flooding, high winds, hurricane, tornado, electrical

storms, etc.) or otherwise make the collection of a sample impracticable (e.g., drought, freezing conditions, etc.). Documentation of the reason for not performing the sampling should be maintained with this plan.

Table 6-2 Naval Base Kitsap Bangor Quarterly Visual Monitoring Program

Group	Drainage Basin	Outfall	1st year	2nd year	3rd year	4th year	5th year
1		OF7	X				X
		OF8		X			
		OF10			X		
		OF13				X	
2		**OF3A**	X		X		X
		OF12		X		X	
N/A		**OF1**	X	X	X	X	X
		OF2	X	X	X	X	X
		OF3	X	X	X	X	X
		OF9	X	X	X	X	X
		OF11	X	X	X	X	X

6.3 Annual Report

As required by the terms of the permit, qualified personnel shall develop an Annual Report for Naval Base Kitsap Bangor, once per calendar year. The requirements of the Annual Report are summarized below. For a full description of Annual Report requirements, refer to the MSGP, part 7.5.

Routine Facility Inspections

The Annual Report must summarize the previous year's Routine Facility Inspections. The measures implemented as a result of this plan, as well as measures previously in place to reduce pollutant loadings, must be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the MSGP. The need for additional measures will be identified. Structural stormwater and pollution prevention measures shall be observed to ensure that they are operating as intended. Visual inspection of equipment needed to implement the plan, such as spill kits, shall be made. Outfalls draining areas with industrial activity will be inspected for evidence of stormwater contamination.

At least one of the inspections during the year must be accomplished while stormwater is discharging. One annual inspection conducted during stormwater discharge must look at control measures and discharge points or outfalls.

In conducting the Routine Facility Inspections, the facility-specific description provided in Section 6 will be reviewed. In particular, the identified pollutant sources will be reviewed to ensure they are accurate and specified control measures (BMPs) will be inspected to ensure they are being implemented. The adequacy of those BMPs will be assessed and recorded on the Facility Visual Inspection Report. All outfalls serving industrial areas must be inspected as part of the visual inspections.

Inventory of Reporting and Recordkeeping Requirements

Reporting and recordkeeping requirements outlined in Table 2-6 shall be reviewed annually. Records shall be inspected to ensure that all requirements of this SWPPP and the MSGP are being satisfied.

Review of Monitoring Data

The results of the previous year's visual and analytical monitoring data must be evaluated when preparing the Annual Report.

Incidents of Noncompliance

The Annual Report must discuss any incidents of noncompliance observed or, if there is no noncompliance, a certification signed in accordance with Appendix B, Subsection 11 stating the facility is in compliance with this permit.

Corrective Action Documentation

A summary of your past year's corrective action documentation must be provided. If corrective action is not yet completed at the time of submission of your annual report, you must describe the status of any outstanding corrective action(s).

Recordkeeping and Deadlines

The Annual Report must be submitted to EPA electronically at the link provided below, per Part 7.2 of the 2015 MSGP, by January 30th for each year of permit coverage.
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-eNOI-System-for-EPAs-MultiSector-General-Permit.cfm

The report shall be retained as part of this SWPPP for at least three years after coverage under the MSGP terminates. Completed Annual reports should be inserted into Appendix M.

7 Corrective Action and Recordkeeping

7.1 Corrective Action

Part 4 of the MSGP requires implementation and documentation of corrective actions in response to certain deficiencies in the stormwater pollution prevention program. This section describes conditions which may trigger corrective action and the general responses required by the Navy.

If the event triggering the review is a permit violation (e.g., non-compliance with an effluent limit), correcting it does not remove the original violation. However, failing to take corrective action in accordance with this section is an additional permit violation. EPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

7.1.1 Conditions Requiring SWPPP Review and Revision to Ensure Effluent Limits are Met

When any of the following conditions occur or are detected during an inspection, monitoring or other means, or EPA informs you that any of the following conditions have occurred you must review and revise the SWPPP so that this permit's effluent limits are met and pollutant discharges are minimized:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit to a water of the U.S.) occurs at your facility.
- Your control measures are not stringent enough for the discharge to meet applicable water quality standards or the non-numeric effluent limits in this permit.
- A required control measure was never installed, was installed incorrectly, or not in accordance with MSGP Parts 2 and/or 8, or is not being properly operated or maintained.
- Whenever a visual assessment shows evidence of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam).

7.1.2 Conditions Requiring SWPPP Review to Determine if Modifications Are Necessary

If any of the following conditions occur, you must review your SWPPP (e.g., sources of pollution, spill and leak procedures, non-stormwater discharges, selection, design, installation and implementation of your control measures) to determine if modifications are necessary to meet the effluent limits in this permit:

- Construction or a change in design, operation, or maintenance that significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged.
- The average of four quarterly sampling results exceeds an applicable benchmark (see MSGP Part 6.2.1.2). If less than four benchmark samples have been taken, but the results are such that an exceedance of the four quarter average is mathematically certain (i.e., if the sum of quarterly sample results to date is more than four times the benchmark level) this is considered a benchmark exceedance, triggering this review. A benchmark exceedance does not trigger a corrective action if it is determined that the exceedance is solely attributable to natural background sources, or if you make a finding that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice (see MSGP Part 6.2.1.2)

Review and comparison of analytical monitoring data against benchmarks is discussed in section 5 of the SWPPP.

7.1.3 Substantially Identical Outfalls

If the event triggering corrective action is linked to an outfall that represents other substantially identical outfalls, the review must assess the need for corrective action at each outfall represented by the outfall that triggered the review. Any necessary changes to control measures that affect these other outfalls must also be made before the next storm event if possible, or as soon as practicable following that storm event.

7.2 Corrective Action Deadlines

The MSGP requires that permittees immediately take all reasonable steps necessary to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events. Immediately is defined as the same work day.

If additional changes are necessary beyond those discussed above, the new or modified controls must be installed and made operational, or repairs completed, before the next storm event if possible, and within 14 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 14 calendar days, you must document why it is infeasible to complete the installation or repair within the 14-day timeframe. You must also identify your schedule for completing the work, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. If the completion of corrective action will exceed the 45 day timeframe, you must notify the EPA Regional Office of your intention to exceed 45 days, provide the rationale for an extension, and a completion date.

These time intervals are not grace periods, but are schedules considered reasonable by the EPA for documenting findings and for making repairs and improvements.

7.3 Corrective Action Documentation

Within 24 hours of discovery of any condition listed in SWPPP section 7.1.1 and 7.1.2, the following information must be documented.

- Identification of the condition triggering the need for corrective action review;
- Date the problem was identified.

- A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

- Description of immediate actions taken to minimize or prevent the discharge of pollutants. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases (see MSGP Part 2.1.2.4); and

- A statement signed and certified in accordance with Appendix B, Subsection 11.

Within 14 days of discovery of any condition listed in SWPPP section 7.1.1 and 7.1.2, the following additional information must be documented.

- Summary of corrective action taken or to be taken (or, for triggering events identified in Part 4 where you determine that corrective action is not necessary, the basis for this determination);
- Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
- Date corrective action initiated; and
- Date corrective action completed or expected to be completed.
- If applicable, document why it was infeasible to complete necessary installations or repairs within the 14-day timeframe.
- If you notified EPA regarding an extension of the 45 day timeframe, you must document your rationale for an extension.

All corrective action documentation must be submitted as part of the Annual Report and a copy must also be retained on-site with the SWPPP.

7.4 Recordkeeping

Copies of these records noted below in Table 7-1 shall be inserted into the Appendices of this SWPPP.

Table 7-1
SUMMARY OF SWPPP REPORTING AND RECORDKEEPING REQUIREMENTS

Reporting/ Recording Requirement	Requirement Description	SWPPP Record Location
Stormwater Monitoring Reports: Visual Examination Report Discharge Monitoring Report	SWPPP Sections 5, 6	Appendix H
Spill Reports	SWPPP Section 1.5.2	Appendix J
Routine Facility Inspection Reports	SWPPP Sections 6	Appendix K
Maintenance Records: Stormwater conveyance system Oil/water separators	SWPPP 4	Maximo
Corrective Action Reports	SWPPP Section 7.3	Appendix O
Employee Training Records	SWPPP Section 4	Appendix M
Annual Comprehensive Site Inspection Reports	SWPPP Section 6	Appendix N

All records required by the permit must be maintained for at least three years after coverage under the permit expires.

APPENDIX A: REFERENCE

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APPENDIX A: REFERENCE

Montoya, B., 1987, *Urban Runoff Discharges from Sacramento, California*, prepared for the California Regional Water Quality Board, Central Valley Region, CVRWQCB Report Number 87-1SPSS.

Pitt, R. and J. McLean, 1986, *Toronto Area Watershed Management Strategy Study; Humber River Watershed Project, Final Report*, The Ontario Ministry of the Environment, Toronto, Ontario.

United States Department of the Navy, 2014, *Environmental and Natural Resources Program Manual*, OPNAVINST 5090.1D.

_____, Naval Submarine Base (SUBASE) Bangor, Hazardous, Materials Control and Management (HMC&M) Plan, June 2002.

_____, 2006, Spill Prevention Control and Countermeasure Plan, May 2006.

_____, 2006, Oil/Hazardous Substance Integrated Contingency Plan, March 2006.

United States Environmental Protection Agency (EPA).

