

UIC 00253

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**DATA CALL 1: GENERAL INSTALLATION INFORMATION**

**1. ACTIVITY: NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT**

- Name

Official name	Naval Undersea Warfare Center Division Keyport
Acronym(s) used in correspondence	NAVUNSEAWARCENDIV KEYPORT, WA
Commonly accepted short title(s)	NUWCDIV Keyport (only internally)

- Complete Mailing address

Commander  
Naval Undersea Warfare Center Division Keyport  
610 Dowell Street  
Keyport, WA 98345-7610

- PLAD

NAVUNSEAWARCENDIV KEYPORT WA

- PRIMARY UIC: N00253

- ALL OTHER UIC (s):

N30041  
N40829  
N40856  
N40867  
N45507  
N47619  
N48519  
N52861

**PURPOSE:**

Range Service Craft Mgmt  
Craft (YTT-9)  
Craft (YTT-10)  
Craft (YTT-11)  
Nanoose Range  
BOS Support (Non-NIF)  
FMS Training  
Range Support

**2. PLANT ACCOUNT HOLDER:**

- Yes  No (check one)

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3. ACTIVITY TYPE:

• HOST COMMAND:

• Yes  No (check one)

• TENANT COMMAND:

• Yes No  (check one)

• Primary Host (current) UIC: \_\_\_\_\_  
• Primary Host (as of 01 Oct 1995) UIC: \_\_\_\_\_  
• Primary Host (as of 01 Oct 2001) UIC: \_\_\_\_\_

• INDEPENDENT ACTIVITY:

• Yes No  (check one)

4. SPECIAL AREAS:

Name	Location	UIC
Naval Undersea Warfare Annex Naval Undersea Warfare Center Division Keyport	Silverdale, WA	N00253
Cape Prince of Wales Field Station	Cape Prince of Wales, AK	N68951

5. DETACHMENTS:

Name	UIC	Location	Host name	Host UIC
NAVUNSEAWARCEN DET HAWTHORNE	N41869	Hawthorne, NV	Hawthorne Army Ammunition Plant	W65XME
NAVUNSEAWARCEN DET HAWAII	N35266	Lualualei, HI	Naval Magazine	N68297
NAVUNSEAWARCEN DET SAN DIEGO	N42039	San Diego, CA	Naval Air Station North Island	N00246
NAVUNSEAWARCEN DET ARCTIC SUBMARINE LABORATORY	N68951	San Diego, CA	Naval Command Control and Ocean Surveillance Center RDT&E Div (NRaD)	N66001

6. BRAC IMPACT: Were you affected by previous Base Closure and Realignment decisions (BRAC-88, -91, and/or -93)? If so, please provide a brief narrative.

Yes. Naval Undersea Warfare Center Division Keyport was established during BRAC-91, as part of the Navy's RDT&E, Engineering, and Fleet Support Activities Consolidation Plan. That consolidation assigned Keyport technical responsibility for providing engineering and industrial base functions for Undersea Warfare (USW) programs. Under BRAC-91, Keyport remained responsible for management of its test ranges and become the parent Command for the Arctic Submarine Laboratory Detachment, San Diego, CA.

These technical functions were assigned to Division Keyport as part of the Naval Undersea Warfare Center to capitalize upon the technical synergy of consolidating like functions to maximize military value. That concept has paid considerable dividends, allowing efficient utilization of resources and effective downsizing of the workforce at Keyport. Through January 1994, Keyport had reduced its civilian workforce level by 600 employees below the BRAC-91 (FY90) baseline. BRAC-91 projected overall Keyport workforce reductions of 701 employees through FY96. Keyport is well on track in that downsizing effort and will meet the BRAC-91 reductions by the end of FY94 (2 years earlier than projected).

BRAC-93 resulted in no changes in Keyport's mission or size. However, the critical role of the Division was reaffirmed by its high military-value ranking among the Technical Centers. This was again confirmed by winning the Federal Quality Institute 1994 National Quality Improvement Award.

7. MISSION:

Current Missions

During the two years since NUWC was formed, significant mission purification has been accomplished, eliminating redundant capabilities, focusing scarce resources on core mission capabilities, and ensuring quality execution of the remaining functions. Commander, Naval Undersea Warfare Center has employed a continuous process of self-examination to evaluate past, present, and future mission roles and responsibilities, core technical capabilities, and opportunities for privatization of non-core work. The results of these examinations have focused the mission at Keyport into the following areas:

Torpedoes/Targets/Countermeasures/Undersea Vehicles:

- Test and Evaluation for Proofing/Periodics/Qualification.
- Maintenance Engineering for Operational Systems.
- Depot/IMA Repair.
- Overhaul, Upgrade, Repair, and Progressive Level Maintenance.
- Maintenance and Issue of Approved Hardware and Software Baselines.
- Engineering and Manufacturing of out-of-production replacement components for operational systems.
- Integrated Logistics/Supply/Fleet Support.
- Off-line Test Equipment Support.

Ranges:

- Range Support for DT&E Testing on Pacific Ranges.
- Range Support for RDT&E Testing on Northwest Ranges.
- Development and Maintenance of Northwest Ranges.

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Current Missions (continued)

Arctic Program Coordination

Submarine/Surface Ship Combat Control and Sonar/Acoustics:

- Depot Repair and Overhaul.
- Technical Data for Systems Support.
- Manufacturing of out-of-production replacement components for operational systems.
- Supply Support.
- Packaging, handling, shipping and transportation.

Operational Testing:

- Operational Test and Evaluation of USW systems (Trusted Agent for assigned USW systems).
- Ship ASW systems testing (e.g., FORACS, CSSQT, SESEF, WSAT) for Pacific Ranges.

Projected Missions for FY2001

NUWC Division, Keyport's current mission is expected to remain, in the main, unchanged during this period. However, due to the evolving regional hub concept to support both the fleet and shore infrastructure efficiencies, some of the mission elements are expected to shift their scope somewhat as Keyport becomes an important and integral component of a more focused and streamlined regional support structure. NUWC, Keyport's deep water access, its underwater test ranges, and its leading regional technical base, will make it an important component of a northwest regional hub with Navy activities such as PSNS, NAS Whidbey, Subase Bangor, and the new Everett home base, as well as potential joint regionalization with the Air Force at McCord and Fairchild, the Army at Ft. Lewis and the Coast Guard in Seattle. A few of the potential contributions of NUWC, Keyport to the Northwest Hub are:

- Regional Industrial Hub for Information Technology Development and Applications.
- Industrial Environmental Center for Pollution Prevention, Industrial Recycling, Hazardous Waste Minimization, and Environmental Compliance.
- Regional Environmental Stress Testing and Component Qualification Laboratory.
- Regional Failure Analysis Laboratory for Electrical, Electronic, and Mechanical Components.
- Regional Engineering Data and Management Information Control System Design and Development Facility.

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## 8. UNIQUE MISSIONS:

### Current Unique Missions

As a result of the ongoing examination of NUWC roles and responsibilities directed by Commander, Naval Undersea Warfare Center, Keyport is focused on the following unique mission elements:

#### Torpedoes/Targets/Countermeasures/Undersea Vehicles:

- Test and Evaluation for Proofing/Periodics/Qualification.
  - Conduct weapon performance, radiated noise, and acoustic data analysis and reporting for production acceptance of USW torpedoes, targets, and countermeasures.
  - Develop, maintain, and operate a land-based test facility employed in test and evaluation of development and production acceptance of undersea vehicles.
  - Develop, maintain, and operate facilities for conducting environmental stress testing (e.g., vibration, shock, temperature) of pre-production, and periodic samples of components from new production USW torpedoes, targets, and countermeasures.
- Maintenance Engineering for Operational Systems.
  - Provide life-cycle engineering support to Fleet IMA's for assigned USW torpedoes, targets, countermeasures, and test equipment.
  - Manage and maintain facilities, equipment, procedures, and personnel to effect repair of designated system components from the Fleet IMA's.
  - Provide maintenance engineering of tests, test equipment, and test-set software for the Depot.
  - Issue standard reliability reports in accordance with approved plans.
  - Conduct quality evaluation programs.
- Depot/IMA Repair.
  - Operate high-capacity Intermediate-level maintenance facilities for USW torpedoes, targets, and countermeasures.
  - Provide full life-cycle maintenance engineering support to the depot.
  - Provide Quality Assurance management of Keyport's IMA and Depot.
- Overhaul, Upgrade, Repair, and Progressive Level Maintenance.
  - Operate the only facilities for depot-level maintenance, repair, and integration of overhauls and upgrades to USW torpedoes, targets, and countermeasures.
  - Procure, manufacture, and assemble kits for torpedo/target ORDALT's.
- Maintenance and Issue of Approved Hardware and Software Baselines.
  - Maintain and operate the hardware and software baseline data base for all USW torpedoes and targets and assigned combat systems.
  - Maintain physical responsibility for the documents and electronically stored information which describes the technical baseline (including drawings and specifications).

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Current Unique Missions (continued)

- Engineering and Manufacturing of out-of-production replacement components for operational systems.
  - FCIM engineering for USW applications.
  - Robotics engineering for USW maintenance applications.
- Integrated Logistics/Supply/Fleet Support.
  - Responsible for technical interface on supply-support functions with SPCC and DLA.
  - Provide Technical Data Packages to Procuring Agencies.
  - Evaluate vendor performance against specifications, including physical configuration audits, and first article, periodic, and functional testing.
  - Provide Supply Support Assistance to the Fleet, including provisioning AEL/APL maintenance, implementation of ORDALT's and demilitarization of obsolete hardware.
  - Perform Integrated Logistics Support planning/management for systems that are post- IOC (Initial Operational Capability).
- Off-line Test Equipment Support.
  - Identify, plan, and install upgrade kits for Fleet test equipment.

Ranges:

- Range Support for DT&E Testing on Pacific Ranges.
  - Coordination of tracking instrumentation support, mobile target services, and tracking ranges. Maintain and operate special Combat Systems test sites (FORACS I and III).
  - Support ship testing and ASW exercise reconstruction.
- Range Support for RDT&E Testing on Northwest Ranges.
  - Support RDT&E testing of special test vehicles, prototype torpedoes, advanced mobile and stationary targets, UUV's and countermeasures. Test design changes to these vehicles and devices.
  - Operate test ranges dedicated to full-spectrum RDT&E and production acceptance testing (proofing) of torpedoes, targets, and countermeasures. Ranges include the Navy's only instrumented littoral/shallow-water (<500 feet) 3-D test range, the Joint U.S.-Canadian medium depth test range, and a low-noise/high-security range in Dabob Bay for weapons test and evaluation and Trident submarine Sea Trials.
  - Operate full-spectrum range support instrumentation for acoustic and E- and B-Field measurements. Collect, process, and analyze resulting data.

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Current Unique Missions (continued)

- Develop, maintain, and operate systems designed for routine search and recovery of USW torpedoes and the only system for recovering units buried in the ocean floor.
- Development and Maintenance of Northwest Ranges.
  - Develop and maintain high accuracy 3-D underwater ranges capable of full-spectrum RDT&E and production acceptance testing of torpedoes, targets and countermeasures.
  - Develop and test improvements in underwater tracking instrumentation, ranges, and new applications such as shallow-water and under-ice.

## Arctic Program Coordination

- Operate the Arctic Submarine Laboratory providing arctic submarine and Ice Camp/Field Station/range operational support and arctic submarine systems development.

## Submarine Combat Control and Acoustics; Surface Ship ASW/SONAR/Acoustics:

- Depot Repair and Overhaul.
  - Provide electronic module test set, test set software, and procedures development including MSRA and CASS.
  - Provide repair and overhaul of cards, equipments, and systems.
  - Provide overhaul engineering.
- Technical Data for Systems Support.
  - Maintain and operate the approved hardware and software baseline data base for assigned combat systems.
  - Provide technical data packages for assigned systems to procuring agencies.
- Manufacturing of out-of-production replacement components for operational systems.
  - Manufacture spare parts for combat systems no longer in production or no longer supported by the original equipment manufacturer.
- Spare Hardware Support.
  - Procure, manufacture, and assemble kits for ORDALT's.
  - Technical interface on supply-support functions with SPCC and DLA.
  - Provide Supply Support Assistance to the Fleet, including provisioning AEL/APL maintenance and implementation of ORDALT's.
- Supply Support.

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Current Unique Missions (continued)

- Packaging, handling, shipping, and transportation.

Operational Testing:

- Operational Test and Evaluation of USW systems (Trusted Agent for assigned USW systems).
  - Provide test and operational assessment engineering (Trusted Agent responsibilities) for COMOPTEVFOR on assigned systems.
- Ship ASW systems testing (e.g., FORACS, CSSQT, SESEF, WSAT) for Pacific Ranges.

Projected Unique Missions for FY 2001

The unique missions listed in the preceding section are expected to continue in FY 2001. Those projected missions for FY 2001 listed in section 7 are likewise unique. Since these mission elements already appear in their respective sections, they will not be repeated here.

9. IMMEDIATE SUPERIOR IN COMMAND (ISIC):

- Operational name Commander, NUWC UIC 68934
- Funding Source DBOF UIC Various

10. PERSONNEL NUMBERS:

	<u>On Board Count as of 01 January 1994</u>		
	Officers	Enlisted	Civilian (Appropriated)
• Reporting Command*	<u>16</u>	<u>271</u>	<u>2916</u>
• Tenants (total)	<u>0</u>	<u>5</u>	<u>18</u>

\* Note: Hawaii Detachment (UIC N35261) had 1 officer, 0 enlisted, and 113 civilians on board. San Diego Detachment (UIC N42039) had 0 officers, 0 enlisted, and 37 civilians on board.

	<u>Authorized Positions as of 30 September 1994</u>		
	Officers	Enlisted	Civilian (Appropriated)
• Reporting Command*	<u>21</u>	<u>128</u>	<u>2728</u>
• Tenants (total)	<u>0</u>	<u>5</u>	<u>18</u>

\* Note: Hawaii Detachment (UIC N35261) will have 1 officer, 0 enlisted, and 113 civilians authorized. San Diego Detachment (UIC N42039) will have 0 officers, 0 enlisted, and 37 civilians authorized.

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11. KEY POINTS OF CONTACT (POC):

Title/Name	Office	Fax	Home
• CO/OIC <u>CAPT Dennis K. Gibbs</u>	(206) 396-2345	(206) 396-2149	(206) 697-4957
• <u>Duty Officer</u>	(206) 396-2551	[N/A]	[N/A]
• BRAC 95 POC <u>Mr. Ronald Krell</u>	(206) 396-2981	(206) 396-7800	(206) 779-3620

12. TENANT ACTIVITY LIST:

- Tenants residing on main complex (shore commands)

Tenant Command Name	UIC	Officer	Enlisted	Civilian
Naval Regional Medical Center Branch, Keyport	N32586	0	5	6
Defense Printing Service Reprographics Facility Keyport	N43326	0	0	4
Defense Financial and Accounting Service	HQ0103	0	0	8
<b>TOTAL</b>		0	5	18

- Tenants residing on main complex (homeported units)

Tenant Command Name	UIC	Officer	Enlisted	Civilian
N/A				

- Tenants residing in Special Areas (Special Areas are defined as real estate owned by host command not contiguous with main complex; e.g., outlying fields).

Tenant Command Name	UIC	Officer	Enlisted	Civilian
N/A				

- Tenants (Other than those identified previously)

Tenant Command Name	UIC	Officer	Enlisted	Civilian
N/A				

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13. REGIONAL SUPPORT:

Activity name	Location	Support function (include mechanism such as ISSA, MOU, etc.)
<b>ISSA's</b>		
Naval Regional Medical Center Detachment Keyport	Bremerton, WA	Provide Clinic space and all services (utilities, fire, security, safety, supplies, etc.).
Naval Undersea Warfare Center Division, Newport Office	Keyport, WA	Provide space and all support services to NUWC Newport Office (utilities, fire, security, phone, safety, etc.).
Defense Printing Services Reprographics Facility Keyport	Keyport, WA	Provide space and all support services to include utilities, safety, custodial, security, etc.
Naval Submarine Base Bangor	Silverdale, WA	Provide ADP services, transportation, utilities, float plane support, test and evaluation.
Naval Audit Service	San Diego, CA	Provide space and all support services (phone, utilities, custodial, fire, police, etc.) for on-site Naval Audit personnel.
Defense Logistics Agency Defense Industrial Supply Center	Philadelphia, PA	Provide testing of ethylene propylene preformed packings.
Strategic Weapons Facility Pacific	Silverdale, WA	Provide Nuclear Accident backup support, equipment calibration support, Lab analysis, test and evaluation for signature and vibration analysis.
Naval Ordnance Center, Pacific Division Concord	Concord, CA	Reciprocal agreement with Concord and NUWC Keyport for emergency computer backup support.
Naval Ordnance Center, Pacific Detachment	Port Hadlock, WA	Provide support services to Pacific Detachment, Port Hadlock, WA to include purchasing/contracting, communications, data processing, supplies, environmental administration support, utilities, etc.
Naval Undersea Warfare Center, Detachment Norfolk	Fort Story, VA	Provide 200 square feet of space for Hyper-fix antenna and associated equipment.
Navy Resale Activity Bangor	Silverdale, WA	Provide space, utilities and real property maintenance for Branch Exchange at Keyport.
<b>MOA's</b>		
National Oceanographic and Atmospheric Agency	Seattle, WA	Acquisition of Test Program Sets for next generation Weather Radar System.

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Cooperative Research and Development Agreement with Team 1 USA	Bainbridge Island, WA	Provide engineering and manufacturing services.
Kitsap Economic Development Council	Bremerton, WA	Provide support in grant preparation efforts.
Kitsap Economic Development Council (KEDC) and Olympic College	Bremerton, WA	Provide support of the Computer Aided Logistics Satellite.
Olympic College	Bremerton, WA	Provide support of the Poulsbo Campus siting, practicums/internships and adjunct instructors in environmental, CALS, etc.
Pacific Missile Test Center	Point Mugu, CA	Responsible for Logistics support of the Participants Instrumentation Packages.
Defense Finance and Accounting Service	Denver, CO	Provide support services (office space, fire, security, real property maintenance, safety, medical, etc.).
NAVSEA AEGIS Program Manager	Arlington, VA	Use of MK 46 Exercise Torpedo during AEGIS Combat System Ship Qualifications Trials.
Naval Sea Systems Command PMO 402	Arlington, VA	Secure, short-term, range data link.
Naval Sea Systems Command PMO 415	Arlington, VA	Secure, short-term, range data link.
Reserve Patrol Wing Pacific Detachment	Whidbey Island, WA	Range data transfer.
Space and Naval Warfare Systems Command	Arlington, VA	Secure, short-term, data link.
Defense Printing Service Branch Office Bangor	Silverdale, WA	Automated Logistics Publishing Services (ALPS)
Naval Ordnance Center Atlantic Division Charleston	Charleston, SC	Secure data link to the MK 50 Torpedo secure network.
Naval Undersea Warfare Center Division Newport	Newport, RI	Secure data link to Keyport's secure VAX network.
Service School Command, Orlando	Orlando, FL	Secure data link to the MK 50 Torpedo secure network.
Naval Sea Systems Command PMO 406	Arlington, VA	Provide Material Management function for the MK 46 Torpedo program.
Naval Surface Force U.S. Pacific Fleet	Pearl Harbor, HI	Diving and salvage support.
Fleet Industrial Supply Center	Bremerton, WA	Provide contracting services and administer performance of contracts.
Naval Surface Warfare Center Dahlgren Division Coastal Systems Station Panama City	Dahlgren, VA	Secure data link via Stu III.

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Commander Patrol Wing Moffett Field, CA	Moffett Field, CA	Range data transfer.
IMA SUBASE New London Submarine Squadron Two	New London, CT	Installation of remote video system and side scan sonar for arctic operations.
U.S. Army Pacific	Fort Shafter, HI	Video teleconferencing sharing.
Directorate Maritime Engineering Support for Chief of the Defense Staff (Canada)	Ottawa, Canada	Provide in-water tracking and acoustic measurement hardware, craft, and ancillary support including launch/retrieval/recovery and associated data analysis support.
Foreign Military Sales (FMS) for the following countries: Argentina Australia Brazil Canada Chile China Denmark Ecuador Egypt France Germany Greece Indonesia Iran Israel Italy Japan Malaysia Mexico Morocco NATO Netherlands New Zealand Pakistan Portugal Saudi Arabia South Korea Spain Taiwan Turkey United Kingdom		Services provided for the FMS countries listed include, but are not restricted to the following: Torpedo IMA and Depot, Refurbishment, Ranging, Proofing, Combat System Support (both submarine and surface), Analysis Support, Operation Management Services, Installation Technical Support, Maintenance Aids and Test Equipment, Technical Assist Teams, Operations and Maintenance Documentation, and Engineering Support.  (Note: Not all services are performed for every country.)
<b>OTHER AGREEMENTS</b>		
Jefferson County Fire District #1	Jefferson County, WA	Reciprocal fire-fighting agreement.
Kitsap County Fire Protection District #2, #15, #18	Kitsap County, WA	Reciprocal fire-fighting agreement.

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Kitsap County Sheriff's Department	Port Orchard, WA	Law enforcement service for NUWC Keyport leased buildings.
Kitsap Federal Credit Union	Bremerton, WA	NUWC Keyport supplies space.
U.S. Coast Guard and COMSUBPACREP PNW	Seattle, WA	Search and Rescue (SAR) Agreement (COMSUBPACREP Pacific Northwest has authority to commit Keyport assets to a SAR operation).
Naval Undersea Museum	Keyport, WA	Provide space and all support services (custodial, fire, security, utilities, disposal, administration, safety, phones, etc.).
Naval Undersea Museum Foundation and Kitsap County Commissioners	Keyport, WA	Agreement for Naval Undersea Museum use by the County.
Westinghouse Electric Corporation	Cleveland, OH	Connection of Westinghouse Corporation Cleveland Ohio to NUWC Keyport Secure Technical Information System and MK 50 Torpedo Technical Data System. Provide office and shop facilities.
Alliant Techsystems Inc. Underwater Systems Division	Hopkins, MN	Connection of Alliant Techsystems Inc., to NUWC Keyport Secure Technical Information System and MK 50 Torpedo Technical Data System. Provide office and shop facilities.
Hughes Aircraft Corporation	Fullerton, CA	Connection of Hughes Aircraft Corporation to NUWC Keyport and MK 48/ADCAP Torpedo Technical Data Systems. Provide office and shop support facilities.
Applied Research Laboratory Penn State University	State College, PA	Provide office and shop facilities and all support services (custodial, fire, security, utilities, disposal, safety, telephones, transportation, etc.).
<b>COMMANDER, OPERATIONAL TEST AND EVALUATION FORCE (COMOPTEVFOR) AGREEMENTS</b>		These are agreements to provide independent technical test planning, analysis, and system performance evaluations for COMOPTEVFOR for the indicated USW systems.
CNO Project 1258-04	Norfolk, VA	AN/SQY-1 Surface Ship ASW Combat System.
CNO Project 802-2	Norfolk, VA	Surface ASW Combat System Integration Program.
CNO Project 834-1	Norfolk, VA	SSN 668 Vertical Launch System (VLS).
CNO Project 164-1	Norfolk, VA	SURTASS Block Upgrade Operational Test and Evaluation.
CNO Project 1214	Norfolk, VA	SURTASS Low Frequency Active Operational Test and Evaluation.
CNO Project 1009	Norfolk, VA	Fixed Distribution System Program Operational Assessment.

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CNO Project 1254	Norfolk, VA	Retract JUNIPER Operational Test and Evaluation.
DEPCOMOPTEVFOR	Norfolk, VA	Secure data link.
AN/BQQ-5E	Norfolk, VA	Sonar Systems Operational Test and Evaluation.
CNO Project 312-01	Norfolk, VA	Integrated Electronic Support Measures.
CNO Project 1351	Norfolk, VA	AN/WLY-1.
CNO Project 312	Norfolk, VA	Integrated Electronic Support Measures Mast Program.
CNO Project 1262	Norfolk, VA	Type 18 Periscope Automatic Direction Finding System.
CNO Project 1401	Norfolk, VA	OT&E for Submarine Offboard Mine and Search System (SOMSS).
CNO Project 1393	Norfolk, VA	Advanced Submarine Tactical Electronic Support Measures Combat System.
CNO Project AN/BSY-1 (V)	Norfolk, VA	Follow on operational testing of Combat Control/Acoustic Test.
CNO Project 640	Norfolk, VA	AN/BLD-1
CNO Project	Norfolk, VA	New Attack Submarine "Centurion".
CNO Project 1303	Norfolk, VA	Surveillance Direction System Program.
CNO Project 1344	Norfolk, VA	Photonics Mast.
CNO Project AN/WLY-1	Norfolk, VA	Acoustic Intercept System.
<b>MOU's</b>		
Applied Physics Laboratory, University of Washington	Seattle, WA	Joint effort - APL and NUWC Keyport Arctic Underwater Tracking and Telemetry Improvements.
Applied Research Laboratory, Penn State University	State College, PA	Implementation, operation and maintenance of Digital Simulation at NUWC Keyport.
Olympic National Park, Department of Interior	Klaloch, WA	Emergency backup power support.
U.S. Fish and Wildlife Service (FWS)	Olympia, WA	Provide notification to FWS when range operations will occur and follow guides to protect natural resources.
Western Washington University and Olympic College	Bellingham, WA and Bremerton, WA	Mutual agreement between NUWC Keyport and both Western Washington University and Olympic College to provide electronic test equipment and classroom space for employees enrolled in the Bachelor of Science in Electronics Engineering Technology Program.
PSNS/NAVBASE Seattle/SUBGRU9/SUBASE	Bremerton, WA	Escort of decommissioned defueled submarine reactor compartments being barged from Bremerton to Hanford, WA.
Fleet Industrial Supply Center	Bremerton, WA	Provides contracting services.

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Naval Surface Warfare Center Dahlgren, White Oak Detachment	Silver Spring, MD	Responsible for designing fiber optic cable system, junction box, and cable termination hardware to be laid on the Nanose Range for CAPTOR Improvement Program Testing.
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14. FACILITY MAPS

- Local Area Map
- Installation Map / Activity Map / Base Map / General Development Map / Site Map
- Aerial photo(s)
- Air Installations Compatible Use Zones (AICUZ) Map

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**BRAC-95 CERTIFICATION**

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**ACTIVITY COMMANDER**

NAME: Dennis K. Gibbs  
(Please type or print)

  
Signature

Captain, US Navy  
Title

8 February 1994  
Date

**NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT**  
Activity

BRAC-95 CERTIFICATION

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Reference: SECNAVNOTE 11000 of 08 December 1993

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I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

NAME: Dennis K. Gibbs  
(Please type or print)  
Commander

  
Signature  
10 FEBRUARY 94

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

NAVAL UNDERSEA WARFARE CENTER DIVISION KEYPORT

Activity

Revision to the NUWC Division Keyport BRAC 95 Data Call 1 Submission (PAGE 3-4).

# Document Separator

**DATA CALL 66  
INSTALLATION RESOURCES**

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**Activity Information:**

Activity Name:	NUWC Division, Keyport
UIC:	N00253
Host Activity Name (if response is for a tenant activity):	
Host Activity UIC:	

**General Instructions/Background.** A separate response to this data call must be completed for each Department of the Navy (DON) host, independent and tenant activity which separately budgets BOS costs (regardless of appropriation), and is located in the United States, its territories or possessions.

**Introduction**

NUWC Division, Keyport executes critical functions of test and evaluation; in-service engineering; depot and industrial support for undersea weapons, targets, and countermeasures; and maintains and operates Pacific undersea ranges.

The following data represents the total general and administrative functions and costs which support the mission capability and workload of NUWC Division, Keyport as submitted in the FY96/96 Biennial Financial Management Budget (BFMB), as well as Base Operating Support (BOS) costs consistent with the BOS exhibit (BS-1) and supplemented as necessary. Services and supplies data corresponds to the Fund 1/IF-4 exhibit, also submitted in the FY96/96 BFMB.

The information provided herein is a budgetary ESTIMATE only. As such, it is certified only as projected, or organizational level, budget data which has been previously submitted via the Chain of Command and is therefore subject to revision at any or all levels above this organization.

**1. Base Operating Support (BOS) Cost Data.** Data is required which captures the total annual cost of operating and maintaining Department of the Navy (DON) shore installations. Information must reflect FY 1996 budget data supporting the FY 1996 NAVCOMPT Budget Submit. Two tables are provided. Table 1A identifies "Other than DBOF Overhead" BOS costs and Table 1B identifies "DBOF Overhead" BOS costs. These tables must be completed, as appropriate, for all DON host, independent or tenant activities which separately budget BOS costs (regardless of appropriation), and, are located in the United States, its territories or possessions. Responses for DBOF activities may need to include both Table 1A and 1B to ensure that all BOS costs, including those incurred by the activity in support of tenants, are



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identified. If both Table 1A and 1B are submitted for a single DON activity, please ensure that no data is double counted (that is, included on both Table 1A and 1B). The following tables are designated to collect all BOS costs currently budgeted, regardless of appropriation, e.g., Operations and Maintenance, Research and Development, Military Personnel, etc. Data must reflect FY 1996 and should be reported in thousands of dollars.

**a. Table 1A - Base Operating Support Costs (Other Than DBOF Overhead).** This Table should be completed to identify "Other Than DBOF Overhead" Costs. Display, in the format shown on the table, the O&M, R&D, and MPN resources currently budgeted for BOS services. O&M cost data must be consistent with data provided on the BS-1 exhibit. Report only direct funding for the activity. Host activities should not include reimbursable support provided to tenants, since tenants will be separately reporting these costs. Military personnel costs should be included on the appropriate lines of the table. Please ensure that individual lines of the table do not include duplicate costs. Add additional lines to the table (following line 2j., as necessary, to identify any additional cost elements not currently shown). **Leave shaded areas of table blank.**



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<b>Table 1A - Base Operating Support Costs (Other Than DBOF Overhead)</b>			
<b>Activity Name: NUWC Division, Keyport</b>		<b>UIC: N00253</b>	
<b>Category</b>	<b>FY 1996 BOS Costs (\$000)</b>		
	<b>Non-Labor</b>	<b>Labor</b>	<b>Total</b>
<b>1. Real Property Maintenance Costs:</b>			
1a. Maintenance and Repair	313.0	11.0	324.0
1b. Minor Construction	30.0	0.0	30.0
<b>1c. Sub-total 1a. and 1b.</b>	<b>343.0</b>	<b>11.0</b>	<b>354.0</b>
<b>2. Other Base Operating Support Costs:</b>			
2a. Utilities	156.0	0.0	156.0
2b. Transportation	0.0	0.0	0.0
2c. Environmental	0.0	0.0	0.0
2d. Facility Leases	0.0	0.0	0.0
2e. Morale, Welfare & Recreation (less Maintenance and Repair)	107.5	163.3	270.8
2f. Bachelor Quarters (less Maintenance and Repair)	154.6	32.7	187.3
2g. Child Care Centers	0.0	0.0	0.0
2h. Family Service Centers	0.0	0.0	0.0
2i. Administration	91.9	130.6	222.5
2j. Other (Specify):	<b>2,361.4</b>	<b>796.7</b>	<b>3,158.1</b>
- Galley Operations	362.5	0.0	362.5
- Civilianization of Military	1,600.0	0.0	1,600.0
- Naval Undersea Museum	268.9	391.8	660.7
- Retail Supply Operations	130.0	404.9	534.9
<b>2k. Sub-total 2a. through 2j:</b>	<b>2,871.4</b>	<b>1,123.3</b>	<b>3,994.7</b>
<b>3. Grand Total (sum of 1c. and 2k):</b>	<b>3,214.4</b>	<b>1,134.3</b>	<b>4,348.7</b>

Notes:

1. The BS-1 exhibit format did not accommodate the total requirement for O&M,N Base Operating Support funds. Other services which must be funded from the O&M,N BOS, namely the non-labor portion of military administration, galley operations, retail supply operations, civilianization of military, and Undersea Museum support were itemized at the bottom of the BS-1 exhibit and have been itemized on this data sheet.



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**b. Funding Source.** If data shown on Table 1A reflects more than one appropriation, then please provide a break out of the total shown for the "3. Grand-Total" line, by appropriation:

<u>Appropriation</u>	<u>Amount (\$000)</u>
O&MN	4,348.7

**c. Table 1B - Base Operating Support Costs (DBOF Overhead).** This Table should be submitted for all current DBOF activities. Costs reported should reflect BOS costs supporting the DBOF activity itself (usually included in the G&A cost of the activity). For DBOF activities which are tenants on another installation, total cost of BOS incurred by the tenant activity for itself should be shown on this table. It is recognized that differences exist among DBOF activity groups regarding the costing of base operating support: some groups reflect all such costs only in general and administrative (G&A), while others spread them between G&A and production overhead. Regardless of the costing process, all such costs should be included on Table 1B. The Minor Construction portion of the FY 1996 capital budget should be included on the appropriate line. Military personnel costs (at civilian equivalency rates) should also be included on the appropriate lines of the table. Please ensure that individual lines of the table do not include duplicate costs. Also ensure that there is no duplication between data provided on Table 1A and 1B. These two tables must be mutually exclusive, since in those cases where both tables are submitted for an activity, the two tables will be added together to estimate total BOS costs at the activity. Add additional lines to the table (following line 21., as necessary to identify any additional cost elements not currently shown). **Leave shaded areas of table blank.**

**Other Notes:** All costs of operating the five Major Range Test Facility Bases at DBOF activities (even if direct RDT&E funded) should be included on Table 1B. Weapon Stations should include underutilized plant capacity costs as a DBOF overhead "BOS expense" on Table 1B.



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<b>Table 1B - Base Operating Support Costs (DBOF Overhead)<sup>1</sup></b>			
<b>Activity Name: NUWC Division, Keyport</b>		<b>UIC: N00253</b>	
Category	FY 1996 Net Cost from UC/FUND-4 (\$000)		
	Non-Labor	Labor	Total
<b>1. Real Property Maintenance Costs:</b>			
1a. Real Property Maintenance (>\$15K)	3,310	0 <sup>2</sup>	3,310
1b. Real Property Maintenance (<\$15K)	3,525	350	3,875
1c. Minor Construction (Expensed)	166	33	199
1d. Minor Construction (Capital Budget)	5,065	0 <sup>2</sup>	5,065
<b>1e. Sub-total 1a. through 1d.</b>	<b>12,066</b>	<b>383</b>	<b>12,449</b>
<b>2. Other Base Operating Support Costs:</b>			
2a. Command Office	902	570	1,472
2b. ADP Support	653	40	693
2c. Equipment Maintenance	437	30	467
2d. Civilian Personnel Services	372	1,127	1,499
2e. Accounting/Finance (DFAS)	0	0 <sup>3</sup>	0
2f. Utilities	818	40	858
2g. Environmental Compliance <sup>4</sup>	3,735	278	4,013
2h. Police and Fire	544	1,505	2,049
2i. Safety	540	504	1,044
2j. Supply and Storage Operations	2,575	2,090	4,665
2k. Major Range Test Facility Base Costs <sup>5</sup>	N/A	N/A	N/A
<b>2l. Other (Specify):</b>	<b>2,849</b>	<b>8,806</b>	<b>11,655</b>
- Administration	860	8,378	9,238
- Military Labor	0	388	388
- Other Engineering Support	1,247	40	1,287
- Base Communications	742	0 <sup>3</sup>	742
<b>2m. Sub-total 2a. through 2l:</b>	<b>13,425</b>	<b>14,990</b>	<b>28,415</b>
<b>3. Depreciation</b>	<b>361</b>	<b>0</b>	<b>361</b>
<b>4. Grand Total (sum of 1e. 2m, and 3.):</b>	<b>25,852</b>	<b>15,373</b>	<b>41,225</b>



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Notes:

- <sup>1</sup> Costs identified herein are based on the DBOF UC/Fund 4 and O&MN BS-1 Budget Exhibits, but, in consonance with the intent of BRAC Data Call #66, exclude those costs reported on the budget exhibits which are not directly related to operational support for the Division. Examples include FECA costs and Separation Incentive Pay.
- <sup>2</sup> Effort is contracted.
- <sup>3</sup> Accounting/Finance (DFAS) and Base Communications (COMNAVTELCOM) labor services will be provided without reimbursement.
- <sup>4</sup> Environmental compliance costs represent only the FY96 budgeted cost of specific projects and management of environmental programs. NUWC Division, Keyport has six designated National Priority List sites. Base closure would incur the cost of full remediation (as agreed with the State of Washington) which is estimated at over \$200 million. Additionally, removal and disposal of asbestos containing materials would cost in excess of \$9 million.
- <sup>5</sup> The Northwest, SOCAL, and MIDPAC Range Systems are not part of the DOD Major Range and Test Facility Base (MRTFB). These ranges are totally customer funded under DBOF.



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**2. Services/Supplies Cost Data.** The purpose of Table 2 is to provide information about projected FY 1996 costs for the purchase of services and supplies by the activity. (Note: Unlike Question 1 and Tables 1A and 1B, above, this question is not limited to overhead costs.) The source for this information, where possible, should be either the NAVCOMPT OP-32 Budget Exhibit for O&M activities or the NAVCOMPT UC/FUND-1/IF-4 exhibit for DBOF activities. Information must reflect FY 1996 budget data supporting the FY 1996 NAVCOMPT Budget Submit. Break out cost data by the major sub-headings identified on the OP-32 or UC/FUND-1/IF-4 exhibit, disregarding the sub-headings on the exhibit which apply to civilian and military salary costs and depreciation. Please note that while the OP-32 exhibit aggregates information by budget activity, this data call requests OP-32 data for the activity responding to the data call. Refer to NAVCOMPTINST 7102.2B of 23 April 1990, Subj: Guidance for the Preparation, Submission and Review of the Department of the Navy (DON) Budget Estimates (DON Budget Guidance Manual) with Changes 1 and 2 for more information on categories of costs identified. Any rows that do not apply to your activity may be left blank. However, totals reported should reflect all costs, exclusive of salary and depreciation.