_____, 1992a, Stormwater Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92-006, September 1992.

_____, 1992, NPDES Stormwater Sampling Guidance Document, EPA 833-B-92-001, July 1992.

_____, 1993, Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems - A Users Guide, EPA 600-R-92-238, January 1993.

_____, 2015, National Pollutant Discharge Elimination System Stormwater Multi-Sector General Permit for Industrial Activity Notice. Published in Federal Register. ???.

SEACOR. 1993. Application for Permit to Discharge Stormwater Associated with Industrial Activity, EPA Form 2F NPDES for Naval Submarine Base Bangor, Silverdale, Washington.

Washington Department of Ecology, 2012. Stormwater Management Manual for Western Washington (The Technical Manual).

APPENDIX B: GLOSSARY OF TERMS

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APPENDIX B: GLOSSARY OF TERMS

Aeration: A process that promotes biological degradation of organic matter. The process may be passive (as when waste is exposed to air) or active (as when a mixing or bubbling device introduces the air).

Berm: An earthen mound to direct the flow of runoff around or through a structure.

Best Management Practice (BMP): Schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Biochemical Oxygen Demand (BOD): The amount of oxygen in water required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

Biodegradable: The ability to break down or decompose under natural conditions and processes.

Biofilter: Vegetative matter such, as grasses, used to entrain and assimilate pollutants.

Boiler Blow-Down: Waste water condensate from boiler operations.

Catch Basin: A stormwater inlet installed.

Chemical Oxygen Demand (COD): Measurement of the total quantity of oxygen required in water for the chemical oxidation of organic matter to carbon dioxide.

Conduit: Any channel or pipe for transporting the flow of water.

Conveyance: Any natural or manmade channel or pipe in which concentrated water flows.

Culvert: A covered channel or a large-diameter pipe that directs water flow below the ground level.

CWA: Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendment of 1972).

Detention Basin: A holding pond or reservoir used to store polluted runoff for a limited time and then release it.

Director: Regional administrator or an authorized representative of the EPA.

Discharge: A release of flow of stormwater or other substance from a conveyance or storage container.

Erosion: The wearing away, of land surface by wind or water. Erosion occurs naturally from weather or runoff but can be intensified by land-cleaning practices related to farming, residential or industrial development, road building, or timber-cutting.

Flocculator: A wastewater treatment unit where normally suspended particles are chemically and physically entrained into a larger settleable mass.

GDMs: General Development Maps. Electronic maps covering the base at a scale of 1"=200'.

Hazardous Substance: 1) Any material that poses a threat to human health and/or the environment. Hazardous substances can be toxic, corrosive, ignitable, explosive, or chemically reactive. 2) Any substance named required by EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or if otherwise emitted into the environment.

Hazardous Waste: By-products of human activities that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Illicit Connection: Any connection to the stormwater system that would allow an illicit discharge.

Illicit Discharge: Any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges authorized by an NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

Impervious surface: A surface such as pavement or rooftops that prevents the infiltration of water into the soil.

Infiltration: 1) The penetration of water through the ground surface into sub-surface soil or the penetration of water from the soil into sewer or other pipes through defective joints, connections, or manhole walls. 2) A land application technique where large volumes of wastewater are applied to the land and allowed to penetrate the surface and percolate through the underlying soil.

Inlet: An entrance into a ditch, storm sewer, or other waterway.

Landfill: An area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Leaching: The process by which soluble constituents are dissolved in a solvent such as water and carried down through the soil.

Noncontact Cooling Water: Water used to cool machinery or other materials without directly contacting process chemicals or materials.

Non-Point Source: Any flow that flows across a surface and is not discernable, confined, and discrete conveyance.

Notice of INTENT (NOI): An application to notify the permitting authority of a facility's Intention to be covered by a general permit; exempts a facility from having to submit an individual or group application.

NPDES: EPA's program to control the discharge of pollutants to waters of the United States. See the definition of "National Pollutant Discharge Elimination System" in 40 CFR 122.2 for further guidance.

NPDES Permit: An authorization, license, or equivalent control document issued by EPA or an approved State agency to implement the requirements of the NPDES program.

Oil and Grease Traps: Devices that collect oil and grease, removing them from water flows.

Oil Sheen: A thin, glistening layer of oil on water.

Oil/Water Separator: A device installed, usually at the entrance of a drain, which removes oil and grease from water flows entering the drain.

Outfall: The point, location, or structure where wastewater or drainage discharges from a sewer pipe, ditch, or other conveyance to a receiving body of water.

Point Source: 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, or vessel or other floating craft, from which pollutants are or may be discharged. The term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant: Any dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), agricultural waste discharged into water.

POLs: Petroleum, oils, lubricants.

Precipitation: Any form of rain or snow.

RCRA: Resource Conservation and Recovery Act.

Recycle: The process of minimizing the generation of waste by recovering usable products that might otherwise become waste. Examples are the recycling of aluminum cans, wastepaper, and bottles.

Retention Basin: A pond or reservoir that hold runoff without release except by means of evaporation, infiltration, or emergency bypass.

Run-on: Stormwater surface flow or other surface flow that enters property other than that where it originated.

Runoff: The part of precipitation, snowmelt, or irrigation water that runs of the land into streams or other surface water. It can carry pollutants from air and land into the receiving waters.

Sanitary Sewer: A system of underground pipes that carries sanitary waste or process wastewater to a treatment plant.

Sanitary Waste: Domestic sewage.

Secondary Containment: Structures, usually dikes or berms, surrounding tanks or other storage containers and designed to catch spilled material from the storage containers.

Sheet flow: Runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel. For purposes of this SWPPP, sheet-flow areas are areas of industrial concern that do not drain to a point discharge, but drain by sheet-flow directly to a receiving water body.

Significant Materials: Include, but are not limited to: raw materials; fuels; materials such as solvents, detergents and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to section 313 of Title III of

the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have a potential to be released with stormwater discharges [122.26(b)(12)].

Significant Spills: Includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (CWA) (see 40 CFR 110.10 and CFR 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

Source Control: A practice of structural measure to prevent pollutants from entering stormwater runoff or other environmental media.

Storm Drain: A slotted opening leading to an underground pipe or an open ditch for carrying surface runoff.

Stormwater: Runoff from a storm event, snowmelt runoff, and surface runoff and drainage.

Stormwater Discharge Associated with Industrial Activity: The discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant.

Sump: A pit or tank that catches liquid runoff for drainage or disposal.

Surface Water: All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, wetlands impoundments, seas, estuaries, etc.); also refers to springs, wells, or other collectors that are directly influenced by surface water.

Swale: An elongated depression in the land surface that is at least seasonally wet, is usually heavily vegetated, and is normally without flowing water. Swales direct stormwater flows into primary drainage channels and allow some of the stormwater to infiltrate into the ground surface.

Topography: The physical features of a surface area including relative elevations and the position of natural and human-made features.

Trench Drain: An elongated catch basin, typically in front of a bay door or across a roadway.

Waters of the United States: (a) All waters, which are currently used, were used in the past, or may susceptible to use in interstate or foreign commerce, including all water which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate wetlands; (c) 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 that would affect or could affect interstate or foreign commerce including any such waters: 1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; 2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or 3) That are used or could be used for industrial purposes by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition; (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial sea; and (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to

manmade bodies of water that neither were originally created in waters of the United States (such as disposal in wetlands) nor resulted from the impoundment of waters of the United States.

Wetlands: An area that is regularly saturated by surface or groundwater and subsequently is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include: swamps, bogs, fens, marshes, and estuaries.

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APPENDIX C: ELIGIBILITY DETERMINATION ENDANGERED SPECIES AND HISTORIC PROPERTIES

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APPENDIX D: ~~NOTICE OF INTENT (NOI)~~

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APPENDIX E: STORMWATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES

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APPENDIX E: STORMWATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES

This appendix provides a basic guide to assist SWPPP team members and others in knowledgeably planning and observing construction sites at their commands. In doing so, the appendix provides:

A summary of permit application options and requirements for construction sites;

A summary of the required contents of a pollution prevention plan for construction sites; and

An overview of temporary and permanent erosion and sedimentation controls and other construction site related best management practices (BMPs).

The information presented in this appendix is based on the requirements of 40 CFR 122 and information provided in the EPA's *Stormwater Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices (1992)* and Washington State Department of Ecology's (Ecology) *Stormwater Management Manual for Western Washington (2005).*

E.1 Permit Application Options for Construction Activity

The stormwater regulation allows two permit application options for stormwater discharges associated with industrial activity from construction activity. Regulated construction activity includes all sites or common plans of development or sale that will result in the disturbance of one or more acres of total land area. The regulations specifically apply to clearing, grading, and excavation activities. Permit options available for construction activities include an individual application and an NOI to comply with a general permit. Each of these application options is discussed briefly in the following paragraphs.

Individual NPDES stormwater permits are issued to a specific facility for stormwater discharges related to industrial activity at specific locations. In most instances, the permit is tailored to meet the discharge characteristics of the facility and/or special requirements of the receiving waters. Individual NPDES stormwater permits are issued by the state in states that have been delegated NPDES permitting authority or by the EPA in states that do not have this authority.

EPA's construction general permit provides a second option: a facility must file an NOI to comply with a general permit for construction activities in order to be covered by this permit. The general permit is issued by the state in NPDES-delegated states and by the EPA in non-delegated states. In many cases, NPDES-delegated states have used EPA's general permits as models with state-specific requirements added. In the State of Washington, which is an NPDES-delegated state, EPA issues NPDES permits for activities on federal land.

Construction activities that disturb one or more total acres of land at federal facilities in the State of Washington are eligible for coverage under EPA's construction general permit (General Permit No. WA-R-12000F). Administration of these permits is by EPA, Region X, Water Management Division (WD-134), Stormwater Staff, Seattle, Washington.

E.1.1 Notice of INTENT (NOI)

As indicated above, compliance with stormwater regulations with respect to construction activities on applicable sites at federal facilities in the State of Washington would include submittal of a NOI to comply with the EPA's general permit.

A Notice of INTENT needs to be filed by both the Contractor and the party administering the construction project (usually the Navy Resident Officer in Charge of Construction (ROICC)).

The contractor's NOI must be signed by the company owner or general partner or, in the case of a corporation by a "responsible corporate officer."

The ROICC's NOI should be signed by the head military person on-site (ROICC) or, the lead civilian (Resident Engineer) if the ROICC chooses to delegate signature authority.

To minimize the possibility for confusion and errors the ROICC NOI should be created after the Contractor has submitted their NOI to the ROICC for review/approval.

A blank NOI copy is available from the EPA link shown below information can be typed directly into the form, which can then be printed out for mailing:
http://www.epa.gov/npdes/pubs/cgp_appendixe.pdf

E.1.2 General Permit for Stormwater Discharges Associated with Construction Activities Conditions

The general permit has a number of requirements and conditions associated with it. Key conditions directly associated with the pollution prevention aspects of the permit include:

- Prohibition of non-stormwater discharges;
- Prevention or minimization of releases in excess of reportable quantities;
- Preparation of a stormwater pollution prevention plan;
- Revision or update of the plan for significant changes in design, construction, operation, or maintenance;
- Proper operation and maintenance of treatment and control measures.

A summary of the key pollution prevention conditions is provided below.

Prohibitions of Non-Stormwater Discharges. All stormwater discharges under the construction general permit must be composed entirely of stormwater. However, the permit provides a number of exceptions. These exceptions include discharges covered by another permit and discharges associated with the following:

- Firefighting activities;
- Fire hydrant flushing;
- Water used to wash vehicles where detergents are not used
- Water used to control dust
- Potable water sources including waterline flushing;

•Routine external building washdown that does not use detergents or other compounds;

•Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;

•Uncontaminated air conditioning or compressor condensate;

•Uncontaminated groundwater or springs; and

•Foundation or footing drains where flows are not contaminated with process materials such as solvents.

•Uncontaminated excavation dewatering

•Landscape Irrigation

Releases in Excess of Reportable Quantities. The discharge of hazardous substances or oil in the stormwater discharge must be prevented or minimized by the facility's stormwater pollution prevention plan. In addition, the permitee is subject to all applicable release reporting requirements under other federal environmental programs (see 40 CFR Parts 117 and 302).

If a release containing a hazardous substance equal to or in excess of its reportable quantity under 40 CFR Part 117 or Part 302 occurs during a 24-hour period the following requirements apply:

•The discharger must notify the National Response Center (NRC) at (800) 424-8802 [or (202) 426-2675 in the Washington metropolitan area] pursuant to 40 CFR Parts 117 and 302.

•The stormwater pollution prevention plan must be modified within 14 days to describe the release.

•The permitee must review the stormwater pollution prevention plan to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and must modify the plan within 7 days if appropriate.

Stormwater Pollution Prevention Plan (SWPPP). Under EPA's Construction General Permit, a SWPPP must be prepared for each construction site covered by the permit. The plan must be prepared in accordance with good engineering practices. The plan must identify potential sources of pollution that reasonably may be expected to affect the quality of stormwater discharges from the facility. In addition, the plan must describe and ensure the implementation of practices that will be used to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of the permit. The SWPPP is discussed further in Section E.2.

Keeping Plans Current. The permitee must amend the SWPPP whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants in stormwater discharges. In addition, the plan must be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

Proper Operation and Maintenance. A permitee at all times must properly monitor and maintain all facilities and systems of treatment and control that are installed to achieve compliance with the permit and the stormwater pollution prevention plan. Proper operation and

maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

E.2 Stormwater Pollution Prevention Plans for Construction Activities

Under the Construction General Permit, EPA requires the development of SWPPPs for construction activities at sites greater than one acre. The manual titled *Stormwater Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices (EPA 1992)* provides the steps which must be completed for a construction site to comply with the pollution prevention requirements contained in the permit. The following discussion is based on information provided in this document.

A pollution prevention plan for construction is designed to reduce pollution at the construction site, before it can cause environmental problems. Many of the practices and measures required for the pollution prevention plan represent standard operating procedure at many construction sites.

EPA has identified phases of stormwater pollution prevention planning. The six major phases of the process are:

- Site evaluation and design development;
- Assessment;
- Control selection and plan design;
- Certification and notification;
- Construction/implementation; and
- Final stabilization/termination.

E.2.1 Site Evaluation and Design Development Phase

The first phase in a preparing a SWPPP for a construction project is to define the characteristics of the site and the type of construction that will be occurring. This phase is broken down into four requirements:

- Collect site information;
- Develop site design;
- Describe construction activity; and
- Prepare pollution prevention site map.

Collect Site Information. Prior to design, it is necessary to collect information about the existing conditions at the construction site. The EPA Construction General Permit requires that the pollution prevention plan incorporate information regarding the existing conditions at the site including:

- Existing soils information;
- Existing runoff water quality;
- Location of surface waters on the construction site; and
- Name of and location of the water body that will receive runoff from the construction site;

•Any applicable total maximum daily loads for the receiving waters;

•Presence of endangered species or critical habitat near the project site.

Develop Site Plan Design. After collecting information about the existing site conditions, a site plan should be developed. The following objectives, which will limit the amount of pollution in stormwater runoff from the construction site, should be considered:

•Disturb the smallest area possible;

•Avoid disturbance of sensitive areas such as steep and/or unstable slopes, surface waters, (including wetlands), areas with soils susceptible to erosion, and existing drainage channels; and

•Identify areas to be preserved or left as open space.

Describe Construction Activity. The SWPPP must describe the purpose or goal of the construction project (e.g., a multi-story office building) and list the soil disturbing activities necessary to complete the project.

Prepare Pollution Prevention Site Map. The final step of the site evaluation and design development phase is to combine the information collected into a comprehensive pollution prevention site map. The starting point for the pollution prevention site map should be the site plan prepared for the construction design. The map should be drawn to scale with topography. The scale of the map should be small enough so that you can easily distinguish important features such as drainage swales and control measures that will be added later. The following information must be included on the site map:

•The location of surface waters;

•The location of steep slopes after grading;

•The location of soil disturbing activities or the total area of the site where soil will be disturbed (also the outline of areas that will not be disturbed); and

•Drainage patterns of the site after the major grading activities and points where stormwater will discharge from the site (includes the location of swales/channels and any new or proposed underground storm drain system on the site).

E.2.2 Assessment Phase

The second phase in developing the SWPPP is to measure the size of the land disturbance and estimate the impact the project will have on stormwater runoff from the site using information collected during the site evaluation. Two components to the assessment include;

•Measurement of the site area;

•Measurement of the drainage areas; and

Measure the Site Area. An estimation of the total site area and the area that will be disturbed must be made. The total site area estimate must represent the size of the parcel of property or right of way on which the construction is occurring. The disturbed area estimate must represent the portion of the total site area that will be disturbed over the course of the construction project.

Determine the Drainage Areas. Determining the size of each drainage area where concentrated flow will leave the site is not required. However, this information is helpful in selecting and

designing the sediment control and stormwater management measures for the project in the next phase of the plan.

E.2.3 Control Selection/Plan Design Phase

The next phase is to design a plan to prevent and control pollution of stormwater runoff from the construction site. To complete the Stormwater Pollution Prevention Plan the following steps should be completed:

- Review and incorporate State and local requirements (Navy policy requires consideration);
- Select erosion and sediment controls;
- Select other structural controls;
- Select stormwater management controls;
- Indicate the location of controls in the site map;
- Prepare an inspection and maintenance plan;
- Prepare a description of controls; and
- Prepare a sequence of major activities.

The following subsections explain how the controls selected should be described in the SWPPP.

The SWPPP must include a description of the measures to be used for erosion and sediment controls throughout the construction project. These controls include stabilization measures for disturbed areas and structural controls to divert runoff and remove sediment. Erosion and sediment controls are implemented during the construction period to prevent and/or control the loss of soil from the construction site into the receiving waters.

As needed, the permit also requires incorporation of structural practices. These structural controls serve to divert flows away from disturbed areas, store flows to prevent downstream scouring, and limit the discharge of pollutants from the site.