<b>Table 2 - Services/Supplies Cost Data</b>	
<b>Activity Name:</b> NUWC Division, Keyport	<b>UIC:</b> N00253
Cost Category	FY 1996 Projected Costs (\$000)
Travel:	6,200
Material and Supplies (including equipment):	46,425
Industrial Fund Purchases (other DBOF purchases):	13,043
Transportation:	0
Other Purchases (Contract support, etc.):	76,167
<b>Total:</b>	<b>141,835</b>

Data Source: Exhibit Fund 1/IF-4



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**3. Contractor Workyears.**

a. **On-Base Contract Workyear Table.** Provide a projected estimate of the number of contract workyears expected to be performed "on base" in support of the installation during FY 1996. Information should represent an annual estimate on a full-time equivalency basis. Several categories of contract support have been identified in the table below. While some of the categories are self-explanatory, please note that the category "mission support" entails management support, labor service and other mission support contracting efforts, e.g., aircraft maintenance, RDT&E support, technical services in support of aircraft and ships etc.

<b>Table 3 - Contract Workyears</b>	
<b>Activity Name: NUWC Division, Keyport</b>	<b>UIC: N00253</b>
<b>Contract Type</b>	<b>FY 1996 Estimated Number of Workyears On-Base</b>
Construction:	8.2
Facilities Support:	61.2
Mission Support:	568.0
Procurement:	18.4
Other:*	0
<b>Total Workyears:</b>	<b>655.8</b>

\*Note: Provide a brief narrative description of the type(s) of contracts, if any, included under the "Other" category.



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**b. Potential Disposition of On-Base Contract Workyears.** If the mission/functions of your activity were relocated to another site, what would be the anticipated disposition of the on-base contract workyears identified on Table 3.

- 1) Estimated number of contract workyears which would be transferred to the receiving site (This number should reflect the number of jobs which would in the future be contracted for the receiving site, not an estimate of the number of people who would move or an indication that work would necessarily be done by the same contractor(s)):

Mission Support - 568

- 2) Estimated number of workyears which would be eliminated:

Construction	8.2
Facilities Support	31.2
Procurement	18.4
<b>Total:</b>	<b>57.8</b>

- 3) Estimated number of contract workyears which would remain in place (i.e., contract would remain in place in current location even if activity were relocated outside of the local area):

Facilities Support	20
Security	10
<b>Total:</b>	<b>30</b>

Notes:

1. Data assumes minimum level of facilities maintenance and security would remain to safeguard government assets.



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c. **"Off-Base" Contract Workyear Data.** Are there any contract workyears located in the local community, but not on-base, which would either be eliminated or relocated if your activity were to be closed or relocated? If so, then provide the following information (**ensure that numbers reported below do not double count numbers included in 3.1a. and 3.b., above**):

No. of Additional Contract Workyears Which Would Be Eliminated	General Type of Work Performed on Contract (e.g., engineering support, technical services, etc.)
0	All off-base Contractor support is in the Mission Support area and therefore would transfer with the function.

No. of Additional Contract Workyears Which Would Be Relocated	General Type of Work Performed on Contract (e.g., engineering support, technical services, etc.)
250	Logistics and Technical Services



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I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears RADM, USN  
Signature

Commander  
Title

18 Jul 94  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~\_\_\_\_\_  
NAME (Please type or print)~~

~~\_\_\_\_\_  
Signature~~

~~\_\_\_\_\_  
Title~~

~~\_\_\_\_\_  
Date~~

~~\_\_\_\_\_  
Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

E. R. STERNER  
NAME (Please type or print)

E. R. Sterner  
Signature

Commander  
Title  
Naval Sea Systems Command

8-15-94  
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)**

W. A. EARNER, JR.  
NAME (Please type or print)

W. A. Earner  
Signature

Title

8/25/94  
Date

**DATA CALL 66  
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BRAC 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

Dennis K. Gibbs  
NAME (Please type or print)

  
Signature

Commander  
Title

18 July 94  
Date

NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT  
Activity

# Document Separator

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**DATA CALL 65  
ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA**

**Activity Identification:** Please complete the following table, identifying the activity for which this response is being submitted.

<b>Activity Name:</b>	Naval Undersea Warfare Center Division, Keyport
<b>UIC:</b>	N00253
<b>Major Claimant:</b>	Naval Sea Systems Command

**General Instructions/Background:**

Information requested in this data call is required for use by the Base Structure Evaluation Committee (BSEC), in concert with information from other data calls, to analyze both the impact that potential closure or realignment actions would have on a local community and the impact that relocations of personnel would have on communities surrounding receiving activities. In addition to Cost of Base Realignment Actions (COBRA) analyses which incorporate standard Department of the Navy (DON) average cost factors, the BSEC will also be conducting more sophisticated economic and community infrastructure analyses requiring more precise, activity-specific data. For example, activity-specific salary rates are required to reflect differences in salary costs for activities with large concentrations of scientists and engineers and to address geographic differences in wage grade salary rates.

Questions relating to "Community Infrastructure" are required to assist the BSEC in evaluating the ability of a community to absorb additional employees and functions as the result of relocation from a closing or realigning DON activity.

Due to the varied nature of potential sources which could be used to respond to the questions contained in this data call, a block appears after each question, requesting the identification of the source of data used to respond to the question. To complete this block, identify the source of the data provided, including the appropriate references for source documents, names and organizational titles of individuals providing information, etc. Completion of this "Source of Data" block is critical since some of the information requested may be available from a non-DoD source such as a published document from the local chamber of commerce, school board, etc. Certification of data obtained from a non-DoD source is then limited to certifying that the information contained in the data call response is an accurate and complete representation of the information obtained from the source. Records must be retained by the certifying official to clearly document the source of any non-DoD information submitted for this data call.



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**General Instructions/Background (Continued):**

The following notes are provided to further define terms and methodologies used in this data call. Please ensure that responses consistently follow this guidance:

**Note 1:** Throughout this data call, the term "**activity**" is used to refer to the DON installation that is the addressee for the data call.

**Note 2:** Periodically throughout this data call, questions will include the statement that the response should refer to the "**area defined in response to question 1.b., (page 3)**". Recognizing that in some large metropolitan areas employee residences may be scattered among many counties or states, **the scope of the "area defined" may be limited to the sum of:**

- **those counties that contain government (DoD) housing units (as identified in 1.b.2)), and,**
- **those counties closest to the activity which, in the aggregate, include the residences of 80% or more of the activity's employees.**

**Note 3:** Responses to questions referring to "**civilians**" in this data call should reflect **federal civil service appropriated fund employees.**



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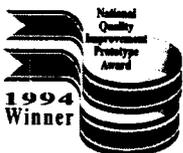
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**ECONOMIC AND COMMUNITY INFRASTRUCTURE DATA**

**1. Workforce Data**

**a. Average Federal Civilian Salary Rate.** Provide the projected FY 1996 average gross annual appropriated fund civil service salary rate for the activity identified as the addressee in this data call. This rate should include all cash payments to employees, and exclude non-cash personnel benefits such as employer retirement contributions, payments to former employees, etc.

<b>Average Appropriated Fund Civilian Salary Rate:</b>	<b>\$45,110</b>
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<b>Source of Data (1.a. Salary Rate):</b> CP-2 Exhibit, FY96/96 NAVCOMPT Budget Submit
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**b. Location of Residence.** Complete the following table to identify where employees live. Data should reflect current workforce.

**1) Residency Table.** Identify residency data, by county, for both military and civilian (civil service) employees working at the installation (including, for example, operational units that are homeported or stationed at the installation). For each county listed, also provide the estimated average distance from the activity, in miles, of employee residences and the estimated average length of time to commute one-way to work. For the purposes of displaying data in the table, any county(s) in which 1% or fewer of the activity's employees reside may be consolidated as a single line entry in the table, titled "Other".

County of Residence	State	No. of Employees Residing in County		Percentage of Total Employees	Average Distance From Base (Miles)	Average Duration of Commute (Minutes)
		Military	Civilian			
Kitsap	WA	283	2,365	84.74%	15	30
Pierce	WA	4	76	2.72%	45	60
Jefferson	WA	6	45	1.61%	30	45
King	WA	3	36	1.29%	15 mi & ferry	60
Mason	WA	1	43	1.54%	20	40
Misc. Outlying Counties	WA	0	30	1.07%	-	-
Others*	Various	14	196	7.02%	-	-

\*Operational off-site facilities.

Data as of July 6, 1994. Taken from Defense Civilian Personnel Data System (DCPDS). Prepared by Human Resources Department, Code 06B; and Military Personnel Records, Code 01B1.



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As discussed in Note 2 on Page 2, subsequent questions in the data call refer to the "area defined in response to question 1.b., (page 3)". In responding to these questions, the scope of the "area defined" may be limited to the sum of: a) those counties that contain government (DoD) housing units (as identified below), and, b) those counties closest to the activity which, in the aggregate, include the residences of 80% or more of the activity's employees.

**2) Location of Government (DoD) Housing.** If some employees of the base live in government housing, identify the county(s) where government housing is located:

All government housing occupied by Keyport personnel (military) is located in Kitsap County.

**Source of Data (1.b. 1) & 2) Residence Data):** Military Personnel, Code 01B1/  
 SUBASE Family Housing Office, Naval Submarine Base, Bangor.

**c. Nearest Metropolitan Area(s).** Identify all major metropolitan area(s) (i.e., population concentrations of 100,000 or more people) which are within 50 miles of the installation. If no major metropolitan area is within 50 miles of the base, then identify the nearest major metropolitan area(s) (100,000 or more people) and its distance(s) from the base.

City	County	Distance from base (miles)
Seattle	King	*
Tacoma	Pierce	45
Bremerton	Kitsap	15

\*Travel route from Keyport to Seattle is approximately 15 highway miles and 30 minutes travel time by Washington State Ferry across Puget Sound. Total travel time to Seattle is approximately 1 hour from Keyport. Alternate route through Tacoma (without ferry) is approximately 78 miles or 1.5 hours.



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**Source of Data (1.c. Metro Areas):** Washington State Map published by H. M. Gousha Company

**d. Age of Civilian Workforce.** Complete the following table, identifying the age of the activity's civil service workforce.

Age Category	Number of Employee	Percentage of Employees
16 - 19 Years	1	0.036%
20 - 24 Years	15	0.54%
25 - 34 Years	443	15.87%
35 - 44 Years	1,054	37.76%
45 - 54 Years	1,059	37.94%
55 - 64 Years	210	7.52%
65 or Older	9	0.32%
<b>TOTAL</b>	<b>2,791</b>	<b>100%</b>

**Source of Data (1.d.) Age Data):** July 6, 1994, Defense Civilian Personnel Data System (DCPDS). Human Resources Office, Code 06B.



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**e. Education Level of Civilian Workforce**

1) **Education Level Table.** Complete the following table, identifying the education level of the activity's civil service workforce.

<b>Last School Year Completed</b>	<b>Number of Employees</b>	<b>Percentage of Employees</b>
8th Grade or less	0	0.00%
9th through 11th Grade	0	0.00%
12th Grade or High School Equivalency	976	34.98%
1-3 Years of College	783	28.05%
4 Years of College (Bachelors Degree)	733	26.26%
5 or More Years of College (Graduate Work)	299	10.71%
<b>TOTAL</b>	<b>2,791</b>	<b>100%</b>

2) **Degrees Achieved.** Complete the following table for the activity's civil service workforce. Identify the number of employees with each of the following degrees, etc. To avoid double counting, only identify the highest degree obtained by a worker (e.g., if an employee has both a Master's Degree and a Doctorate, only include the employee under the category "Doctorate").



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Degree	Number of Civilian Employees
Terminal Occupation Program - Certificate of Completion, Diploma or Equivalent (for areas such as technicians, craftsmen, artisans, skilled operators, etc.)	39
Associate Degree	263
Bachelor Degree	815
Masters Degree	155
Doctorate	8

**Source of Data (1.e.1) and 2) Education Level Data):** July 6, 1994, Defense Civilian Personnel Data System (DCPDS). Human Resources Office, Code 06B.

**f. Civilian Employment By Industry.** Complete the following table to identify by "industry" the type of work performed by **civil service** employees at the activity. The intent of this table is to attempt to stratify the activity civilian workforce using the same categories of industries used to identify private sector employment. Employees should be categorized based on their primary duties. Additional information on categorization of private sector employment by industry can be found in the Office of Management and Budget Standard Industrial Classification (SIC) Manual. However, you do not need to obtain a copy of this publication to provide the data requested in this table.

Note the following specific guidance regarding the "Industry Type" codes in the first column of the table: Even though categories listed may not perfectly match the type of work performed by civilian employees, please attempt to assign each civilian employee to one of the "Industry Types" identified in the table. However, only use the Category 6, "Public Administration" sub-categories when none of the other categories apply. Retain supporting data used to construct this table at the activity-level, in case questions arise or additional information is required at some future time. Leave shaded areas blank.



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Industry	SIC Codes	No. of Civilians	% of Civilians
<b>1. Agriculture, Forestry &amp; Fishing</b>	01-09	0	0.0%
<b>2. Construction</b> (includes facility maintenance and repair)	15-17	69	2.5%
<b>3. Manufacturing</b> (includes Intermediate and Depot level maintenance)	20-39		
3a. Fabricated Metal Products (include ordnance, ammo, etc.)	34	318	11.4%
3b. Aircraft (includes engines and missiles)	3721 et al	0	0.0%
3c. Ships	3731	40	1.4%
3d. Other Transportation (includes ground vehicles)	various	31	1.1%
3e. Other Manufacturing not included in 3a. through 3d.	various	599	21.5%
<b>Sub-Total 3a. through 3e.</b>	20-39	988	35.4%
<b>4. Transportation/Communications/Utilities</b>	40-49		
4a. Railroad Transportation	40	0	0.0%
4b. Motor Freight Transportation & Warehousing (includes supply services)	42	127	4.6%
4c. Water Transportation (includes organizational level maintenance)	44	0	0.0%
4d. Air Transportation (includes organizational level maintenance)	45	1	0.04%



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Industry	SIC Codes	No. of Civilians	% of Civilians
4e. Other Transportation Services (includes organizational level maintenance)	47	5	0.2%
4f. Communications	48	17	0.61%
4g. Utilities	49	66	2.3%
<b>Sub-Total 4a. through 4g.</b>	40-49	216	7.94%
<b>5. Services</b>	70-89		
5a. Lodging Services	70	1	0.04%
5b. Personal Services (includes laundry and funeral services)	72	0	0.0%
5c. Business Services (includes mail, security guards, pest control, audio/visual, photography, janitorial and ADP services)	73	167	6.0%
5d. Automotive Repair and Services	75	0	0.0%
5e. Other Misc. Repair Services	76	2	0.07%
5f. Motion Pictures	78	0	0.0%
5g. Amusement and Recreation Services	79	1	0.04%
5h. Health Services	80	1	0.04%
5i. Legal Services	81	1	0.04%
5j. Educational Services	82	10	0.4%
5k. Social Services	83	6	0.2%
5l. Museums	84	6	0.2%



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Industry	SIC Codes	No. of Civilians	% of Civilians
5m. Engineering, Accounting, Research & Related Services (includes RDT&E, ISE, etc.)	87	1,155	41.4%
5n. Other Misc. Services	89	62	2.2%
<b>Sub-Total 5a. through 5n.:</b>	70-89	1,412	50.56%
<b>6. Public Administration</b>	91-97		
6a. Executive and General Government, Except Finance	91	18	0.6%
6b. Justice, Public Order & Safety (includes police, fire fighting and emergency management)	92	60	2.1%
6c. Public Finance	93	0	0.0%
6d. Environmental Quality and Housing Programs	95	28	1.0%
<b>Sub-Total 6a. through 6d.</b>		106	3.7%
<b>TOTAL</b>		2,791	100 %

**Source of Data (1.f.) Classification By Industry Data):** July 6, 1994, Defense Civilian Personnel Data System (DCPDS), Human Resources Office, Code 06B.



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**g. Civilian Employment by Occupation.** Complete the following table to identify the types of "occupations" performed by civil service employees at the activity. Employees should be categorized based on their primary duties. Additional information on categorization of employment by occupation can be found in the Department of Labor Occupational Outlook Handbook. However, you do not need to obtain a copy of this publication to provide the data requested in this table.

Note the following specific guidance regarding the "Occupation Type" codes in the first column of the table: Even though categories listed may not perfectly match the type of work performed by civilian employees, please attempt to assign each civilian employee to one of the "Occupation Types" identified in the table. Refer to the descriptions immediately following this table for more information on the various occupational categories. Retain supporting data used to construct this table at the activity-level, in case questions arise or additional information is required at some future time. **Leave shaded areas blank.**

Occupation	Number of Civilian Employees	Percent of Civilian Employees
<b>1. Executive, Administrative and Management</b>	326	11.7%
<b>2. Professional Specialty</b>		
2a. Engineers	723	25.90%
2b. Architects and Surveyors	1	0.04%
2c. Computer, Mathematical & Operations Research	34	1.22%
2d. Life Scientists	4	0.14%
2e. Physical Scientists	14	0.50%
2f. Lawyers and Judges	1	0.04%
2g. Social Scientists & Urban Planners	0	0.00%



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Occupation	Number of Civilian Employees	Percent of Civilian Employees
2h. Social & Recreation Workers	1	0.04%
2i. Religious Workers	0	0.00%
2j. Teachers, Librarians & Counselors	16	0.6%
2k. Health Diagnosing Practitioners (Doctors)	0	0.00%
2l. Health Assessment & Treating(Nurses, Therapists, Pharmacists, Nutritionists, etc.)	0	0.00%
2m. Communications	17	0.6%
2n. Visual Arts	7	0.3%
<b>Sub-Total 2a. through 2n.:</b>	<b>818</b>	<b>29.38%</b>
<b>3. Technicians and Related Support</b>		
3a. Health Technologists and Technicians	1	0.04%
3b. Other Technologists	289	10.35%
<b>Sub-Total 3a. and 3b.:</b>	<b>290</b>	<b>10.39%</b>
<b>4. Administrative Support &amp; Clerical</b>	<b>129</b>	<b>4.62%</b>
<b>5. Services</b>		
5a. Protective Services (includes guards, fire fighters, police)	36	1.3%
5b. Food Preparation & Service	0	0.00%
5c. Dental/Medical Assistants/Aides	0	0.00%



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Occupation	Number of Civilian Employees	Percent of Civilian Employees
5d. Personal Service & Building & Grounds Services (includes janitorial, grounds maintenance, child care workers)	0	0.00%
<b>Sub-Total 5a. through 5d.</b>	36	1.29%
<b>6. Agricultural, Forestry &amp; Fishing</b>	0	0.00%
<b>7. Mechanics, Installers and Repairers</b>	599	21.46%
<b>8. Construction Trades</b>	69	2.4%
<b>9. Production Occupations</b>	389	13.9%
<b>10. Transportation &amp; Material Moving</b>	133	4.8%
<b>11. Handlers, Equipment Cleaners, Helpers and Laborers</b> (not included elsewhere)	2	0.06%
<b>TOTAL</b>	2,791	100.00%

**Source of Data (1.g.) Classification By Occupation Data): July 6, 1994, Defense  
Civilian Personnel System (DCPDS). Human Resources Office, Code 60B.**



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**Description of Occupational Categories used in Table 1.g.** The following list identifies public and private sector occupations included in each of the major occupational categories used in the table. Refer to these examples as a guide in determining where to allocate **appropriated fund civil service jobs** at the activity.

1. **Executive, Administrative and Management.** Accountants and auditors; administrative services managers; budget analysts; construction and building inspectors; construction contractors and managers; cost estimators; education administrators; employment interviewers; engineering, science and data processing managers; financial managers; general managers and top executives; chief executives and legislators; health services managers; hotel managers and assistants; industrial production managers; inspectors and compliance officers, except construction; management analysts and consultants; marketing, advertising and public relations managers; personnel, training and labor relations specialists and managers; property and real estate managers; purchasing agents and managers; restaurant and food service managers; underwriters; wholesale and retail buyers and merchandise managers.
2. **Professional Specialty.** Use sub-headings provided.
3. **Technicians and Related Support.** Health Technologists and Technicians sub-category - self-explanatory. Other Technologists sub-category includes aircraft pilots; air traffic controllers; broadcast technicians; computer programmers; drafters; engineering technicians; library technicians; paralegals; science technicians; numerical control tool programmers.
4. **Administrative Support & Clerical.** Adjusters, investigators and collectors; bank tellers; clerical supervisors and managers; computer and peripheral equipment operators; credit clerks and authorizers; general office clerks; information clerks; mail clerks and messengers; material recording, scheduling, dispatching and distributing; postal clerks and mail carriers; records clerks; secretaries; stenographers and court reporters; teacher aides; telephone, telegraph and teletype operators; typists, word processors and data entry keyers.
5. **Services.** Use sub-headings provided.
6. **Agricultural, Forestry & Fishing.** Self explanatory.
7. **Mechanics, Installers and Repairers.** Aircraft mechanics and engine specialists; automotive body repairers; automotive mechanics; diesel mechanics; electronic equipment repairers; elevator installers and repairers; farm equipment mechanics; general maintenance mechanics; heating, air conditioning and refrigeration technicians; home



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- appliance and power tool repairers, industrial machinery repairers; line installers and cable splicers; millwrights; mobile heavy equipment mechanics; motorcycle, boat and small engine mechanics; musical instrument repairers and tuners; vending machine services and repairers.
8. **Construction Trades.** Bricklayers and stonemasons; carpenters; carpet installers; concrete masons and terrazzo workers; drywall workers and lathers; electricians; glaziers; highway maintenance; insulation workers; painters and paperhangers; plasterers; plumbers and pipefitters; roofers; sheet metal workers; structural and reinforcing ironworkers; tilesetters.
  9. **Production Occupations.** Assemblers; food processing occupations; inspectors, testers and graders; metalworking and plastics-working occupations; plant and systems operators, printing occupations; textile, apparel and furnishings occupations; woodworking occupations; miscellaneous production operations.
  10. **Transportation & Material Moving.** Bus drivers; material moving equipment operators; rail transportation occupations; truck drivers; water transportation occupations.
  11. **Handlers, Equipment Cleaners, Helpers and Laborers** (not included elsewhere).  
Entry level jobs not requiring significant training.



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**h. Employment of Military Spouses.** Complete the following table to provide estimated information concerning military spouses who are also employed in the area defined in response to question 1.b., above. **Do not fill in shaded area.**

1. Percentage of Military Employees Who Are Married:	48%
2. Percentage of Military Spouses Who Work Outside of the Home:	25%
3. Break out of Spouses' Location of Employment (Total of rows 3a. through 3d. should equal 100% and reflect the number of spouses used in the calculation of the "Percentage of Spouses Who Work Outside of the Home".	
3a. Employed "On-Base" - Appropriated Fund:	4%
3b. Employed "On-Base" - Non-Appropriated Fund:	0%
3c. Employed "Off-Base" - Federal Employment:	8%
3d. Employed "Off-Base" - Other Than Federal Employment	88%

<b>Source of Data (1.h.) Spouse Employment Data):</b> Military Personnel files and survey, Code 01B1.
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**2. Infrastructure Data.** For each element of community infrastructure identified in the two tables below, rate the community's ability to accommodate the relocation of additional functions and personnel to your activity. Please complete each of the three columns listed in the table, reflecting the impact of various levels of increase (20%, 50% and 100%) in the number of personnel working at the activity (and their associated families). In ranking each category, use one of the following three ratings:

- A - Growth can be accommodated with little or no adverse impact to existing community infrastructure and at little or no additional expense.
- B - Growth can be accommodated, but will require some investment to improve and/or expand existing community infrastructure.
- C - Growth either cannot be accommodated due to physical/environmental limitations or would require substantial investment in community infrastructure improvements.

**Table 2.a., "Local Communities":** This first table refers to the local community (i.e., the community in which the base is located) and its ability to meet the increased requirements of the installation.

**Table 2.b., "Economic Region":** This second table asks for an assessment of the infrastructure of the economic region (those counties identified in response to question 1.b., (page 3) - taken in the aggregate) and its ability to meet the needs of additional employees and their families moving into the area.

**For both tables, annotate with an asterisk (\*) any categories which are wholly supported on-base, i.e., are not provided by the local community. These categories should also receive an A-B-C rating. Answers for these "wholly supported on-base" categories should refer to base infrastructure rather than community infrastructure.**



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a. Table A: Ability of the local community to meet the expanded needs of the base.

1) Using the A - B - C rating system described above, complete the table below.

Category	20% Increase	50% Increase	100% Increase
Off-Base Housing	A	A	B
Schools - Public	A	A	B
Schools - Private	A	A	A
Public Transportation - Roadways	A	A	A
Public Transportation - Buses/Subways	A	A	A
Public Transportation - Rail	N/A	N/A	N/A
Fire Protection*	A	A	A
Police*	A	A	A
Health Care Facilities	A	A	A
Utilities:			
Water Supply	A	A	A
Water Distribution	A	A	A
Energy Supply	A	A	A
Energy Distribution	A	A	A
Wastewater Collection*	A	A	A
Wastewater Treatment*	A	A	A
Storm Water Collection*	A	A	A



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Category	20% Increase	50% Increase	100% Increase
Solid Waste Collection and Disposal	A	A	A
Hazardous/Toxic Waste Disposal	A	A	A
Recreational Activities	A	A	A

Remember to mark with an asterisk any categories which are wholly supported on-base.

Kitsap County is well positioned to accept the impact of at least a 100% increase in the number of personnel at NUWC Division, Keyport.

2) For each rating of "C" identified in the table on the preceding table, attach a brief narrative explanation of the types and magnitude of improvements required and/or the nature of any barriers that preclude expansion.

**Source of Data (2.a. 1) & 2) - Local Community Table): Kitsap County Economic Development Council.**



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**b. Table B: Ability of the region described in the response to question 1.b. (page 3) (taken in the aggregate) to meet the needs of additional employees and their families relocating into the area.**

1) Using the A - B - C rating system described above, complete the table below.

Category	20% Increase	50% Increase	100% Increase
Off-Base Housing	A	A	B
Schools - Public	A	A	B
Schools - Private	A	A	A
Public Transportation - Roadways	A	A	A
Public Transportation - Buses/Subways	A	A	A
Public Transportation - Rail	N/A	N/A	N/A
Fire Protection*	A	A	A
Police*	A	A	A
Health Care Facilities	A	A	A
Utilities:			
Water Supply	A	A	A
Water Distribution	A	A	A
Energy Supply	A	A	A
Energy Distribution	A	A	A
Wastewater Collection*	A	A	A
Wastewater Treatment*	A	A	A



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Category	20% Increase	50% Increase	100% Increase
Storm Water Collection*	A	A	A
Solid Waste Collection and Disposal	A	A	A
Hazardous/Toxic Waste Disposal	A	A	A
Recreation Facilities	A	A	A

Remember to mark with an asterisk any categories which are wholly supported on-base.

The Puget Sound Region is well positioned to accept the impact of at least a 100% increase in the number of personnel at NUWC Division, Keyport.

2) For each rating of "C" identified in the table on the preceding table, attach a brief narrative explanation of the types and magnitude of improvements required and/or the nature of any barriers that preclude expansion.

**Source of Data (2.b. 1) & 2) - Regional Table):** Kitsap County Economic Development Council.



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**3. Public Facilities Data:**

- a. **Off-Base Housing Availability.** For the counties identified in the response to question 1.b. (page 3), in the aggregate, estimate the current average vacancy rate for community housing. Use current data or information identified on the latest family housing market analysis. For each of the categories listed (rental units and units for sale), combine single family homes, condominiums, townhouses, mobile homes, etc., into a single rate:

Although King, Pierce, Jefferson, and Mason counties are within commuting distance of NUWC Division, Keyport, more than 84.7% of our on-site workforce resides in Kitsap County.

Rental Units:

The current average vacancy rate for rental housing in Kitsap County is 7.74% (March 1994) with a total of 15,711 apartment rental units. This is the highest vacancy rate in the six years the surveys have been conducted.

Units for Sale:

Approximately 2,500 homes (new and used) are listed for sale in Kitsap County.

<p><b>Source of Data (3.a. Off-Base Housing):</b> Rental Units - SUBASE Family Housing Office; Units for Sale - Kitsap County Computer Multiple Listing Service</p>
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**b. Education.**

1) Information is required on the current capacity and enrollment levels of school systems serving employees of the activity. Information should be keyed to the counties identified in the response to question 1.b. (page 3).

School District	County	Number of Schools			Enrollment		Pupil-to-Teacher Ratio <sup>3</sup>		Does School District Serve Gov't Housing Units? *
		Elementary	Middle	High	Current <sup>1</sup>	Max. Capacity <sup>2</sup>	Current	Max. Ratio	
Bremerton	Kitsap	7	1	1	6,133	6,620	19.1:1	28.6:1	YES
Central	Kitsap	14	3	2	12,845	12,845	25:1	25:1	YES
South	Kitsap	10	3	1	10,794	10,794	26:1	28:1	YES
North	Kitsap	7	2	1	5,980	6,100	26.8:1	27.3:1	YES
Peninsula	Pierce	8	4	3	8,769	8,769	26:1	28:1	NO
North Mason	Mason	2	1	1	2,152	2,152	26:1	30:1	NO
Bainbridge Island	Kitsap	3	1	1	3,167	3,167	26.3:1	26.3:1	YES

\* Answer "Yes" in this column if the school district in question enrolls students who reside in government housing.

Notes:

- 1 - Includes students in alternative schools and the Kitsap Peninsula Vocational Skills Center, neither of which is included in the "number of schools" column.
- 2 - Based on existing facilities, capacity could be increased with acquisition of additional portable classroom facilities. Space is available to locate additional portables to accommodate increased demand due to expansion.
- 3 - Pupil to teacher ratios vary from one grade level to another. Data reflects the average ratios for all grades per school district. Maximum ratio based on teacher association contracts.

**Source of Data (3.b.1) Education Table): School Districts - Administrators**



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2) Are there any on-base "Section 6" Schools? If so, identify number of schools and current enrollment.

NO

**Source of Data (3.b.2) On-Base Schools):** Not Applicable

3) For the counties identified in the response to question 1.b. (page 3), in the aggregate, list the names of undergraduate and graduate colleges and universities which offer certificates, Associate, Bachelor or Graduate degrees :

Central Texas College (Puget Sound Naval Shipyard)	Northwest College of Arts
Columbia College (Puget Sound Naval Shipyard)	University of Puget Sound
Chapman University (Bangor)	University of Washington/Seattle
City University	University of Washington/Tacoma
Olympic College	University of Washington/Bremerton
Southern Illinois University (Bangor)	Pierce College
Lesley College	Tacoma Community College
Seattle Pacific University	University of Puget Sound Law School
Seattle University	Pacific Lutheran University
Pennsylvania State University (Keyport)	Indiana University (Keyport)
Western Washington University/Bremerton	

**Source of Data (3.b.3) Colleges):** Telephone Books



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4) For the counties identified in the response to question 1.b. (page 3), in the aggregate, list the names and major curriculums of vocational/technical training schools:

Eton Technical Institute - Health Careers, Medical, Dental, Word Processing  
 Office Training Center - Telephone Skills, Typing, Word Processing  
 Kitsap Peninsula Vocational Skills Center - Food Services, Auto Mechanics, etc.  
 Clover Park Technical College - Variety  
 L.H. Bates Technical College - Barbering, Upholstery, Beautician, etc.  
 Trans Union Truck Driving School - Semi-truck driving instruction  
 Western Truck School - Semi-truck driving instruction  
 Business Computer Training Institute  
 Griffin College - Business courses  
 Puget Sound Naval Shipyard Apprentice School - Electronics/electrical, structural, machinist, and service utilities related trades.

**Source of Data (3.b.4) Vo-tech Training): Telephone Books**

**c. Transportation.**

1) Is the activity served by public transportation?

	<u>Yes</u>	<u>No</u>
Bus:	<u>  X  </u>	<u>    </u>
Rail:	<u>    </u>	<u>  X  </u>
Subway:	<u>    </u>	<u>  X  </u>
Ferry:	<u>  X  </u>	<u>    </u>

**Source of Data (3.c.1) Transportation): Kitsap Transit, Bremerton, WA, Washington State Ferries**



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2) Identify the location of the nearest passenger railroad station (long distance rail service, not commuter service within a city) and the distance from the activity to the station.

The nearest passenger terminals are located in Tacoma (45 miles) and Seattle (15 miles plus a 35 minute ferry ride).

**Source of Data (3.c.2) Transportation): AMTRAK**

3) Identify the name and location of the nearest commercial airport (with public carriers, e.g., USAIR, United, etc.) and the distance from the activity to the airport.

Nearest municipal airport - Bremerton National, located west of Keyport (20 miles). The nearest major international airport with commercial air carriers is SEATAC airport, which is 60 miles from Keyport.

**Source of Data (3.c.3) Transportation): Bremerton National Airport, SEATAC General Information Office.**

4) How many carriers are available at this airport?

Bremerton National Airport has one charter air taxi service, but no scheduled commercial air carriers. SEATAC airport has 39 commercial carriers providing domestic, international, and cargo flights.

**Source of Data (3.c.4) Transportation): Bremerton National Airport, SEATAC General Information Office.**



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5) What is the Interstate route number and distance, in miles, from the activity to the nearest Interstate highway?

NUWC Division, Keyport is located 45 miles from the Interstate 5 Highway in Tacoma. Access to Interstate 5 is by 4-lane, limited access (no traffic signals) state highway.

**Source of Data (3.c.5) Transportation):** Washington State Map published by H. M. Gousha Company

6) Access to Base:

a) Describe the quality and capacity of the road systems providing access to the base, specifically during peak periods. (Include both information on the area surrounding the base and information on access to the base, e.g., numbers of gates, congestion problems, etc.)

Two state highways serve NUWC Division, Keyport from the south and west. The highway are two-lane with a 50 mile-an-hour speed limit. Since Keyport is the only large scale industrial operation served by these highways, traffic density is low even during peak operating periods. Three gates serve the base. Combined with a flex-time and compressed work schedule, traffic jams entering and exiting the base are minimal.

b) Do access roads transit residential neighborhoods?

Although residential neighborhoods feed onto the state highway access roads to Keyport, the highways themselves do not transit residential neighborhoods.



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c) Are there any easements that preclude expansion of the access road system?

No

d) Are there any man-made barriers that inhibit traffic flow (e.g., draw bridges, etc.)?

No

**Source of Data (3.c.6) Transportation):** Washington State Map published by H. M. Gousha Company

- d. **Fire Protection/Hazardous Materials Incidents.** Does the activity have an agreement with the local community for fire protection or hazardous materials incidents? Explain the nature of the agreement and identify the provider of the service.

Memorandums of Agreement are in place with all local fire districts for additional firefighting capability during emergencies. Support for hazardous material incidents above our capability is provided by SUBASE, Bangor. When incidents outside the Division's perimeter are in close proximity to the fenceline, NUWC Division, Keyport provides some "first in, first out" firefighting/security response.

**Source of Data (3.d. Fire/Hazmat):** Various Memorandums of Agreement



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**e. Police Protection.**

1) What is the level of legislative jurisdiction held by the installation?

The Keyport Site maintains "concurrent" legislative jurisdiction for the entire installation.

2) If there is more than one level of legislative jurisdiction for installation property, provide a brief narrative description of the areas covered by each level of legislative jurisdiction and whether there are separate agreements for local law enforcement protection.

N/A.

3) Does the activity have a specific written agreement with local law enforcement concerning the provision of local police protection?

No specific written agreement exists with local law enforcement concerning police protection. Verbal agreements are in place with both Kitsap County Sheriff's Department and the Washington State Highway Patrol for back-up support when required.

4) If agreements exist with more than one local law enforcement entity, provide a brief narrative description of whom the agreement is with and what services are covered.

N/A



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5) If military law enforcement officials are routinely augmented by officials of other federal agencies (BLM, Forest Service, etc.), identify any written agreements covering such services and briefly describe the level of support received.

Regional written agreements are in place for emergency "SWAT" teams through Ft. Lewis Army Base/McCord Air Force Base, waterfront security protection through the U.S. Coast Guard, hostage barricade negotiators through Naval Criminal Investigative Service, and anti-terrorist support through Marine Corps. Battalion, Pacific.

**Source of Data (3.e. 1) - 5) - Police):** Letter of Agreement between NUWC Keyport and Kitsap County; Verbal Agreements; NAVBASE Regional Agreements.



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f. **Utilities.**

1) Does the activity have an agreement with the local community for water, refuse disposal, power or any other utility requirements? Explain the nature of the agreement and identify the provider of the service.

<u>Utility</u>	<u>Provider</u>	<u>Contract Number</u>
Electricity	Puget Power	Various
Gas	Cascade Natural Gas Corp.	Various
Water	PUD No. 1 Kitsap County	N62474-80-C-5103
Sewer	Kitsap County Public Works	N62474-77-C-3005
Telephone	United Telephone	DCA-200-92-H-0146
Cellular phone	Cellular One	N00253-94-M-0194
Cable TV	Falcon Cable TV	N62474-86-M-1418

SUBASE Bangor provides refuse disposal services to NUWC Division, Keyport via Interservice Support Agreement which continues for an indefinite period of time.

2) Has the activity been subject to water rationing or interruption of delivery during the last five years? If so, identify time period during which rationing existed and the restrictions imposed. Were activity operations affected by these situations? If so, explain extent of impact.

There have not been any water rationing restrictions or interruption of delivery during the last five years. There is an existing on-site chlorination treatment facility for potable water and a waste treatment facility to handle off-site flows.

Supply and storage capabilities are adequate for existing operations and capable of supporting expanded requirements and mobilization increases. There is also the option to expand service with Kitsap County PUD #1.



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3) Has the activity been subject to any other significant disruptions in utility service, e.g., electrical "brown outs" "rolling black outs", etc., during the last five years? If so, identify time period(s) covered and extent/nature of restrictions/disruption. Were activity operations affected by these situations? If so, explain impact.

NUWC Division, Keyport owns its own substation which is supplied from two separate 115KV feeders. As such, the Division is immune from most local power outages. Recent electrical system upgrades at the Division have allowed for rerouting of electrical systems in the event of cable disruptions, thus virtually assuring continued service.

NUWC Division Keyport, has historically suffered from power outages only during rare ice storms that have been of sufficient scope to affect the entire Puget Sound Area. Regionally, significant weather related outages only occur approximately every 4-5 years. The most recent storm outage occurred in January 1993 when the Division was without power for 4 hours. The other outage was in December 1990 for 10 hours. Neither power outage affected NUWC Division, Keyport security or overall ability to meet mission requirements.