In addition, the permit requires that, where attainable, a temporary or permanent sedimentation basin be installed in any drainage location where more than 10 acres in the upstream drainage area are disturbed at one time. The sedimentation basin must provide at least 3,600 cubic feet of storage for every acre of upland area.

Stormwater management controls are constructed to prevent or control pollution of stormwater after the construction is completed. The permit requires that the pollution prevention plan include a description of these measures. These controls include, but are not limited to Retention ponds, detention ponds, infiltration measures, and vegetated swales and natural depressions.

As an aid to the preparation and review of SWPPPs for construction activities, EPA has developed a preconstruction checklist and an Erosion and Sediment Control checklist. Additional discussions of the control measures mentioned above are provided in Section E.3 of this appendix.

E.2.4 Certification and Notification Phase

Once the site description and controls portion of the SWPPP have been prepared, the plan must be certified and a NOI must be submitted to the appropriate agency.

The plan should identify an authorized representative for the operator to sign the plan. In signing the plan, the authorized representative certifies that the information is true and assumes liability for the plan. All contractors and subcontractors responsible for implementing measures in the plan must be listed along with the measures for which they are responsible. All such contractors and subcontractors must sign a certification statement that they understand the permit requirements.

As discussed above, EPA must process the NOI at least 7 days before construction activities begin. The NOI is essentially an application and contains important information about your site, including site location, owner information, operator (general contractor) information, receiving water(s), existing NPDES Permit Number (if any), an indication of existing quantitative data, and a brief description of the project.

E.2.5 Construction Implementation Phase

The next phase of the pollution prevention process involves undertaking the activities identified in the plan, including:

- Implementing the controls;
- Inspecting and maintaining the controls;
- Maintain records of construction activities;
- Updating and changing the plan to keep it current;
- Taking proper action when there is a reportable quantity spill; and
- Having plans accessible.

Implement Controls. The first action that should be taken is to construct or perform the controls that were selected for the SWPPP. Although federal facilities are directly regulated by the EPA, Navy policy requires consideration of State or local specifications. The applicable specifications for the State of Washington and local agencies in the Puget Sound area are documented in Ecology's *Stormwater Management Manual for Western Washington* (2005). Excerpts from this manual are provided in Section E.3.

To ensure that controls are adequately implemented, it is important that the work crews who install the measures are experienced and/or adequately trained. Improperly installed controls can have little or no effect and may actually increase the pollution in stormwater.

Inspect and Maintain Controls. The general permit requires inspection every 7 days or; every 14 days and within 24 hours of a storm of 0.5 inches or more in depth. All disturbed areas of the site, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that were identified as part of the plan must be inspected. Controls must be in good operating condition until the area they protect has been completely stabilized and the construction activity is complete.

The inspector must record any damages or deficiencies on an inspection report form provided for this purpose. These same forms can be used to request maintenance and repair and to prove that inspection and maintenance were performed. The operator should correct damage or deficiencies as soon as practicable after the inspection but in no case later than 7 days after the inspection. Any changes that may be required to correct deficiencies in the SWPPP should also

be made as soon as practicable after the inspection but in no case later than 7 days after the inspection.

Maintain Records of Construction Activities. The operator should keep records of the construction activity on the site. In particular, the operator should keep a record of the following information:

- The dates when major grading activities occur in a particular area;
- The dates when construction activities cease in an area, temporarily or permanently; and
- The dates when an area is stabilized: temporarily or permanently.

These records can be used to make sure that areas where there is no construction activity will be stabilized within the required timeframe.

Update/Change the Plan. For a construction activity to be in full compliance with its NPDES stormwater permit, and for the SWPPP to be effective, the plan must accurately reflect site features and operations. When it does not, the plan must be changed. The plan must also be changed if the operator observes that it is not effective in minimizing pollutant discharge from the site.

Report Releases of Reportable Quantities. Hazardous substances which are spilled in amounts that equal or exceed Reportable Quantity (RQ) levels must be reported in accordance with 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302.

Provide for Plan Location and Access. The SWPPP must be kept at the construction site from the time construction begins until the site is finally stabilized. Copies of the SWPPP and all other reports required by the permit, as well as all of the data used to complete the NOI must be retained for 3 years after the completion of final site stabilization.

E.2.6 Final Stabilization/Termination Phase

Operators of a construction site must continue to comply with permit conditions until:

- He or she no longer meet the definition of an operator of a construction site; or
- The construction activity is complete, all disturbed soils have been finally stabilized, and temporary erosion and sediment controls have been or will be removed.

A permitee should submit a Notice of Termination (NOT) to inform EPA that he/she is no longer an operator of a construction activity.

Final stabilization is defined by the EPA general permit as meaning that all soil disturbing activities at the site have been completed, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of rip-rap, gabions, or geotextiles) have been employed.

The NOT is a one-page form which should be completed and submitted to EPA when a site has been finally stabilized or when an operator of a construction activity changes.

E.3Best Management Practices for Construction Activity Stormwater Pollution Prevention

A number of sources are available that describe best management practices (BMPs) for pollution prevention on construction sites. Much of this information has been complied and modified to reflect local (Puget Sound) conditions in Ecology's *Stormwater Management Manual for Western Washington* (2005). The material provided below is based on information presented in this manual.

Understanding the basic processes of erosion and sedimentation and the basic principles of control provides the foundation for developing and implementing a successful erosion and sedimentation control plan. This section outlines the types of erosion and sediment control measures (best management practices) that can be applied before, during and after the development process. Best management practices (BMPs) are defined as physical, structural, and/or managerial practices, that when used singly or in combination, prevent or reduce pollution of water.

The remainder of this section discusses problem areas of the construction site (such as slopes or surface drainageways) and will describe which BMPs best alleviate problems associated with each area. The areas discussed are:

- Slopes;
- Stream and waterways;
- Surface drainageways;
- Enclosed drainage inlets and outfalls;
- Large, flat surface areas;
- Borrow areas; and
- Adjacent properties.

E.3.1 Slopes

Slopes greatly increase the potential for erosion. As slope length and steepness increase, runoff velocity increases. This increases the capacity of water to detach and transport soil particles. Steeper slopes usually have faster runoff velocities, less infiltration and more erosion than less steep slopes.

Modifying a slope by clearing existing vegetative cover also increases its vulnerability to erosion. Vegetation slows down runoff velocity and root systems hold soil particles in place. Vegetation maintains the soil's capacity to absorb precipitation. The following conditions indicate a need for special care when modifying or creating a slope:

- Extensive length (exceeding 0.7% over 300 ft, 7%-15% over 150 ft, and >15% over 75 ft);
- Moderate to extreme steepness. (Greater than about 7%);
- High soil erodibility; and
- Difficulty of reestablishing vegetative cover.

Vegetative stabilization, diversion measures, slope drains and slope stabilization measures may counteract problems created by modifying slopes.

Vegetative Stabilization. Maintaining a natural vegetative buffer or filter strip at the base of a slope retains sediment on site and is the preferred method for control of erosion. If the natural vegetative cover is left, other cover techniques such as mulch or plastic covering will not have to be used. Undisturbed vegetation is by far the best method to maintain unstable slopes. If the natural vegetative covering must be disturbed, methods such as placing sod strips at intervals along the face of the slope also help. These measures help slow runoff, trap sediment, and reduce the volume of runoff.

Grass or grass and legumes are the most commonly used plant material for stabilizing exposed slopes. Plants are usually established in one of the following methods:

•Hydroseeding;

•Standard seeding; and

•Sodding.

Hydro-seeding is mixture of seeds, fertilizer, and water and is sprayed on the slope. A mulch and a mulch-tacking agent can also be applied. This method is effective on large areas.

In standard seeding, the seed is drilled or broadcast either mechanically or by hand. A cultipacker or similar tool is used after seeding to make the seedbed firm and to provide seed covering. The proper timing of seeding, mulching, and watering is important for areas seeded in this manner.

Sodding is also an effective means to establish plant cover quickly. Sod strips are laid across the slope and in this way instant cover is provided. Sod should be placed on a prepared bed and pegged on steep slopes. Watering is important. This method is effective and is often used on steep slopes.

Diversion Measures Used to Control Erosion. A dike, ditch or a combination dike/ditch can divert runoff from the face of an exposed slope. For short slopes, placing these diversion measures at the top works well. For longer slopes, placing the dikes or ditches across the slope at intervals effectively reduces slope length. Temporary diversions must remain in place until slopes have been permanently restabilized.

Diversion ditches can be bare channels, vegetatively stabilized channels, or channels lined with a hard surface material. When properly constructed, diversions minimize runoff over disturbed slopes. They may also collect runoff and divert it to a sediment trap or pond.

Since diversions concentrate the volume of surface runoff, they increase its erosive force. Runoff should be released onto a stabilized area to reduce erosion potential. Gradually reducing the slope of the diversion channel is sometimes adequate. Level spreaders, or stormwater conveyance channels such as grassed waterways may also be used.

Slope Drains. Where disposing of runoff laterally is unsatisfactory, utilizing drains over the face of the slope may be used. Slope drains can run down the surface of the slope as sectional downdrains, paved chutes, or pipes placed beneath the ground surface.

The contractor should protect against erosion at the inlet; otherwise undercutting at the lip of the drain and piping under the drain frequently occur. Compacting the soil carefully at the mouth of the slope drain and anchoring it adequately can prevent this undercutting. Also, any areas cleared to construct the drain should be revegetated and stabilized.

At the slope drain outlet, energy dissipators (such as rip-rap) are frequently necessary. Not using a dissipator can result in serious erosion problems at the outflow end of the drain. The dissipator lowers the velocity of the runoff to a non-erosive level. Rip-rap is one effective energy dissipator.

Structural Slope Stabilization Measures: The most effective way to decrease erosion is to avoid modifying fully vegetated slopes. The angle of repose naturally achieved is the most stable for that soil type and situation. However, during construction, it is often necessary to modify existing slopes or to create unnatural slopes. Cut and fill slopes are a good example.

One way to stabilize slopes is to reduce their steepness. Retaining walls are often used when a slope is too steep to establish and maintain vegetation. They obviate disturbance of the upper parts of natural slopes when lower parts are disturbed. Thus, trees or other naturally stable vegetation can be maintained. The cost of building retaining walls is significant but many areas are difficult or impossible to stabilize otherwise.

When slopes are disturbed, leaving them rough reduces velocity and increases infiltration rates. Rough slopes hold water, seed, and mulch better than smooth slopes. Slope surfaces can be roughened by running wheeled construction equipment across the slope, or tracked equipment up and down the slope face. The groove created by the construction equipment should run across the slope horizontally, and not up and down the slope. Slopes can also be scarified to produce the desired surface roughness.

If final grading is delayed more than a few days, the contractor should stabilize exposed slopes immediately after completing rough grading. For short periods of protection, either temporary mulching or temporary seeding and mulching together should be used. When slopes are cut to final grade, permanent vegetative stabilization measures are implemented.

Clear plastic covering provides immediate protection to slopes that cannot be prepared and seeded during the seeding period and/or during initial establishment of seeded areas. However, plastic covering also increases the quantity and velocity of runoff, requiring safe disposal of it onto stabilized areas. Additionally, plastic becomes a disposal problem once it is removed from the slopes it is protecting. Generally, mulches are a better solution for covering exposed areas.

Mulching after permanent seeding as well as before seeding protects exposed areas for short periods. Mulches decrease the impact of falling rain, slow runoff velocity and increase the capacity of the soil to absorb water. Mulches hold seeds in place, preserve soil moisture, and insulate germinating seeds from the extremes of heat and cold. Many types of mulch are available: these include straw and woodchips. There are also geotextiles that can substitute for mulches and other erosion control measures in some cases.

E.3.2 Streams and Waterways

Protecting streams and waterways on and near sites undergoing development and protecting areas downstream from development involves the following three goals:

•The increased sediment loads carried by surface runoff from areas under construction must not be allowed to enter streams;

•Stream banks must be protected from erosion hazards caused by increases in runoff volume and velocity; and

•The rates of release of increased volumes of runoff into streams and waterways and the velocity of flow in stream channels must be controlled.

There are several characteristics that serve to identify streams that are particularly vulnerable to erosion. Streams that have a small channel capacity and steep banks are very susceptible to erosion. Streams that flow through areas of erodible soil and streams with sharp meanders or bends in the channel alignment are also prone to erosion. Before development begins, nearby streams should be analyzed to identify potential problem areas.

After conducting this survey, control measures may have to be implemented to meet the above mentioned goals. These stream and waterway protective BMPs include:

•Streambank stabilization measures; and

•Sediment control measures.

Streambank Stabilization Measures. The maintenance of existing vegetation on stream banks is a fundamental principle of erosion and sedimentation control. Streambank vegetation serves to stabilize the soil, slow runoff and dissipate its erosive energy, and to filter sediment from runoff. To prevent the destruction of streambank vegetation, stream crossing and construction traffic along the banks must be controlled. Culverts or temporary bridges for vehicle crossings should be constructed only where necessary.

Where stream banks must be disturbed or where existing cover is inadequate, grass or grass-legume mixtures may be established. Immediately after grading on stream banks has been completed, vegetative restabilization measures must be initiated. Willows and other natural vegetation, as well as grass and legumes, are recommended for the protection of stream banks. Woody vegetation is used where ice damage may occur.

Stream banks can be protected from erosion by structural as well as vegetative measures. Where vegetation will not provide sufficient protection, banks can be protected with revetments and deflectors, as well as other mechanical measures. However, willows and other vegetation can also be used in conjunction with structural measures. This is a biomechanical approach. Biomechanical and vegetative methods are always preferred over purely structural measures, which only should be used when absolutely necessary.

Revetments, which cover the banks, are commonly used where sharp bends or constrictions in the stream channel (such as culverts, bridges, or grade control structures) occur. Rip-rap, gabions, sacked concrete, and concrete or asphalt paving are commonly used as revetment materials. Deflectors consist of jetties or pilings that angle outward from the bank in a downstream direction and deflect currents away from vulnerable bank areas.

Sediment Control Measures. The first essential step in preventing sediment from entering streams and waterways is to control erosion on construction sites. A second necessary step in sediment control is to trap sediment that is transported by runoff before it reaches streams and waterways or leaves the construction site.

To trap sediment, the runoff must be detained for a sufficient period of time (up to 40 hours or longer) to allow the suspended soil particles to settle out. The amount of sediment which is deposited will depend on the speed at which runoff flows through the sediment trap, the length of time that runoff is detained, and the size and weight of the soil particles which are in suspension.

Several techniques are available for controlling the amount of sediment that reaches streams and waterways. The techniques include:

•Vegetative filter strips (preferably strips left in their natural state) between streams and development areas serve to slow runoff and filter out sediment;

•Check dams constructed at regular intervals in the drainageways are temporary sediment control measures that are easy and economical to construct;

•Barriers consisting of bags filled with pea gravel or crushed rock and stacked in an interlocking manner trap sediment and reduce the velocity of flow; and

•Sediment basins or ponds constructed by excavating a pit or by construction of an impoundment also protect streams from increased sediment loads by trapping runoff in before it is released into stream channels.

Sediment basins often consist of an earthen dam, mechanical spillway (including a perforated riser pipe), and an emergency spillway. The construction of sediment basins should be completed before clearing and grading begin. They are generally located at or near the low point of the site. Points of discharge from sediment basins must be stabilized. In many developments these temporary sediment basins may be converted into permanent Retention/detention basins.

E.3.3 Surface Drainageways

Surface runoff, and runoff intercepted by erosion control measures such as diversions, must be collected by drainageways and let out in stabilized areas, storm sewers, or sediment basins. The design of these drainageways ensures that runoff is transported without risk of erosion or flooding. Unless surface drainageways are adequately designed, constructed, and maintained, they can become a major source of sediment pollution.

Development should be planned to maintain and utilize the naturally stabilized drainageways that exist on a site. To reduce the velocity of runoff in drainageways, a variety of grade control structures can be used. Erosion and sedimentation from surface runoff can be minimized through the use of the following:

•Grassed waterways may be stabilized through seeding and mulching or with sod, and are the preferred form of conveyance;

•Lined channels should be used where water velocities are high, but are an undesirable alternative to grassed waterways; and

•Grade control structures are necessary to reduce runoff velocity to non-erosive levels (care should be taken to ensure the protection of channel sides and bottoms).

E.3.4 Enclosed Drainage: Inlet and Outfall Control

The capacity of vegetated drainage channels may be exceeded by the increases in runoff caused by construction activities. As a result, vegetatively-lined channels may scour and erode.

Enclosed storm sewers can safely convey runoff of high concentrations and velocities; they can also serve to decrease the velocity of runoff and release it at preferred rates of flow.

When using enclosed drainage systems sediment control is still necessary. Sediment must be prevented from entering the storm sewer system and it must be removed from runoff. The following BMPs achieve these purposes:

•Drain inlet sediment filters made of crushed rock, gravel, or sod; placed around the inlets prevent sediment from entering the storm sewer system.

•Enclosed drains and sediment basins can be carefully located and designed to trap sediment that may be in stormwater before it is released off the site or downstream and to control the volume and velocity of runoff.

E.3.5 Large, Flat Surface Areas

The amount of erosion on flat and gently sloping surface areas can be significant. Erosion on these areas can be minimized by:

•Scheduling development in phases so as to keep the extent of the exposed area and the duration of exposure a minimum;

•Promptly applying surface stabilization with either temporary or permanent vegetative cover to minimize erosion; and

•Using sediment traps to trap soil eroded from exposed surface areas before it is carried off the site or into waterways.

Areas being prepared for paving should be protected from erosion by the use of:

•Gravel or stone filter berms to slow and filter runoff and divert runoff from the exposed right-of-way;

•Compaction to reduce the vulnerability of the exposed right-of-way to erosion (care should be given to increased velocity and runoff volume);

•Aggregate cover to stabilize the soil surface while allowing the movement of construction equipment on the right-of-way.

By implementing the control measures listed above, soil erosion on exposed surface areas and areas adjacent to paved surfaces can be minimized.

E.3.6 Borrow and Stockpile Areas

Borrow areas, especially those that are located off the development site, cannot be ignored in erosion and sedimentation control planning. Borrow areas, as well as stockpile and spoil areas, must be stabilized.