**Source of Data (3.f. 1) - 3) Utilities): NUWC Division Keyport, Code 07 and Code 20.**



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4. **Business Profile.** List the top ten employers in the geographic area defined by your response to question 1.b. (page 3), taken in the aggregate, (include your activity, if appropriate):

Employer	Product/Service	No. of Employees*
1. Puget Sound Naval Shipyard, Bremerton	Shipyard	22,394
2. Naval Submarine Base, Bangor	Submarine Base	8,743
3. Naval Undersea Warfare Center, Division, Keyport	Undersea Weapons Systems Test & Evaluation and In-Service Engineering	3,582
4. State Agencies	Public Services	1,752
5. Central Kitsap School District	Education	1,350
6. Harrison Memorial Hospital, Bremerton	Medical	1,335
7. South Kitsap School District	Education	1,100
8. Kitsap County	Community Services	879
9. Johnson Controls World Service	Military Base Operating Support	850
10. Vitro, Corp.	Military Engineering Logistics Support	844
* "Number of Employees" includes military and civilian personnel.		

Note: Data is from February 1993, which is the most recent data available on all Kitsap County employers. Downsizing of Naval Bases in the county since that date are not reflected. For example, NUWC Division, Keyport currently has 3,102 military and civilian employees on board (480 fewer than in February 1993).

**Source of Data (4. Business Profile):** Economic Development Council of Kitsap County, February 1993.



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5. **Other Socio-Economic Impacts.** For each of the following areas, describe other recent (past 5 years), on-going or projected economic impacts (both positive and negative) on the geographic region defined by your response to question 1.b. (page 3), in the aggregate:

a. **Loss of Major Employers:** There has been no loss of major employers over the past 5 years, although the downsizing at Naval Undersea Warfare Center Division, Keyport and Puget Sound Naval Shipyard have eliminated over 2,700 civilian jobs.

b. **Introduction of New Business/Technologies:** New businesses have been primarily in the areas of retail trade and services. The last major business base increase was the development of the Naval Submarine Base, Bangor in the late 1970's and early 1980's. This resulted in the shift of the county business hub and new housing development from Bremerton to the central county area in and around Silverdale, Washington.

c. **Natural Disasters:** There have been no significant natural disasters in the region. The region has a mild climate year-round and due to a lack of major rivers, the County is not subject to flooding. Violent weather is virtually non-existent.

d. **Overall Economic Trends:** Kitsap County is located across Puget Sound, due west of Seattle, Washington. It is a rural, largely wooded county occupying the northernmost two-thirds of the Kitsap Peninsula. The top three employers in the County are Naval bases. The overall County has experienced a fairly stable economy, although there has been a shift in concentration of area businesses and population growth to the central County area over the past 15 years. Government jobs are the mainstay of the County. Today, some 35 cents of every dollar that comes into the County is in some way attached to the U.S. Military, while 47.5% of all jobs in Kitsap County are Government related. The major Naval and Fleet activities in Kitsap County are Puget Sound Naval Shipyard, SUBASE Bangor, Strategic Weapons Facility Pacific, Trident Refit Facility, Trident Training Facility, Naval Undersea Warfare Center Division Keyport, Fleet and Industrial Supply Center Puget Sound, USS NIMITZ, USS TRUXTUN, USS CALIFORNIA, USS SACRAMENTO, USS CAMDEN, USS ROANOKE, and eight OHIO Class submarines.

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In regards to taxable retail sales, 1993 figures in Kitsap County were \$1,658,975,823. Over the past five years (1989-1993), the unemployment rate in Kitsap County averaged 5.6 percent, about 1 percent lower than the Washington State average of 6.5 percent. The 1993 unemployment rate in Kitsap County climbed to 6.9 percent, but remains slightly lower than that of the State which climbed to 7.4 percent.

Kitsap County's median price for home purchases is greatly influenced by the areas of Bainbridge Island (\$207,000) and Silverdale (\$139,950). The remaining balance of the County has median prices starting at \$77,000 in West Bremerton, \$92,600 in East Bremerton, \$112,000 in South Kitsap, \$113,000 in Central Kitsap (excluding Silverdale), and \$124,925 in North Kitsap. Kitsap County rental vacancy rate is currently 7.74 percent, with rentals averaging between \$600-\$1400 for a 3-bedroom, single-family home, to \$450-\$800 for 1 to 3 bedroom apartments. Some 690 new homes are currently under construction for military housing.

**Source of Data (5. Other Socio/Econ):** Kitsap Consolidated Housing Authority, House Builders Association of Kitsap County, Economic Development Council of Kitsap County, Kitsap Board of Realtors, SUBASE Bangor Housing House.

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**6. Other.** Identify any contributions of your activity to the local community not discussed elsewhere in this response.

Even after significant downsizing, NUWC Division, Keyport contributes over \$300 million annually to the local economy.

- Purchase \$58M in materials each year.
- Contract for \$102M in services each year.
- Pay \$158M in salaries each year.
- Received RADM C. J. Peoples Plaque Award for employment of personnel with disabilities (1994).
- More than 17,000 students visited the Naval Undersea Museum in the past two years during Project Jason.
- Provide Naval Undersea Museum facilities and services to the community, including a 450 seat auditorium, a research library, and exhibits toured by 40,000 visitors.
- Provide 75 tutors to local schools and won the Personal Excellence through Cooperative Education Award (1993).
- Initiated an education/industry consortium to accelerate technical curriculum development plans in the community.
- Received Secretary of the Navy Award for outstanding achievement in Pollution Prevention (1994).
- Received first-ever Navy Meritorious Unit Commendation for support of the Fleet, Community, and native Americans in environmental and natural resources preservation (1992).
- Support vocational education by providing speakers, tours, instructors, and facilities.

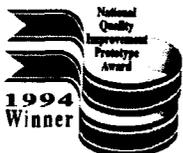


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- Received Award for Governor's Outstanding Achievement in Pollution Prevention (1993).
- Initiated various community stewardship partnerships: EPA, academia, private industry, and other Federal organizations.
- Partnered with local and state Economic Development Councils to serve on their committees and have offered to incubate local high-tech businesses.
- Executive Director serves on Olympic College Poulsbo Campus Expansion Board of Directors.
- Executive Director serves on Board of Directors for Economic Development Council.
- Named Governor's "Outstanding Large Public Employer of the Year" in recognition of achievements in promoting employment opportunities for people with disabilities (1993).
- Awarded Community Economic Development Support Award for "community involvement above and beyond the call of duty" (1994).
- Initiated and partnered in seven ARPA TRP proposals:
  - Healthcare/Defense Information System
  - Manufacturing Technology and Business Center
  - Rapid Response Recovery System Development (Team 1 USA)
  - Oregon State University/NUWC Division, Keyport Teaching Factory
  - SEAL Team Personnel Transport Module (Team 1 USA)
  - Oil Spill Recovery Module (Team 1 USA)
  - HAZMAT Tank Corrosion Rate Monitor
- Established partnership with Olympic College for Computer-Aided Acquisition and Lifecycle Support Shared Resource Center.
- Base Commander serves on the Board of Directors for the United Way..



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- Exceeded our Combined Federal Campaign contribution goal by \$35,000.
- Tutored and mentored "at risk" Native American students.
- Planned and conducted the Special Olympics.

**Source of Data (6. Other):** NUWC Division, Keyport Code EDX



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I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears RADM, USN  
Signature

Commander  
Title

20 JULY 94  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~NAME (Please type or print)~~

~~Signature~~

~~Title~~

~~Date~~

~~Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

G. R. STERNER  
NAME (Please type or print)

G. R. Sterner  
Signature

Naval Undersea Warfare Center  
Title

7/25/94  
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER  
NAME (Please type or print)

W. A. Earner  
Signature

Title

8/6/94  
Date

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BRAC 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

Dennis K. Gibbs  
NAME (Please type or print)

  
Signature

Commander  
Title

15 JULY 1994  
Date

NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT  
Activity

# Document Separator

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**"LAB" JOINT CROSS-SERVICE GROUP GUIDANCE PACKAGE**

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### SECTION I: TASKING

In accordance with the Deputy Secretary of Defense memorandum dated 7 Jan 94, the Laboratory Joint Cross-Service Group (LJCSG) with DOD components should, where operationally and cost effective, strive to: retain in only one Service militarily unique capabilities used by two or more Services; consolidate workload across the Service to reduce capacity; and assign operational units from more than one Service to a single base. Specifically, the purpose of the LJCSG is:

- Determine common support functions and bases to be addressed by LJCSG
- Establish guidelines, standards, assumptions, measures of merit, data elements and milestone schedules for DOD Component conduct of cross-service analysis of common support functions
- Review excess capacity analysis
- Develop closure or realignment alternatives
- Analyze cross-service trade-offs

The following information identifies to the Services common support functions and data element requirements necessary to support the cross-service analysis of these common support functions.

#### 1.1 Guidelines

Because the DOD components are organized differently, "Lab" activities are considered to be those involved in the following life cycle efforts: Science and technology, and/or engineering development, and/or in-service engineering.

Service missions and force structure will be as stipulated in the FY1995-2000 Defense Planning Guidance and Interim Force Structure Plan.

The Military Departments will use the projected funding in the FY95 President's Budget Submission (Future Years Defense Plan -- FYDP) and an estimate of funds that will be received from outside the military department for execution.

If "lab" excess capacity exists, the Military Departments will start to reduce it where operationally and cost effective through a combination of downsizing in place within the departments, internal service consolidation, and cross service alternatives.



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The Military Departments will gather, exchange, and analyze data collected per this guidance call for Common Support Functions (Appendix C) at "lab" activities (Appendix B) in accordance with the milestones and schedule dates identified in Appendix A.

Cross-service alternatives will result in an aggregate reduction in the overall "lab" infrastructure across the Military Departments -- personnel/funding/facilities and equipment.

Common cross-service Measures of Merit will be consistently applied for all cross-service alternatives.

Integration of weapon systems/components into operational forces will remain with the individual Military Departments responsible for those forces.

### 1.2 Standards

Evaluation of cross-service alternatives will be consistent with PL 101-510 (as amended) and the eight BRAC criteria. Only certified data will be used.

The COBRA cost model will be used to calculate estimated costs, estimated savings, and Return on Investment (ROI) of alternatives leading to proposed closures and realignments. Common inputs will be used for Military COBRA runs incorporating cross-service alternatives.

Military value analysis will be conducted by the Military Departments IAW Title 10, USC responsibilities.

### 1.3 Assumptions

"Lab" Common Support Functions and activities identified herein represent the major opportunities for developing cross-service alternatives. The Military Departments are not precluded from proposing other cross-service alternatives to reduce excess capacity as they assess the full complement of "lab" functions.

Previous BRAC decisions will be factored into cross-service alternatives.

"Lab" capacity will be based on budgeted workyears. A workyear is considered to be 2080 hours adjusted for time not on the job (e.g. sick leave, annual leave, etc.)



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### 1.4 Measures of Merit

The following Measures of Merit represent the outcome from the DOD component final realignment and closure recommendations that are supported by the capabilities data which will be gathered by activity and common support function in Section III of this guidance.

- Reduction of "lab" infrastructure
- Return on investment (COBRA)
- Military value (BRAC criteria 1-4) -- the composite assessment of the quality of the remaining "lab" infrastructure

### 1.5 Activities

The Military Departments will collect capacity data for each "lab" activity identified in Appendix B. The "lab" activities were selected by considering all individual aggregates of personnel and facilities located at one base, under the same commander, performing predominantly science and technology (S&T), engineering development, and/or in-service engineering work. Small sub-elements of these "lab" activities were included with the activity. Larger sub-elements were broken out and defined as separate activities. The list of activities was then narrowed down to the list in Appendix B based on a joint Military Department assessment of common support functions with cross-service potential.

### 1.6 Common Support Functions

The common support functions (CSFs) were selected as shown in Appendix C based on a joint Military Department assessment of commonalty and cross-servicing potential. Common support functions which were already consolidated and being cross serviced were not included.

Common Support Functions are divided into two categories: product and pervasive. Product functions include all S&T, engineering development, and in-service engineering efforts associated with a product from all funding sources. Pervasive functions only include those efforts that are S&T funded, i.e. Technology Base (6.1)/Exploratory Development (6.2)/Advanced Development (6.3).



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### SECTION II: CAPACITY OF DOD COMPONENTS

2.1 **Workload.** Use the following table to describe historic and projected workload at each activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Projected funding will be derived from FY95 President's Budget Submission (Then year dollars). Past fiscal year data shall begin with FY86 or at the inception of the activity as it existed on 1 Oct 93. (BRAC Criteria I & IV)

Information Required	Fiscal Years											
	86	87	88	89	90	91	92	93	94	95	96	97
Total Funds Programmed (\$M)	7.6	7.8	14.5	16.6	22.5	26.1	33.0	45.4	43.1	41.0	37.0	30.9
Total Actual Funds (\$M)	8.7	9.7	13.5	15.5	25.7	28.9	34.0	44.0				
Programmed Workyears	102	128	145	165	286	317	332	387	359	341	324	307
Actual Workyears	114	135	138	187	282	324	320	378				
Data above represents In-Service Engineering work which is the only "lab activity" which is conducted by NUWC Division, Keyport as defined in Paragraph 1.5 of this data call.												

- Budgeted workyears are the selected indicator of the "lab" infrastructure's capacity at an aggregate level for each Military Department. They include both workyears funded directly by the Military Department and the workyears funded from organizations outside the Military Department.

Workyears = government personnel and on-site FFRDCs and SETAs

2.2 **Excess "Lab" Capacity -- Measured at the DOD Component Level** (378 - 307) = 71

- Excess "Lab" Capacity = Sum of the Peak Workyears - Sum of the Projected Workyears
- Peak at each activity = Highest value between FY86 (or since inception of organization) and FY93
- Projected at each activity = Estimated at FY97



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**SECTION III: CAPABILITY OF ACTIVITIES TO PERFORM COMMON SUPPORT FUNCTIONS (CSFs):** Provide the information described for each common support function listed in Appendix C in which you are actively engaged.

No information is provided for this section because NUWC Division, Keyport does not provide In-Service Engineering support for the systems listed in Appendix C.



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**SECTION IV: APPENDICES**

- A. Macro Process/Schedule
- B. List of Activities
- C. Common Support Functions



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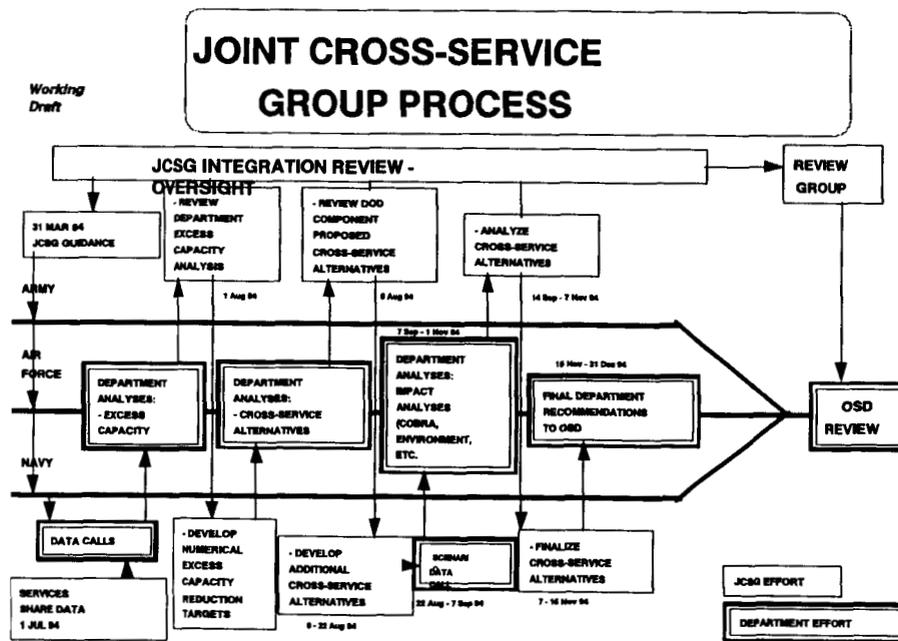
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APPENDIX A



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## APPENDIX B

### LIST OF ACTIVITIES

#### AIR FORCE

1. Armstrong Lab, Brooks AFB
2. Armstrong Lab, Tyndall AFB
3. Armstrong Lab, Wright-Patterson AFB
4. Armstrong Lab, Williams AFB
5. Human Systems Center, Brooks AFB
6. Wright Lab, Wright-Patterson AFB
7. Wright Lab, Eglin AFB
8. Aeronautical Systems Center, Wright-Patterson AFB
9. Aeronautical Systems Center, Eglin AFB
10. Oklahoma City Air Logistics Center, Tinker AFB (In-service engineering)
11. Ogden Air Logistics Center, Hill AFB (In-service engineering)
12. San Antonio Air Logistics Center, Kelly AFB (In-service engineering)
13. Sacramento Air Logistics Center, McClellan AFB (In-service engineering)
14. Warner-Robins Air Logistics Center, Robins AFB (In-service engineering)
15. Phillips Lab, Kirtland AFB
16. Phillips Lab, Hanscom AFB
17. Phillips Lab, Edwards AFB
18. Space & Missile Center, Los Angeles AFB
19. Space & Missile Center, Norton AFB
20. Sacramento Air Logistics Center, Peterson AFB
21. Rome Lab, Griffiss AFB
22. Rome Lab, Hanscom AFB
23. Electronic Systems Center, Hanscom AFB
24. Sacramento Air Logistics Center, Peterson AFB (In-service engineering)

#### ARMY

1. Army Research Lab (ARL), Adelphi, MD
2. ARL, Aberdeen Proving Grounds (APG), MD
3. ARL, White Sands Missile Range, NM
4. ARL, NASA Langley, VA
5. ARL, NASA Lewis, OH
6. Natick Research, Development and Engineering Center, Natick, MA
7. Aviation Research, Development and Engineering Center, St Louis, MO



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8. Aviation Troop Command, Aeroflight Dynamics Directorate, Moffitt Field, CA
9. Aviation Troop Command, Aviation Applied Technology Directorate, Fort Eustis, VA
10. Edgewood Research, Development and Engineering Center, Aberdeen Proving Ground, MD
11. Communications Electronics Command Research, Development and Engineering Center, Ft Mammoth, NJ
12. Communication Electronics Command Research, Development and Engineering Center -Night Vision EO Directorate, Ft Belvoir, VA
13. Missile Research, Development and Engineering Center, Redstone Arsenal, AL
14. Armaments Research, Development and Engineering Center, Picatinny Arsenal, NJ
15. Armaments Research, Development and Engineering Center, Benet Labs, Watervliet Arsenal, NY
16. Tank-Automotive Command Research, Development and Engineering Center, Warren, MI
17. USA Research Institute of Infectious Diseases, Ft Detrick, MD
18. Walter Reed Army Institute of Research, Washington D.C.
19. USA Institute of Surgical Research, Ft Sam Houston, TX
20. USA Aeromedical Research Lab, Ft Rucker, AL
21. Medical Research Institute of Chemical Defense Aberdeen Proving Grounds, MD
22. USA Research Institute of Environmental Medicine, Natick, MA
23. Construction Engineering Research Laboratory, Champaign, IL
24. Cold Regions Research and Engineering Lab, Hanover, NH
25. Topographic Engineering Center, Alexandria, VA
26. Waterways Experiment Station, Vicksburg, MS
27. USA Research Institute for Behavioral & Social Sciences, Alexandria, VA
28. Simulation, Training and Instrumentation Command (STRICOM), Orlando, FL

### NAVY

1. Naval Air Warfare Center, Weapons Division, China Lake
2. Naval Air Warfare Center, Weapons Division, Point Mugu
3. Naval Air Warfare Center, Aircraft Division, Patuxent River
4. Naval Air Warfare Center, Aircraft Division, Indianapolis
5. Naval Air Warfare Center, Aircraft Division, Lakehurst
6. Naval Research Lab, Washington D.C.
7. Naval Research Lab Detachment, Bay St Louis
8. Naval Surface Warfare Center, Carderock Division, Bethesda
9. Naval Surface Warfare Center, Carderock Detachment, Annapolis
10. Naval Surface Warfare Center, Crane Division
11. Naval Surface Warfare Center, Crane Detachment, Louisville
12. Naval Surface Warfare Center, Dahlgren Division



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13. Naval Surface Warfare Center, Dahlgren Detachment, Panama City
14. Naval Surface Warfare Center, Indian Head Division
15. Naval Surface Warfare Center, Port Hueneme Division
16. Naval Command, Control, and Ocean Surveillance Center, RDT&E Division, San Diego
17. Naval Command, Control, and Ocean Surveillance Center, In-Service Engineering, West Coast Division, San Diego
18. Naval Command, Control, and Ocean Surveillance Center, In-Service Engineering Division, Charleston
19. Naval Aerospace Medical Research Center, Pensacola
20. Naval Biodynamics Lab, New Orleans
21. Naval Dental Research Lab, Great Lakes
22. Naval Health Research Center, San Diego
23. Naval Medical Research Institute, Bethesda
24. Naval Undersea Warfare Center, Keyport Division, WA
25. Naval Surface Warfare Center, Carderock, Philadelphia Detachment
26. Naval Undersea Warfare Center, Newport, RI
27. Naval Undersea Warfare Center (Newport), New London, CT
28. Naval Personnel Research and Development Center, San Diego, CA

### DEPARTMENT OF DEFENSE

1. Armed Forces Radiobiology Research Institute (AFRRI), Bethesda, MD



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**APPENDIX C**

**COMMON SUPPORT FUNCTIONS**  
**(DEFINITIONS LISTED FOLLOWING PAGES)**

**Product Functions**

1. Air Vehicles
  - Fixed
    - Structure
    - Propulsion
    - Avionics
    - Flight Subsystems
  - Rotary
    - Structure
    - Propulsion
    - Avionics
    - Flight Subsystems
2. Weapons
  - ICBMs/SLBMs
  - Conventional Missiles/Rockets
  - Cruise Missiles
  - Guided Projectiles
  - Bombs
  - Guns and Ammunition
  - Directed Energy
  - Chemical/Biological
3. Space Systems
  - Launch Vehicles
  - Satellites
  - Ground Control Systems
4. C<sup>4</sup>I Systems
  - Airborne C<sup>4</sup>I
  - Fixed Ground-Based C<sup>4</sup>I
  - Ground Mobile C<sup>4</sup>I



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**Pervasive Functions**

1. Electronic Devices
2. Environmental Sciences
3. Infectious Diseases
4. Human Systems
5. Manpower and Personnel
6. Training Systems
7. Environmental Quality
8. Advanced Materials



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## DEFINITIONS

### COMMON SUPPORT FUNCTIONS

#### Product Functions

**1. Air Vehicles.** Air vehicles are broken out into common support functions for fixed wing and rotary wing. Includes but not limited to all science and technology, demonstration and validation, engineering development, and production activities which support employment and in-service engineering of air vehicles. Included are all air vehicles including their application as UAV's and targets.

- Structures. Includes but not limited to all air vehicles structure technology, engineering and production efforts. Include technology and engineering practices which advance structural design and analysis; advanced structural concepts and fabrication techniques; and structural integrity.

- Propulsion. Includes but not limited to all technology, engineering and production efforts associated with air vehicle propulsion such as turbine engine, rotorcraft power drive, and hypersonic propulsion components. Such components include compressors, inlets and nozzles, turbines, mechanical systems and control, gears, bearings, shafts, and clutches. In addition, include associated subsystems activities such as turborocket, turboramjet and rotorcraft transmissions; and supporting technical and engineering disciplines.

- Avionics. Includes but not limited to all technology, engineering and production efforts associated with the air platform's integrated avionics system. The avionics suite includes but is not limited to weapon delivery systems, electronic warfare, navigation, communications, radar, electro-optic sensors, signal/data processing and associated software system and support. Includes efforts associated with developing the integrated avionics system (i.e. optimizing functional partitioning, distribution and integration of avionics/related functions).

- Flight Subsystems. Includes but not limited to all technology, engineering and production efforts for air vehicle support systems such as landing gear; transparent crew enclosures; egress systems; mechanical equipment integrity; electrical component integrity; subsystem integration; and aircraft power, pressurization, and temperature control systems.

**2. Weapons.** Includes but not limited to all science and technology, demonstration and validation, engineering development, and production activities which support employment and in-service engineering of ICBMs/SLBMs, conventional missiles and rockets, cruise missiles, guided projectiles, bombs, guns and ammunition, directed energy and chemical/biological



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munitions. Include with each weapon as appropriate, all related technology, engineering and production activities such as fusing/safe and arm, missile propulsion, warheads and explosives, and guidance and control.

**3. Space.** Includes but not limited to all science and technology, demonstration and validation, engineering development, and production activities which support employment and in-service engineering of launch vehicles, satellites and associated ground control systems (satellite control only; ground systems for telemetry of data included in C4I). Include under satellites, all technology, engineering and production activities associated with space communications and space-based surveillance (and associated sensors) and space-based C4I.

**4. C<sup>4</sup>I.** Includes but not limited to all science and technology, demonstration and validation, engineering development, and production activities which support employment and in-service engineering of airborne, fixed ground-based and mobile ground based C<sup>4</sup>I systems. Include all technology, engineering and production activities associated with communications networks, radios and links, distributed information systems, data fusion, decision aids, and associated computer architectures.

### Pervasive Functions (6.1, 6.2, and 6.3)

**1. Electronic Devices.** Includes but not limited to all science and technology activities supporting development of semiconductor and superconductor materials for optoelectronic, acoustic and microwave devices. Include all associated electronic materials/device fabrication and processing.

**2. Environmental Sciences.** Includes but not limited to all science and technology activities to improve measurement, characterization and modeling of the earth atmosphere and space environment. Examples include global prediction systems, space effects, and celestial backgrounds/astronomical reference sources.

**3. Infectious Diseases.** Includes but not limited to all science and technology activities which preserve manpower and performance by the prevention and treatment of militarily important infectious diseases that occur naturally worldwide.

**4. Human Systems.** Includes but not limited to all science and technology activities to enable, protect, sustain and enhance human effectiveness in DOD operations. The focus of this pervasive, multi-disciplinary area is the human and therefore impacts all DOD systems and operations. This area includes: (1) human performance definition, assessment, and aiding; (2) physiologic bioeffects of toxic hazards, ionizing and non-ionizing radiation, biodynamic (bio-mechanical) stress, and extreme environments; (3) military operational



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medicine; and (4) generic, human-centered design standards/methodologies for crew station subsystems, information management and display, and life support.

**5. Manpower and Personnel.** Includes but not limited to all science and technology activities which support four broad areas: (1) selection and classification of DOD personnel (including pilots); (2) identification of operational tasks performed and requirements for skills, knowledge, and aptitudes; (3) matching the right people with the jobs they are best suited for according to the needs of DOD, (4) and developing techniques for measuring and enhancing the productivity of the operational force.

**6. Training Systems.** Includes but not limited to all science and technology which support training of personnel, including training strategies, devices and simulators, and computer aided intelligent tutoring systems.

**7. Environmental Quality.** Includes but not limited to all science and technology activities which support the development of technologies to reduce the environmental costs of DOD operations while ensuring mission accomplishment is not jeopardized by adverse environmental impacts. Specifically, this area encompasses technologies to: (1) identify and cleanup sites contaminated with hazardous materials as a result of DOD operations (cleanup); (2) ensure DOD compliance with current and anticipated local, national, and international environmental laws and treaties (compliance); (3) minimize DOD use of hazardous materials and reduce DOD hazardous waste generation (pollution prevention); and (4) provide for protection of natural resources under DOD stewardship (conservation).

**8. Advanced Materials.** Includes but not limited to all science and technology activities related to structural, high temperature, electromagnetic protection, electronic, magnetic, optical, and biomolecular materials. Note: excludes materials areas which were included in DDR&E decision of 18 Mar 94 related to the Army's Materials Research Facility at Aberdeen Proving Ground and the Navy's Materials Facility at Carderock.



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### LABORATORIES

#### DISTRIBUTION

Naval Air Warfare Center, Weapons Division, China Lake  
Naval Air Warfare Center, Weapons Division, Point Mugu  
Naval Air Warfare Center, Aircraft Division, Patuxent River  
Naval Air Warfare Center, Aircraft Division, Indianapolis  
Naval Air Warfare Center, Aircraft Division, Lakehurst  
Naval Research Lab, Washington, D.C.  
Naval Research Lab Detachment, Bay St. Louis  
Naval Surface Warfare Center, Carderock Division, Bethesda  
Naval Surface Warfare Center, Carderock Detachment, Annapolis  
Naval Surface Warfare Center, Carderock, Philadelphia Detachment  
Naval Surface Warfare Center, Crane Division  
Naval Surface Warfare Center, Crane Detachment, Louisville  
Naval Surface Warfare Center, Dahlgren Division  
Naval Surface Warfare Center, Dahlgren Detachment, Panama City  
Naval Surface Warfare Center, Indian Head Division  
Naval Surface Warfare Center, Port Hueneme Division  
Naval Command, Control, and Ocean Surveillance Center, RDT&E Division, San Diego  
Naval Command, Control, and Ocean Surveillance Center, In-Service Engineering, West Coast Division, San Diego  
Naval Command, Control, and Ocean Surveillance Center, In-Service Engineering, East Coast Division, Charleston  
Naval Aerospace Medical Research Center, Pensacola  
Naval Biodynamics Lab, New Orleans  
Naval Dental Research Lab, Great Lakes  
Naval Health Research Center, San Diego  
Naval Medical Research Institute, Bethesda  
Naval Undersea Warfare Center, Keyport Division, WA  
Naval Undersea Warfare Center, Newport, RI  
Naval Undersea Warfare Center (Newport), New London, CT  
Naval Personnel Research and Development Center, San Diego, CA



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UIC N00253  
NUWC DIV KEYPORT

Naval Undersea Warfare Center Division Keyport  
BRAC 95 Data Call 12 Submission

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears  
Signature

Commander  
Title

11 May 94  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~NAME (Please type or print)~~

~~Signature~~

~~Title~~

~~Date~~

~~Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

**G. R. STERNER**

NAME (Please type or print)

G. R. Sterner  
Signature

Title

5-13-94  
Date

**Commander**  
**Naval Sea Systems Command**  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)**  
**DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)**

**J. B. GREENE JR**

NAME (Please type or print)

J. B. Greene Jr  
Signature

Acorns  
Title

23 MAY 1994  
Date

BRAC-95 CERTIFICATION

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with the policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

NAME: Dennis K. Gibbs  
(Please type or print)

*Dennis K. Gibbs*  
Signature

Commander  
Title

11 May 94  
Date

NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT  
Activity

# Document Separator

**DATA CALL 63  
FAMILY HOUSING DATA**

209

Information on Family Housing is required for use in BRAC-95 return on investment calculations.

<b>Installation Name:</b>	NUWC KEYPORT VA
<b>Unit Identification Code (UIC):</b>	N00253
<b>Major Claimant:</b>	NAVSEA

<b>Percentage of Military Families Living On-Base:</b>	<del>20</del> 20.3% CW
<b>Number of Vacant Officer Housing Units:</b>	0
<b>Number of Vacant Enlisted Housing Units:</b>	0
<b>FY 1996 Family Housing Budget (\$000):</b>	<del>9.9</del> 9.4 CW
<b>Total Number of Officer Housing Units:</b>	<del>1.5</del> 2 CW
<b>Total Number of Enlisted Housing Units:</b>	0

Line 4, Percentage of Military Families Living on Base, is taken from DD Form 1377. Lines 7-9, represents the activities' "fair share" of the complex total of the family housing budget and inventory of officer and enlisted units. This data was provided by COMNAVFACENGCOM. This UIC contains 13 personnel entitled to BAQ W/Dependents out of a complex total of 8287 personnel entitled to BAQ W/Dependents.

There are 121 activities identified within this complex.

**Note:** All data should reflect figures as of the beginning of FY 1996. If major DON installations share a family housing complex, figures should reflect an estimate of the installation's prorated share of the family housing complex.

Enclosure (1)

CW 7/13  
Chris Ward  
7/13/94  
NAVFAC 52JEW

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

J. E. BUFFINGTON, RADM, CEC, USN  
NAME (Please type or print)

COMMANDER  
Title

NAVAL FACILITIES ENGINEERING COMMAND  
Activity

  
Signature  
7/20/94  
Date

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER  
NAME (Please type or print)

Title

  
Signature  
7/25/94  
Date

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 of 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

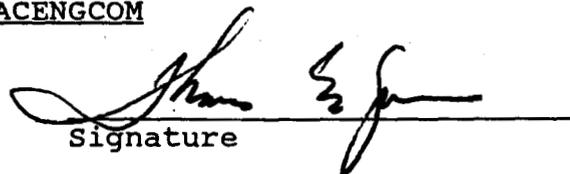
The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the chain of command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the chain of command. Copies must be retained by each level in the chain of command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

SOUTHWESTNAVFACENGCOM

THOMAS E. GUNN  
Name (Please type or print)

  
Signature

COMMANDING OFFICER  
Title

7/13/94  
Date

# Document Separator

**DATA CALL 64**  
**CONSTRUCTION COST AVOIDANCES**

**Table 1: Military Construction (MILCON) Projects (Excluding Family Housing Construction Projects)**

<b>Installation Name:</b>		<b>BANGOR WA NUSW ANNEX</b>		
<b>Unit Identification Code (UIC):</b>		<b>N00253</b>	<b># 209</b>	
<b>Major Claimant:</b>		<b>NAVSEA</b>		
<b>Project FY</b>	<b>Project No.</b>	<b>Description</b>	<b>Appn</b>	<b>Project Cost Avoid (\$000)</b>
1996	336	METAL TREATMENT FACILITY	MCON	5,300
		<b>Sub-Total - 1996</b>		<b>5,300</b>
1999	315	SANITARY WASTEWATER SYS	MCON	660
1999	334	ENVIRONMENTAL TEST FAC	MCON	6,400
		<b>Sub-Total - 1999</b>		<b>7,060</b>
2000	371	HAZ/MAT RECYCLE FAC	MCON	8,000
2000	373	INDUST WSTE TRMNT PLNT UPG	MCON	3,000
		<b>Sub-Total - 2000</b>		<b>11,000</b>
2001	345	TARGET SUPPORT FACILITY	MCON	9,000
		<b>Sub-Total - 2001</b>		<b>9,000</b>
		<b>Grand Total</b>		<b>32,360</b>

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

**J. E. BUFFINGTON, RADM, CEC, USN**  
NAME (Please type or print)

Jack E Buffington  
Signature

**COMMANDER**  
Title

2/13/94  
Date

**NAVAL FACILITIES ENGINEERING COMMAND**  
Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)**

**W. A. EARNER**

\_\_\_\_\_  
NAME (Please type or print)

W A Earner  
Signature

\_\_\_\_\_  
Title

2/18/94  
Date

BRAC-95 CERTIFICATION

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MARK E. DONALDSON  
NAME (Please type or print)

CDR, CEC, USN  
Title

MILCON PROGRAMMING DIVISION  
Division

FACILITIES PROGRAMMING AND CONSTRUCTION DIRECTORATE  
Department

NAVAL FACILITIES ENGINEERING COMMAND  
Activity

  
Signature

12 July 1994  
Date

Enclosure (1)

BRAC DATA CALL NUMBER 64  
CONSTRUCTION COST AVOIDANCE

Information on cost avoidance which could be realized as the result of cancellation of on-going or programmed construction projects is provided in Tables 1 (MILCON) and 2 (FAMILY HOUSING). These tables list MILCON/FAMILY HOUSING projects which fall within the following categories:

1. all programmed construction projects included in the FY1996 - 2001 MILCON/FAMILY HOUSING Project List,
2. all programmed projects from FY1995 or earlier for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995, and,
3. all programmed BRAC MILCON/FAMILY HOUSING projects for which cost avoidance could still be obtained if the project were to be canceled by 1 OCT 1995.

Projects listed in Tables 1 and 2 with potential cost avoidance were determined as meeting any one of the following criteria:

Projects with projected Work in Place (WIP) less than 75% of the Current Working Estimate (CWE) as of 1 OCT 1995 .

Projects with projected completion dates or Beneficial Occupancy Dates subsequent to 31 March 1996.

Projects with projected CWE amount greater than \$15M.

The estimated cost avoidance for projects terminated after construction award would be approximately one-half of the CWE for the remaining work. Close-out, claims and other termination costs can consume the other half.

# Document Separator

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# NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT



**BRAC 95 DATA CALL 33**

**ENVIRONMENTAL  
DATA CALL**

BRAC 1995 ENVIRONMENTAL DATA CALL:  
All Navy/Marine Corps Host Activities

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**ADMINISTRATIVE SENSITIVE**

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i  
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NUWC DIV KEYPORT

## ENVIRONMENTAL DATA CALL

Responses to the following questions provide data that will allow an assessment of the potential environmental impact associated with the closure or realignment of a Navy shore activity. This criterion consists of:

- Endangered/Threatened Species and Biological Habitat
- Wetlands
- Cultural Resources
- Environmental Facilities
- Installation Restoration
- Land/Air/Water Use

As part of the answers to these questions, a *source citation* (e.g., 1993 base loading, 1993 base-wide Endangered Species Survey, 1993 letter from USFWS, 1993 Base Master Plan, 1993 Permit Application, 1993 PA/SI, etc.) must be included. It is probable that at some point in the future, you will be asked to provide additional information detailing specifics of individual characteristics. In anticipation of this request, supporting documentation (e.g., maps, reports, letters, etc.) regarding answers to these questions should be retained. Information needed to answer these questions is available from the cognizant EFD Planning and Real Estate Division, and Environment Safety, and Health Divisions; and from the activity Public Works Department, and activity Health Monitoring and Safety Offices.

For purposes of the question associated with land use at your base is defined as land (acreage owned, withdrawn, leased, and controlled through easements); air (space controlled through agreements with FAA, e.g., MOAs); and water (navigation channels, and waters along a base shoreline) under the control of the Navy.

Provide a list of the tenant activities with UICs that are covered in this response.