Borrow and stockpile areas present the same set of problems for the control of erosion and sedimentation as exposed cut and fill slopes. All areas are erodible. Runoff should be diverted from the face of the slopes that are exposed in the excavation process. The runoff must then be conveyed in stabilized channels to stable disposal points.

The BMPs used to control erosion on slopes, such as the top of slope dikes, diversions, slope drains, etc., should also be used in borrow areas. Only those sections of the borrow area which are currently needed to supply fill should be stripped. Immediately after the required fill has been taken, the exposed area should be stabilized. If practical, each phase of the borrow operation should be:

- Graded,
- Covered with topsoil; and
- Seeded with permanent vegetation and mulched.

If final grading is delayed for more than a few days, temporary seeding should be used. By properly timing the disturbance of the natural cover in the borrow area in carefully planned phases, the area of exposed soil and the duration of exposure are reduced and, therefore, erosion losses are reduced.

The topsoil from borrow areas is stripped and stockpiled for later redistribution on the disturbed area. These stockpiles should be located on the uphill side of the excavated area wherever possible so that they can act as diversions. Stockpiles should be shaped and seeded with temporary cover. They can also be covered with plastic and circled at the bottom with a ditch to catch the runoff.

E.3.7 Adjacent Properties

The protection of adjacent properties and waterways from accelerated erosion and sedimentation is an important concern. Relevant BMPs for protecting adjacent properties have already been discussed under the previous problem areas. The following list illustrates some of the BMPs that can be used:

- Sediment traps;
- Diversions;
- Grass waterways;
- Rock and washed gravel check dams;
- Vegetative filter strips; and
- Filter fences.

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APPENDIX F: BMP INDEX

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APPENDIX F: BMP INDEX

Appendix F presents the site specific Best Management Practices (BMPs) for Naval Base Kitsap Bangor.

BMPs are measures or procedures that are used to prevent or reduce the potential for pollution of stormwater. There are numerous BMPs to choose from in order to achieve this purpose: however, some are more appropriate for an individual site than others, based on the site's characteristics and other factors. Some BMPs are readily implemented at all sites.

APPENDIX G: EXISTING STORMWATER CHARACTERIZATION DATA

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APPENDIX H: STORMWATER MONITORING REPORTS

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STORMWATER VISUAL MONITORING RECORD

Outfall Number:		
Observer Name:		
Observation Date:	Time:	
Quarter (Check)	January through March	☐
	April through June	☐
	July through September	☐
	October through December	☐
Estimated Time Runoff Discharge Began:		

Visual Observations:

Color	Yes☐	No☐	Describe :
Odor	Yes☐	No☐	Describe :
Clear	Yes☐	No☐	Describe :
Floating Solids	Yes☐	No☐	Describe :
Settled Solids	Yes☐	No☐	Describe :
Suspended Solids	Yes☐	No☐	Describe :
Foam	Yes☐	No☐	Describe :
Oil Sheen	Yes☐	No☐	Describe :

Other Observations:

Suspected Sources of Pollutants by Visual Examination

List Sources:

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APPENDIX I: AUTHORIZED USE LIST

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APPENDIX J: RECORD OF SPILLS

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APPENDIX K: ROUTINE FACILITY INSPECTION REPORTS

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Figure K-1

FACILITY VISUAL INSPECTION REPORT

Date of Inspection:	Inspector:
Facility Name:	
Building Number:	Sector:
Inspection Frequency (Check):	
Monthly (Sectors O. Q. R)☐	
Quarterly (Sectors N. P. AA[1])☐	
Annual (All Facilities)☐	

Pollution Sources and Controls (BMP) Status (See SWPPP Section 6, Table 4-XXXXD)

Pollution Source/Area in SWPPP	Are SWPPP BMPs in Place and Effective		Are Pollutants Being or Potentially Being Released		Follow-Up Action/New BMPs if Needed[a]
	Yes	No	Yes	No	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	

Pollution Control Equipment

Equipment Type	Operating Status		Follow-Up Action if Needed
	Adequate	Unsatisfactory	
Oil Water Separators	☐	☐	
Catch Basins	☐	☐	
Spill Response Equipment	☐	☐	
Other:	☐	☐	
	☐	☐	
	☐	☐	

New Pollution Source/Area

Not in SWPPP[2]	BMPs In Place and effective		Are Pollutants Being or Potentially Being Released		Identify Follow-Up Action (New BMPs if needed)[2]
	Yes	No	Yes	No	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	
	☐	☐	☐	☐	

[1] Inspection frequency may be extended to semi-annual if controls consistently found effective.

[2] Update SWPPP with new BMPs and/or new pollutant sources whenever there is a change in design, construction, operation, or maintenance that has significant effect on the potential for discharge of pollutants to receiving waters or no later than 12 weeks after annual evaluation.

APPENDIX L: MAINTENANCE REPORTS

Maintenance activities are performed under the Regional Base Operating Services Contract (BOSC). Records of inspections and maintenance are maintained online in Maximo. At the discretion of the pollution prevention team, copies of key maintenance reports may be included in this appendix.

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APPENDIX M: EMPLOYEE TRAINING RECORDS

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Table M-1

STORMWATER POLLUTION PREVENTION TRAINING[1]

General Training Areas	**N**	**O**	**P**	**Q**[3]	**R**[3]	**AA**
Goals of the Pollution Prevention Plan	X	X	X	X	X	X
Spill Prevention and Control	X	X	X	X	X	X
Good Housekeeping	X	X	X	X	X	X
Materials Management Practices	X	X	X	X	X	X
Sector Specific Training Areas[2]						
Responsibilities for Pickup of Recyclable Materials	X					
Outdoor Storage of Recyclable Materials	X					
Proper Handling Storage of Hydraulic Fluids and Lubricants	X					
Used Oil Management			X	X	X	
Spent Solvent Management			X	X	X	
Spill Prevention, Response, and Control			X			
Fueling Practices			X	X	X	
Proper Painting and Blasting Procedures			X		X	
Used Battery Management			X	X	X	
Proper Handling Procedures for Hazardous Waste		X				
Proper Disposal of Spent Abrasives				X	X	
Proper Disposal of Vehicle Wash Waters				X	X	

[1]-Training to include personnel responsible for implementing activities identified in the plan or otherwise responsible for stormwater management.

[2]-Training areas only required when applicable to the facilities.

[3]-Employees, independent contractors, and customers must be informed of BMPs. Facility should consider posting easy to read depictions, of BMPs or graphic depictions of BMPs and emergency phone numbers in work areas.

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APPENDIX N: ANNUAL REPORTS TO EPA

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APPENDIX O: CORRECTIVE ACTION REPORTS

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APPENDIX P: STORMWATER MONITORING SOP

Analytical Monitoring Plan

Background:

This NAVBASEKitsap Bangor Analytical Monitoring Plan is a component of the Stormwater Pollution Prevention Plan.

The purpose of the SWPPP is to identify and minimize potential sources of stormwater pollution. Stormwater monitoring can help evaluate the effectiveness of implemented stormwater pollution control measures/best management practices (BMPs) and also help recognize otherwise unidentified pollution sources.

This analytical monitoring plan is written to assist personnel who will monitor stormwater at NAVBASE Kitsap Bangor, under the requirements of the SWPPP.

Read this plan to its entirety before proceeding with monitoring.

Introduction and Purpose:

The 2015 MSGP requires the following analytical monitoring be performed at NAVBASE Kitsap Bangor:

- Benchmark monitoring is the collection of stormwater samples for laboratory analysis. The samples will be analyzed for the constituents indicated in SWPPP 2015 Table P-1. Results of the sampling will be compared to 2015 MSGP specified "benchmark" values discussed in section 5 of the SWPPP. Results with levels above the benchmark values may require further evaluation. Each monitoring will take place during a distinct storm event, which is defined to occur by 72-hour separation from the previous storm event. This 72-hour rule can be waived if the local climate calls for a different interval, and the newly proposed interval can be supported in writing. A storm event is defined as a measurable rainfall. Samples should be collected within the first 30 minutes of the beginning of discharge from the outfall. If no measurable storm occurs within a monitoring quarter, monitoring can be excused upon documentation that no runoff occurred. Such documentation should be signed and certified.
- Receiving water hardness must be measured during the first quarter of sampling.
- Impaired waters monitoring: Portions of Hood Canal on the west side of Bangor are listed on the 303(d) list for low dissolved oxygen. Clear Creek which drains the east side of NAVBASE Kitsap Bangor is included on the 303(d) list for high fecal coliform counts. Figure 5-2 shows the water bodies near N Kitsap Bangor that are currently included as impaired on the 303(d) list. Table P-3 shows monitoring that will be conducted at NAVBASE Kitsap Bangor industrial outfalls discharging to impaired waters.
- Puget Sound Cleanup Sites monitoring: Portions of the Hood Canal are also listed as Puget Sound Sediment Cleanup Sites (Category 4B) for multiple parameters which is shown in Figure 5-2. Table P-3 shows the TSS monitoring that will be conducted at NAVBASE Kitsap Bangor's industrial outfalls discharging to these areas.

Benchmark Monitoring

2015 MSGP Part 6.2.1 gives the detailed requirements for benchmark monitoring. Additional benchmark monitoring requirements are given in the Sector-Specific section, 2015 MSGP Part 8.

Sampling Frequency and Recordkeeping:

Benchmark monitoring shall be conducted every quarter during the monitoring years. **When and Where to Collect Samples:**

- Collect a grab sample at each outfall location listed in SWPPP 2015 Table P-1.
- Collect a sample of the receiving water to analyze for hardness.
- Collect samples during daylight hours.
- Collect samples from storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. Document this on form P-1 and if conducting visual monitoring at the same time the form provided in Appendix H.
- Collect samples within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site.

Table P-1: Benchmark Monitoring Requirements for NAVBASE Kitsap Bangor Stormwater Outfalls[a]

Analytical Parameter	Method	Outfall						
		OF1	OF2	OF3	OF3A	OF8	OF9	OF11
Applicable Industrial Sectors		Q	N,P, AA	Q,R,AA	Q,R	Q	Q	Q
Aluminum[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Copper[b]	200.8		Q					
Iron[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Lead[b]	200.8	Q	Q	Q	Q	Q	Q	Q
Zinc[b]	200.8	Q	Q	Q	Q	Q	Q	Q
COD	410.4		Q					
Nitrate-Nitrite	353.2		Q	Q				
TSS	160.2		Q					
Hardness		Once	Once	Once	Once	Once	Once	Once

a - All analytical sampling to be conducted on a quarterly basis except where otherwise intended.
b - Metal analyses to include total recoverable fraction.
c - Hardness of receiving waters must be determined the first quarter sampled.

What Analytical Analyses are Required:

1) Analysis of outfall samples:

Sample collection, preservation and holding times for stormwater sampling required at NAVBASE Kitsap Bangor are shown in Table P-2.

Table P-2
BENCHMARK MONITORING SAMPLE COLLECTION AND PRESERVATION REQUIREMENTS

Parameter	Analytical Group	40 CFR 136 EPA Method	Containers (size and type)	Preservation	Max Holding Time
Metals (total recoverable):					
Aluminum	Metals	200.8	500-ml HDPE	HNO_3 to pH <2 Cool to ≤6°C	6 months
Copper	Metals	200.8			
Zinc	Metals	200.8			
Iron	Metals	200.8			
Lead	Metals	200.8			
Magnesium	Metals	200.8			
Arsenic	Metals	200.8			
Cadmium	Metals	200.8			
Selenium	Metals	200.8			
Silver	Metals	200.8			
Cyanide	Metals	335.2, 335.3, **SM20 4500-CN C,E**	1-liter polyethylene or glass bottle	NaOH to pH >12; 0.6 g ascorbic acid; Cool to ≤6°C	14 days
Mercury	Metals	**245.7**, 245.2, 1631.E	300-ml polyethylene	HNO_3 to pH <2 Cool ≤6°C	6 months
COD	Conventional	410.4	500-ml HDPE	HNO_3 to pH <2 Cool ≤6°C	28 days
Nitrate plus Nitrite Nitrogen	Conventional	353.1, 353.2, 353.3, **300.0**	100-ml polyethylene or glass	H_2SO_4 to pH <2 Cool to ≤6°C	28 days
Total Ammonia as N	Conventional	350.1, 350.2, 350.3	1-liter plastic or glass	H2SO4 to pH <2 Cool to ≤6°C	28 days
TSS (total suspended solids)	Conventional	160.2	100-ml polyethylene or glass bottle	Cool to ≤6°C	7 days
Hardness (as CaCO3)	Conventional	130.1, 130.2, **SM20 2340B**	250-ml polyethylene or glass bottle	HNO_3 to pH <2	6 months

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Analysis of receiving water sample:

The receiving water is sampled during the first quarter of Benchmark sampling. This is the only time this sample is collected for the entire permit term. This sample is analyzed for hardness in order to determine hardness dependent benchmarks.

Records and Reporting:

All monitoring data collected pursuant to 2015 MSGP Part 6.2 must be submitted to EPA using EPA's online system (www.epa.gov/netdmr) no later than 30 days (email date or postmark date) after you have received your complete laboratory results for all monitored outfalls for the reporting period. If you cannot access NetDMR, paper reporting forms must be submitted by the same deadline to the appropriate address identified in 2015 MSGP Part 7.9. If you are using paper reporting forms, EPA strongly recommends that you use the MSGP discharge monitoring report (MDMR) available at www.epa.gov/npdes/stormwater/msgp.

If you collect multiple samples in a single quarter (e.g., due to adverse weather conditions, climates with irregular stormwater runoff, or areas subject to snow), you are required to submit all sampling results to EPA within 30 days of receiving the laboratory results.

Corrective actions that arise from the analytical monitoring will be reported to EPA in the Annual Report. Any corrective action required must be performed consistent with 2015 MSGP Part 4.

Use the Form P-1 included in this Appendix P to record benchmark sampling events. Keep this record along with the analysis results in SWPPP Appendix H.

Safety:

- Personal Protective Equipment: Raincoat, rain pants, hat/hood, gloves, colored safety vest, hard hat, and sturdy shoes or steel toe boots (if you will be lifting storm drain covers),
- Traffic cones,
- All monitoring must be done during daylight hours and monitoring must not be done during severe/extreme storm events,
- Consider taking along a partner for sampling in some locations,
- For emergency communication purposes, a cell phone and/or radio
- Wear safety/lab goggles if acids are used to preserve samples.
- In addition monitoring personnel should be aware of the cautionary measures appropriate for handling nitric acid (a preservative) that is typically placed in the sample container by the contract lab. When opening each of the sample bottles, be sure to have your face positioned away from the opening, as the moisture in the air will cause the nitric acid to fume.

Preparation:

- Good to go? 72-hour dry period
- Check safety gear (see list above)

- Check gear
- Sample bottles
- Dipper type sampler
- Notebook
- Manhole puller
- Pen/sharpie
- Chain-of-custody
- Bottle labels
- CoC seals
- Dipper (inspect and clean if necessary)
- Cooler (s)
- Sampling plan
- Ice/blue ice
- Plastic sheeting
- Paper towels or lab towels
- Analytical monitoring Form P-1
- Extra clean sample container – transfer container
- Zip-lock bags

Paperwork:

- Fill out labels and chain-of-custody, as much as you can, prior to leaving the office.
- Fill out Form P-1, as much as you can, prior to leaving the office.

Sampling:

- Note when the rainfall started.
- Put on gloves and safety goggles.
- Place traffic cones if applicable.
- Take care when removing manhole cover/catch basin grates. Don't fully remove catch basin grates. Just move to the side but leave some in groove. Take care not to allow the grate to fall in catch basin.
- Note details of discharge. Estimate flow rate or depth of flow and other details.
- Use dipper. Rinse in effluent three times. Don't touch dipper to sides or bottom of pipe, manhole, or catch basin.

- Insert dipper into effluent flow to collect sample. Be careful not disturb sediment/debris in the outfall pipe. Stay safely back from any ledges, bluffs, or drops.
- Fill and rinse the sampler with stormwater first, and then fill again with the stormwater sample.
- Fill bottles to about the neck. Don't overfill as you will lose the preservative. Most bottles will be pre-preserved by the lab (contain a few ml of acid). Take care when removing cap as moisture in the air can react with the acid. This is especially true with nitric acid, which is used to preserve metals samples. Hold the bottle away from you when opening. Keep cap oriented down to prevent pollutants from settling in the cap.
- If necessary add nitric acid until the pH of the sample falls below 2. A pH indicator is useful but not required (and typically not used). It would be used to ensure the pH of the sample is at or below required levels for adequate preservation.
- Note down the time when sample was collected in notebook.
- Note down weather conditions in your notebook.
- Note: Multiple bottles can still be one sample.
- Fill out sample container label and apply to the container. Apply custody seal if provided by the laboratory.
- Store the container in the prepared cooler.
- Fill out chain-of-custody form provided by lab. Line out and initial any mistake. Make sure to note the required analytical method (200.7, Table I-1, or 200.8) and the digestion method (total metals). Sign and date form when sampling is complete.
- Seal the completed chain-of-custody form in a zip lock bag, and store in the cooler with the sample bottles.
- Transport the cooler to contractor's laboratory within required holding time.
- Complete Form P-1.
- Proceed to next outfall.

Decontamination Procedures:

- Dipper-type sampler:
- Examine for discoloration or residue prior to use.
- If there are signs of contamination, clean using detergent and water. Make sure the last rinse is with deionized water.

Post Sampling:

- Complete paper work – chain-of-custody and bottle labels. Fill out chain-of-custody form provided by lab. Line out and initial any mistake. Make sure to note the required analytical method (200.7, Table P-1, or 200.8) and the digestion method (total metals). Sign and date form when sampling is complete.
- Make sure you ask for the analysis you want on the chain-of-custody.
- Pack samples in cooler. Use cube ice if available but blue ice is ok. If using cube ice place it inside zip lock bags. May want to place each bottle inside a zip-lock bag. Place chain-of-custody in zip lock bag and place inside cooler.
- Transport the cooler to contractor's laboratory within the required holding time. For the majority of metals it is six months so not a problem but some parameters are shorter so need to be careful not to exceed a holding time
- Sign off on chain-of-custody and make sure the lab "takes" custody.