Tenant Command Name	UIC
Naval Regional Medical Center Branch, Keyport	N32586
Defense Printing Service Reprographics Facility Keyport	N43326
Defense Financial and Accounting Service	HQ0103



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33

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NUWC DIV KEYPORT

# 1. ENDANGERED/THREATENED SPECIES AND BIOLOGICAL HABITAT

1a. For federal or state listed endangered, threatened, or category 1 plant and/or animal species on your base, complete the following table. Critical/sensitive habitats for these species are designated by the U.S. Fish and Wildlife Service (USFWS). A species is present on your base if some part of its life-cycle occurs on Navy controlled property (e.g., nesting, feeding, loafing). Important Habitat refers to that number of acres of habitat that is important to some life cycle stage of the threatened/endangered species that is not formally designated.

SPECIES (plant or animal)	Designation (Threatened/ Endangered)	Federal/ State	Critical/ Designated Habitat (Acres)	Important Habitat (acres)
<i>example: Haliaeetus leucocephalus - bald eagle</i>	<i>threatened</i>	<i>Federal</i>	25	0
<u>Haliaeetus leucocephalus - bald eagle</u>	threatened	both	250	-
<u>Oncorhynchus kisutch - coho salmon</u>	sensitive	state	-	1
<u>Ardea herodias - great blue heron</u>	sensitive	state	-	25

Source Citation: The designation of two hundred fifty acres as critical habitat emanates from the USFWS Bald Eagle Management Guidelines (see enclosed map). NUWC Division, Keyport's Natural Resources program is closely coordinated with USFWS to ensure protection of this critical habitat. Moreover, the Natural Resources program is dedicated to the enhancement and protection of all critical habitat within, or adjacent to, the base. The base is a strong participant in the Legacy Program to protect critical habitat. The Natural Resources Program is a key element in the success of the Division's environmental programs, which were recognized for outstanding accomplishment when NUWC Division, Keyport received the first-ever Secretary of the Navy Meritorious Unit Commendation (MUC) for Environmental Excellence in 1993. In presenting this award, the Honorable Jacqueline E. Schafer, assistant Secretary of the Navy (Installations and Environment) said, "*Today's recognition is the result of applying two time-tested military principles -- leadership and teamwork -- moving out together to accomplish the mission of environmental protection. As the first Command to be recognized in this way, you will stand as the model of stewardship for other installations to follow.*" Examples of projects on which this Division is working



ADMINISTRATIVE SENSITIVE

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closely with the State and local community to protect critical habitat include:

**Bald Eagle.** Three Bald Eagle nests are located on the Division's Toandos Peninsula property on Hood Canal. Guidance stipulates a 400 meter primary protection air zone around the nest and an 800 meter secondary zone. The enclosed map shows the nest locations and the primary and secondary zones. This Division is currently working closely with USFWS to study the feeding and nesting habits of the eagles on Hood Canal. NUWC Division, Keyport protects these and other critical habitats through its comprehensive environmental review process. Environmental reviews are the first step in performing environmental assessments in accordance with the National Environmental Policy Act. This Division performs over 100 project reviews per year.

**Salmon.** NUWC Division, Keyport's Toandos Peninsula property has a small stream at the south end that provides habitat for Oncorhynchus kisutch (coho salmon). The USFWS is considering declaring coho salmon endangered for Hood Canal and possibly for all of Washington State. This stream is being restored and enhanced for coho salmon habitat. There are also O. mykiss, O. clarkii, and O. keta (steelhead, cutthroat trout, and chum salmon) in this stream. Cutthroat trout are also under consideration for endangered species listing.

**Blue Heron.** This Division has a Great Blue Heron (Ardea herodeus) rookery. The Great Blue Heron is a sensitive species in the State of Washington. This Division is currently protecting and enhancing its 25 acres of wetland habitat on the main base to support the Blue Heron. Enhancement includes planting native species and eliminating potential sources of pollution.

**Migratory Birds.** NUWC Division, Keyport supports several species of migratory birds which are protected by the Migratory Bird Act. This Division strictly forbids hunting in all forms and provides a critical nesting and loafing refuge for these waterfowl. The Division, along with the Audubon Society, conducts an annual inventory of the various species.



**ADMINISTRATIVE SENSITIVE**

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1b.

Have your base operations or development plans been constrained due to: - USFWS or National Marine Fisheries Service (NMFS)? - State required modifications or constraints? If so identify below the impact of the constraints including any restrictions on land use.	NO
Are there any requirements resulting from species not residing on base, but which migrate or are present nearby? If so, summarize the impact of such constraints.	NO

NUWC Division, Keyport's environmental programs are fully integrated in the operational planning and development processes of the base. All environmental considerations are addressed during the concept review phase. Any environmental concerns are mitigated at that time. The Division has successfully accomplished its full mission without any adverse impact to critical habitat or loss of any wetlands (since 1989). In fact, this Division has expanded/enhanced its critical habitat areas by three acres (mainly by removing non-native vegetation), while increasing its engineering/industrial capability with 150,000 square feet of new buildings since 1992.

None of Keyport's industrial operations threaten or impact any of the areas where migratory birds congregate. All industrial areas are within controlled areas which do not contain any critical habitat. Likewise, all critical habitat areas are completely unsuitable for industrial applications and future construction; therefore, no special requirements are needed to protect these areas or species.

As stated earlier, this Division has a wide variety of migratory waterfowl present, both seasonally and year-round. In spring and summer, Canada Geese and terns use the lagoon, shoreline, and grass areas. In winter a variety of ducks and widgeons use the base for protection. This variety adds a rich fullness to the ecosystem of the base.



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1c. If the area of the habitat and the associated species have not been identified on base maps provided in Data Call 1, submit this information on an updated version of Data Call 1 map.

See enclosed map.

1d.

Have any efforts been made to relocate any species and/or conduct any mitigation with regards to critical habitats or endangered/threatened species? Explain what has been done and why.	YES
--	-----

NUWC Division, Keyport, particularly through the Legacy Program, has done considerable work enhancing critical habitat. The Division is a dedicated steward of its natural resources and recognizes the importance of protecting critical habitat for future generations and for the benefit of the local community. The continued operation of the base as a controlled access area will guarantee constant protection of these endangered species and habitats. The base's critical habitats, especially the shoreline, are merely a part of the much larger habitat of the Puget Sound Basin. All the work described below has been performed without any impact on this Division's primary mission nor was it required as a result of changes in base operations. Keyport's environmental programs are fully integrated into its industrial operations to ensure full support to industrial activities while not sacrificing or threatening any critical habitat.

This Division has enhanced all 30 acres of wetlands on Keyport by planting a buffer zone of native trees and plants around the wetland edges, as well as erecting nesting boxes for a variety of bird species and bats. The Division has received Legacy Program and Natural Resources Reserve Account funds for several projects that have either been completed or are underway. The following is a list of the projects:

- Endangered Species Survey
- Wildlife Distribution and Habitat Improvement
- Nature Trail Construction and Improvement
- Wetland Delineation and Enhancement
- Salmon Stream Enhancement

The endangered species survey is complete. It was done to determine whether there were any endangered plants on the main base at Keyport, the Undersea Warfare Annex, or on the Toandos Peninsula. Although no endangered species were found, the data is being used to enhance the habitat for native plant species.



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The Wildlife Distribution and Habitat Improvement project will be completed this summer. NUWC Division, Keyport is conducting surveys to determine which small mammals are present on the main base at Keyport and on the Undersea Warfare Annex. This Division is also attempting to remove non-native invasive plants and replace them with native species to provide native flora for local wildlife. Additionally, the Division is working to protect critical otter habitat.

Enhancing Natural Resources Awareness - NUWC Division, Keyport is currently restoring approximately 1/2 mile of nature trail and creating an additional 1/2 mile of wetland trail. These interpretive trails will take visitors on an educational journey through forests, wetlands, and critical habitat. Over 50 yards of boardwalk are being constructed to ensure wetlands remain undisturbed, while allowing people to stand surrounded by wetland fauna and flora.

The Wetland Delineation and Enhancement project is taking place at Keyport's Undersea Warfare Annex and on the Toandos Peninsula. Projects should be complete by the end of FY 1994. Enhancement will include measures to reduce invasive plant species and also to improve a wetland that has been used primarily as a storm drainage basin. These improvements are expected to improve critical habitat for migratory bird species.

The Salmon Stream Enhancement project will also be completed this summer by Division personnel, with support from the local community Youth Corps. Culverts will be removed from old, unused, logging roads, thus allowing salmon better access to the upper portions of the stream. This will improve habitat for coho salmon, the species that is expected to be listed as an endangered species. It will also improve habitat for steelhead and cutthroat trout.

In addition to the above projects, this Division's personnel have spent considerable volunteer time planting over 1,000 trees at Keyport and Keyport's Undersea Warfare Annex. This has been done to improve the wildlife habitat, particularly for birds, and also to start replacing non-essential grassy areas, thereby reducing mowing costs and returning these areas to a natural state. Some areas are being planted with native berries to provide a food source for wildlife and recreation enthusiasts.

The Natural Resources Program supports this Division's mission by providing funding and work for Division personnel through the Legacy Program. Through aggressive planning and execution, the Division has successfully obtained approximately 2 workyears of funding from the Legacy Program each year for the last three consecutive years.



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1e.

Will any state or local laws and/or regulations applying to endangered/threatened species which have been enacted or promulgated but not yet effected, constrain base operations or development plans beyond those already identified? Explain.	NO
---	----

NUWC Division, Keyport is a recognized leader in Environmental Management. All environmental and natural resources programs have been successfully integrated through use of this Division's unique Environmental Management Information System (EMIS) and Geographic Information System (GIS). EMIS is a relational database which allows multimedia (air, water, soil) site locations to share common chemical and hazardous material information. Included are all environmentally sensitive areas, such as critical habitats and wetlands. GIS is the visual representation of EMIS data. Environmentally sensitive areas can be viewed on an overlay map of the base. The natural marriage of GIS and EMIS is being consummated under a proposed CRADA between NUWC Division, Keyport and Vitro Corporation. These systems are the main tool environmental managers use to plan and prepare for changes in laws and regulations. Similarly, multimedia environmental and natural resources planning has been fully integrated into the Division's 5-year business planning process. New laws and regulations are anticipated and planned for at least 2 to 3 years prior to their effective date. In this way new requirements are fully addressed and budgeted for well in advance.

As mentioned earlier, NUWC Division, Keyport has a highly effective environmental review process for all proposed operational and construction projects. The success of this process is largely due to the overall success this Division has had in implementing Total Quality. This was nationally recognized when NUWC Division, Keyport received the Federal Quality Institute's prestigious 1994 Quality Improvement Prototype Award as one of only three such winners in the entire federal government. The environmental review process employs the same Total Quality principles to improve cost, schedule, and performance as any industrial process at the Division. In this way the environmental review keeps pace with the vision of the Division--*Quality for our customers, Improvement for our future--* and the primary mission of providing undersea warfare support to the Navy.

At remote range sites the Division works closely with the controlling state authorities to ensure operations at the ranges have zero impact on wildlife, habitat and water quality. The Division utilizes a comprehensive environmental assessment process where multimedia (air, water, soil...) subject matter experts review all new proposed range operations and ensure potential impacts are mitigated early in the process. The Division has consistently received State approval for all new operations and has an outstanding working relationship with the State. The Division continually monitors its operations to maintain the high standards of environmental quality within the range waters it operates in.



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# UNDERSEA WARFARE ANNEX

Structures



Paved Roads



Dirt.



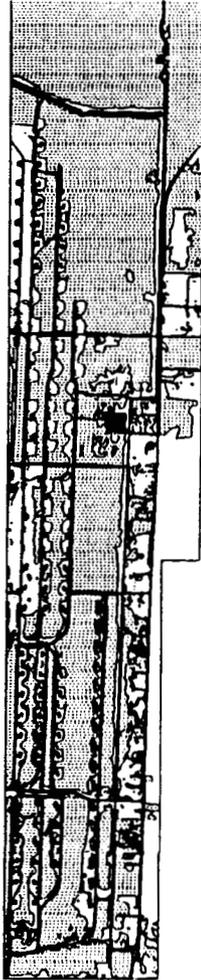
Land Cover



grass



tree



sf



0

9000

18000

## 2. WETLANDS

Note: Jurisdictional wetlands are those areas that meet the wetland definitional criteria detailed in the Corps of Engineers (COE) Wetland Delineation Manual, 1987, Technical Report Y-87-1, U.S. Army Engineer Waterway Experiment Station, Vicksburg, MS or officially adapted state definitions.

2a.

Does your base possess federal jurisdictional wetlands?	YES
Has a wetlands survey in accordance with established standards been conducted for your base?  A survey was completed for the Keyport property in 1992. This Division has received Legacy Program funds to conduct similar delineation surveys at Toandos Peninsula and Keyport's Undersea Warfare Annex properties. These surveys have been started and will be completed this summer (see map).	YES
When was the survey conducted or when will it be conducted?	June - August 1992
What percent of the base has been surveyed?  Keyport: 100% Keyport's Undersea Warfare Annex: 25% (Survey will be completed June - August, 1994) Toandos Peninsula: 0% (Survey will be completed June - August 1994)	100% / 25% / 0%
What is the total acreage of jurisdictional wetlands present on your base?  Keyport: 25 acres Keyport's Undersea Warfare Annex: Estimated 60 acres Toandos Peninsula: Estimated 40 acres	25 / 60 / 40

Source Citation: 1992 NUWC Division, Keyport Wetlands Survey Report

NUWC Division, Keyport successfully applied for and received Legacy Program funding to perform its own wetlands surveys at its properties. This Division has extensive expertise in wetlands delineation. In fact, Division personnel have taught several college courses on wetlands delineation and routinely bring classes to the base to practice delineation techniques.



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The surveys at Undersea Warfare Annex and Toandos Peninsula are being handled in this manner. This Division is fully dedicated to protecting its wetlands in harmony with completing its mission. The wetlands serve as vital habitat to a variety of birds and animals. In addition, they provide a buffer and filter zone between stormwater runoff from industrial areas and main bodies of water.

NUWC Division, Keyport believes in being a responsible steward of its natural resources, including its wetlands. For that reason, the Division has devoted significant time and resources to surveying wetlands and studying the impacts of industrial operations on its wetlands. Additionally, this Division has embarked on educating employees about their potential impact on wetlands and is constructing a mile of interpretive nature trail, which includes 50 yards of boardwalk through sensitive wetlands areas. Display centers will be posted along the trail to explain about wetlands and their importance as habitat and natural filtering systems in the environment.

**2b.** If the area of the wetlands has not been identified on base maps provided in Data Call 1, submit this on an updated version of Data Call 1 maps.

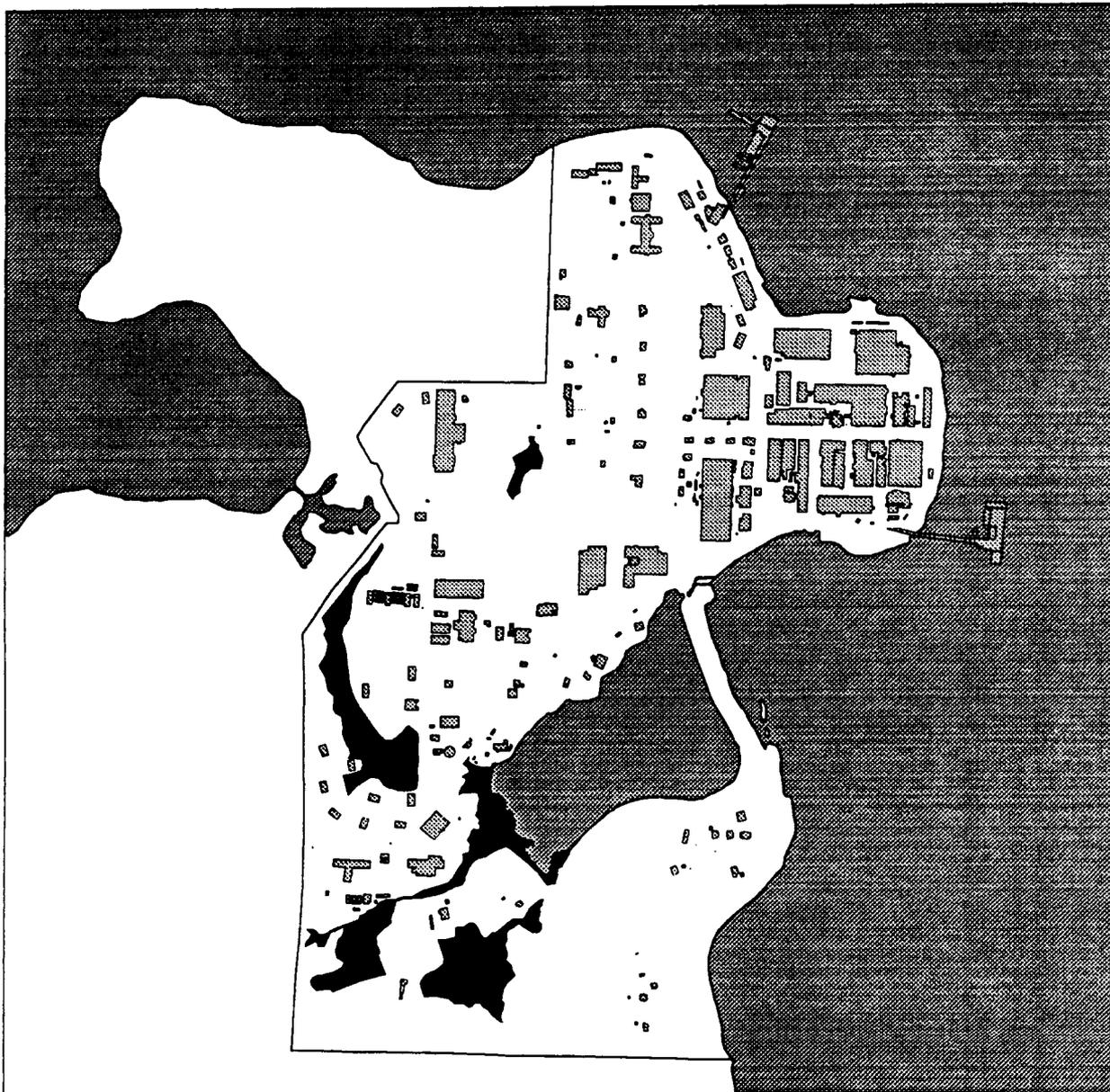
See maps on following pages.



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# NUWC Keyport Wetlands



Base Boundary



Wetlands



Base Structures



Shoreline.



Land / Water

Land



Water

sf



0

2000

4000



2c. Has the EPA, COE, or a state wetland regulatory agency required you to modify or constrain base operations or development plans in any way in order to accommodate a jurisdictional wetland? NO If YES, summarize the results of such modifications or constraints.

NUWC Division, Keyport's concern about wetlands protection has resulted in several wetlands enhancement projects. Most notably, the Division has done extensive removal of invasive vegetation (non-native) and replanted native species in its place. Over 3 acres of wetlands have been opened up and restored in this manner during a time when the Division has built over 150,000 square feet of industrial and office buildings. This exemplifies this Division's ability to protect and enhance its wetlands while adding to its industrial capabilities (without impact or threat to any environmentally sensitive areas). The continued operation of the base as a controlled access area will guarantee constant protection of these sensitive wetland areas. The EPA, COE and state have never had cause to modify or constrain base operations or development plans in any way to accommodate a jurisdictional wetland.

NUWC Division, Keyport ensures compatibility between its industrial operations and wetland areas, not only through wetlands protection, but also through aggressive application of the shoreline management program. The Division is a recognized leader and expert on performing coastal consistency determinations which identify any potential impacts of industrial operations on surface or subsurface waters discharging into wetlands or adjacent bodies of water. The Division has consistently met all requirements of the Shoreline Management Act. Environmental reviews and coastal consistency determinations address any new operation within 200 feet of main bodies of water. Potential environmental impact from these operations is fully mitigated prior to operation startup. For example, the new Hazardous Waste Storage Facility has a special storm drainage collection system to ensure all stormwater is treated through an oil/water separator and then discharged to an adjacent wetland for natural filtration.



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**3. CULTURAL RESOURCES**

**3a.**

Has a survey been conducted to determine historic sites, structures, districts, or archaeological resources which are listed, or determined eligible for listing, on the National Register of Historic Places? If so, list the sites below.	<b>YES</b>
---	------------

- Building 35
- 3 potential historic districts at the main site
  - a portion of the industrial area
  - family housing (2 areas)
- Tower Point Site on the Toandos Peninsula

Building 35 was constructed in 1918 and was originally used as a Marine barracks. The building is significant as an excellent example of the Georgian style of architecture. It reflects the influence of architectural styles emerging in the early 1900's upon the Bureau of Yards and Docks. NUWC Division, Keyport has treated Building 35 as a historic structure, and the building exterior maintains the characteristics prominent when first constructed, yet significant improvements to remediate seismic, fire safety, and habitability deficiencies have been implemented.

**3b.**

Has the President's Advisory Council on Historic Preservation or the cognizant State Historic Preservation Officer required you to mitigate or constrain base operations or development plans in any way in order to accommodate a National Register cultural resource? If YES, list the results of such modification or constraints below.	<b>NO</b>
---	-----------

**3c.**

Are there any on base areas identified as sacred areas or burial sites by Native Americans or others? List below.	<b>NO</b>
---	-----------

There is no land that is currently used for operations or that would be available for expansion that is constrained by prior uses as sacred areas or burial sites.



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#### 4. ENVIRONMENTAL FACILITIES

Notes: If your facility is permitted for less than maximum capacity, state the maximum capacity and explain below the associated table why it is not permitted for maximum capacity. Under "Permit Status" state when the permit expires, and whether the facility is operating under a waiver. For permit violations, limit the list to the last 5 years.

4a.

Does your base have an operating landfill?				NO	
ID/Location of Landfill	Permitted Capacity (CYD)		Maximum Capacity (CYD)	Contents <sup>1</sup>	Permit Status
	Total	Remaining			

<sup>1</sup> Contents (e.g., building demolition, asbestos, sanitary debris, etc.)

**Are there any current or programmed projects to correct deficiencies or improve the facility?**

NUWC Division, Keyport, through aggressive waste management, minimization and recycling, does not require a landfill. The Division actively pursues solid waste minimization opportunities, including source reduction, material reutilization, and solid waste recycling. Over 40 percent of the solid waste generated at this Division is recycled. Ferrous and non-ferrous metals, cardboard, and virtually all of the office wastepaper produced at the base are recycled through the Industrial Recycling Program. In addition, timber and other wood wastes are reused in on-base construction activities.

This Division's Pollution Prevention Program (which includes waste minimization) was awarded the 1994 Secretary of the Navy Pollution Prevention Team Award. This program has reduced waste generation by 16 percent (414,049 pounds) in the last two years. In addition, unique hazardous materials used at the base have been cut from 10,000 to 4,000 items. The Pollution Prevention and Industrial Recycling programs are fully integrated, making them singularly unique in the Navy. These programs, working in unison, have successfully enabled the sale of industrial and hazardous wastes for commercial reuse. The programs thus reduce the operating costs of this Division's industrial processes, making them more efficient and cost effective. This is accomplished at minimal risk to the Division, because comprehensive environmental site evaluations are conducted at potential recycling facilities.



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**4b.** If there are any non-Navy users of the landfill, describe the user and conditions/ agreements.

N/A

**4c.**

Does your base have any disposal, recycling, or incineration facilities for solid waste?					YES
Facility/Type of Operation	Permitted Capacity	Ave Daily Throughput	Maximum Capacity	Permit Status	Comments
Integrated Material Processing Facility	Not Applicable	Paper-3,750 lbs Metals-5,708 lbs	Paper-7,000 lbs Metals-12,000 lbs	Not Applicable	See Below

**List any permit violations and projects to correct deficiencies or improve the facility.**

The Integrated Material Processing Facility handles materials for recycling on the base. It is a multi-function facility which also handles/processes materials, such as serviceable material being returned to the Supply System, reusable hazardous materials, and precious metals-bearing electronic scrap. They are turned in to the local Defense Reutilization Marketing Office.

Relative to solid waste, the facility receives recyclable material such as paper, wood, and steel products, already presorted by the customer turning in the material. These items are delivered to the facility by an integrated material movement system. The received material is screened for quality to ensure best sales return, baled, bagged, et cetera in the form desired by the buyer of the product. Because our material is source-separated and not food-contaminated, no permits are required for the facility.



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**List permit violations and discuss any projects to correct deficiencies.**

NUWC Division, Keyport does not have a domestic wastewater treatment plant because all domestic wastewater is discharged into the sanitary sewer system, which connects to the local publicly-owned treatment works (POTW). In addition, much of the industrial wastewater generated on the base is pretreated prior to discharge. The original base (established in 1914) had combined sewer and storm drain systems. Today, the Division has conducted exhaustive studies and designs to ensure all cross-connections between the two systems have been eliminated. Final upgrades to the sewer system are being completed this year (FY 1994). The sanitary collection system has adequate capacity to support all industrial and domestic discharges. This Division has an excellent relationship with the local POTW, the Central Kitsap Wastewater Treatment Plant.

4e. If you do not have a domestic WWTP, describe the average discharge rate of your base to the local sanitary sewer authority, discharge limits set by the sanitary sewer authority (flow and pollutants) and whether the base is in compliance with their permit. Discuss recurring discharge violations.

The average discharge rate of domestic wastewater from NUWC Division, Keyport to the Central Kitsap Wastewater Treatment Plant is 190,355 gallons per day or 5.79 million gallons per month. (Source Citation: CY 1993 Kitsap County monthly invoices for sewage service.) Discharge limits are currently set by this Division's sewer service contract with Kitsap County, which incorporates the county's ordinance regarding sewage systems. (Source Citation: Department of the Navy Contract No. N62474-77-C-3005-P00023) The Division's daily discharge quantity is well below the set flow limit of 2 million gallons per day. The base has consistently complied with the referenced sewer ordinance that prohibits the discharge of unlawful wastes, such as sewage containing suspended solids in excess of 350 milligrams per liter, or grease and oil in excess of 100 parts per million, sewage with ph lower than 5.5 or greater than 9.0, or Biological Oxygen Demand (BOD) greater than 300 milligrams per liter, or sewage containing toxic or poisonous substances in sufficient quantity to injure or interfere with any sewage treatment process or cause a hazard to humans or animals. In addition, the Division's Industrial Waste Treatment Plant (IWTP) unfailingly meets ordinance pretreatment requirements by treating industrial wastewaters prior to their introduction into the public sewer. Kitsap County Public Works personnel routinely monitor Keyport's sewage discharge quantity and quality, and they have never reported any problems whatsoever. The base is in compliance with this sewer service contract and has not had any associated discharge violations.



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4f.

Does your base operate an Industrial Waste Treatment Plant (IWTP)?					YES
ID/Location of IWTP	Type of Treatment	Permitted Capacity	Ave Daily Discharge Rate (GPD)	Maximum Capacity (GPD)	Permit Status
Bldg. 825	Chromium Reduction	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 825	Cyanide Treatment	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 825	Metals Removal	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 514	Otto Fuel Separator	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 1055	Oil/Water Separator	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 489	Above Grade Sump	N/A	N/A	N/A	N/A
Bldg. 884	Alodine Treatment	<sup>A</sup>	18,325 <sup>B</sup>	60,000 <sup>B</sup>	In Review <sup>C</sup>
Bldg. 514	Above Grade Sump	N/A	N/A	N/A	N/A
Bldg. 72	Above Grade Sump	N/A	N/A	N/A	N/A
Various (network)	Double-wall Piping	N/A	N/A	N/A	N/A

List any permit violations and projects to correct deficiencies or improve the facility.

Notes:

<sup>A</sup> NUWC Division, Keyport currently has a completed application under review by the Washington State Department of Ecology for a State Waste Discharge Permit for Industrial Discharges to a Publicly Owned Treatment Works (POTW). Per Washington State water pollution rules, the Department of Ecology, in cooperation with the Environmental Protection



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Agency and Kitsap County, has agreed to issue a comprehensive permit to permanently approve NUWC Division, Keyport industrial discharges to the sanitary sewer, including IWTP operations and effluent, sometime near June 1994. NUWC Division, Keyport has worked with the State to develop a permit truly reflective of the Center's industrial operations, and treatment processes, and capabilities.

<sup>B</sup> Avg. Daily Discharge Rate: 18,325 gallons per operating day from the IWTP. (Source Citation: Bldg. 825 Operator Logs).

The maximum capacity of the IWTP is 60,000 GPD. The buildings which house these facilities are part of the secondary containment and control systems for the treatment process. These unique facilities are tied together through a network of state-of-the-art, double-wall, underground pipes. This network piping system feeds into the main treatment facility, Bldg 825. Therefore, the average daily discharge rate is for the effluent leaving Bldg 825. Discharges of this nature from all other facilities are included in the 190,355 GPD total discharge rate for effluent discharged off-base in the sanitary sewer system.

<sup>C</sup> NUWC Division, Keyport currently has a completed application, as stated above, under review by the Washington State Department of Ecology for a State Waste Discharge Permit for Industrial Discharges to a Publicly Owned Treatment Works (POTW).

This unique, technically advanced Industrial Waste Treatment Plant was developed to treat complex wastewaters generated from the industrial processes used at this Division in the fabrication, maintenance, and repair of underwater weapons and targets and the reclamation of Otto fuel for the Navy. (Otto Fuel is a highly energetic monopropellant used as a torpedo fuel.) The facilities treat industrial wastewaters from Bldg. 72 (Plating Shop), Bldg. 38 (Metal Shop), Bldg 134 (Photo Lab), Bldg 514 (Refueling Area), Bldg. 84 (Soda Blast Paint Strip Facility), Bldg. 85 (Battery Shop), Bldg. 509 (Oil Tank Pit), Bldg. 820 (Alodine Shop), Bldg. 209 (Otto Fuel Reclamation Facility), and bilge water from range craft. This facility reduces nearly six million gallons of contaminated wastewaters per month into clean water, which is then discharged to the Central Kitsap Wastewater Treatment Plant. The facility is a major integral part of the Division's Pollution Prevention Program and provides essential support to the Division's core USW depot repair mission.

The IWTP has separate influent storage and batch reactors to simultaneously receive, store, and treat both acidic, chromium-contaminated wastewaters and caustic, cyanide-bearing wastestreams. Chrome reduction is accomplished on acidic wastewaters, and cyanide destruction is performed on caustic wastewater prior to consolidation for metals removal treatment. Metals are removed through a process consisting of pH adjustment, flocculation, clarification, solids dewatering, and filtration. Auxiliary facilities listed in table 4f accomplish Otto fuel separation, oil/water separation, and treatment of Alodine wastewater.



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The IWTP is an extensive combination of fixed buildings, tanks, and a double-wall underground piping system. Buildings include the main treatment plant, an adjacent oil/water separation facility, and an Otto fuel separation facility. These facilities contain tank systems, piping, pumps, valves, alarms, and monitors to efficiently move and control wastewater throughout the treatment process. These semi-automated facilities have secondary containment which ensure protection of both human health and the environment by preventing them from coming into contact with contaminated wastewater. The facilities also contain ventilation equipment to maximize worker safety. The state-of-art, double-walled piping extends throughout most of the industrial section of the base.

From initial operation (1982), the IWTP has operated continuously at full utilization (365 days per year at 24 hours per day) in compliance with federal general pretreatment regulations and metal finishing categorical pretreatment standards. Although the facility has never been under a formal permit, it has always been operated in full compliance and in close cooperation with the Central Kitsap Wastewater Treatment Plant, which accepts the effluent. Analytical testing on the IWTP effluent has been routinely performed by the POTW, and in-house monitoring of batch treatment operations done, to ensure compliance with pretreatment standards. Treatment operations and processes have been continually evaluated and improved to increase treatment capability and stay ahead of regulatory requirements. Innovative technology is being used to upgrade chromium-reduction treatment to address more complex wastewaters, reduce operating costs (for example, by reducing feed stock chemicals), reduce sludge generation, and decrease treatment times.

The original treatment facility (Bldg. 825) and piping system network were constructed and put into operation in 1982. Upgrades and additions to the basic facility have occurred to support mission requirements and maintain full compliance. These upgrades and additions include:

Otto Fuel Separation Facility	1983
Above Grade Sump (B489)	1990
Oil/Water Separation Facility	1992
Sludge Press replacement (B825)	1992
Above Grade Sump (B514)	1992
Above Grade Sump (B72)	1993
Double-Wall Piping Network (2,500 lf)	1993
NFESC Treatment Upgrade (B825)	1994

There are no special budget requirements for these facilities. The facilities are fully compliant with all current federal, state, and local regulations. A comprehensive review of future requirements has been performed, and the facilities have been upgraded to ensure mission and compliance requirements are supported well into the future.

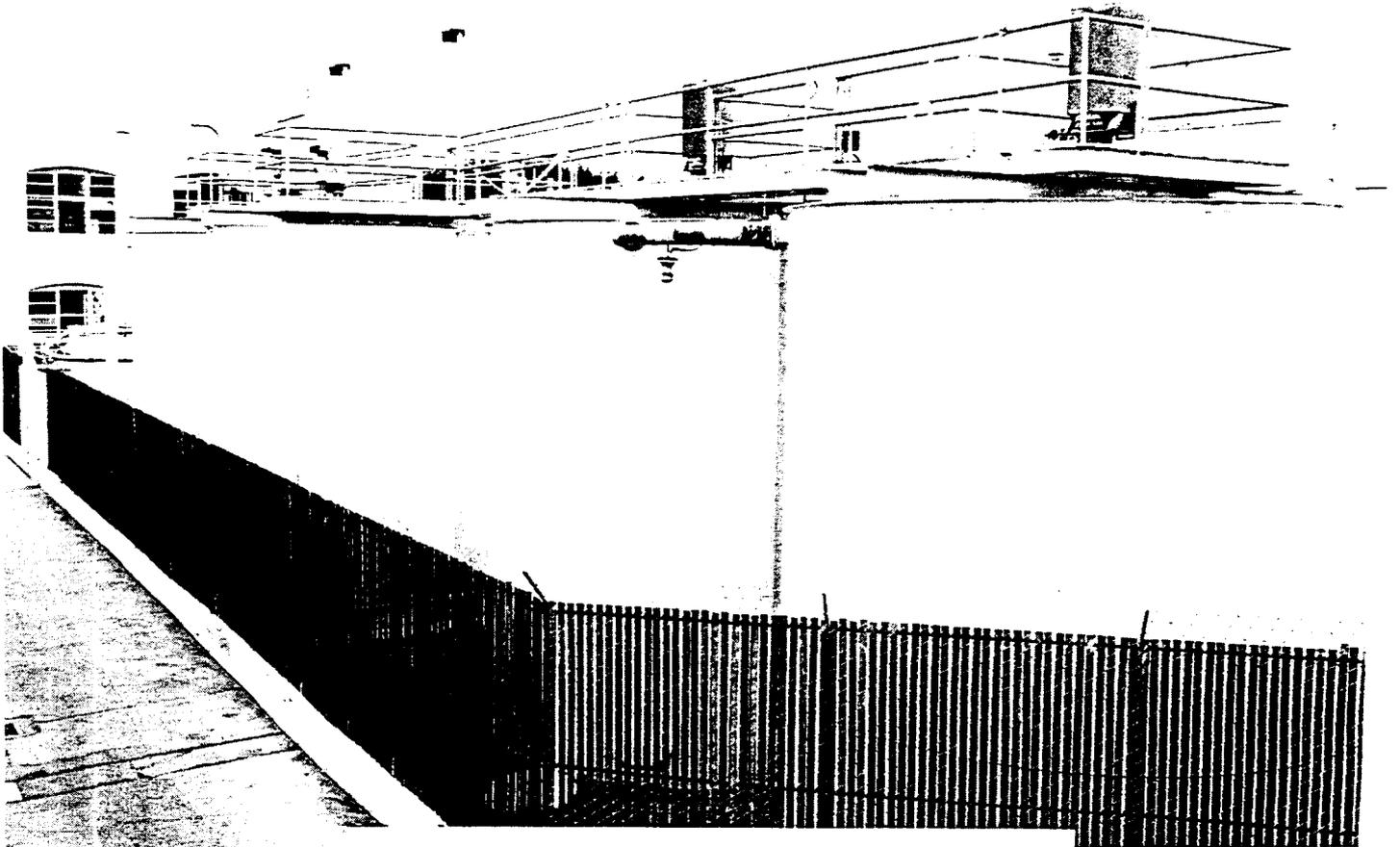
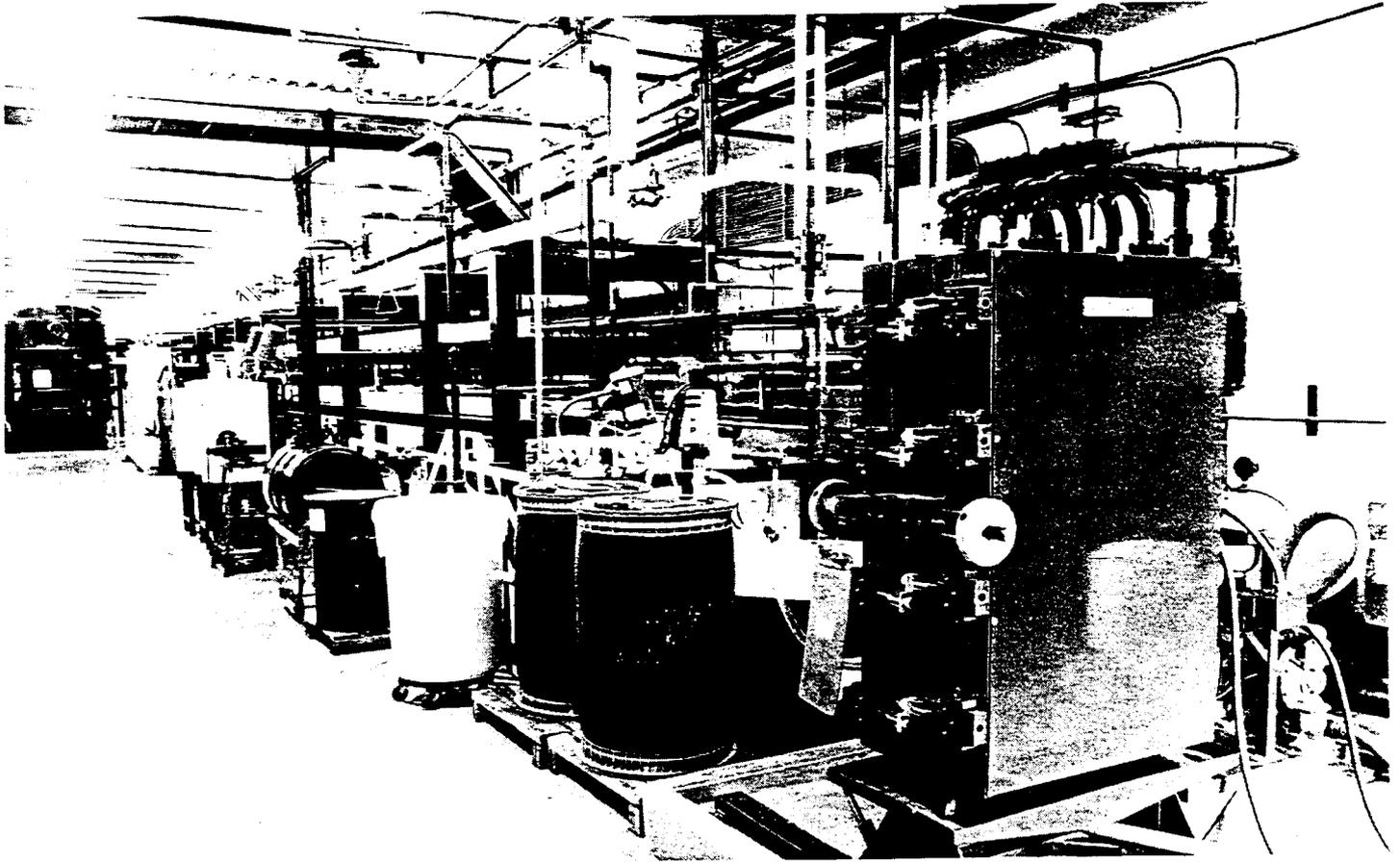


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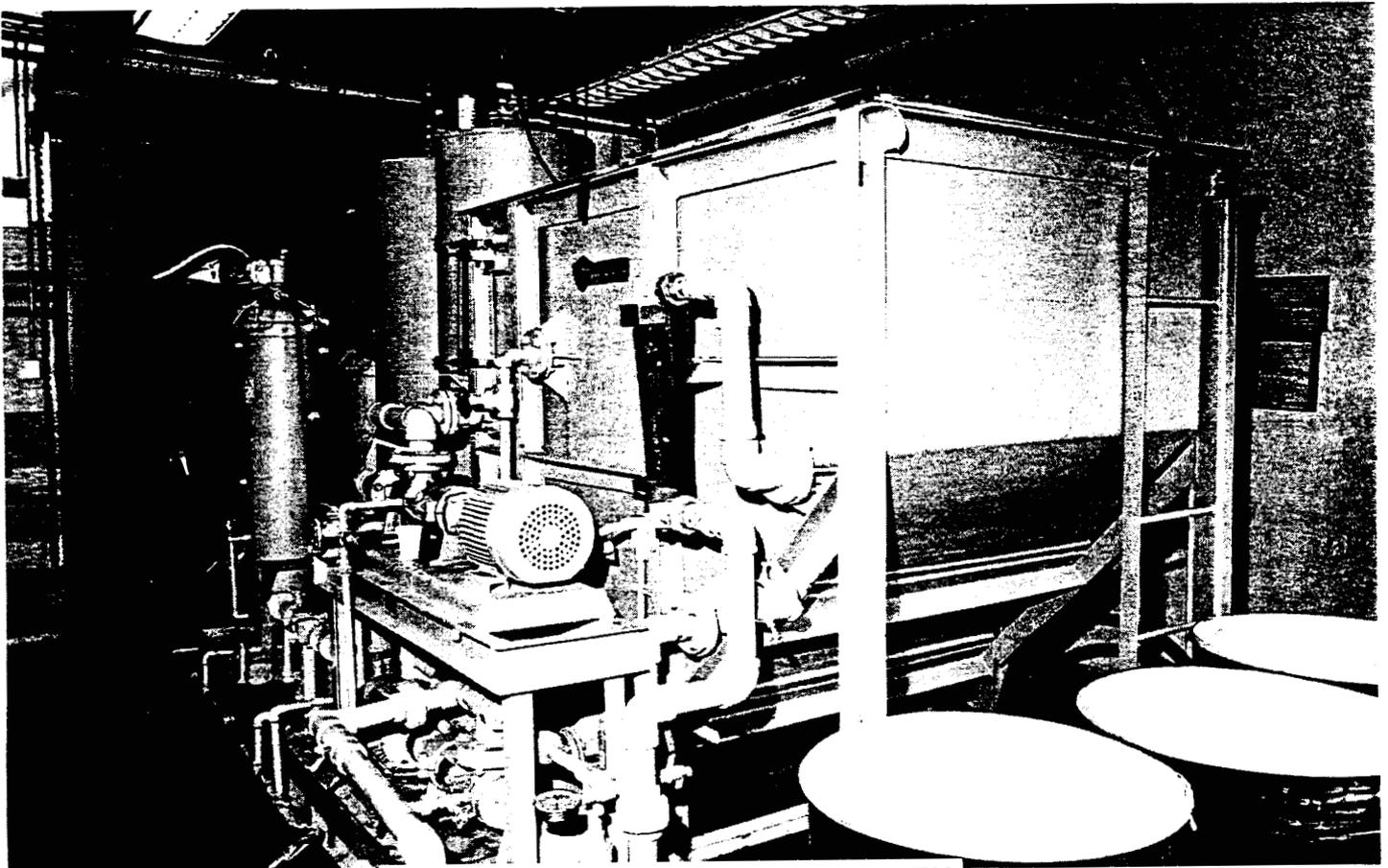


**INDUSTRIAL WASTE TREATMENT PLANT**

**NUWC DIVISION, KEYPORT**



**OIL/WATER SEPARATION FACILITY**



**OTTO FUEL SEPARATION FACILITY**

4g. Are there other waste treatment flows not accounted for in the previous tables? Estimate capacity and describe the system.

NUWC Division, Keyport's IWTP facilities were designed to address all the wastewater flows generated from this Division's overhaul, maintenance, and industrial operations. Therefore, any other waste flows not handled by the IWTP system or by the hazardous waste control and management process are very low volumes which do not require treatment. The base has an efficient, well-integrated hazardous material control and management system which insures that all wastes and wastewaters generated by industrial processes and operations receive proper treatment and disposal.

4h.

Does your base operate drinking Water Treatment Plants (WTP)?					YES
ID/Location of IWTP	Operating (GPD)		Method of Treatment	Maximum Capacity	Permit Status
	Permitted Capacity	Daily Ave. Use Rate			
Bldg. 10 <sup>A</sup>	6,506GPM <sup>B</sup>	343,000	Chlorination	936,000 GPD	Green <sup>C</sup>

The Division has one drinking water supply well which is chlorinated and provided through a water treatment and distribution system.

Notes:

<sup>A</sup>The water supply well is located less than 300 feet from Building 10. Water pumped from the well enters Building 10 where it is metered, treated with chlorine and discharged into two 50,000 gallon reservoirs. Chlorine gas is automatically mixed with water in a metered mixing apparatus in Building 10. The treated water is then injected into the main feed line from the well just as it enters Building 10 and is charged into the two reservoirs. Level switches in the reservoirs activate the well pump to maintain a constant reservoir level.  
(Source citation: 1992 NUWC Division, Keyport Water System Plan)

<sup>B</sup>Permitted Capacity: State of Washington Public Water System Operating Permit does not stipulate an operating capacity. The gallons per minute source capacity reported for our drinking water well is 650 gpm.

<sup>C</sup>Permit Status: NUWC Division, Keyport's water system has a State of Washington Public Water System Operating Permit, permit category Green, which means that the Department of Health, Division of Drinking Water has categorized the system as being substantially in compliance with all applicable provisions of the Washington State Drinking Water Rules.



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compliance with all applicable provisions of the Washington State Drinking Water Rules.

**List permit violations and project/actions to correct deficiencies or improve the facility:**

The WTP and water system have not had any permit violations. There are no facility corrections or improvements needed for drinking water treatment. This is attributed to a comprehensive Safe Drinking Water Program. This program has covered all provisions of the Safe Drinking Water Act. For example, sampling and corrective actions have been completed for lead in drinking water, routine sampling of well water, and testing of backflow preventers. In addition, the Water Conservation Program currently encompasses the design and installation of closed-loop cooling systems to replace all single pass, non-contact, cooling water systems.

**4i. If you do not operate a WTP, what is the source of the base potable water supply? State terms and limits on capacity in the agreement/contract, if applicable.**

NUWC Division, Keyport not only has its own water supply source, WTP, and internal water distribution system, but also has a water service contract with the local public utilities district (PUD) to supply potable water. PUD No. 1 of Kitsap County owns and operates a system that supplies water to the town of Keyport and residential areas adjacent to the town and this Division. In 1983, the Navy entered into a contract with the PUD to furnish water on an emergency basis. In 1993, that contract was modified to provide for permanent service supplying up to a daily maximum demand of 500,000 GPD, with an associated estimated annual consumption of 182,500,000 gallons per year. The actual operating rate of water supplied by the PUD averages 91,000 GPD. This dual on-base and off-site water supply situation provides excellent back-up and emergency support and favorably involves this Division in Washington State mandated regional water utilities coordination and planning.

(Source Citation: Water Service Contract N62474-80-C-5103, 1992 NUWC Division, Keyport Water System Plan and 1993 Operating Records)



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4j.

Does the presence of contaminants or lack of supply of water constrain base operations? Explain.	NO
--	----

The base water supply has been consistently monitored for contaminants in accordance with federal and state drinking water regulations. Sampling results for the Division's current drinking water well have shown no contaminants present above the allowable maximum contaminant levels (MCLs). In addition, the base water supply system taps an 800-foot deep aquifer which is completely protected (200-foot aquitard) from contaminated Superfund sites. Both the base water supply well and PUD No. 1 service are currently running under 50 percent of their maximum capacity. No lack of water supply whatsoever is anticipated for this Division's operations, particularly since water conservation efforts are lowering supply demands. The Division, as a good neighbor and concerned party, actively participates on the local watershed management board to ensure its water supply is protected from future land development on the adjacent properties of the county.

4k.

Other than those described above, does your base hold any NPDES or storm water permits? If YES, describe permit conditions.	NO
If NO, why not, and provide explanation of plan to achieve permitted status.	

NUWC Division, Keyport presently does not hold any NPDES or stormwater permits. To date, the only such permit this Division has been required to apply for is an NPDES permit for stormwater discharges. As a federal facility in Washington State, NPDES permitting authority is retained with the Environmental Protection Agency (EPA) Region 10. NUWC Division, Keyport has pursued EPA stormwater permitting as part of the Navy-wide group application, and is currently evaluating the future stormwater permitting options of the proposed EPA Multi-Sector General Permit or EPA Region 10 Baseline General Permit. In preparation of achieving stormwater permit status, this Division is preparing and implementing a stormwater pollution prevention and monitoring plan which will meet or surpass future permit requirements. This plan is integrated into the overall multimedia pollution prevention plan which addresses air, water, soil, et cetera pollution elimination.



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41.

Does your base have bilge water discharge problem?	NO
Do you have a bilge water treatment facility?	YES

Explain:

The majority of bilge water generated at the base is treated at the new Oily Water/Bilge Water Treatment Facility. It is expected that this facility will handle about 75 percent (600,000 pounds per year) of the total oily water/bilge water waste stream. (The remaining 25 percent is contaminated by materials such as solvents which require that it be shipped off-base as hazardous wastes.) This facility utilizes the latest and best technologies for treatment of bilge water. Handling, collection, and transport of bilge water is performed only by highly skilled hazardous waste handlers. Dedicated tankers (to avoid cross contamination) are used to safely transport bilge water from the vessels to the treatment facility, where the waste is analyzed for any untreatable contaminants. In the rare event that the waste is untreatable, it is shipped to an off-base disposal facility. To ensure full treatment of the bilge water, the Oily Water/Bilge Water Treatment Facility effluent is discharged directly into the Industrial Waste Treatment Plant, where it undergoes further heavy metal removal treatment. The ultimate discharge to the sanitary sewer meets all county, state, and federal discharge limits.

The current facility consists of two 5,000 gallon pretreatment storage tanks and two 5,000 gallon post-treatment storage tanks. The facility is capable of batch processing 5,000 gallons of oily bilge water in a 10-hour period under optimal conditions. The facility is constructed of concrete and metal, with secondary containment incorporated into the construction. All tanks are equipped with high-level alarms for spill prevention protection. Post-treatment tanks are piped directly to the industrial waste pretreatment plant for further processing. All tanks are equipped with sampling ports for chemical analysis. The facility treatment unit utilizes the latest, state-of-the-art technology to minimize off-station disposal of oily bilge water. The facility has built-in process controls to maximize worker safety.



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4m.

Will any state or local laws and/or regulations applying to Environmental Facilities, which have been enacted or promulgated but not yet effected, constrain base operations or development plans beyond those already identified? Explain.	NO
---	----

Recently enacted/promulgated State and local laws/regulations will not constrain the current operation of NUWC Division, Keyport's Environmental Facilities. NUWC Division, Keyport's Environmental Program uses well-established administrative and management planning procedures to ensure that upcoming regulatory changes do not affect current base operations or development plans. Positive relationships with state and local officials are maintained so that this Division receives advance notice of laws and regulations that may impact Keyport's operations. As an example, NUWC Division, Keyport, working with the state and federal regulators, was able to successfully handle over 2 million pounds of hazardous waste from the National Science Foundation's Station in Antarctica and subsequently handled hazardous waste from base closures in the Philippines for a variety of government agencies in 1992-1993 with equal success.

State-of-the-art environmental management information systems are used to track laws and regulations that could affect Keyport's operations as well as to maintain compliance with current laws and regulations. This unique system also tracks and generates reports for air emission sources, storm water discharge points, analytical data, and soil contamination sources, as well as state and federal annual waste reports. The EMIS system is currently being demonstrated at other Naval and federal activities for adoption.

4n. What expansion capacity is possible with these Environmental Facilities? Will any expansions/upgrades as a result of BRACON or projects programmed through the Presidents budget through FY 1997 result in additional capacity? Explain.

The new Hazardous Waste Treatment and Storage Facility that is currently under construction (FY94 MILCON) provides numerous upgrades in waste handling operations designed to increase efficiency and reduce transportation and disposal costs. Although the facility's square feet of contained area is not increased, greatly improved space utilization and improved waste storage facilities will result in more than sufficient capacity to handle existing waste volumes and allow for expansion to handle additional waste volumes. The facility will also incorporate future treatment technologies to reduce off-site disposal costs. These innovations will allow flexibility to support current and future mission requirements. (This facility is covered in more detail under question 7g regarding "Conforming Storage" ). Construction of this facility began in May 1994.



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**40. Do capacity limitation on any of the facilities discussed in question 4 pose a present or future limitation on base operations? Explain.**

No. A large degree of flexibility has been worked into the capacity of each facility to ensure current and future operations are fully supported. For example: the drinking water system is a combination of county-supplied water and on-base well water. The duality of this system provides sufficient capacity, extends the life of the existing well, and provides a backup system.

In a similar fashion it is common practice within Keyport's hazardous material/waste management system to have more than one source of reuse, reclamation, treatment, or disposal for a particular material or waste. This network of options allows greater cost savings by allowing the most cost effective practice to be selected. In addition, multiple options ensure that industrial operations will not be impacted by closure of a particular material/waste handling facility.

The Division is a leader in pollution prevention technology and utilizes this technology to extend the life and capacity of its current facilities. A simple example of this is the solvent-life extension program. All major solvent tanks have had filtering systems installed which extend the life of the solvents up to four times. These systems reduce new material (solvent) costs, reduce disposal costs and free up capacity in both hazardous material and hazardous waste facilities. The program has been so successful that hazardous material storage has been consolidated into a single warehouse and the former storage areas are used for vital industrial operations.



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**5. AIR POLLUTION**

**5a.**

<p>What is the name of the Air Quality Control Areas (AQCA) in which the base is located?</p> <p>Puget Sound Air Pollution Control Agency</p>
<p>Is the installation or any of its OLFs or non-contiguous base properties located in different AQCA's? <u>NO</u> List site, location and name of AQCA.</p>

**5b.** For each parcel in a separate AQCA fill in the following table. Identify with an X whether the status of each regulated pollutant is: attainment/non-attainment/maintenance. For those areas which are in non-attainment, state whether they are: Marginal, Moderate, Serious, Severe, or Extreme. State target attainment year.

Site: NUWC Division, Keyport and Undersea Warfare, Bangor AQCA: PSAPCA

Pollutant	Attainment	Non-Attainment	Maintenance	Target Attainment Year <sup>1</sup>	Comments <sup>2</sup>
CO	X				
Ozone	X				
PM-10	X				
SO <sub>2</sub>	X				
NO <sub>2</sub>	X				
Pb	X				

<sup>1</sup> Based on national standard for Non-Attainment areas or SIP for Maintenance areas.

<sup>2</sup> Indicate if attainment is dependent upon BRACON, MILCON or Special Projects. Also indicate if the project is currently programmed within the Presidents FY 1997 budget.



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5c. For your base, identify the baseline level of emissions, established in accordance with the Clean Air Act. Baseline information is assumed to be 1990 data or other years as specified. Determine the total level of emissions (tons/yr) for CO, NOx, VOC, PM10 for the general sources listed. For all data provide a list of the sources and show your calculations. Use known emissions data or emissions derived from use of state methodologies, or identify other sources used. "Other Mobile" sources include such items as ground support equipment.

Emission Sources (Tons/Year)*					
Pollutant	Permitted Stationary	Personal Automobiles	Aircraft Emissions	Other Mobile	Total
CO	4	1,003	N/A	140	1,147
NOx	17	26	N/A	4	47
VOC	311	38	N/A	5	354
PM10	1	2	N/A	0.2	3.2

Source Document: a. PSAPCA CY90 Form B and CY93 Emission Statement  
 b. PSAPCA Registration File Listing

\* Sources and calculations shown in attachment A.

5d. For your base, determine the total FY 1993 level of emissions (tons/yr) for CO, NOx, VOC, PM10 for the general sources listed. For all data provide a list of sources and show your calculations. Use known emissions data, or emissions derived from use of state methodologies, or identify other sources used. "Other Mobile" sources include such items as ground support equipment.

Emission Sources (Tons/Year)*					
Pollutant	Permitted Stationary	Personal Automobiles	Aircraft Emissions	Other Mobile	Total
CO	4	836	N/A	113	953
NOx	20	22	N/A	3	45
VOC	44	31	N/A	4	79
PM10	2	1	N/A	0.2	3.2



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- Source Document: a. PSAPCA CY90 Form B and CY93 Emission Statement  
b. PSAPCA Registration File Listing

\* Sources and calculations shown in attachment A.

5e. Provide estimated increases/decreases in air emissions (Tons/Year of CO, NO<sub>x</sub>, VOC, PM10) expected within the next six years (1995-2001). Either from previous BRAC realignments and/or previously planned downsizing shown in the Presidents FY 1997 budget. Explain.

The air emission reduction program is very closely tied to the other pollution prevention programs such as solvent reduction, ozone depleting substance elimination, and recycling/reuse of hazardous materials. Working together in subcommittees as a team effort, NUWC Division, Keyport has made tremendous progress during the past few years to reduce air emissions. This trend of emission reduction will continue during the next six years as scheduled pollution prevention initiatives and projects are implemented. Vapor degreasers using methyl chloroform, as well as cold solvent wash tanks, have been replaced by aqueous processes which eliminate or drastically reduce emissions. Toxic solvents are being replaced by non/less-hazardous solvents. Closed system processes are being installed to eliminate the need to exhaust fumes or vapors to the atmosphere. Halon systems, both portable and fixed, will be replaced with ozone friendly chemicals.

Emissions at Keyport from Volatile Organic Compounds (VOC's) have decreased significantly during the past 4 years due to proactive hazardous minimization efforts. Currently, VOC emissions are 86 percent lower than 1990 levels. This downward trend of VOC emissions is expected to continue during the next 6 years.

NUWC Division, Keyport, located in Kitsap County, an attainment area for CO, NO<sub>x</sub>, and PM-10, emits relatively small amounts of these criteria pollutants. Emissions for CO, NO<sub>x</sub>, and PM-10 are expected to decrease during the next 6 years.

The following chart shows estimated emissions through the year 2001. Emissions are estimated to decrease 5 percent per year based on a 5 percent downsizing of base staff. Also effecting this emission reduction are change-overs made to natural gas usage and increased personnel participation in Commute Trip Reduction Program efforts.



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**ESTIMATED TOTAL EMISSIONS (tons/yr)**

	1993	1994	1995	1996	1997	1998	1999	2000	2001
CO	953	905	860	817	776	737	700	665	632
NO <sub>x</sub>	45	43	41	39	37	35	33	31	30
VOC	79	75	71	68	64	61	58	55	52
PM-10	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.2	2.1

**5f. Are there any critical air quality regions (i.e., non-attainment areas, national parks, etc.) within 100 miles of the base?**

YES. King, Pierce, and Snohomish counties have non-attainment areas for CO and ozone that are within 100 miles of this base. King, Pierce, and Thurston counties are considered non-attainment areas for PM-10 (PM = particulate matter). Mt. Rainier National Park and Olympic National Park are within 100 miles of the base.

As part of the local effort to improve air quality in the Puget Sound area and maintain the pristine conditions in nearby national parks, NUWC Division, Keyport has initiated a number of major efforts which have reduced air pollution:

Through the Commute Trip Reduction Program, 25 percent of the workforce at the base travel to work with others in car pools, van pools, or buses. As mobile sources contribute the largest portion of pollution in Washington State, this effort is significant in air pollution reduction.

The Volatile Organic Compound (VOC) Reduction Plan has been extremely successful, with a greater than 50 percent reduction of emissions in both 1992 and 1993. Solvent substitution, process elimination, and equipment change were all factors in achieving an 86% overall reduction since 1990.

**5g. Have any base operations/mission/functions (i.e., training, R&D, ship movement, aircraft movement, military operations, support functions, vehicle trips per day, etc.) been restricted or delayed due to air quality considerations? Explain the reason for the restriction and the "fix" implemented or planned to correct.**

NO. NUWC Division, Keyport has an outstanding Air Quality Program. Over the past five years the program has been developed and refined to its present Navy Field Activity leadership position.



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The air-permitting process is fully integrated with the environmental review process (discussed earlier in section 1b.) and the operational and facilities planning functions for the base. This integration is based on Total Quality principles, and each department takes full ownership and responsibility for their Air Contaminant Generating Equipment (ACGE). In addition, the strong communication links between planners, engineers, and environmental personnel ensure that proposed changes to ACGE, or new ACGE, are reported early to the NUWC Department Air Operations Manager, and the Environmental Division Air Quality Manager.

This Division has never been restricted by PSAPCA or the State on air quality issues. This is largely due to the high quality of permit applications that are submitted to the State and the outstanding management of the Division's air emissions. All proposed projects (operational and construction) go through an environmental review. If that review identifies any air permit requirements, a "Notification of Construction" is sent to PSAPCA. This step is done well in advance of the actual project, and this Division has never had a delay in an operational or construction project due to air permit requirements. The actual air permit is prepared as a team effort between facilities, operational design engineers, and the Air Quality Manager. This teamwork ensures permit applications are accurate and of high quality. For this reason, regulatory officials have confidence in the NUWC Division, Keyport Air Quality Program.

The Air Contaminant Generating Equipment (ACGE) have been inventoried, and a tracking system has been established. All pertinent information for each piece of equipment is on the Environmental Management Information System. The versatility of the tracking system is being increased by transferring photographs of the ACGE to computer disk and linking the photo files to the site locations on the database.

One-hundred-twenty operators and supervisors of Air Contaminant Generating Equipment have received training concerning the air program, proper operation and maintenance of equipment, inspection of equipment, and documentation required to comply with regulations.

All applicable Air Contaminant Generating Equipment has been registered with Puget Sound Air Pollution Control Agency (PSAPCA), the local control agency, and any new equipment is immediately permitted. An update of equipment, as well as an emission statement for air sources, is annually submitted to PSAPCA. This emission statement documents results in air contaminant reduction which have been so significant that the base is no longer required to obtain the Federal Clean Air Act Title V Operating Permit.

**5h.** Does your base have Emission Reduction Credits (ERCs) or is it subject to any emission offset requirements? If yes, provide details of the sources affected and conditions of the ERCs and offsets. Is there any potential for getting ERCs?

This base does not have ERCs nor is it subject to emission offset requirements since, per PSAPCA, this applies only to non-attainment areas.



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## 6. ENVIRONMENTAL COMPLIANCE

6a. Identify compliance costs, currently known or estimated that are required for permits or other actions required to bring existing practices into compliance with appropriate regulations. Do not include Installation Restoration costs that are covered in Section 7 or recurring costs included in question 6c. For the last two columns provide the combined total for those two fiscal years.

Program	Survey Completed?	Costs in \$K to Correct Deficiencies					
		FY 94	FY 95	FY 96	FY 97	FY 98-99	FY 00-01*
Air	Y	325.2	360	201	0	79	0
Hazardous Waste	Y	594.5	240	464	45	200.5	0
Safe Drinking Water Act	Y	50	0	0	140	0	0
PCBs	Y	0	0	0	0	0	0
Other (non-PCB) Toxic Substance Control Act	Y	0	0	0	0	0	0
Lead Based Paint	Y	0	0	0	0	0	0
Radon	Y	0	0	0	0	0	0
Clean Water Act	Y	429.5	310	0	0	0	0
Solid Waste	Y	0	0	0	0	0	0
Oil Pollution Act	Y	226.5	10	0	130	0	0
USTs	Y	168	60	360	0	81	0
Other	Y	16	0	0	200	20	0
<b>Total</b>		<b>1,809.7</b>	<b>980</b>	<b>1,025</b>	<b>515</b>	<b>380.5</b>	<b>0</b>

\* Through this aggressive plan we expect to have all existing practices in full compliance by the end of FY 99. Hence, no funds will be required in FY 00-01.

**Provide a separate list of compliance projects in progress or required, with associated cost and estimated start/completion date.**



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
VENTILATION UPGRADE-TEARDOWN	35,000.0	489	CAA	94
MAINTAIN/REPAIR PAINT BOOTH VENTILATION	30,000.0	83	CAA	94
MODIFY EXHAUST GAS BURNER SYSTEM	222,000.0	207	CAA	94
INSTALL DUST COLLECTOR FOR MK103 WARHEAD	10,700.0	7719	CAA	94
SEPARATE CYANIDE & ACID VENTS GOLD PLATE LINE	24,000.0	1019	CAA	94
VENTILATE NEW ELECTRO-POLISH TANK	3,500.0	1019	CAA	94
SUBTOTAL	325,200.0			
REPLACE EXHAUST AFTERBURNER BLDG 106	200,000.0	106	CAA	95
HALON FIRE EXTINGUISHER REPLACE	160,000.0	KPT	CAA	95
SUBTOTAL	360,000.0			
INSTALL NEW CLEANING TANKS AND VENTS	120,000.0	38	CAA	96
DESIGN & INSTALL NEW EXHAUST VENTILATION FOR BLDG 84	80,000.0	84	CAA	96
RE-ROUTE EXHAUST DUCT AND FIX VENTILATION	1,000.0	107	CAA	96
SUBTOTAL	201,000.0			
REMOVE ASBESTOS FROM DIRT LOCKER	79,000.0	35	CAA	98
REPIPE SANITARY LINES FOR SEVERAL BLDGS (ELIMINATE ILLICIT STORM DRAINS) (SUB W/R A&B)	418,000.0	KPT	CWA	94



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
REMEDIATE DIESEL SPILL AND REPAIR TRENCHES	8,000.0	1	CWA	94
INSTALL SEWER PUMP OUT STATIONS AT 3 PIER LOCATIONS	3,500.0	RANGES	CWA	94
SUBTOTAL	429,500.0			
PHASE 2: ELIMINATE ILLICIT DISCHARGE TO SEWER	60,000.0	KPT	CWA	95
UPGRADE SEWAGE LIFT STATION, REPLACE PUMPS	150,000.0	144	CWA	95
DESIGN STORM WATER RETENTION TO PREVENT FLOODING	100,000.0	UWA	CWA	95
SUBTOTAL	310,000.0			
PROVIDE METHANE MONITORING IN REST ROOMS	1,000.0	916	IR	94
AREA 8 GROUND WATER INVESTIGATIONS	15,000.0	KPT	IR	94
SUBTOTAL	16,000.0			
LAGOON BANK PROTECTION , REPAIR EROSION	200,000.0	LAGOON	NR	97
REPAIRS TO BANK BELOW TRANSIT SHELTER #504, TOANDOS PENINSULA	20,000.0	ZP504	NR	98
REMOVE CARBON COLUMNS AND INSTALL NEW SEPARATOR	7,000.0	514	PP	94



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
PROVIDE & INSTALL FILTERS ON ALL SOLVENT TANKS	20,000.0	514	PP	94
PROVIDE STUDY AND DESIGN CENTRAL HAZ MAT DISTRIBUTION	40,000.0	KPT	PP	94
INSTALL NEW OTTO FUEL SEPARATOR EQUIP	0.0	1049	PP	94
INSTALL DRUM FILLER INCLUDING BERM	5,000.0	1049	PP	94
STUDY/ACTION TO REDUCE WATER USE AT KEYPORT	5,000.0	KPT	PP	94
REPLACE PAINT BOOTH WITH DRY TYPE	3,000.0	7719	PP	94
INSTALL CLOSED LOOP CHILLED WATER COOLING SYSTEM	140,000.0	514	PP	94
SUBTOTAL	220,000.0			
HAZARDOUS MATERIAL COLLECTION FOR MARINE RAILWAY	200,000.0	48	PP	95
INSTALL RECYCLING EQUIP (FY95 EQUIP BUY)	50,000.0	735	PP	96
PACKAGE WASTE WATER PLANT BLDG 825	150,000.0	825	PP	96
DEGREASER RECYCLING EQUIPMENT - BLDG 735	50,000.0	735	PP	96
PROCURE/INSTALL WATER-JET WASTE WATER RECOVERY	80,000.0	38	PP	96
DESIGN OILY BILGE WATER SEPARATOR SYSTEM, 350 TONS/YEAR	10,000.0	84	PP	96
SUBTOTAL	340,000.0			
INSTALL CADMIUM RECOVERY SYSTEM, INSTALL C/20 EQUIP	3,000.0	72	PP	97



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
INSTALL COOLING TOWERS BLDGS 15 & 24 - ENVIRO FY94 JOB	200,000.0	15	PP	97
CORRECT COOLING WATER DISCHARGE TO SANITARY	50,000.0	38	PP	97
SUBTOTAL	253,000.0			
REROUTE NON-CONTACT COOLING WATER TO STORM DRAIN	50,000.0	84	PP	98
HW TANK ASSESSMENTS	120,000.0	KPT	RCRA	94
PROCURE 5,400 SF TEMP STORAGE AT BLDG 957	100,000.0	957	RCRA	94
OPERATIONS CONTAINMENT BLDG 106	110,000.0	106	RCRA	94
CONNECT WASHER AND DRYER AT DECON TRAILER	1,000.0	88	RCRA	94
UPGRADE ELECTRICAL SERVICE TO 200 AMPS	900.0	884	RCRA	94
CONSTRUCT HAZARDOUS WASTE HOLDING/PUMPING SYSTEM	114,000.0	207	RCRA	94
REPLACE PLASTIC PIPE ON ACID SYSTEM	1,700.0	825	RCRA	94
MODIFY CONCRETE FLOOR RM 101, BLDG 825	3,500.0	825	RCRA	94
REPLACE 2 PUMPS FOR CAUSTIC TANKS	4,000.0	825	RCRA	94
MAKE SIGN STICKERS FOR ENVIRONMENTAL	500.0	884	RCRA	94
INSTALL STEPS FROM TANK TO EQUIP AREA	1,500.0	825	RCRA	94
CONSTRUCT DRUM STORAGE AREA	75,000.0	209	RCRA	94
DESIGN/INSTALL 1500 GALLON WASTE STORAGE TANK	25,000.0	514	RCRA	94



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
DESIGN/INSTALL PARALLEL WATER SEPARATOR/SYSTEM & TANK	35,000.0	514	RCRA	94
ETCH AND EPOXY CHROME AREA IN BLDG	2,400.0	825	RCRA	94
SUBTOTAL	594,500.0			
REPLACE 2 OUTSIDE WASTE STORAGE TANKS AND DOUBLE WALL PIPE	180,000.0	72	RCRA	95
BUILD CATWALK ON PIER 2 TO ACCESS SEWAGE HOOKUP	2,000.0	825	RCRA	95
RESURFACE INSIDE OF CHROME RECEIVER TANKS	3,000.0	825	RCRA	95
HW TANK REMOVAL/CLOSURE DESIGN	55,000.0	KPT	RCRA	95
SUBTOTAL	240,000.0			
SUMP FOR CANOPIED AREA BY BLDG 735	64,000.0	735	RCRA	96
HW TANK REMOVAL/CLOSURE	400,000.0	KPT	RCRA	96
SUBTOTAL	464,000.0			
EVAL ON NEED FOR BLDG 5065 HAZ. WASTE AREA	45,000.0	5065	RCRA	97
DESIGN/INSTALL SECONDARY CONTAINMENT FOR INTERIOR SUMPS	200,000.0	72	RCRA	99
HAZARDOUS WASTE DRAIN PROBLEM BLDG 894	500.0	894	RCRA	99
SUBTOTAL	200,500.0			



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ACTION/PROGRAM TITLE	MILCON OR W/R TRAK	BLDG #	Program	YEAR
MODIFY PIPING AT WELL PUMP TO CUT MAINTENANCE COSTS	4,100.0	10	SDWA	94
CONDUCT HYDROLOGY STUDY FOR A NEW WELL	20,000.0	KPT	SDWA	94
LOCATE AND ABANDON 10" LINE FROM WELL #4 TO WELL #5	6,000.0	64	SDWA	94
INVESTIGATE/REPAIR ODOR/WATER LEAKS IN STEAM TRENCH - DESIGN ONLY	20,000.0	KPT	SDWA	94
SUBTOTAL	50,100.0			
WATER LEAKAGE STUDY, BACKFLOW PREVENTER STUDY/INSTALL, PHASE II,III, V	140,000.0	KPT	SDWA	97
DESIGN OF B804 REPLACEMENT	30,000.0	804	SPCC	94
DESIGN/INSTALL DOUBLE WALLED PIPING	24,000.0	209	SPCC	94
INSTALL BERM AROUND AGITENE BULK TANK	11,000.0	489	SPCC	94
PROVIDE SPILL PROTECTION FOR FUEL TANK	1,500.0	7717	SPCC	94
INSPECT ALL PIERS FOR HAZARDOUS PIPING	5,000.0	KPT	SPCC	94
REMOVE DIESEL PIPING FROM PIERS	15,000.0	211	SPCC	94
FLUSH LINES AND REMOVE PIPING ON PIER 1	40,000.0	211	SPCC	94
SUBTOTAL	126,500.0			



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	MILCON OR W/R TRAK	BLDG #	Program	YEAR
INSTALL SPILL BERM FOR 1000 GALLON TANK	10,000.0	Z-475	SPCC	95
PROVIDE SPILL CONTAINMENT	80,000.0	93	SPCC	97
DISCONNECT AND ABANDON OIL/WATER SEPARATOR	50,000.0	7658	SPCC	97
SUBTOTAL	130,000.0			
BLDG 93 TANK UPGRADE, DESIGN	35,000.0	93	UST	94
DEMO BLDG AND REMEDIATE SOIL	110,000.0	14	UST	94
ELIMINATE UNDERGROUND STORAGE TANK	23,000.0	234	UST	94
SUBTOTAL	168,000.0			
BLDG 93 TANK UPGRADE	60,000.0	93	UST	95
UST CLOSURE FOR HEATING OIL TANKS	360,000.0	KPT	UST	96
ADJUST FUEL PUMP FLOW RATE	0.0	93	UST	98
INSTALL RETRACTABLE HOSES FOR GAS PUMPS	1,000.0	93	UST	98
STAGE 2 VAPOR RECOVERY (INCLUDES KP-3669 THAT WAS CANCELLED)	80,000.0	93	UST	98
SUBTOTAL	81,000.0			



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6b. Does your base have structures containing asbestos? Yes What percent of your base has been surveyed for asbestos? 15% Are additional surveys planned? Yes What is the estimated cost to remediate asbestos? (\$K) \$9,000K Are asbestos survey costs based on encapsulation, removal or a combination of both?

The asbestos program at NUWC Division, Keyport, under the cognizance of the Asbestos Control Program Manager, unites the combined efforts of the Safety Office, the Environmental Office, and the Public Works Office to form a management team.

Most of the buildings at NUWC Division, Keyport contain some asbestos in the form of pipe lagging, insulation, floor tile or roofing material. Although only an estimated 15 percent of NUWC Division, Keyport's buildings (including detachments) have been surveyed for asbestos, most of the principal industrial buildings at Keyport were included in the 1988-89 survey. Excluded were the Keyport family housing buildings, Keyport's Undersea Warfare Annex buildings, small Keyport buildings, and detachments. Additional surveys planned by the Asbestos Control Program Manager are initial surveys for those buildings not part of the 1988-1989 survey and three-year follow-on surveys.

Currently all asbestos containing materials are encapsulated and carefully maintained. The Division has certified personnel to perform minor maintenance, repair, and removal of asbestos containing materials. Less than a dozen repair and removal actions are performed each year, so the maintenance and disposal costs are minimal. Complete removal and disposal of all asbestos containing materials, as in the event of base closure, would cost in excess of \$9,000,000.



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6c. Provide detailed cost of recurring operational (environmental) compliance costs, with funding source.