Outfall Locations

Perform benchmark monitoring on the samples collected at the outfalls listed in Table P-1. Form P-1 is a log that can be used to record monitoring events.

Form P-1: Monitoring Log for Quarterly Benchmark Monitoring

Facility Name:_____ Date:_____ Quarter:_____

Days Since Last Discharge:_____ Estimated Time Runoff Discharge Began:_____

Name:_____ Weather Information and discharges at the time of sample collection:_____

Signature:_____ _____

Outfall Location	Sector	Sampling Requirements	Time	Notes and Observations
OF 1	Q	Required. Submit the results to EPA.		
OF 2	N.P.AA	Required. Submit the results to EPA.		
OF 3	Q.R.AA	Required. Submit the results to EPA.		
OF 3A	Q.R	Required. Submit the results to EPA.		
OF 8	Q	Required. Submit the results to EPA.		
OF 9	Q	Required. Submit the results to EPA.		
OF 11	Q	Required. Submit the results to EPA.		

Impaired Waters Monitoring

2015 MSGP Part 6.2.4 gives the detailed requirements for impaired waters monitoring.

Sampling Frequency and Constraints:

Beginning in the first full quarter following your date of discharge authorization, you must monitor once per year at each outfall (except substantially identical outfalls) discharging stormwater to impaired waters without an EPA approved or established TMDL. This monitoring requirement does not apply after one year if the pollutant for which the waterbody is impaired is not detected above natural background levels in your stormwater discharge, and you document, as required in Part 5.5 (Additional Documentation Requirements), that this pollutant is not expected to be present above natural background levels in your discharge.

If the pollutant for which the water is impaired is not present and not expected to be present in your discharge, or it is present but you have determined that its presence is caused solely by natural background sources, you should include a notification to this effect in your first monitoring report, after which you may discontinue annual monitoring. To support a determination that the pollutant's presence is caused solely by natural background sources, you must keep the following documentation with your SWPPP records:

- An explanation of why you believe that the presence of the pollutant causing the impairment in your discharge is not related to the activities at your facility; and
- Data and/or studies that tie the presence of the pollutant causing the impairment in your discharge to natural background sources in the watershed.

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

When and Where to Collect Samples:

- Collect a grab sample at each outfall location listed in SWPPP 2015 Table P-3.
- Collect a sample annually.
- Collect samples during daylight hours.
- Collect samples from storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period. Document this on Form P-2.
- Collect samples within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and you must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from your site.

Table P-3: Discharges to Impaired Water Bodies Monitoring Requirements for NAVBASE Kitsap Bangor

Analytical Parameter	Method	Outfall				
		OF1	OF2	OF8	OF9	OF11
COD	410.4			A		A
Ammonia	SM4500-NH3 G			A		A
Fecal Coliform	MF 9222D	A	A			
TSS				Q	Q	Q

What Analytical Analyses are Required:

Table P-3 shows the analytical requirements.

Records and Reporting:

All monitoring data collected pursuant to 2015 MSGP Part 6.2 must be submitted to EPA using EPA's online system (www.epa.gov/netdmr) no later than 30 days (email date or postmark date) after you have received your complete laboratory results for all monitored outfalls for the reporting period. If you cannot access the online system, paper reporting forms may be used if a waiver is obtained from EPA. Paper forms must be submitted by the same deadline to the appropriate address identified in 2015 MSGP Part 7.9. If you are using paper reporting forms, EPA strongly recommends that you use the MSGP discharge monitoring report (MDMR) available at www.epa.gov/npdes/stormwater/msgp.

Corrective actions that arise from the analytical monitoring will be reported to EPA in the Annual Report. Any corrective action required must be performed consistent with SWPPP 2015's Section 7 and Appendix O and with 2015 MSGP Part 4.

Use the Form P-2 included in this Appendix to record benchmark sampling events. Keep this record along with the analysis results in SWPPP 2015, Appendix H.

Safety:

- Personal Protective Equipment: Raincoat, rain pants, hat/hood, gloves, colored safety vest, hard hat, and sturdy shoes or steel toe boots (if you will be lifting storm drain covers),
- Traffic cones,
- All monitoring must be done during daylight hours and monitoring must not be done during severe/extreme storm events,
- Consider taking along a partner for sampling in some locations,
- For emergency communication purposes, a cell phone and/or radio
- Wear safety/lab goggles if acids are used to preserve samples.

- In addition monitoring personnel should be aware of the cautionary measures appropriate for handling nitric acid (a preservative) that is typically placed in the sample container by the contract lab. When opening each of the sample bottles, be sure to have your face positioned away from the opening, as the moisture in the air will cause the nitric acid to fume.

Preparation:

- Good to go? 72 hour dry period
- Check safety gear (see list above)
- Check gear
- Sample bottles
- Dipper type sampler
- Notebook
- Manhole puller
- Pen/sharpie
- Chain-of-custody
- Bottle labels
- CoC seals
- Dipper (inspect and clean if necessary)
- Cooler (s)
- Sampling plan
- Ice/blue ice
- Plastic sheeting
- Paper towels or lab towels
- Analytical monitoring FormH-1
- Extra clean sample container – transfer container
- Zip-lock bags

Paperwork:

- Fill out labels and chain-of-custody, as much as you can, prior to leaving the office.
- Fill out Form H-2, as much as you can, prior to leaving the office.

Sampling:

- Note when the rainfall started.

- Put on gloves and safety goggles.
- Place traffic cones if applicable.
- Take care when removing manhole cover/catch basin grates. Don't fully remove catch basin grates. Just move to the side but leave some in groove. Take care not to allow the grate to fall in catch basin.
- Note details of discharge. Estimate flow rate or depth of flow and other details.
- Use dipper. Rinse in effluent three times. Don't touch dipper to sides or bottom of pipe, manhole, or catch basin.
- Insert dipper into effluent flow to collect sample. Be careful not disturb sediment/debris in the outfall pipe. Stay safely back from any ledges, bluffs, or drops.
- Fill and rinse the sampler with stormwater first, and then fill again with the stormwater sample.
- Fill bottles to about the neck. Don't overfill as you will lose the preservative. Most bottles will be pre-preserved by the lab (contain a few ml of acid). Take care when removing cap as moisture in the air can react with the acid. This is especially true with nitric acid, which is used to preserve metals samples. Hold the bottle away from you when opening. Keep cap oriented down to prevent pollutants from settling in the cap.
- If necessary add nitric acid until the pH of the sample falls below 2.
- A pH indicator is useful but not required. It would be used to ensure the pH of the sample is at or below required levels for adequate preservation.
- Note down time when sample was collected in notebook.
- Note down weather conditions in your notebook.
- Note: Multiple bottles can still be one sample.
- Fill out sample container label and apply to the container. Apply custody seal if provided by the laboratory.
- Store the container in the prepared cooler.
- Fill out chain-of-custody form provided by lab. Line out and initial any mistake. Make sure to note the required analytical method (200.7, Table I-1, or 200.8) and the digestion method (total recoverable). Sign and date form when sampling is complete.
- Seal the completed chain-of-custody form in a zip lock bag, and store in the cooler with the sample bottles.
- Transport the cooler to contractor's laboratory within required holding time.
- Complete Form P-2.
- Proceed to next outfall.

Decontamination Procedures:

- Dipper-type sampler:
- Examine for discoloration or residue prior to use.
- If there are signs of contamination, clean using detergent and water. Make sure the last rinse is with deionized water.

Post Sampling:

- Complete paper work – chain-of-custody and bottle labels. Fill out chain-of-custody form provided by lab. Line out and initial any mistake. Make sure to note the required analytical method (200.7, Table I-1, or 200.8) and the digestion method (total recoverable). Sign and date form when sampling is complete.
- Make sure you ask for the analysis you want on the chain-of-custody.
- Pack samples in cooler. Use cube ice if available but blue ice is ok. If using cube ice place it inside zip lock bags. May want to place each bottle inside a zip-lock bag. Place chain-of-custody in zip lock bag and place inside cooler.
- Transport the cooler to contractor's laboratory within the required holding time. For the majority of metals it is six months so not a problem but some parameters are shorter so need to be careful not to exceed a holding time
- Sign off on chain-of-custody and make sure lab "takes" custody.

Outfall Locations:

Perform impaired waters monitoring on the samples collected at the outfalls listed in Table H-4.

Form P-2: Monitoring Log for Annual Impaired Water Monitoring

Facility Name:_____ Date:_____

Days Since Last Discharge:_____ Estimated Time Runoff Discharge Began:_____

Name:_____ Weather Information and discharges at the time of sample collection:_____

Signature:_____ _____

Outfall Location	Sector	Sampling Requirements	Time	Notes and Observations
OF1		Required. Submit the results to EPA.		
OF2		Required. Submit the results to EPA.		
OF7		Required. Submit the results to EPA.		
OF8		Required. Submit the results to EPA.		
OF10		Required. Submit the results to EPA.		
OF11		Required. Submit the results to EPA.		
OF13		Required. Submit the results to EPA.		

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APPENDIX Q: FACILITY MAPS

Facility maps provided separately in a roll. Maps are also available electronically in Adobe Acrobat format on the CD supplied with this plan.

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Figure 4-[redacted]