Funding Source	FY 92 (\$K)	FY 93 (\$K)	FY 94 (\$K)	FY 95 (\$K)	FY 96 (\$K)	FY 97 (\$K)	FY 98- 99(\$K)	FY 00- 01(\$K)
O&MN								
HA	0	0	0	0	0	0	0	0
PA	0	0	0	0	0	0	0	0
Other O&MN (specify) <sup>1</sup>	85	175	175	175	175	115	175	175
Other (specify) <sup>2</sup>	1,010	950	997	819	805	783	1,490	1,413
<b>Total</b>	<b>1,095</b>	<b>1,125</b>	<b>1,172</b>	<b>994</b>	<b>980</b>	<b>898</b>	<b>1,665</b>	<b>1,588</b>

<sup>1</sup> DERA funding for labor to manage the community relations portion of the Installation Restoration Program.

<sup>2</sup> The Division receives funding from various torpedo programs in order to provide hazardous waste services.

6d. Are there any compliance issues/requirements that have impacted operations and/or development plans at your base?

Aside from National Priority List (NPL) sites, NUWC Division, Keyport has invested substantially to develop an Environmental Program which is the recognized environmental leader in the Navy. This was made clearly evident when this Division was awarded the first-ever Secretary of the Navy Meritorious Unit Commendation for Environmental Achievement in 1993. That leadership carries on today to ensure all compliance issues are fully addressed and result in no negative impact or constraints on fulfilling the mission of the Division. Environmental considerations have been fully integrated into the early planning of all projects, and any potential compliance issues are mitigated early in the process. Three key elements to compliance control are environmental assessment, self-compliance evaluations, and pollution prevention.

Environmental reviews of industrial activities are conducted to ensure proper National Environmental Policy Act (NEPA) documentation and consideration and mitigation of impacts to the environment. The NEPA program looks at present and future environmental considerations which could impact Division operations and projects, and develops mitigation solutions or alternatives to proposed actions. This forward-looking approach addresses compliance before it becomes an issue. As a part of the integrated approach to environmental



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compliance, the review of all proposed actions is conducted early in the design phase. A group of specialists are assigned to guarantee that all aspects of the project are reviewed to avoid potential compliance problems and to ensure compliance with proposed future legislation. Aspects of the environmental review for proposed actions also include evaluation for pollution prevention, consideration of environmental impact mitigation, determination of environmental protection provisions, and identification of environmental permit requirements. This process has been accomplished for all proposed actions at Keyport, which accounts for at least 400 reviews since 1989. A computerized information repository has been developed and maintained to aid site environmental assessment, review existing data and soils information, and ensure all environmental and worker safety issues are addressed. The repository links the Geographic Information System with the Environmental Management Information System. It provides a graphic representation of selected areas at Keyport with detailed trend analysis data, soils information, and laboratory findings. Environmental reviews also provide a holistic look at existing and future projects and operations thereby accommodating changes, avoiding conflicts, and keeping pace with mission requirements.

The Environmental Compliance Self Evaluation Program was developed to ensure compliance with current regulations. It is a comprehensive program which conducts continuous reviews of the compliance status of all industrial operations. The program provides instant feedback to industrial operators so they know where compliance emphasis needs to be placed. The program also provides ownership of all processes and allows each program manager to plan and budget for compliance issues associated with the process.

The Pollution Prevention (P2) Program uses a team approach and Total Quality principles to solve difficult hazardous waste and material issues. The key to the success of the team is identifying processes which contribute to the waste stream and effectively reduces future compliance requirements. The team considers all forms of pollution (air, water, soil, and industrial waste) in a comprehensive multimedia approach. The charter of the team was developed to aggressively reduce pollution from industrial processes performed at Keyport. NUWC Division, Keyport's P2 team has aggressively identified sources of pollution and waste generation and has taken active steps to reduce the pollution through controlled acquisition, authorized use list, product substitution, and reutilization. The result of these efforts is the reduction of waste generated, reducing the cost of procurement, treatment, storage, and disposal. Through the P2 Program, Keyport has developed P2 solutions to limit compliance problems, has been able to meet requirements for compliance ahead of scheduled time frames, and is able to adapt to changing mission requirements. Application of P2 solutions reduces the number of pollutant sources, the amount of waste handled, disposal costs, the number of permits required, and the number of applicable regulations and subsequently helps to eliminate compliance problems. When an activity has a progressive P2 Program, regulators also tend to become less aggressive on other compliance issues. The P2 Program enhances Keyport's ability to perform its mission, at the same time reducing



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compliance issues and costs, and enhancing rapport with regulators.

The Industrial Recycling Program as described in question 4(c) focuses on evaluation and implementation of recycling opportunities in industrial operations and wastestreams. This program effectively reduces the amount of waste generated, and the subsequent costs of disposal, and provides an opportunity to recycle hazardous substances.

All operations at Keyport are evaluated to determine compliance status, and measures are developed to meet the regulatory requirements. NUWC Division, Keyport's integrated approach to environmental compliance is demonstrated throughout all programs, and the results are shown in the awards bestowed upon this Division and the lack of violations received. Keyport's innovative, team-oriented approach to environmental compliance allows for the use of proactive, integrated measures rather than a reactive mode. Regulatory issues and problems are identified well in advance of required compliance dates, and the solutions become a part of the overall comprehensive approach to doing business. The main goal of NUWC Division, Keyport's environmental programs is to provide sound environmental management to all of the industrial processes performed at Keyport. NUWC Division, Keyport is recognized as a regional pacesetter for compliance and reporting issues. The benefits of such a program, which makes environmental compliance an integral part of its mission, is clearly demonstrated in the fact that NUWC Division, Keyport is keeping pace with current regulations and considers future requirements in its decision making process.



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## 7. INSTALLATION RESTORATION

7a.

Does your base have any sites that are contaminated with hazardous substances or petroleum products?	YES
Is your base an NPL site or proposed NPL site?	YES

NUWC Division, Keyport has numerous designated NPL sites which result from historic industrial practices that did not meet present day environmental stewardship standards. In each case, the Division has worked proactively with the community, the regulatory agencies and with the Naval Facilities Command to develop cost effective means to remediate and mitigate these contaminated sites. The resulting plans are based upon the cornerstone assumption that the facility will remain in its present use, thereby abbreviating the inordinately costly requirement for immediate remediation, as would be necessary in the case of base closure. Agreements with the State of Washington stipulate that if the base is turned over to the private sector, full remediation must be immediately performed at an estimated cost in excess of \$200M.

The base was originally established in 1914 and has conducted industrial operations throughout its history. From the 1930's to the 1970's, the station operated a landfill in which millions of pounds of municipal, industrial, and hazardous wastes were disposed. The hazardous wastes included paints, solvents, torpedo fuels, waste waters, and heavy metal sludges. Two-thirds of the landfill is surrounded by Class A wetlands. The entire base was placed on the NPL in 1989, as a result of the past practices at the landfill and five other sites (discussed below). It must be recognized that about 50 percent of the industrial area of the base is made of fill material. The original Initial Assessment Study (IAS) identified 22 potential sites. For this reason, NUWC Division, Keyport has a strict excavation policy mandating that all soils be tested prior to excavation or disposal; as a minimum, soils are disposed of at the county landfill as a problem waste; and more contaminated soils are disposed of in a Class A hazardous waste landfill.

Other highly contaminated areas include a 1929 plating facility which originally had dirt floors which absorbed the inevitable spills of industrial solvents and plating solutions. Later solutions contaminated by acids, bases, cyanides, and heavy metals were pumped directly into the bay in the 1940's to 1960's. Today the plating facility stands atop about one acre of solvent and heavy-metal contaminated soils. A very successful interim removal action was conducted to remove exterior chromium-contaminated trenches and pipes which were once used to discharge wastes into the bay. However, the bulk of the contaminated soils still remains.



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A third contaminated site, at Building 957, was an empty drum storage area. This area was used to process empty drums for shipping. Nearly empty drums containing paints, solvents, acids, and bases were turned upside down and completely drained in this area before shipping or reuse. The site comprises about two acres of contamination. In addition, in 1976, 2,500 to 5,000 gallons of concentrated plating wastes spilled in this area. Runoff from this site, the plating area, and the storm drain system (which used to be the industrial discharge system for the base), all flow into the bay. For that reason, the entire shoreline of the base is the fourth NPL site. Shellfishing and other similar shoreline recreation is restricted.

The fifth site consists of an underground Otto Fuel II (monopropellant torpedo fuel) sump which leaked for several years. Much of the Otto Fuel II migrated to the adjacent lagoon. The last area is a sludge disposal area where the sewage treatment sludges were dried and buried. The sewage treatment plant operated from the 1960's to the 1970's, and industrial wastes were pumped to the plant. Discharge from the plant went directly into the bay.

Currently the proposed plan consists of containing and monitoring contamination in Area 1 (Landfill), Areas 2, 3, 5, & 8 (Spill Sites), and Area 9 (Beach) with limited removal action for Area 8 only. The total cost for these actions is estimated to be approximately \$20M. Although there will be some additional costs for hazardous waste tank closures (less than \$100K), complete remediation of all sites and tanks would not be required unless the base is closed. The estimated cost for full remediation, in the event of base closure, would be in excess \$200M. Continued industrial operations in these areas, with limited interim remedial action, can be maintained and will keep the cost of remediation at a minimum.

The Installation Restoration (IR) program is managed jointly by NUWC Division, Keyport and Engineering Field Activity, Northwest. This successful union ensures a consolidated effort to eliminate duplication and speed up the Comprehensive Environmental Response Compensation Liability Act (CERCLA) process. A key role that this Division plays in the CERCLA process is managing community relations. The Division places community awareness and acceptance of remedial alternatives as a significant element to the process.

Throughout the IR process, the base has taken a proactive community relations approach to involving the community in the remedial process. Three open house events, numerous site tours, three public meetings, a series of informational workshops, and several technical review committee meetings have been conducted in the past three years. Through the Technical Review Committee, the Division has developed a good working relationship with the local tribe, public utility district, local health department, a community Technical Assistance Grant (TAG) oversight group, and the local community club. Environmental personnel of the Division have been invited to attend community events and provide displays and to participate on local advisory committees. The IR Program is a team effort between NUWC Division, Keyport; the community; the Environmental Protection Agency; the Washington State Department of Ecology; and the Engineering Field Activity, Northwest.



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7b. Provide the following information about your Installation Restoration (IR) program. Project list may be provided in separate table format. Note: List only projects eligible for funding under the Defense Environmental Restoration Account (DERA). Do not include UST compliance projects properly listed in section VI.

Site # or Name	Type Site <sup>1</sup>	Groundwater contaminated	Extends off base?	Drinking Water Source?	Cost to Complete(\$M)/Est Compl. Date	Status <sup>2</sup> / Comments
Area 1, Landfill	CERCLA	Yes	Yes	No	\$11 M*	Feasibility Study
Area 2, Spill Site	CERCLA	Yes	No	No	\$1.2 M*	Feasibility Study
Area 3, Spill Site	CERCLA	Yes	No	No	\$0 (No Action Required)	Feasibility Study
Area 5, Spill Site	CERCLA	Yes	No	No	\$0.005 M	Feasibility Study
Area 8, Spill Site	CERCLA	Yes	Yes	No	\$8 M*	Feasibility Study
Area 9, Beach	CERCLA	Yes	Yes	No	\$0.0 M*	Feasibility Study

<sup>1</sup> Type site: CERCLA, RCRA corrective action (CA), UST or other (explain)

<sup>2</sup> Status = PA, SI, RI, FS, RD, RA, long term monitoring, etc.

\* No estimated completion date. Sites will require long-term monitoring.



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List all underground hazardous waste tanks (note: this includes all Solid Waste Management Units (SWMU) which are anticipated to require assessment, closure and remediation):

Site # or Name	Type Site <sup>1</sup>	Groundwater contaminated	Extends off base?	Drinking Water Source?	Cost to Complete (\$M) /Est Compl. Date	Status <sup>2</sup> / Comments
Bldg. 1	RCRA	No	No	No	\$0.8M	PA, SI*
Bldg. 21	RCRA	No	No	No	\$0.025M	PA, SI
Bldg. 21	RCRA	No	No	No	\$0.025M	PA, SI
Bldg. 21	RCRA	No	No	No	\$0.025M	PA, SI
Bldg. 21	RCRA	No	No	No	\$0.025M	PA, SI
Bldg. 21	RCRA	No	No	No	\$0.020M	PA, SI
Bldg. 38	RCRA	No	No	No	\$0.015M	PA, SI
Bldg. 40	RCRA	No	No	No	\$0.05M	PA, SI
Bldg. 84	RCRA	No	No	No	\$0.5M	PA, SI
Bldg. 85	RCRA	No	No	No	\$0.025M	PA, SI
Bldg. 134	RCRA	No	No	No	\$0.05M	PA, SI
Bldg. 478A	RCRA	No	No	No	\$0.4M	PA, SI
Bldg. 478B	RCRA	No	No	No	\$0.1M	PA, SI
Bldg. 478C	RCRA	No	No	No	\$0.08M	PA, SI
Bldg. 478D	RCRA	No	No	No	\$0.08M	PA, SI
Bldg. 478E	RCRA	No	No	No	\$0.08M	PA, SI
Bldg. 514	RCRA	No	No	No	\$0.5M	PA, SI
Bldg. 514	RCRA	No	No	No	\$0.075M	PA, SI
Bldg. 790	RCRA	No	No	No	\$0.3M	PA, SI
Bldg. 820	RCRA	No	No	No	\$0.02M	PA, SI
Bldg. 820	RCRA	No	No	No	\$0.7M	PA, SI
Bldg. 820	RCRA	No	No	No	\$0.02M	PA, SI



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Site # or Name	Type Site <sup>1</sup>	Groundwater contaminated	Extends off base?	Drinking Water Source?	Cost to Complete (\$M) /Est Compl. Date	Status <sup>2</sup> / Comments
Bldg 181	RCRA	No	No	No	\$0.1M	PA, SI
Bldg. 825	RCRA	No	No	No	\$0.02M	PA, SI
Bldg. 825	RCRA	No	No	No	\$0.02M	PA, SI
Bldg. 825	RCRA	No	No	No	\$0.02M	PA, SI

<sup>1</sup> Type site: CERCLA, RCRA corrective action (CA), UST or other (explain)

<sup>2</sup> Status = PA, SI, RI, FS, RD, RA, long term monitoring, etc.

\*A Preliminary Assessment and Site Investigation for the entire base has been performed. Individual assessments for each SWMU are still required and are included in the cost. Final completion date is estimated to be 1998.

These amounts represent the costs of currently proposed (partial) remedial actions. None of the alternatives will clean up the sites completely. The Area 1 Landfill has never been characterized, but contaminated soils are known to sit directly in the groundwater. Full characterization, soils and debris removal, and groundwater cleanup of the land fill alone is estimated at \$60M to \$75M. In order to return the land to private ownership, complete remediation for all the sites would cost in excess of \$100M. Cleanup of groundwater would take a minimum of 20 years and complete cleanup cannot be guaranteed.

In addition, as stated in question 7a., about 50 percent of the industrial area of the base is constructed on fill, and there are 25 SWMU's requiring remediation. Full characterization and cleanup of contaminated hot spots and groundwater could amount to an additional \$20M to \$50M (this includes the SWMU cleanup costs).

7c. Have any contamination sites been identified for which there is no recognized/accepted remediation process available? List.

Complete remediation of Area 1 Landfill and Area 8 plating area spillsite may not be feasible. Both areas are extremely close to the bay. Only after extreme expense, and highly technical engineering, would it be possible to hold back the seawater to allow complete remediation of the sites. Currently, only limited action at Area 1, and hot spot removal at Area 8 is proposed. Even groundwater treatment may not be feasible due to saltwater intrusion. The current remediation plan allows for natural cleaning of the groundwater. Complete groundwater cleanup can not be guaranteed. In addition, total remediation of the landfill will destroy the current wetlands. It would take considerable cost and time to restore those



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wetlands to their natural state. NUWC Division, Keyport does not have sufficient property to move the wetlands (under a no-net-loss scenario) to another location.

There are potential sites not listed on the NPL. For example, the 1992 Site Inspections conducted at two large areas detected scattered metals, petroleum, and VOC's above and below regulatory standards. Groundwater in several areas on base but outside of NPL areas, shows low-level contamination by solvents. This Division has integrated its environmental review and planning process into the operational and facilities planning functions to ensure concerns about contaminated soils are addressed.

Prior to construction projects, soil sampling is conducted via soil borings to groundwater depth, and soils are analyzed for metals, VOC's, petroleum, pesticides, and PCB's. This information is used to dispose of soil properly and to develop site safety plans. It has been noted that the majority of surface soils on the base are fill, and there have been several unexpected developments during construction, such as detecting solvent vapors, finding metal chips and other debris in the soil, and other contaminants that may have originated prior to the base establishment in 1914 or with imported fill. There is a probability that industrial shop floors have been compromised, and there is known leakage of hazardous substances, as evidenced by floors of the plating shop (Area 8); the machine shop, Building 73; and indoor sumps at Building 84. It may not be feasible to conduct a complete cleanup of the base without tearing down a significant portion of the industrial area.

7d.

Is there a groundwater treatment system in place?	NO
Is there a groundwater treatment system planned?	NO*

\* None as long as the base remains operational.

**State scope and expected length of pump and treat operations.**

There is no groundwater treatment in place at this time.

Area 1 Landfill. This area would certainly require treatment of groundwater before the site could be returned to private ownership. Groundwater contaminants exceed state cleanup levels. The State has proposed to allow containment of the groundwater (as opposed to treatment) as long as the property is under Navy ownership.



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Area 8 Plating Shop. Only heavy metals removal is planned for this area. Volatile-Organic-Compounds contamination in the groundwater will remain. Groundwater treatment would be required prior to the property being turned over to private ownership. The plating shop is about 25 feet from the bay. Salt water intrusion will slow the process considerably. It is estimated that it would take 20 to 50 years to treat the groundwater by pump and treat.

7e.

Has a RCRA Facilities Assessment been performed for your base?	YES
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A RCRA Facilities Assessment was conducted in September 1991.

7f. Does your base operate any "Conforming Storage" facilities for handling hazardous materials? If YES, describe facility, capacity, restrictions, and permit conditions.

YES. Hazardous materials arriving at this Division are accepted at the Shipping and Receiving Facility (Bldg. 893) and subsequently transferred to the Hazardous Materials Storage Facility (Bldg. 1006).

The Hazardous Materials Storage Facility is a state-of-the-art facility constructed specifically for storage of the hazardous and flammable materials utilized in the various industrial processes conducted at NUWC Division, Keyport. The facility was constructed to meet hazardous and flammable materials storage requirements established by EPA under the Clean Water Act and the guidelines established by the National Fire Protection Association.

The facility has approximately 8,400 square feet of storage area segregated into five subareas for the storage of different materials. Flammables storage encompasses approximately 4,900 square feet; corrosives, approximately 1,300 square feet; oxidizers, approximately 560 square feet; POL, approximately 950 square feet; and cylinder storage, approximately 680 square feet. The facility allows for efficient materials storage and handling operations and maintains a buffer capacity ranging from 10 to 20 percent at any given time. No operational restrictions have been identified to date. There is no specified permit required for the operation of this facility.

This facility, along with an award-winning Pollution Prevention Program (1994 Secretary of the Navy Pollution Prevention Team Award) and Industrial Recycling Program have allowed the base to eliminate substantial amounts of hazardous material in shop and environmentally sensitive areas (such as piers). Storage areas where small amounts of hazardous materials are stored have secondary containment, controlled access, and overhead covering and are clearly labelled. All areas are routinely inspected to ensure proper storage and protection of human health and the environment.



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7g. Does your base operate any "Conforming Storage" facilities for handling hazardous waste? If YES, describe facility, capacity, restrictions, and permit conditions.

YES. NUWC Division, Keyport's Hazardous Waste Treatment and Storage Facility accepts facility-generated dangerous wastes for consolidation, packaging, and storage pending shipment to final off-base disposal. Container storage at the facility consists of two 5,000 square foot buildings, two soft-covered 5,000 square foot facilities and five 1,800 square foot bunkers located adjacent to the facility. The main buildings and facilities sit on a two acre paved area which is located directly on top of the southern end of the Area 1 Landfill. The total container (drum) storage capacity is 96,460 gallons. Bulk tank storage consists of ten 5,000 and one 300 gallon storage tanks, giving a total storage capacity of 50,300 gallons.

One unique feature of the hazardous waste storage facility is the storage of spent lithium boilers. The Division is the sole storage facility for the entire U.S. Navy's inventory of expended MK 50 Torpedo lithium boilers. The contents of these canisters are highly reactive when exposed to air or water. The Division used its engineering and environmental expertise to modify existing storage facilities to ensure the complete safety of stored boilers. The facilities have special humidity control equipment as well as standard epoxy-coated floors and remote sensor alarms. The Division also pioneered the development of a special copper powder fire extinguisher to fight lithium fires. This system is the only known effective method of extinguishing lithium fires. The Fleet now uses these extinguishers wherever MK 50 Torpedoes are stored. In addition, the Division teamed with the Washington State Fire Training Center to develop training for the use of the extinguisher for the Fleet.

The lithium storage facility is supported by the Lithium Decontamination Facility. This facility is used to teardown, sort, troubleshoot, and, if necessary, decontaminate hardware, including targets, torpedoes, or torpedo components. This includes classified and explosive-laden components and materials. Torpedoes, Submarine Launched Mobile Mine (SLMM), or special R&D test torpedoes or targets which have become contaminated with hazardous materials are environmentally cleaned. This include MK 50 Torpedo components which are contaminated with lithium salts as a result of a boiler breach or a lithium battery failure. The hardware is repackaged and segregated into hazardous materials, wastes, and reusable components. Torpedo failure analysis and hardware inspection is also performed on contaminated hardware. The facility has the capability to safely decontaminate hardware using a series of cleaning and rinsing operations involving water, steam, detergents, and agents which neutralize the lithium salts. It is operated by highly skilled technical personnel who average over eight years of applicable specialized experience.

The Naval Sea Systems Command has identified the Lithium Boiler Decontamination facility as having unique and essential capabilities in recent studies, and it is in direct support of the policy imperative to maintain an organic capability to provide Fleet maintenance.



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The current Hazardous Water Treatment and Storage Facility operates under an Interim Status RCRA Part B Permit. There is no given expiration of this permit status, since a new Part B Permit application is being prepared for a new Treatment and Storage Facility that will replace the existing facility. This Division recognized early that the existing facility, sitting on top of an NPL site, would not be suitable to support long-term mission requirements (especially when the site goes through remediation). The new facility, currently being constructed (estimated completion date 1995), will provide expanded capabilities and efficiency for waste handling operations along with improved safety and emergency preparedness features.

The new facility will be a 44,000 square foot, one-story, enclosed structure with approximately 18,000 square feet of attached exterior covered area. The total container (drum) storage capacity will be 55,000 gallons. The new facility provides for more efficient space utilization and is designed to provide more than sufficient capacity for waste storage operations as compared to the current facility. The total bulk tank capacity will be 55,000 gallons, provided by eleven 5,000 gallon tanks. Obtaining a Final Part B Permit will allow greater regulatory flexibility for waste handling operations. The new facility will provide more efficient waste segregation, staging, and consolidation operations, which will result in reduced handling and shipment costs for off-base disposal. Additional benefits come from the state-of-the-art release-prevention, detection, and response equipment designed into the facility.

In addition, to the main hazardous waste and hazardous material storage facilities, the Division has invested in 15 high-quality, fully contained, mobile storage units that can be used for hazardous material or waste. Each unit can store up to six drums. These units can be equipped with sprinkler and alarm systems if needed. The units fully contain all spilled materials. These units are easily transportable and are regularly moved to support industrial operations on and off-site. The Division does not store any hazardous waste or material outside of these units unless the building has a built-in, roofed, secondary containment, storage facility. The Division places a high priority on spill prevention as a key part of its environmental stewardship program.

Even in the shop areas, all hazardous material and hazardous waste are stored in special lockers or secondary containment units. The Division has a site registration program which requires all lockers, storage sites, mobile units and material/waste facilities be approved by safety, fire, security, and environmental authorities before the site can be placed in operation. This approval process ensures sites are not placed near environmentally sensitive areas and that each site location is registered. Through a central database, site inventories can be monitored. If a spill occurs, the fire department will know the exact location of the site and all the material/waste stored at that site at that exact moment.



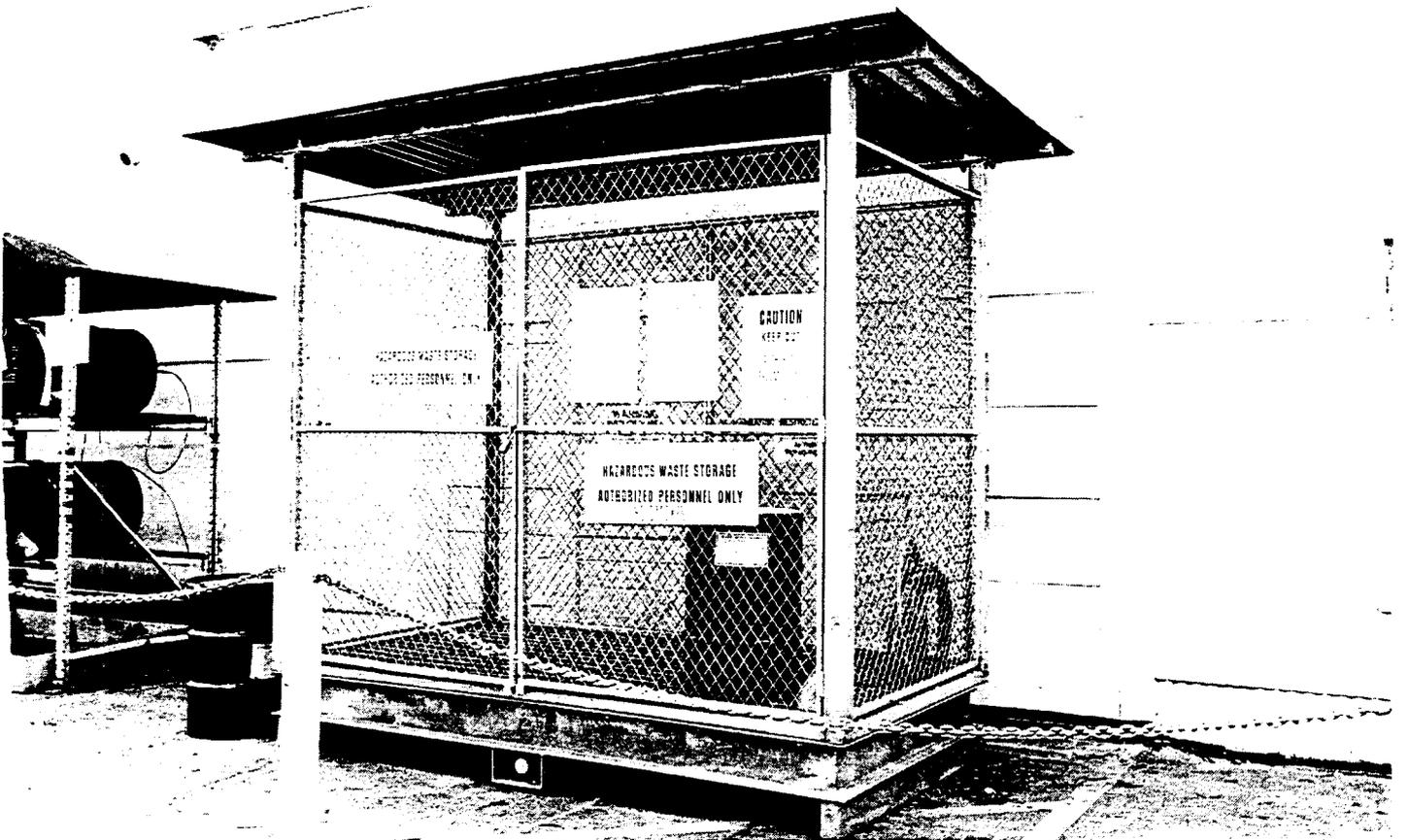
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**NUWC DIVISION, KEYPORT**

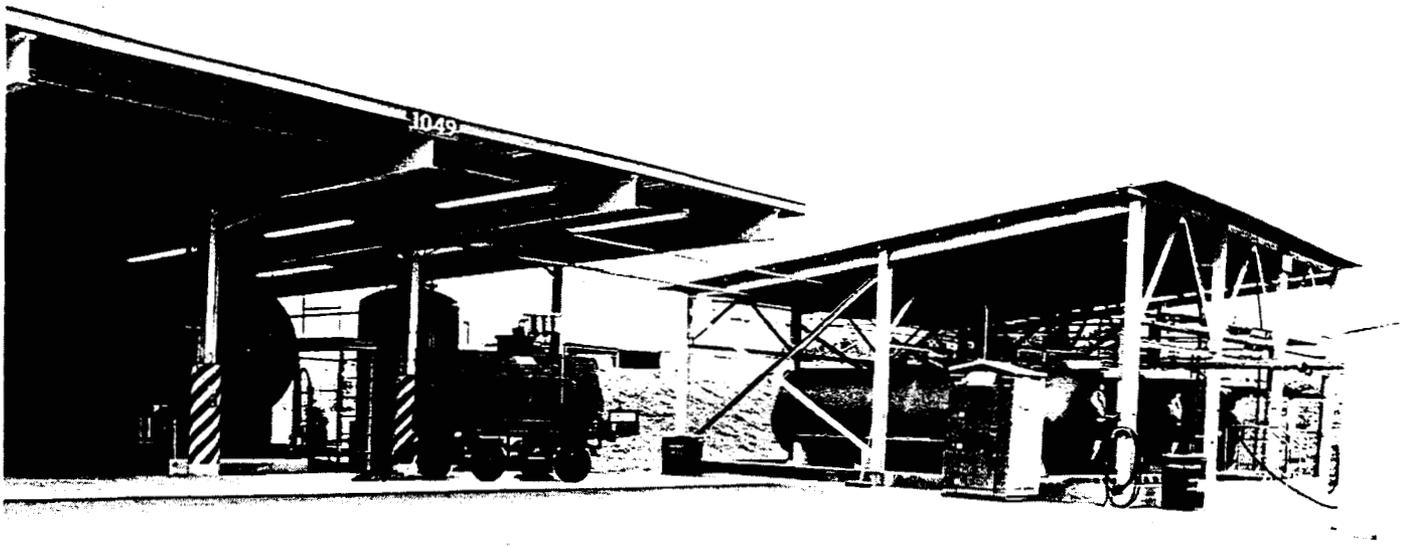


**HAZARDOUS MATERIAL STORAGE FACILITY**

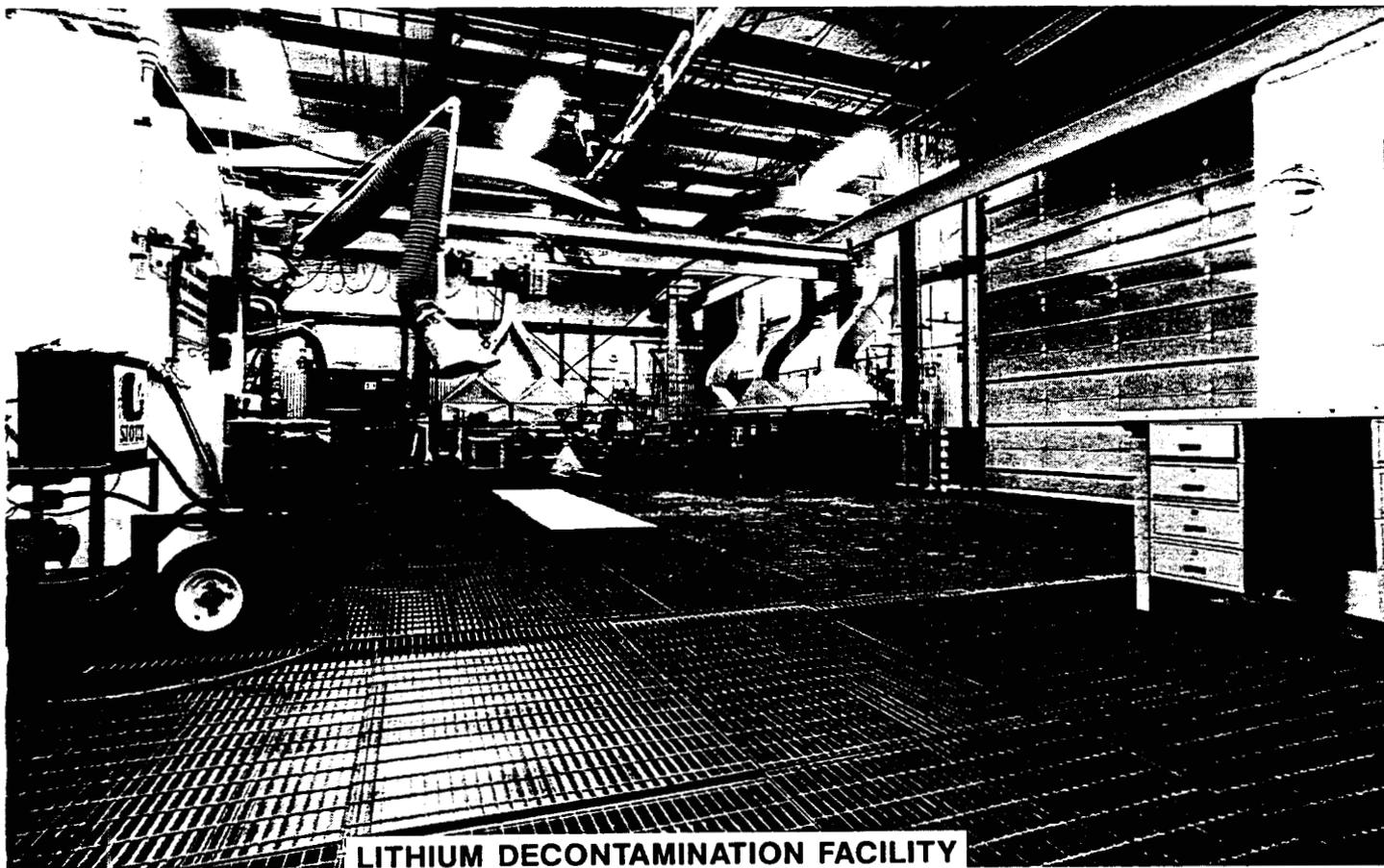


**HAZARDOUS WASTE STORAGE UNIT**

**NUWC DIVISION, KEYPORT**



**OTTO FUEL RECLAMATION FACILITY**



**LITHIUM DECONTAMINATION FACILITY**

7h. Is your base responsible for any non-appropriated fund facilities (exchange, gas station) that require clean up? If so, describe facility/location and cleanup required/status.

Through NUWC Division, Keyport's aggressive tank removal program, the only exchange gas station was remediated in 1990. This site had three 10,000 gallon underground tanks that had leaked and one waste oil sump. All contaminated soils were removed (approximately 100 cubic yards), and the site was fully restored for reuse. The UST removal program has completed removal and remediation of all petroleum contaminated sites (not within NPL sites), and the only two remaining underground gas and diesel tanks are in full compliance.

7i.

Do the results of any radiological surveys conducted indicate limitations on future land use? Explain below.	NO
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There are no structures, areas, or locations having known, probable, or suspected contamination by radioactive materials on the base or any of its remote sites.

7j. Have any base operations or development plans been restricted due to Installation Restoration considerations?

No. Although the base cannot currently construct facilities on any of the five areas designated as operable units this constraint has not impacted or restricted any base operations or development plans. All five areas are already paved over or have buildings on top of them. These areas actually support base operations and development plans by providing parking areas away from the main industrial areas. Uncontaminated parking lots in the industrial area were "free" to construct upon, because adequate parking was available on the operable units. As a result over 150,000 square feet of additional engineering and industrial capability has been added to the base since 1992.

The Division had the vision in 1989 to see that its current hazardous waste facility, which resides on top of the Area 1 Landfill, would not be able to meet hazardous waste standards for a permitted facility. In addition, the EPA stated they would not permit a hazardous waste facility on top of an operable unit. A MILCON request was immediately submitted to remedy the situation. Construction for a new state-of-the-art hazardous waste facility began in May 1994. This 45,000 square feet facility will provide superior support to current and future base operations. This facility will serve as the Navy's permitted storage facility for spent MK 50 lithium boilers. In addition, it will handle unique Otto Fuel II wastes as well as many other torpedo related wastes.



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7k. List any other hazardous waste treatment or disposal facilities not included in question 7b. above. Include capacity, restrictions and permit conditions.

Attached is a list of all Solid Waste Management Units (SWMUs) at the base. The Division has a comprehensive hazardous waste program which enables it to utilize a wide variety of SWMUs to manage its waste. For this reason all tanks, portable tanks, tankers, mobile storage units, lockers, etc. are listed. Under certain waste storage requirements, any of these SWMUs can serve as conforming storage (strictly less than 90-day operation). None of these units ever require permitting (except those permanently attached to the permitted hazardous waste treatment storage and disposal facility, Bldg. 884 and Bldg. 1032 (see question 7f. and 7g.)). Most units operate either under permit-by-rule, treatment-by-generator, or as less than 90-day storage units. The Division monitors the movement of all portable SWMUs and knows the location of all units at any given instant. This tracking is accomplished using the Environmental Management Information System (EMIS) developed by the Division.

There are no restrictions on any of the permitted or unpermitted SWMUs. The Division's hazardous waste management program is fully integrated throughout the industrial area. Each industrial shop has registered storage areas which are strictly controlled by a local hazardous waste site manager. This manager coordinates waste collection and storage for the waste generators in their designated area. The site managers receive annual training to ensure they understand the latest hazardous waste requirements. Currently there are about 120 site managers (plus alternates). The Division also identifies any satellite accumulation areas and tracks the location of these units. All sites must be registered and the location must be approved by fire, safety, and environmental personnel. This high level of control ensures hazardous material and waste requirements are being met and the program is in full compliance.



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**NUWC DIVISION, KEYPORT SOLID WASTE MANAGEMENT UNITS**

<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0001-501	HAZARDOUS MATERIAL	LOCKER	SLMM SHOP
K0006-501	HAZARDOUS MATERIAL	LOCKER	DIVERS
K0010-501	HAZARDOUS MATERIAL	LOCKER	WATER TREATMENT/RESERVOIR
K0011-501	HAZARDOUS MATERIAL	LOCKER	LAGGING SHOP
K0012-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING LOCATION
K0012-501	HAZARDOUS MATERIAL	WAREHOUSE	HAZARDOUS MATERIAL STORAGE
K0015-501	HAZARDOUS MATERIAL	LOCKER	MACHINE MAINTENANCE
K0015-502	HAZARDOUS MATERIAL	LOCKER	ENV. TEST DEPT
K0017-501	HAZARDOUS MATERIAL	LOCKER	WOOD HOBBY SHOP/SELF HELP
K0017-502	HAZARDOUS MATERIAL	LOCKER	ARMORY
K0021-501	HAZARDOUS MATERIAL	LOCKER	MACHINE MAINTENANCE
K0021-502	HAZARDOUS MATERIAL	LOCKER	MAINTENANCE DEPARTMENT
K0024-501	HAZARDOUS MATERIAL	LOCKER	ENV. TESTING DEPT
K0033-501	HAZARDOUS MATERIAL	LOCKER	BOAT SHOP
K0036-501	HAZARDOUS MATERIAL	LOCKER	RIGGERS
K0038-501	HAZARDOUS MATERIAL	LOCKER	WELD SHOP
K0040-501	HAZARDOUS MATERIAL	LOCKER	WELD SHOP
K0040-502	HAZARDOUS MATERIAL	LOCKER	SOLDER TRAINING
K0047-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING AREA
K0047-501	HAZARDOUS MATERIAL	LOCKER	UNDERWATER RECOVERY
K0048-501	HAZARDOUS MATERIAL	LOCKER	SMALL BOAT MAINTENANCE
K0072-501	HAZARDOUS MATERIAL	LOCKER	PLATING (72, 1019, 181, 199)
K0073-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING FOR CODE 20
K0073-501	HAZARDOUS MATERIAL	LOCKER	MACHINE MAINTENANCE
K0073-502	HAZARDOUS MATERIAL	LOCKER	TOOLMAKERS
K0073-503	HAZARDOUS MATERIAL	LOCKER	
K0073-504	HAZARDOUS MATERIAL	LOCKER	TOOL ROOM
K0080-501	HAZARDOUS MATERIAL	LOCKER	ROBOTICS LAB
K0081-501	HAZARDOUS MATERIAL	LOCKER	81 HYDRO
K0081-502	HAZARDOUS MATERIAL	LOCKER	MECHANIC ASSEMBLY
K0081-503	HAZARDOUS MATERIAL	LOCKER	PLASTIC SHOP
K0082-501	HAZARDOUS MATERIAL	LOCKER	TARGET DEPOT MECH
K0082-502	HAZARDOUS MATERIAL	LOCKER	TARGET ELECT. DEPOT
K0082-503	HAZARDOUS MATERIAL	LOCKER	MOSS



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0082-504	HAZARDOUS MATERIAL	LOCKER	TARGET SHOP
K0082-505	HAZARDOUS MATERIAL	LOCKER	MOTOR SHOP
K0082-506	HAZARDOUS MATERIAL	LOCKER	USW BRANCH
K0083-501	HAZARDOUS MATERIAL	LOCKER	SILK SCREEN
K0083-502	HAZARDOUS MATERIAL	LOCKER	MACHINE SHOP
K0083-503	HAZARDOUS MATERIAL	LOCKER	WELD SHOP
K0083-504	HAZARDOUS MATERIAL	LOCKER	
K0083-505	HAZARDOUS MATERIAL	LOCKER	SHEETMETAL SHOP
K0083-506	HAZARDOUS MATERIAL	LOCKER	MARKING
K0083-507	HAZARDOUS MATERIAL	LOCKER	FUNCTIONAL ASSIST SHOP
K0083-508	HAZARDOUS MATERIAL	LOCKER	PAINT SHOP
K0084-501	HAZARDOUS MATERIAL	LOCKER	HEAT TREAT
K0084-502	HAZARDOUS MATERIAL	LOCKER	PAINT SHOP
K0084-503	HAZARDOUS MATERIAL	LOCKER	STRIP SHOP
K0084-504	HAZARDOUS MATERIAL	LOCKER	MAINTENANCE ELECTRICIANS
K0084-505	HAZARDOUS MATERIAL	LOCKER	SIGN SHOP
K0084-506	HAZARDOUS MATERIAL	LABORATORY	CHEMICAL LAB
K0085-501	HAZARDOUS MATERIAL	LOCKER	SALT SHOP
K0085-502	HAZARDOUS MATERIAL	LOCKER	BATTERY SHOP
K0091-501	HAZARDOUS MATERIAL	STORE ROOM	WOOD SHOP STOREROOM
K0094-501	HAZARDOUS MATERIAL	LOCKER	FACILITIES SUPPORT BRANCH
K0095-501	HAZARDOUS MATERIAL	LOCKER	CARPENTER'S SHOP
K0095-502	HAZARDOUS MATERIAL	LOCKER	ELECTRICAL
K0095-503	HAZARDOUS MATERIAL	LOCKER	TRANSPORTATION, RIGGERS
K0095-504	HAZARDOUS MATERIAL	LOCKER	TRANSPORTATION
K0098-501	HAZARDOUS MATERIAL	LOCKER	98 HYDRO
K0098-502	HAZARDOUS MATERIAL	LOCKER	GENERAL FIR
K0098-503	HAZARDOUS MATERIAL	LOCKER	COMPUTER MAINTENANCE
K0098-504	HAZARDOUS MATERIAL	LOCKER	WEST WALL EXPLODER SHOP
K0098-505	HAZARDOUS MATERIAL	LOCKER	DEPOT TIES, MK48
K0098-506	HAZARDOUS MATERIAL	LOCKER	GYRO SHOP
K0098-507	HAZARDOUS MATERIAL	LOCKER	COMBAT SYS ELEC REPAIR
K0098-508	HAZARDOUS MATERIAL	LOCKER	COMBAT SYSTEMS
K0098-509	HAZARDOUS MATERIAL	LOCKER	TEST SET ASSY
K0098-510	HAZARDOUS MATERIAL	LOCKER	CIRCUIT BOARD ASSY & REPAIR
K0098-511	HAZARDOUS MATERIAL	LOCKER	BLOCK UPGRADE
K0098-512	HAZARDOUS MATERIAL	LOCKER	CABLE FABRICATION
K0098-513	HAZARDOUS MATERIAL	LOCKER	MECHANIC ASSEMBLY
K0099-501	HAZARDOUS MATERIAL	LOCKER	PIER ONE YTT OUTFITTING



**ADMINISTRATIVE SENSITIVE**

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<u>SITE #</u>	<u>SITE TYPE</u>	<u>DESCRIPTION</u>	<u>LOCATION</u>
K0105-501	HAZARDOUS MATERIAL	LOCKER	ELECTRICAL FIR, DEPOT
K0105-502	HAZARDOUS MATERIAL	LOCKER	MK 48 ADCAP MECHANICAL
K0105-503	HAZARDOUS MATERIAL	STORE ROOM	QA HAZARDOUS MATERIAL RECEIVING
K0105-504	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING LOCATION
K0106-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL ENGINE TEST FAC
K0107-501	HAZARDOUS MATERIAL	LOCKER	CARPENTER'S SHOP
K0108-501	HAZARDOUS MATERIAL	LOCKER	ELEC PROPULSION TEST FAC
K0110-501	HAZARDOUS MATERIAL	LOCKER	PAINT SHOP
K0134-501	HAZARDOUS MATERIAL	LOCKER	PHOTO LAB
K0134-502	HAZARDOUS MATERIAL	LOCKER	TANKS, PHOTO LAB
K0137-501	HAZARDOUS MATERIAL	LOCKER	SPECIAL OPERATIONS
K0144-501	HAZARDOUS MATERIAL	LOCKER	INERT ORDNANCE HANDLING
K0205-501	HAZARDOUS MATERIAL	LOCKER	JOHNSON CONTROLS
K0206-501	HAZARDOUS MATERIAL	LOCKER	MODEL SHOP
K0206-502	HAZARDOUS MATERIAL	LOCKER	SAMPLE PREP AREA
K0206-503	HAZARDOUS MATERIAL	LOCKER	PINGER
K0206-504	HAZARDOUS MATERIAL	LOCKER	OPTICAL CAL LAB
K0206-505	HAZARDOUS MATERIAL	LOCKER	FIBER OPTICS LAB
K0206-506	HAZARDOUS MATERIAL	LOCKER	INSTRUMENT REPAIR
K0206-508	HAZARDOUS MATERIAL	LOCKER	WEAPONS CAL LAB
K0206-509	HAZARDOUS MATERIAL	LOCKER	MECHANICAL CAL LAB RM105
K0207-501	HAZARDOUS MATERIAL	LOCKER	UWEF
K0208-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL PLANT
K0209-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL STORAGE
K0233-501	HAZARDOUS MATERIAL	LOCKER	ENGINE, LATHES, GRINDING
K0233-502	HAZARDOUS MATERIAL	LOCKER	AUTOMATIC & TURRET LATHES
K0234-501	HAZARDOUS MATERIAL	LOCKER	POWER PLANT
K0467-501	HAZARDOUS MATERIAL	LOCKER	CALIBRATION BARGE
K0478-501	HAZARDOUS MATERIAL	LOCKER	SONAR
K0478-502	HAZARDOUS MATERIAL	LOCKER	ARL PENN STATE
K0478-503	HAZARDOUS MATERIAL	LOCKER	COMPUTER OFFICE
K0478-504	HAZARDOUS MATERIAL	LOCKER	XTV WORK AREA
K0489-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING LOCATION
K0489-501	HAZARDOUS MATERIAL	LOCKER	SHOP FLOOR
K0489-502	HAZARDOUS MATERIAL	LOCKER	ALLIANT TECH SYSTEMS
K0489-503	HAZARDOUS MATERIAL	LOCKER	



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0489-504	HAZARDOUS MATERIAL	LOCKER	CONAP ROOM
K0489-505	HAZARDOUS MATERIAL	LOCKER	COMBAT SYSTEMS
K0489-506	HAZARDOUS MATERIAL	STORE ROOM	STOREROOM
K0489-507	HAZARDOUS MATERIAL	LOCKER	PC DEPOT SUPPORT
K0508-501	HAZARDOUS MATERIAL	LOCKER	NPSO
K0514-106	HAZARDOUS MATERIAL	IN-USE	DEEP SINK ROOM (TAILCONE SINK)
K0514-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING LOCATION
K0514-501	HAZARDOUS MATERIAL	LOCKER	SHOP FLOOR
K0514-502	HAZARDOUS MATERIAL	LOCKER	WESTINGHOUSE/HUGHES
K0514-503	HAZARDOUS MATERIAL	STORE ROOM	STOREROOM
K0726-501	HAZARDOUS MATERIAL	LOCKER	PAINT SHOP
K0734-501	HAZARDOUS MATERIAL	LOCKER	PAINT SHOP
K0735-501	HAZARDOUS MATERIAL	LOCKER	DIESEL REPAIR SHOP
K0790-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL STORAGE
K0791-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL STORAGE
K0811-501	HAZARDOUS MATERIAL	LOCKER	ELECT REPAIR
K0811-502	HAZARDOUS MATERIAL	LOCKER	COMBAT SYSTEMS
K0820-501	HAZARDOUS MATERIAL	LOCKER	SHELL REPAIR BRANCH
K0820-502	HAZARDOUS MATERIAL	LOCKER	MACHINE SHOP
K0820-503	HAZARDOUS MATERIAL	LOCKER	DECONTAMINATION
K0824-501	HAZARDOUS MATERIAL	LOCKER	MAINTENANCE
K0825-500	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING LOCATION
K0825-501	HAZARDOUS MATERIAL	LOCKER	WASTE WATER TREATMENT
K0825-502	HAZARDOUS MATERIAL	STORE ROOM	ONE TON GAS CYLINDER STORAGE
K0825-503	HAZARDOUS MATERIAL	IN-USE	ONE TON GAS CYLINDER, SULFUR DIOXIDE, ON-LINE
K0825-504	HAZARDOUS MATERIAL	IN-USE	ONE TON GAS CYLINDER, CHLORINE, ON-LINE
K0880-501	HAZARDOUS MATERIAL	LOCKER	BOX SHOP
K0884-501	HAZARDOUS MATERIAL	LOCKER	HAZARDOUS WASTE TREATMENT
K0893-501	HAZARDOUS MATERIAL	LOCKER	MATERIAL DISTRIBUTION
K0893-502	HAZARDOUS MATERIAL	RECEIVING	HAZARDOUS MATERIAL RECEIVING AND SHIPPING
K0893-504	HAZARDOUS MATERIAL	IMPOUND	HAZARDOUS MATERIAL IMPOUND AREA FOR UNAUTHORIZED MATERIAL
K0894-102	HAZARDOUS MATERIAL	TANK	PARTS WASHER



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0894-103	HAZARDOUS MATERIAL	TANK	PARTS WASHER
K0894-500	HAZARDOUS MATERIAL	RECEIVING	RECEIVING LOCATION
K0894-501	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-502	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-503	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-504	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-505	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-506	HAZARDOUS MATERIAL	LOCKER	HAZARDOUS MATERIAL STORAGE LOCKER
K0894-507	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-508	HAZARDOUS MATERIAL	LOCKER	ALLIANT, CHEMICAL STORAGE
K0894-509	HAZARDOUS MATERIAL	IN-USE	WORK AREA
K0894-510	HAZARDOUS MATERIAL	STORE ROOM	MK 50, STOREROOM
K0901-501	HAZARDOUS MATERIAL	LOCKER	TRANSPORTATION
K0940-501	HAZARDOUS MATERIAL	LOCKER	PROPULSION TEST FACILITY
K0950-501	HAZARDOUS MATERIAL	LOCKER	TMD PLANT
K0950-502	HAZARDOUS MATERIAL	LOCKER	REXTORP ASSY 46 AND 50
K0951-501	HAZARDOUS MATERIAL	LOCKER	CV-ASWM
K0952-501	HAZARDOUS MATERIAL	LOCKER	HIGH PRESSURE BOILER
K0957-501	HAZARDOUS MATERIAL	STORE ROOM	HAZARDOUS MATERIAL TRANSFERRED TO DRMO (1348)
K1006-500	HAZARDOUS MATERIAL	RECEIVING	RECEIVING DOCK
K1006-501	HAZARDOUS MATERIAL	WAREHOUSE	FLAMMABLE STORAGE
K1006-502	HAZARDOUS MATERIAL	WAREHOUSE	CAUSTIC STORAGE
K1006-503	HAZARDOUS MATERIAL	WAREHOUSE	COMPRESSED GAS STORAGE
K1006-504	HAZARDOUS MATERIAL	WAREHOUSE	REFRIGERATED STORAGE
K1006-505	HAZARDOUS MATERIAL	IMPOUND	IMPOUND AREA
K1006-506	HAZARDOUS MATERIAL	WAREHOUSE	POISON STORAGE
K1006-507	HAZARDOUS MATERIAL	WAREHOUSE	ACID STORAGE
K1013-501	HAZARDOUS MATERIAL	LOCKER	AUTO HOBBY SHOP
K1044-501	HAZARDOUS MATERIAL	LOCKER	TATF BUILDING
K1049-501	HAZARDOUS MATERIAL	LOCKER	OTTO FUEL STORAGE
K7246-501	HAZARDOUS MATERIAL	LOCKER	BLDG, 7246 AT KB DOCKS (BANGOR)
KBDKS-501	HAZARDOUS MATERIAL	LOCKER	LOCKER ON PIER
KBDKS-502	HAZARDOUS MATERIAL	LOCKER	
KYT11-501	HAZARDOUS MATERIAL	LOCKER	PAINT LOCKER ON BOAT YTT11
KYT11-502	HAZARDOUS MATERIAL	LOCKER	FLAM LOCKER
KYT11-503	HAZARDOUS MATERIAL	LOCKER	WORKSHOP
KYT11-504	HAZARDOUS MATERIAL	LOCKER	CLEANING GEAR LOCKER



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
KYT11-505	HAZARDOUS MATERIAL	LOCKER	LAUNDRY
KYTT9-501	HAZARDOUS MATERIAL	LOCKER	
K0001-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0001-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0001-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0006-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED AND SECURED
K0010-101	HAZARDOUS WASTE	UST	UNDERGROUND FUEL (GASOLINE) TANK
K0011-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0011-02	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED & SECURED STORAGE CAGE
K0014-101	HAZARDOUS WASTE	UST	UNDERGROUND HEATING OIL TANK
K0015-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0021-02	HAZARDOUS WASTE	NINETY DAY	TUFF TANK DESIGNATED STORAGE AREA
K0021-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0021-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0021-104	HAZARDOUS WASTE	NINETY DAY	2000 GALLON COVERED, BERMED TANK (COOLANT)
K0021-105	HAZARDOUS WASTE	NINETY DAY	2000 GALLON COVERED, BERMED TANK (COOLANT)
K0024-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0024-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0038-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0038-102	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA, UNDERGROUND SUMP 50-55 GALLONS
K0038-103	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0038-104	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0038-105	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0038-106	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0038-107	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0038-108	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0038-109	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0039-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0039-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0040-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0040-02	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED DRUM STORAGE
K0047-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0048-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED & SECURED STORAGE CAGE
K0072-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED & SECURED STORAGE CAGE
K0072-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0072-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0072-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0073-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA, SECURED, COVERED & BERMED
K0073-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0073-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0076-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0081-01	HAZARDOUS WASTE	NINETY DAY	SECURED, COVERED DRUM STORAGE CAGE



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0081-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0081-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0081-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0081-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0081-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0082-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-07	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0082-08	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-01	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0083-02	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0083-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-07	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-08	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA



**ADMINISTRATIVE SENSITIVE**

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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0083-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0083-10	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0084-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0084-02	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0084-03	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0084-04	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0084-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0084-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0084-07	HAZARDOUS WASTE	NINETY DAY	SECURED DRUM STORAGE
K0084-08	HAZARDOUS WASTE	SATELLITE	SECURED DRUM STORAGE
K0084-101	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0085-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED COVERED STORAGE TANK (TUFF TANK)
K0085-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0085-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0085-06	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0095-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED, & SECURED STORAGE CAGE
K0098-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA



**ADMINISTRATIVE SENSITIVE**

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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0098-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-07	HAZARDOUS WASTE	SATELLITE	FLAMMABLE STORAGE LOCKER
K0098-08	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-10	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-11	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-12	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0098-13	HAZARDOUS WASTE	SATELLITE	COVERED, BERMED, DESIGNATED STORAGE AREA
K0098-14	HAZARDOUS WASTE	SATELLITE	DESIGNED STORAGE AREA; OPEN, FOR SMALL DRUMS
K0105-01	HAZARDOUS WASTE	NINETY DAY	SECURED STORAGE CAGE, COVERED & BERMED
K0105-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-03	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-07	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-08	HAZARDOUS WASTE	SATELLITE	SECURED STORAGE LOCKER
K0105-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0105-10	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0106-01	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0106-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0106-05	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED AND SECURED STORAGE BLDG.
K0106-101	HAZARDOUS WASTE	NINETY DAY	1,300 GALLON HAZARDOUS WASTE TANK (CN-)
K0106-102	HAZARDOUS WASTE	NINETY DAY	600 GALLON HAZARDOUS WASTE OVERFLOW TANK (OTTO FUEL)
K0110-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0134-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0144-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0144-02	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0181-101	HAZARDOUS WASTE	NINETY DAY	SECONDARY CONTAINMENT FOR BULK DIESEL STORAGE TANKS
K0205-02	HAZARDOUS WASTE	NINETY DAY	COVERED & SECURED STORAGE AREA
K0206-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE CAGE
K0206-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0206-03	HAZARDOUS WASTE	SATELLITE	COVERED, BERMED, DESIGNATED STORAGE AREA
K0206-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0206-05	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0206-06	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0206-07	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0207-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0207-101	HAZARDOUS WASTE	UST	UNDERGROUND HEATING OIL TANK
K0209-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0233-02	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0233-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0234-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0467-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0478-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0478-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0489-02	HAZARDOUS WASTE	NINETY DAY	SECURED STORAGE AREA
K0489-03	HAZARDOUS WASTE	NINETY DAY	SECURED DESIGNATED ABOVEGROUND STORAGE TANK (1200 GAL.)
K0489-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-07	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-08	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-10	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-11	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-12	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-13	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-14	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-15	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-16	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-17	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0489-18	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-19	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-20	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0489-21	HAZARDOUS WASTE	SATELLITE	DESIGNATED WASTE BATTERY STORAGE
K0514-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED & SECURED STORAGE AREA
K0514-02	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-08	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0514-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-10	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-101	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED & BERMED
K0514-102	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED & BERMED
K0514-103	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED & BERMED
K0514-104	HAZARDOUS WASTE	NINETY DAY	350 GALLON TANK, COVERED BERMED & SECURED
K0514-105	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED & BERMED
K0514-11	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-12	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-13	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0514-14	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0726-01	HAZARDOUS WASTE	NINETY DAY	BERMED & SECURED STORAGE CAGE
K0735-01	HAZARDOUS WASTE	SATELLITE	DESIGNATED STORAGE AREA
K0790-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0811-01	HAZARDOUS WASTE	NINETY DAY	COVERED & SECURED STORAGE AREA
K0820-01	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA
K0820-02	HAZARDOUS WASTE	NINETY DAY	DESIGNATED STORAGE AREA



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0820-03	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED & SECURED DRUM STORAGE AREA
K0820-04	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0820-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0820-106	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED, SECURED STORAGE, 3,000 GAL, STEEL (TANK A)
K0820-107	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED, SECURED STORAGE, 3,000 GAL, STEEL (TANK B)
K0820-108	HAZARDOUS WASTE	SECONDARY	SECONDARY CONTAINMENT FOR K0820-106, K0820-107
K0824-01	HAZARDOUS WASTE	NINETY DAY	SECURED DRUM, BERMED, COVERED
K0825-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0825-101	HAZARDOUS WASTE	PERMITTED	6,500 GALLON CYANIDE TREATMENT/STORAGE TANK
K0825-102	HAZARDOUS WASTE	PERMITTED	6,500 GALLON CYANIDE TREATMENT/STORAGE TANK
K0884-01	HAZARDOUS WASTE	PERMITTED	DESIGNATED STORAGE AREA
K0884-02	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED DRUM STORAGE
K0884-03	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED DRUM STORAGE
K0884-04	HAZARDOUS WASTE	PERMITTED	COVERED, SECURED DRUM STORAGE
K0884-05	HAZARDOUS WASTE	PERMITTED	COVERED, SECURED DRUM STORAGE
K0884-06	HAZARDOUS WASTE	PERMITTED	COVERED, SECURED DRUM STORAGE
K0884-07	HAZARDOUS WASTE	PERMITTED	COVERED, SECURED DRUM STORAGE
K0884-101	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED H/W STORAGE TANK
K0884-102	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED H/W STORAGE TANK
K0884-103	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED H/W STORAGE TANK
K0884-104	HAZARDOUS WASTE	PERMITTED	COVERED, BERMED & SECURED H/W STORAGE TANK
K0884-105	HAZARDOUS WASTE	PERMITTED	SECURED H/W STORAGE TANK
K0884-106	HAZARDOUS WASTE	PERMITTED	SECURED H/W STORAGE TANK
K0884-107	HAZARDOUS WASTE	PERMITTED	SECURED H/W STORAGE TANK



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0884-108	HAZARDOUS WASTE	PERMITTED	SECURED H/W STORAGE TANK
K0884-109	HAZARDOUS WASTE	PERMITTED	SECURED, SECONDARY CONTAINMENT (DOUBLE-WALLED) H/W STORAGE TANK
K0884-110	HAZARDOUS WASTE	PERMITTED	SECURED, SECONDARY CONTAINMENT (DOUBLE-WALLED) H/W STORAGE TANK
K0884-301	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030889)
K0884-302	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 031056)
K0884-303	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030892)
K0884-304	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030886)
K0884-305	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030881)
K0884-306	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030896)
K0884-307	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030888)
K0884-308	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030882)
K0884-309	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 023411)
K0884-310	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030893)
K0884-311	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 13357)
K0884-312	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 13045)
K0884-313	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030878)
K0884-314	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030897)
K0884-315	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 13356)
K0884-316	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 23412)
K0884-317	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 080887)
K0884-318	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030883)
K0884-319	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 031057)
K0884-320	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030877)
K0884-321	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030885)
K0884-322	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030894)
K0884-323	HAZARDOUS WASTE	PERMITTED	220 GAL BONGO TANK (# 003808)
K0884-324	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030895)
K0884-325	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030891)
K0884-326	HAZARDOUS WASTE	PERMITTED	330 GAL TUFF TANK (# 030884)
K0884-327	HAZARDOUS WASTE	NINETY DAY	6,000 GALLON TANK TRAILER (VIN 97-33843)
K0884-328	HAZARDOUS WASTE	NINETY DAY	6,000 GALLON TANK TRAILER (VIN )
K0884-TP1	HAZARDOUS WASTE	PERMITTED	
K0884-TP2	HAZARDOUS WASTE	PERMITTED	
K0884-TP3	HAZARDOUS WASTE	PERMITTED	



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0884-TP4	HAZARDOUS WASTE	PERMITTED	
K0884-TP5	HAZARDOUS WASTE	PERMITTED	
K0884-TP7	HAZARDOUS WASTE	PERMITTED	
K0884-TP9	HAZARDOUS WASTE	PERMITTED	
K0884TP10	HAZARDOUS WASTE	PERMITTED	
K0884TP13	HAZARDOUS WASTE	PERMITTED	
K0884TP16	HAZARDOUS WASTE	PERMITTED	
K0884TP17	HAZARDOUS WASTE	PERMITTED	
K0884TP20	HAZARDOUS WASTE	PERMITTED	
K0884TP21	HAZARDOUS WASTE	PERMITTED	
K0893-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0894-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-02	HAZARDOUS WASTE	NINETY DAY	COVERED, SECURED & BERMED CAGE
K0894-04	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-05	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-06	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-07	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-08	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-09	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-10	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0894-101	HAZARDOUS WASTE	NINETY DAY	BERMED, DESIGNATED STORAGE AREA
K0894-11	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0894-12	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0940-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED AND SECURED STORAGE BLDG.



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<u>SITE #</u>	<u>SITE TYPE</u>	<u>SITE DESCRIPTION</u>	<u>LOCATION</u>
K0950-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K0951-01	HAZARDOUS WASTE	SATELLITE	COVERED, DESIGNATED STORAGE AREA
K0957-01	HAZARDOUS WASTE	NINETY DAY	COVERED, DESIGNATED STORAGE AREA
K1013-01	HAZARDOUS WASTE	NINETY DAY	COVERED, BERMED, & SECURED STORAGE CAGE
K1013-101	HAZARDOUS WASTE	NINETY DAY	BERMED & SECURED STORAGE



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## 8. LAND/AIR/WATER USE

8a. List the acreage of each real estate component controlled or managed by your base (e.g., Main base - 1,200 acres, Outlying Field - 200 acres, Remote Range - 1,000 acres, remote antenna site - 5 acres, Off-Base Housing Area - 25 acres).

Parcel Descriptor	Acres	Location
Keyport Main Base	340	Keyport, WA
Undersea Warfare Annex (including Toandos Peninsula)	1,878	Silverdale, WA
Detachment (Tenant)	15	Hawthorne, NV
Detachment (Tenant)	6	Oahu/Kauai, HI
Detachments (Host and Tenant)	5	San Diego, CA
Remote Range Sites	24	Cape Prince of Wales, AK
	38,138*	Quinault, WA
	7,628*	Dabob Bay, WA
	21,188*	Oahu, HI
	33,900*	San Diego, CA

\* Surface area of instrumented Undersea Tracking Range Sites in acres.

At remote range sites the Division works closely with the controlling state authorities to ensure operations at the ranges have zero impact on wildlife, habitat and water quality. The Division utilizes a comprehensive environmental assessment process where multimedia (air, water, soil...) subject matter experts review all new proposed range operations and ensure potential impacts are mitigated early in the process. The Division has consistently received State approval for all new operations and has an outstanding working relationship with the State. The Division continually monitors its operations to maintain the high standards of environmental quality within the range waters it operates in.



**ADMINISTRATIVE SENSITIVE**

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8b. Provide the acreage of the land use categories listed in the table below.

LAND USE CATEGORY		ACRES
Total Developed: (administration, operational, housing, recreational, training, etc.)		965
Total Undeveloped (areas that are left in their natural state but are under specific environmental development constraints, i.e., wetlands, endangered species, etc.)		Wetlands: 845
		All Others: 720
Total Undeveloped land considered to be without development constraints, but which may have operational/man caused constraints (i.e., HERO, HERF, HERP, ESQD, AICUZ, etc.) TOTAL		345
Total Undeveloped land considered to be without development constraints		63
Total Off-base lands held for easements/lease for specific purposes		0
Breakout of undeveloped, restricted areas. Some restricted areas may overlap:	ESQD	345
	HERF	0
	HERP	0
	HERO	0
	AICUZ	0
	Airfield Safety Criteria	0
	Other	0

8c. How many acres on your base (including off base sites) are dedicated for training purposes (e.g., vehicular, earth moving, mobilization)? This does not include buildings or interior small arms ranges used for training purposes. There is no acreage devoted to training purposes.

8d. What is the date of your last AICUZ update? \_\_\_ / \_\_\_ / \_\_\_ Are any waivers of airfield safety criteria in effect on your base? YES/NO Summarize the conditions of the waivers below.

N/A NUWC Division, Keyport does not have any AICUZ associated with operations.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
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UIC N00253  
NUWC DIV KEYPORT

**8e.** List the off base land use types (e.g., residential, industrial, agricultural) and acreage within Noise Zones 2 & 3 generated by your flight operations and whether it is compatible/incompatible with AICUZ guidelines on land use.

Acreage/Location/ID	Zones 2 & 3	Land Use	Compatible/ Incompatible
N/A			

**8f.** List the navigational channels and berthing areas controlled by your base which require maintenance dredging? Include the frequency, volume, current project depth, and costs of the maintenance requirements.

Navigational Channels/ Berthing Areas	Location/ Description	Maintenance Dredging Requirement			
		Frequency	Volume (MCY)	Current Project Depth (FT)	Cost (\$M)
Pier 1	Keyport, WA	20*	.014	21	.18
Pier 2	Keyport, WA	20*	.007	19	.13
K/B Dock	Subase Bangor	10*	.011	30	.18

\* Interval in years between dredging operations.

**8g.** Summarize planned projects through FY 1997 requiring new channel or berthing area dredged depths, include location, volume and depth.

There are no planned projects requiring new channel or berthing areas. Existing facilities are adequate for existing operations and can support additional Undersea Weapons related ship support.



**ADMINISTRATIVE SENSITIVE**

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8-3  
UIC N00253  
NUWC DIV KEYPORT

8h.

Are there available designated dredge disposal areas for maintenance dredging material? List location, remaining, capacity, and future limitations.	YES
Are there available designated dredge disposal areas for new dredge material? List location, remaining capacity, and future limitations.	YES
Are the dredged materials considered contaminated? List known contaminants.	NO

NUWC Division, Keyport utilizes Army Corps of Engineers dredge disposal sites and does not own or operate any dredge disposal sites on its property. There is adequate room on the army sites to accept the minimal quantities of dredge material. There are no constraining factors on NUWC, Division Keyport's ability to dispose of dredge material.

Sampling of materials from past dredging operations at NUWC Division, Keyport have not identified any contaminants. There have not been any changes to the existing sediment or modifications to environmental regulations that would preclude successful maintenance dredging operations now or in the future.

8i. List any requirements or constraints resulting from consistency with State Coastal Zone Management Plans.

NUWC Division, Keyport has successfully and consistently fulfilled the regulatory requirements for compliance with the Coastal Zone Management Act and Washington State Coastal Zone Management Program (CZMP). This Division has routinely submitted Coastal Consistent Determinations (CCD's) to the Washington State Department of Ecology for actions which occur in, or affect, the coastal zone. It has always received state concurrence that projects and actions are consistent, to the maximum extent practicable, with the enforceable policies of Washington's CZMP. NUWC Division, Keyport also complies with local shoreline permitting requirements. NUWC Division, Keyport's actions and projects in, or affecting, the coastal zone have not been constrained by CZMP and have been accomplished with environmental protection sufficient to prevent adverse effects to the shoreline environment.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33

8-4

UIC N00253

NUWC DIV KEYPORT

8j. Describe any non-point source pollution problems affecting water quality, e.g., coastal erosion.

There are no major non-point source pollution problems associated with NUWC Division, Keyport that affect water quality. Stormwater from the Division does represent a non-point source discharge that can produce pollution; NUWC Division, Keyport is presently developing and implementing a stormwater pollution prevention plan to deter this impact. Water quality at NUWC Division, Keyport operating locations is not impacted by non-point source pollution to a degree that presents any specific problems that impact the Division or its operations.

8k.

If the base has a cooperative agreement with the U.S. Fish and Wildlife Service and/or the State Fish and Game Department for conducting a hunting and fishing program, does the agreement or these resources constrain either current or future operations or activities? Explain the nature and extent of restrictions.	NO
---	----

The base has no such agreements.

8l. List any other areas on your base which are indicated as protected or preserved habitat other than threatened/endangered species that have been listed in Section 1. List the species, whether or not treated, and the acres protected/preserved.

NONE.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
8-5  
UIC N00253  
NUWC DIV KEYPORT

## 9. WRAPUP

9a. Are there existing or potential environmental showstoppers that have affected or will affect the accomplishment of the installation mission that have not been covered in the previous 8 questions?

The executive management of NUWC Division, Keyport had the vision and commitment to substantially invest in environmental programs in the 1980's. This commitment is reflected in the award-winning environmental programs that have been developed and the environmental leadership role that this Division commands today. The main goal was to ensure continued smooth operation of all industrial and mission-related operations in the wake of increasing environmental regulations and requirements. For this reason, there are no environmental showstoppers now or in the foreseeable future.

Total Quality principles are fully integrated into the environmental programs to ensure continuous improvement in compliance. In turn the environmental programs played a key role in this Division being recognized for outstanding Total Quality Achievements. Environmental programs demonstrate that Total Quality can be implemented throughout an activity. Individuals at all levels now take ownership and responsibility in ensuring compliance of their industrial operations. This contributed to NUWC Division, Keyport becoming one of only three activities in the entire federal government to win the 1994 Quality Improvement Prototype Award. When announcing the three winners of this prestigious award, Michele Hunt, Director of the Federal Quality Institute, said, *"These organizations are among the very best in government. They exemplify the vision of the Vice President's National Performance Review--a government that works better and costs less. The employees in these defense centers are demonstrating what a customer-centered government can do when there is a strong shared vision and a commitment to excellence throughout the organization."* In recognizing NUWC Division, Keyport's achievement, The Honorable John H. Dalton, Secretary of the Navy, said, *"Your focus on the customer, organization wide implementation, cross functional standing teams and Union-Management partnership demonstrate what government can do when there is a strong shared vision and a commitment to excellence throughout the organization. Your vision "Quality For Ours Customers, Improvement For Our Future" serves you well."* In congratulating NUWC Division, Keyport personnel, ADM Mike Boorda, Chief of Naval Operations, stated *"Your selection for this prestigious award proves that you have an organizational culture that is customer and quality oriented. It also brings to the attention of many organizations and people outside the Navy the terrific job you do. Keep up the great work."*



ADMINISTRATIVE SENSITIVE

DATA CALL #33  
9-1  
UIC N00253  
NUWC DIV KEYPORT

To sustain environmental leadership and compliance, resource planning is fully integrated into the 5-year planning process for this Division. Environmental budgets are based on industrial workload and environmental requirements. All waste costs are charged back to the generators. In addition, environmental projects are also integrated into Division project planning. These projects consistently receive the highest priority compared to industrial projects. All this results in well-managed, adequately-funded environmental programs.

**9b.** Are there any other environmental permits required for base operations, include any relating to industrial operations.

One of the key goals of NUWC Division, Keyport's aggressive Pollution Prevention Program is to reduce permitting requirements now and in the future. The Division has already reduced air emissions to the point where it will not require an Air Operating Permit for its industrial processes. Similarly, the Division is currently inventorying and analyzing all stormwater discharges to determine origin and concentration of pollutants in the stormwater. The goal is to feedback the analytical data into the Pollution Prevention Program and target elimination of those pollutants. Future permit requirements will be solved as a pollution prevention issue instead of a compliance issue. Ideally, this Division will only obtain future environmental permits if they directly support the business opportunities the Division is pursuing.

The multimedia approach to integrated pollution prevention described above is one of the main reasons this Division received the 1994 Secretary of the Navy Pollution Prevention Team Award. The results have been significant. Waste generation has been reduced by 16 percent (400,000 pounds) and unique hazardous materials used has been reduced from 10,000 to 4,000 items. The industrial recycling portion of the program has had similar results. Solid waste generation has been reduced by 18 percent and the Division has saved over \$1.9M in cost avoidance through recycling of industrial wastes.

**9c.** Describe any other environmental or encroachment restrictions on base property not covered in the previous 8 sections.

Environmental planning is completely integrated into the business and development planning of NUWC Division, Keyport. The purpose of this is to ensure that potential environmental and encroachment restrictions are addressed early in the concept phase of a project. All potential environmental issues are mitigated prior to the project being designed. Through this process, the Division ensures that there will not be any environmental or encroachment restrictions which could impact the primary mission of the Division.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33

9-2

UIC N00253

NUWC DIV KEYPORT

The environmental planning system has reviewed over 400 projects since its inception in the late 1980's. Each project is reviewed for potential impacts to habitat and species, coastal zones, wetlands, air quality, water quality, and waste management. Any identified impacts are first mitigated through pollution prevention solutions. As a last resort, compliance solutions (such as double wall piping or secondary containment) are implemented. The goal is to implement practical solutions which do not raise operational costs, yet adequately mitigate environmental concerns.

**9d.** List any future/proposed laws/regulations or any proposed laws/regulations which will constrain base operations or development plans in any way. Explain.

No future/proposed laws/regulations will constrain base operations in any way.

Part of the investment in environmental programs is dedicated to future planning and review of all future laws and regulations with the goal of eliminating the requirement as opposed to meeting the requirement. Impact of any proposed law is addressed in the resource planning process. NUWC Division, Keyport is fully prepared to meet the challenge of new environmental requirements that have been proposed or may appear in the future. The Division will fully comply with all proposed requirements without any significant impact to its operational costs or ability to perform its mission. This Division will do this by implementing pollution prevention solutions which eliminate the need to even address compliance requirements.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
9-3

UIC N00253  
NUWC DIV KEYPORT

**ATTACHMENT A**  
**NUWC DIVISION, KEYPORT**  
**EMISSION SOURCES AND CALCULATIONS**  
**for**  
**QUESTIONS 5 (c) AND 5 (d)**



**ADMINISTRATIVE SENSITIVE**

**DATA CALL #33**  
**5A-1**  
**UIC N00253**  
**NUWC DIV KEYPORT**

Questions 5c/d: The Air Contaminant Generating Equipment (ACGE), the source for these emissions in 1990 and 1993, are listed in Puget Sound Air Pollution Control Agency's (PSAPCA) Registration File Listing. Date of installation in the listing indicates any equipment installed after 1990.

Emissions for 1990 and 1993, listed under column "Permitted Stationary", are found in the summary page 1 of PSAPCA's Emission Statement. These values summarize the results of each emission point/segment. Specific calculations for the emission point/segments are only available for 1993 in "Supporting Calculations for PSAPCA Form B 1993".

Values listed in the column "Personal Automobiles" are calculated from information supplied by the Commute Trip Reduction Program. Taking into consideration the number of commute trips per day from single car, car/van pools and buses, and an average commute trip distance of 10.5 miles, the gasoline usage was determined to be 1,717 gallons per day. Using the emission factors in EPA's publication AP-42, the amount of emissions per pollutant was calculated. No data for personal automobile use in 1990 is available. The data shown in Question 5(c) was obtained by multiplying the 1993 data by the ratio of the Division's workforce in 1990 to that in 1993.

Example for NO<sub>x</sub>: 424,099 gal x 102 lb/1,000 gal x 1 ton/2,000 lbs = 21.6 tons

Emissions from "Other Mobile" are based on 1990/1993 gasoline usage of 71,000/57,524 gallons from the Public Works gas station. Emission factors from EPA's AP-42 are also used to calculate pollutant emissions.

Example for CO: 57,524 gal x 3,940 lb/1,000 gal x 1 ton/2,000 lbs = 113 tons



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
UIC N00253  
NUWC DIV KEYPORT

**ATTACHMENT A**  
**NUWC DIVISION, KEYPORT**  
**EMISSION SOURCES**



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
5A-3  
UIC N00253  
NUWC DIV KEYPORT

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
110 Union St, Suite 500, Seattle, WA 98101  
NOV 18, 1993, 12:18 PM

Safety Equip. Req.? YES  
X Hard Hat  
Goggles  
X Safety Glasses  
Ear Protection  
Respirators  
HEPA Filters  
Acid/Gas/Organic Fltr  
Ammonia Filter  
Safety Shoes  
Other  
DSS Insp CMW Engr

Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079  
DOE #: 1

Mail to:

HWY 308, KEYPORT  
KITSAP COUNTY 98345-0580

CODE 075  
KEYPORT, WA 98345-0580

ROBERT CAMPAGNA ENVIRONMENTAL ENGINEER 396-7090  
RICHARD WAITE, KRISTEN NELSON ENVIRONMENTAL ENGINEER 396-7090

UTM: 528.50 / 5283.00

O&M PLAN REQUIRED

8 Hours/Day 5 Days/Week 51 Weeks/Year Dec-Feb 25% Mar-May 25%  
Op. Sched. Note: Jun-Aug 25% Sep-Nov 25%

SIC # 9711 NATIONAL SECURITY

EPA Program:

Classification: A1 SW(1993): 1

Inspection Record (INSP File):

INSPECTED 04/22/1981 DSS  
04/16/1982 DSS  
04/14/1983 DSS  
05/18/1984 DSS  
04/24/1985 DSS  
04/25/1985 DSS  
04/29/1986 DSS 2  
04/28/1987 DSS 2  
07/27/1988 DSS  
05/03/1989 FLA 1  
10/30/1989 LST 2  
04/19/1991 AJF SLW 1991 FORM A REC'D  
11/16/1990 CMW 2 NOTICE OF CONST #3301 AND 3345  
02/08/1991 CMW 2 NO VIOL. ALLOWED MOVE. OF ANODIZ STRIP PROC W/O NC  
06/18/1991 CMW SLW 1991 FORM B REC'D  
05/24/1991 CMW 1 INSTRUCTED FACILITY ON FORM B COMPL  
04/15/1992 AJF SLW 1992 FORM A REC'D  
04/15/1992 CMW SLW 1992 FORM B REC'D  
04/24/1992 DSS 2 NOTICE OF CONSTR #3901, 4079, 4139, 4147, 4152, 3853  
05/13/1993 DSS 2 NC 3570, 3661, 3671, 3727, 3771, 4280, 4291, 4494,  
4568, 4579 AND 4834  
06/28/1993 JMW CMW 1 CALIB LAB HOODS EXEMPT FROM NC & REG. RQMTS  
11/18/1993 PBB CMW 1 EXEMPT EQUIPMENT IDENTIFIED

Air Contaminant Generating Equipment/Air Contaminant Control Apparatus

(1) WASHER  
BLDG. 1 AGITENE PARTS  
Rated:500 CFM Year Installed: 1989

PUGET SOUND AIR POLLUTION CONTROL AGENCY

NOV 18, 1993, 12:18 PM

Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

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-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- \* (2) LABORATORY FUME HOOD  
BLDG #24 "O" RING TEST FACILITY  
Rated:1300 CFM Year Installed: 1988
  
- (3) DESPATCH CURING OVEN  
BLDG. #24 OFII HEATING  
Rated:1000 CFM Year Installed: 1985
  
- (4) DESPATCH CURING OVEN  
BLDG 24  
Rated:2000 CFM Year Installed: 1985
  
- (5) WOODWORKING EQUIPMENT  
BLDG #33  
Rated:4600 CFM Year Installed: 1978
  
- CE (1) CYCLONE  
BLDG #33--WOODWORKING EQUIPMENT  
6450 CFM Year Installed: 1984
  
- \* (6) METAL PARTS SANDING  
BLDG #38 METAL DUST, SOLVENT  
Rated:650 CFM
  
- \* (7) WELDING  
BLDG 38  
Rated:5140 CFM
  
- \* (8) WELDING  
BLDG 38  
Rated:4600 CFM
  
- (9) HOOD  
BLDG 38, CAUSTIC SODA  
Rated:3088 CFM Year Installed: 1961
  
- (10) HOOD  
BLDG 38, CAUSTIC SODA  
Rated:2892 CFM Year Installed: 1961
  
- \* (11) HOOD  
BLDG 38, RINSE WATER  
Rated:3470 CFM Year Installed: 1961
  
- \* (12) HOOD  
BLDG 38, RINSE WATER  
Rated:3200 CFM Year Installed: 1961

\* This item is not assessed an annual registration fee.

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

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-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- (13) HOOD  
BLDG 38, ISOPREP 184  
Rated:13540 CFM Year Installed: 1961
- \* (14) WELDING  
BLDG 40  
Year Installed: 1992
- (15) DRY FILTER SPRAY BOOTH  
BLDG 47, CODE 8037 DEVILBISS AEROSOL  
Rated:1582 CFM Year Installed: 1990 NC#: 3570
- \* (16) WELDING  
BLDG 48, FLEX ARM
- (17) PLATING LINE  
BLDG 72 TANKS 104, 105, 106, 113 114 GENERAL BAY CADMIUM  
Rated:7730 CFM Year Installed: 1993 NC#: 3700
- CE (14) SCRUBBER  
BLDG 72 MAPCO MW-300 HCN  
7730 CFM Year Installed: 1993 NC#: 3700
- (18) ELECTROPLATING  
BLDG 72 TANKS 100, 102, 116, 117  
Rated:9230 CFM Year Installed: 1993 NC#: 3700
- CE (15) SCRUBBER  
BLDG 72 MAPCO MW-300  
9230 CFM Year Installed: 1993 NC#: 3700
- (19) TANK  
BLDG 72 TANKS CHROME PLATING  
Rated:25550 CFM Year Installed: 1993 NC#: 3700
- CE (16) SCRUBBER  
BLDG 72 MAPCO ENFORCER III FOR HEXAVALENT CHROME  
25550 CFM Year Installed: 1993 NC#: 3700
- (20) PLATING LINE  
BLDG 72 TANKS 115, 124, 125, 127 129, 130, 135, 136, 139, 140  
Rated:25500 CFM Year Installed: 1993 NC#: 3700
- CE (17) SCRUBBER  
BLDG 72 MAPCO MW-300 CAUSTICS  
23675 CFM Year Installed: 1993 NC#: 3700

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- (21) VAPOR DEGREASER  
BLDG #72  
Rated:1850 CFM Year Installed: 1957
  
- (22) GRINDERS, POLISHERS, SANDERS  
BLDG #72 METAL DUST  
Rated:4700 CFM Year Installed: 1985  
  
CE (22) CYCLONE  
BLDG 72 GRINDERS, POLISHERS, SANDERS
  
- (23) PLATING LINE  
BLDG 72, TANKS AND OVEN AND 2 ALODINE WASH SINKS  
Rated:11000 CFM Year Installed: 1976
  
- (24) CUTTING/GRINDING  
BLDG #73 METAL DUST/FUMES PLASTIC DIP POT  
Rated:3000 CFM Year Installed: 1970
  
- \* (25) SOLDER TABLE  
BLDG 73 TRAINING AREA  
Rated:500 CFM Year Installed: 1990
  
- (26) TANK  
BLDG #73 LABCONCO TAP HOOD/EXH ACID FROM FROM TAP-OUT TO MTL  
Year Installed: 1991 NC#: 4147
  
- (27)- MOLDER  
BLDG #81--THERMOSETTING  
Rated:3200 CFM Year Installed: 1987
  
- (28)- GRINDER  
BLDG #81--RUBBER  
Rated:4330 CFM Year Installed: 1986  
  
CE (6) BAG FILTER  
BLDG. 81  
4330 CFM Year Installed: 1983
  
- (29)- LASER WIRE STRIPPER  
BLDG #81 QCI PROTOTYPE  
Rated:400 CFM Year Installed: 1992 NC#: 4291
  
- (30)- SCREW MOLD MACHINE  
BLDG #81 ACRYLIC RESIN FUME  
Rated:539 CFM Year Installed: 1983

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
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-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- \* (31)- OVEN  
BLDG 81 MOLDING AND ENCAPSULATING  
Rated:40 CFM Year Installed: 1983
- \* (32)- OVEN  
BLDG 81 MOLDING AND ENCAPSULATING  
Rated:40 CFM Year Installed: 1983
- \* (33)- OVEN  
BLDG 81 MOLDING AND ENCAPSULATING  
Rated:26 CFM Year Installed: 1983
- \* (34)- HOOD  
BLDG 81 (FLUX RINSE)  
Rated:360 CFM Year Installed: 1983
- \* (35)- SOLDER POT MACHINE  
BLDG 81 (CABLE AREA)  
Rated:360 CFM Year Installed: 1983
- \* (36)- HOOD  
BLDG 81 PLATEN HEATER VENT HOOD  
Rated:7560 CFM Year Installed: 1983
- (37)- MOLDER  
BLDG 81 WAFER MOLDER, VULCANIZING ROOM  
Rated:11000 CFM Year Installed: 1986
- (38)- PRESS(3)  
BLDG 81 VULCANIZING PRESSES AND VENT  
Rated:11000 CFM Year Installed: 1986
- (39)- VENTED WORK STATION(4)  
BLDG #81 ISOCYANATES POLYURETHANE ENCAPSULATION  
Rated:7560 CFM Year Installed: 1983
- \* (40)- SOLDER TABLE  
BLDG #81 CABLE CLEANING  
Rated:7000 CFM Year Installed: 1986
- (41)- HOOD  
BLDG. #81 VULCANIZING HOOD  
Rated:11000 CFM Year Installed: 1986
- (42)- BLAST BOOTH  
BLDG. #81 GLASS BEAD  
Rated:200 CFM Year Installed: 1983

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
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U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- (43) PRESS  
BLDG. #81 TRANSFER PRESS - MOLDING ROOM  
Rated:3800 CFM Year Installed: 1987
- (44)-PLASTIC FORMING PRESS  
BLDG #81A PLASTIC EQUIP CO MODEL PE 4-4-18D VACUUM OVEN  
Rated:800 CFM Year Installed: 1993 NC#: 3820
- (45)- FUME HOOD  
BLDG 82 FOR WORK TABLE  
Rated:1000 CFM Year Installed: 1991 NC#: 3901
- (46)- FUME HOOD  
BLDG. 82 MOTOR POWER SUPPLY BENCH  
Rated:675 CFM Year Installed: 1991 NC#: 3901
- (47)⌞ BEAD BLASTER  
BLDG 82  
Year Installed: 1991
- \* (48)⌞ GRIEVE OVEN  
BLDG. 82 TB DRYING/PAINT CURING  
Rated:1000 CFM Year Installed: 1991 NC#: 3901
- (49) BENCH TOP HOOD  
BLDG 82 PAINT, VARNISH, EPOXY  
Rated:1500 CFM Year Installed: 1990 NC#: 3901
- (50) BENCH TOP HOOD  
BLDG 82 CARBON DUST  
Rated:666 CFM Year Installed: 1990 NC#: 3901
- (51) STORAGE  
BLDG 83 PAINT STORAGE ROOM
- (52) DIP TANK  
BLDG 83, BENZOIC ACID MARKING ROOM  
Year Installed: 1980
- \* (53) PAINT DRYING ROOM  
BLDG 83  
Rated:1000 CFM
- \* (54)-WELDING  
BLDG 83 CADMIUM  
Rated:3546 CFM Year Installed: 1980

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

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-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

\* (55) WELDING

BLDG 83 CADMIUM

(56) DRY FILTER SPRAY BOOTH

BLDG #83--MIXING/SILK SCREENING/ SPRAY PAINTING

Rated:20000 CFM Year Installed: 1981 NC#: 2192

\* (57) DRYING OVEN

BLDG #83

Rated:200 CFM Year Installed: 1973

\* (58) FUME HOOD

BLDG #83 INKS, ORGANIC SOLVENT MARKING ROOM FUME HOOD

Rated:1250 CFM Year Installed: 1983

(59) WASH STATION

BLDG #83 MIXING SOLVENT WASH LACQUER THINNER INKS, MEK

Rated:1130 CFM Year Installed: 1971

(60)- SHEET METAL CUTTING

BLDG #83 ALUMINUM

Rated:1700 CFM Year Installed: 1985

CE (7) CYCLONE

BLDG. 83

23400 CFM Year Installed: 1980 NC#: 2192

(61) SILK SCREEN TABLE

BLDG. #83

Rated:220 CFM Year Installed: 1979

(62) PAINT MIXING ROOM

BLDG. #83

Rated:750 CFM Year Installed: 1965

(63) FURNACE

BLDG 84, LEAD ROOM

Rated:4280 CFM Year Installed: 1973

CE (3) DRY FILTER SYSTEM

BLDG #84--MELTING POT

11000 CFM Year Installed: 1973

(64) MELTING FURNACE

BLDG 84 LEAD ROOM

Rated:3460 Year Installed: 1973

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

CE (3) DRY FILTER SYSTEM  
BLDG #84--MELTING POT  
11000 CFM Year Installed: 1973

(65) BEAD BLASTER  
BLDG 84, PAINT SHOP W/IONEX HEPA FILTER  
Rated:1000 CFM Year Installed: 1980

CE (8) CYCLONE, CARTRIDGE DUST COLLECTOR  
ABRASIVE BLASTING, BLDG. 84  
9000 CFM Year Installed: 1988 NC#: 3109

(66) DRY FILTER SPRAY BOOTH  
BLDG 84, PAINT SHOP  
Rated:4780 CFM Year Installed: 1976

(67) PAINT MIX BOOTH  
BLDG 84, PAINT SHOP  
Rated:2900 CFM Year Installed: 1976

\*(68) STORAGE  
BLDG 84, PAINT SHOP PAINT STORAGE ROOM  
Rated:1135 CFM Year Installed: 1991

(69) DRY FILTER SPRAY BOOTH  
BLDG #84--SIGN SHOP  
Rated:4000 CFM Year Installed: 1986

\*(70) PAINT STRIPPING(2)  
BLDG #84 WATER & DETERGENT  
Rated:35000 CFM Year Installed: 1980 NC#: 2132

\*(71) CURING OVEN  
BLDG #84 PAINT SHOP  
Rated:2000 CFM Year Installed: 1984

\*(72) GRIEVE OVEN  
BLDG #84 - B2-500 PAINT BAKING (REPL OVEN DESTROYED BY FIRE)  
Rated:3300 CFM Year Installed: 1991 NC#: 4152

(73) BLAST BOOTH  
BLDG# 84 PLASTIC MEDIA  
Rated:9000 CFM Year Installed: 1988 NC#: 3109

CE (5) BAGHOUSE  
BLDG #84--ABRASIVE BLASTING CARTRIDGE DUST COLLECTOR  
9000 CFM Year Installed: 1988 NC#: 3109

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

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Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- (74) DRY FILTER BOOTH  
BLDG #84 PAINT SPRAY, TOOL CLEANING  
Rated:20540 CFM Year Installed: 1976
- (75) BATTERY CHARGING  
BLDG #85 EXHAUST  
Rated:5000 CFM Year Installed: 1983
- (76) SPRAY BOOTH  
BLDG 85 SALT SHOP BLEEKER BROS  
Rated:7085 CFM NC#: 4311
- \* (77) OVEN  
BLDG 85, SALT SHOP  
Rated:80 CFM Year Installed: 1991
- (78) GLASS BEAD BLASTER  
BLDG 85  
Rated:2000 CFM Year Installed: 1990
- \* (79) DRYING OVEN  
BLDG #82 CURING PAINT, VARNISH  
Rated:1200 CFM Year Installed: 1990 NC#: 3901
- (80) UNDERGROUND STORAGE TANK  
BLDG #93, KP-93G UNLEADED GASOLINE, UST 5378  
Rated:20000 GAL Year Installed: 1981 NC#: 2238
- \*CE (23) SUBMERGED FILL TUBE, LENGTH UNVERIFIED  
Year Installed: 1993 NC#: 4915
- (81) BOILER  
BLDG #95  
Rated:1.00 MILLION BTU/HR Year Installed: 1972 DIST OIL
- (82) WOODWORKING EQUIPMENT  
BLDG #95--CARPENTER SHOP  
Rated:4430 CFM Year Installed: 1981 NC#: 2266
- CE (4) CYCLONE  
BLDG #95--WOODWORKING  
4430 CFM Year Installed: 1981 NC#: 2266
- (83) CURING OVEN  
BLDG #98 FOR CONFORMAL COATING FOR ELEC. PARTS  
Rated:4450 CFM Year Installed: 1985

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

- (84) SPRAY PAINTING  
BLDG #98  
Rated:496 CFM Year Installed: 1984
- (85) CLEANING ELECTRICAL CIRCUIT BOARDS  
BLDG# 98  
Rated:2800 CFM Year Installed: 1984
- \* (86) DRYING OVEN  
BLDG #98 CONVECTION  
Rated:200 CFM Year Installed: 1987
- (87) POTTING BOOTH  
BLDG #98 EPOXY  
Rated:2300 Year Installed: 1985
- (88) CLEANING ROOM  
BLDG. #98 MK-21 EXPLODER  
Rated:1100 CFM Year Installed: 1985
- (89) ALODINE  
BLDG. #98 CLEANING STATION  
Rated:750 CFM
- (90) FUME HOOD(2)  
BLDG 98  
Rated:2600 CFM Year Installed: 1993 NC#: 4834
- (91) HOOD  
BLDG #105 AGITENE, OTTO FUEL II, OIL  
Rated:1467 CFM Year Installed: 1979
- (92) CONFORMAL COATING(2)  
BLDG #105 URALANE DYNASOL EPIBOND  
Rated:4030 CFM Year Installed: 1984
- \* (93) CURING OVEN  
BLDG #105  
Rated:170 CFM Year Installed: 1981
- (94) PHOTOGRAPHIC DEVELOPING  
BLDG #105 CHEMICAL VENT  
Rated:600 CFM Year Installed: 1989
- \* (95) GRIEVE OVEN  
BLDG 105 HA 500 CYLINDER BARREL DRYING  
Rated:275 CFM Year Installed: 1991 NC#: 4139

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
 Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
 -----

- (96) QUENCH TANK  
 BLDG 106 VENTILATION  
 Rated:2900 CFM Year Installed: 1985 NC#: 2486
- (97) WOODWORKING EQUIPMENT  
 BLDG #107--CARPENTER SHOP  
 Rated:4500 CFM Year Installed: 1980
- CE (18) BAGHOUSE  
 O/S BLDG 107, CARPENTER SHOP ARRESTALL AR50  
 5800 CFM Year Installed: 1991 NC#: 3853
- (98) SPRAY PAINTING  
 BLDG #110 ENAMEL & LACQUER  
 Rated:10800 CFM Year Installed: 1986 NC#: 2832
- (99) FILM DEVELOPING  
 BLDG #134, ACETIC ACID  
 Rated:400 CFM Year Installed: 1965
- (100) DARK ROOM(2)  
 BLDG #134 ACETIC ACID, HYDROQUINONE MAIN DARK ROOM  
 Year Installed: 1968
- (101) MIXING TANK  
 BLDG #134 ACIDS FIXER  
 Rated:1040 CFM Year Installed: 1968
- (102) QUENCH FURNACE  
 BLDG #206 BARIUM CARBONATE, QUENCH OIL (HOUGHTON #2)  
 Rated:2900 CFM Year Installed: 1985 NC#: 2486 ←
- (103) GLOVE BOX BEAD BLASTER  
 BLDG #206  
 Rated:100 CFM Year Installed: 1988 NC#: 3124
- \* (104) HOOD  
 BLDG #206 OTTO FUEL PUMP DISASSEMBLY  
 Rated:950 Year Installed: 1986
- (105) METAL GRINDING  
 BLDG #233 METAL DUST  
 Rated:3600 CFM Year Installed: 1985
- (106) WATER TUBE BOILER(2)  
 BLDG #234--MAIN POWER PLANT  
 Rated:25000 LB STEAM/HR(35.0 MMBTU/HR) 125 PSIG Year  
 Installed: 1981 NAT GAS/DIST OIL NC#: 2271

\* This item is not assessed an annual registration fee.

Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
 Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
 -----

(107) WATER TUBE BOILER

BLDG #234--MAIN POWER PLANT

Rated:17500 LB STEAM/HR(24.5 MMBTU/HR) Year Installed: 1986

NAT GAS/DIST OIL - NC#: 2768

\*(108) STORAGE TANK

BLDG #489--OTTO FUEL

Rated:1200 GAL Year Installed: 1975

\*(109) DRYING OVEN

BLDG. #489

Rated:100 CFM Year Installed: 1983

(110) FUELING/DEFUELING

BLDG #489, TORPEDO OTTO FUEL II

Rated:30800 CFM Year Installed: 1968

(111) CIRCUIT BOARD MOLDING

BLDG #489 URETHANE HARDENER & RESIN HYDROCARBON SOLVENT

Rated:790 CFM Year Installed: 1984

(112) GLASS BEAD BLASTER

BLDG. #489

Rated:200 CFM Year Installed: 1986

(113) WASHER(6)

BLDG #489 AGITENE PARTS

Rated:25340 CFM Year Installed: 1987

\*(114) STORAGE TANK

BLDG #514--OTTO FUEL

Rated:5000 GAL Year Installed: 1973

\*(115) STORAGE TANK(2)

BLDG #514--MINERAL SPIRITS

Rated:500 GAL Year Installed: 1973

(116) FUELING/DEFUELING

BLDG #514 TORPEDO

Rated:35680 CFM Year Installed: 1970

(117) EXHAUST SYSTEM(2)

BLDG 514 AMMERMAN FUME EXTRACTOR ARMS

Rated:150 CFM Year Installed: 1993 NC#: 4656

(118) FUME HOOD

BLDG 514 OVER TANKS 6, 7, 8 DEEP SINK ROOM OF MK48 TORP SH

Rated:25163 CFM Year Installed: 1992 NC#: 4494

\* This item is not assessed an annual registration fee.

\*\*\*\*\* -COMM. JOURNAL- \*\*\*\*\* DATE JUN-03-1994 \*\*\*\*\* TIME 09:01 \*\*\*\*\* P.1

MODE = TRANSMISSION

START=JUN-03 08:43

END=JUN-03 09:01

NO.	COM	SPEED/NTWK	STATION NAME/ TELEPHONE NO.	PAGES	PRG.NO.	PROGRAM NAME
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-NUWC KEYPORT / EDD -

\*\*\*\*\* ( FAX-310 U2.12)\* - 206 396 7800- \*\*\*\*\*

Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
 Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
 -----

- (119) PARTS DEGREASING/CLEANING  
 BLDG #514  
 Rated:25163 CFM Year Installed: 1976
- (120) DRY FILTER SPRAY BOOTH  
 BLDG #514  
 Rated:35000 CFM NC#: 5968
- \* (121) AFTERBODY VENTING  
 BLDG #514  
 Rated:1000 CFM Year Installed: 1976
- (122) SPRAY PAINTING  
 BLDG #726 ENAMEL & LACQUER  
 Rated:6900 CFM Year Installed: 1981
- (123) GRINDING  
 BLDG. #735 EXHAUST (AND WELDING)  
 Rated:800 CFM Year Installed: 1989
- (124) GLASS BEAD BLASTER  
 BLDG 735 BRAZING  
 Rated:80 CFM Year Installed: 1990
- \* (125) INJECTION MOLD MACHINE  
 BLDG 735 INJECTION TEST SET  
 Rated:70 CFM Year Installed: 1990
- (126) STORAGE TANK(2)  
 BLDG 804  
 Rated:52500 GAL Year Installed: 1992 NC#: 4579
- (127) ABRASIVE BLASTING ROOM  
 BLDG #820 TRINITY  
 Rated:1000 CFM Year Installed: 1982
- (128) TANK(4)  
 BLDG 820 LITHIUM DECON, VENTED  
 Rated:21400 CFM Year Installed: 1990 NC#: 3671
- (129) CLEAN LINE PRIME TANK(2)  
 BLDG 820 ALODINE  
 Rated:4680 CFM Year Installed: 1986
- (130) CURING OVEN  
 BLDG #820--EPOXY, BELZONA  
 Rated:2700 CFM Year Installed: 1986

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

(131) PLASTIC MEDIA BLAST BOOTH

BLDG #820

Rated:9000 CFM Year Installed: 1987 NC#: 3110

CE (10) CYCLONE, CARTRIDGE DUST COLLECTOR

BLDG 820 BLAST BOOTH

850 CFM Year Installed: 1988 NC#: 3110

(132) BLAST BOOTH

BLDG #824 GLOVE BOX SAND PAULI AND GRIFFIN

Rated:110 CFM Year Installed: 1991

CE (11) CYCLONE

BLDG #824 METAL DUST, PAINT DUST SAND DUST

100 CFM Year Installed: 1980

(133) WOODWORKING EQUIPMENT

BLDG #880

Rated:1200 CFM Year Installed: 1984

CE (9) CYCLONE

BLDG #880

1200 CFM Year Installed: 1984

\* (134) STORAGE TANK(2)

BLDG #884--MINRL SPRTS/OTTO FUEL

Rated:5000 GAL Year Installed: 1986

(135) WASTE WATER TREATMENT PLANT

BLDG 884--CYANIDE MIXMASTER

Rated:1180 CFM Year Installed: 1987 NC#: 3079

(136) PACKAGING

BLDG #893--URETHANE

Rated:3465 CFM Year Installed: 1984

(137) EXHAUST SYSTEM

BLDG #894 VENTILATION SYSTEM INCLUDING 4 EXHAUST HOODS

Rated:14000 CFM Year Installed: 1993 NC#: 5043

(138) AFTERBODY VENTING

BLDG #894 BENZENE

Rated:7360 CFM Year Installed: 1982

(139) POTTING BOOTH

BLDG #894 ADHESIVES, TOLUENE, HUMISEAL

Rated:2000 CFM Year Installed: 1987

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PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
 Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
 -----

- (140) GRIEVE OVEN  
 BLDG 894, MK 50 DEPOT #EB-350 ELECTRIC  
 Year Installed: 1991 NC#: 3771
  
- (141) FUME HOOD  
 BLDG 894 (SO SIDE) MECH SHOP OF MARK 50 DEPOT AREA  
 Rated:2000 CFM NC#: 4263
  
- \* (142) STEAM GENERATOR  
 BLDG 952--VAPOR CORP  
 Rated:7.00 MILLION BTU/HR Year Installed: 1988 PROPANE  
 NC#: 3055
  
- \* (143) HEATER  
 BLDG 1006--BRYAN CL-120W-FDG  
 Rated:.96 MILLION BTU/HR Year Installed: 1988 NAT GAS  
 NC#: 3077
  
- (144) TANK(13)  
 BLDG 1019 PRECIOUS METAL PLATING  
 Rated:15000 CFM Year Installed: 1990 NC#: 3727
  
- (145) TANK(12)  
 BLDG 1019 SMALL PARTS PLATING  
 Rated:20000 CFM Year Installed: 1990 NC#: 3727
  
- (146) PHOTO ETCHING MACHINE  
 BLDG 1019 PROCESSING BOOTH  
 Rated:1000 CFM Year Installed: 1990 NC#: 3727
  
- (147) BAKING OVEN  
 BLDG #5000 AND WORKBENCH HOODS  
 Rated:5000 CFM Year Installed: 1968
  
- (148) FUME HOOD  
 BLDG 5000 (FOR ALODINE WORK BENCH) VENTED  
 Rated:500 CFM Year Installed: 1991 NC#: 4079
  
- (149) LEAK TESTING  
 BLDG #5003 KRYPTON  
 Rated:540 CFM Year Installed: 1978
  
- (150) TORPEDO TESTING  
 BLDG # 5065 EXHAUST  
 Rated:665 CFM Year Installed: 1969

\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY

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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING

Reg #:14079

-----  
Air Contaminant Generating Equipment/Air Contaminant Control Apparatus  
-----

(151) TORPEDO TEARDOWN

BLDG #5067 OTTO FUEL II EXHAUST  
Rated:2500 CFM Year Installed: 1973

(152) LEAK TESTING

BLDG #5074 FREON 12  
Rated:500 CFM Year Installed: 1989 NC#: 3345

(153) SPRAY PAINT BOOTH

BLDG #5094 PRIMER, ENAMELS  
Rated:17000 CFM Year Installed: 1987 NC#: 2918

\*(154) CURING OVEN

BLDG 5094 NUWES ORDNANCE ANNEX BINKS PAINT CURING (180F)  
Rated:1500 CFM Year Installed: 1992 NC#: 4280

(155) ABRASIVE BLASTING BOOTH

BLDG #5094 CAB  
Rated:14400 CFM Year Installed: 1988 NC#: 2918

CE (12) CARTRIDGE DUST COLLECTION SYSTEM

BLDG. 5094  
14400 CFM Year Installed: 1987 NC#: 2918

(156) DRY FILTER SPRAY BOOTH

BLDG 5095 14'X9'X8'  
Rated:16000 CFM Year Installed: 1990 NC#: 3661

(157) ABRASIVE BLASTING MACHINE

BLDG 5095, NUWES ORDNANCE ANNEX UNIVERSAL 6036P-DH  
Rated:1210 CFM NC#: 4081

CE (19) CYCLONE/DUST COLLECTOR

BLDG 5095 UNIVERSAL DC200  
1210 CFM NC#: 4081

(158) CARPENTRY BLOCKING/BRACING

BLDG #5888  
Rated:1380 CFM Year Installed: 1984

CE (13) CYCLONE

BLDG. 5888  
4500 CFM Year Installed: 1989

Air Contaminant Control Apparatus (CE File):  
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\* This item is not assessed an annual registration fee.

PUGET SOUND AIR POLLUTION CONTROL AGENCY  
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Registration File Listing

U S NAVY UNDERSEA WARFARE ENGINEERING  
-----

Reg #:14079

Air Contaminant Control Apparatus (CE File):  
-----

- (2) SCRUBBER  
BLDG #72--PLATING CHROME  
12300 CFM Year Installed: 1983
  
- (20) AFTERBURNER  
BLDG #106 TORPEDO ENGINE EXHAUST 36 MMBTU  
Year Installed: 1986 NC#: 3301
  
- (21) AFTERBURNER  
BLDG #207 OTTO FUEL 28 MMBTU  
Year Installed: 1988 NC#: 3040
  
- (24) ROTOCLONE WET TYPE DUST COLLECTOR  
BLDG 820 ALUMINUM GRINDING MODEL LV W/MIST ELIMINATOR  
2200 CFM Year Installed: 1993 NC#: 4860

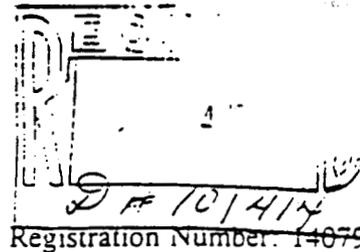
**ATTACHMENT A**  
**NUWC DIVISION, KEYPORT**  
**1990 - 1993 EMISSION LEVELS**



**ADMINISTRATIVE SENSITIVE**

DATA CALL #33  
UIC N00253  
NUWC DIV KEYPORT

December 30, 1993



U S NAVY UNDERSEA WARFARE ENGINEERING  
Attn: ROBERT CAMPAGNA, ENVIRONMENTAL ENGINEER  
CODE 075  
KEYPORT, WA 98345-0580

**NOTICE**  
1994 Calendar Year Emission Statement  
HWY 308, KEYPORT

Regulation I, Section 5.07, of the Puget Sound Air Pollution Control Agency requires the completion and submittal of the information on the enclosed emission statement form.

**The emission statement form is due April 15, 1994.**

An instruction sheet has been enclosed to assist in completion of the form.  
If you have any questions, please contact Claude Williams (206) 689-4066.

Enclosures: Emission Statement Form  
Instructions

**Puget Sound Air Pollution Control Agency**

100 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066  
Emission Statement Reporting Instructions

Please verify all information in **bold** by marking any corrections and fill in each blank, including all data for 1990 through 1993. Emissions must be calculated in a consistent manner in order to eliminate any artificial trends.

The reporting format of this emission statement is intended to be compatible with EPA reporting requirements and is described in terms of emission points and segments (accompanied by a source classification code), and one of four calculation methods. Under a given segment, different methods may be used for different pollutants.

Method #1, source test, is simply a method for determining an emission factor. The emission factor is multiplied by annual process/raw material quantity or hours of operation to obtain annual emissions.

Method #2, material balance, is generally used for evaporative emissions. Emissions are estimated based on product density and composition from Material Safety Data Sheets by assuming 100% evaporation of the volatile compounds not recycled, disposed of, or incorporated into the finished product.

Method #3, published emission factor (e.g. AP-42, TANKS, FIRE), involves the application of factors derived from the other estimation methods.

Method #4, engineering judgment, involves estimating emissions based on a known flow rate and hours of operation and an assumed concentration, or a known amount collected and an assumed control efficiency.

Any volatile organic compounds which cannot be reported as individual toxic air contaminants should be reported as "other VOC." Emissions from sources not presently included as an emission point/segment should not exceed 1 ton per year.

Sufficient information should be provided to enable PSAPCA to verify the accuracy of the calculations. For example, attach the source test results and date, representative product Material Safety Data Sheets, page and date of the published emission factor, flow rate/hours and assumed concentration, or amount collected and assumed control efficiency used to calculate the emissions.

If you have *any* questions, please contact the person listed on the heading of your emission statement.

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Location (KITSAP County):

HWY 308  
KEYPORT, WA 98345-0580  
RICHARD WAITE, KRISTEN NELSON  
ENVIRONMENTAL ENGINEER  
(206) 396-7090

Mailing:

CODE 075  
KEYPORT, WA 98345-0580  
ROBERT CAMPAGNA  
ENVIRONMENTAL ENGINEER  
(206) 396-7090

Standard Industrial Classification: 9711 NATIONAL SECURITY

Normal Operating Schedule:

Hours/Day:	8	December-February:	25%
Days/Week:	5	March-May:	25%
Weeks/Year:	51	June-August:	25%
Hours/Year:	2,040	September-November:	25%

### Air Contaminant Emission Summary

<u>Criteria Air Contaminants:</u>	<u>tons/1990</u>	<u>tons/1991</u>	<u>tons/1992</u>	<u>tons/1993</u>
Carbon Monoxide	4	3	3	<u>4</u>
Nitrogen Oxides	17	14	13	<u>20</u>
Particulate Matter	1	<0.5	<0.5	<u>2</u>
Sulfur Oxides	12	6	6	<u>7</u>
Volatile Organic Compounds	311	260	92	<u>44</u>
<u>Negligibly Reactive Organic Compounds:</u>				
1,1,1-Trichloroethane (Methyl chloroform)	18	9	15	<u>20</u>
1,1,2-Trichloro-1,2,2-trifluoroethane	4	1	7	<u>1</u>
<u>Toxic Air Contaminants:</u>				
1,1,1-Trichloroethane (Methyl chloroform)	36,654	18,226	29,303	<u>40,667</u>
1,1,2-Trichloro-1,2,2-trifluoroethane	8,540	2,728	13,118	<u>2,378</u>
2-Butanone (MEK; Methyl ethyl ketone)	61,536	53,930	25,812	<u>7,645</u>
2-Ethoxyethyl acetate	12,025	10,140	7,410	<u>6</u>
Acetone	978	1,254	924	<u>459</u>
Butyl Alcohol	6,531	5,467	2,862	<u>4,239</u>
Chlorine	9,288	9,300	12,150	<u>8,823</u>
Ethyl alcohol (Ethanol)	6,560	4,920	1,446	<u>790</u>
Formic acid	1,155	9	<0.5	<u>24</u>
Gasoline	1,044	1,488	1,416	<u>1,380</u>
Isopropyl alcohol (Isopropanol)	101,135	67,182	20,824	<u>2,484</u>
Lead compounds	11	12	21	<u>451</u>

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

<u>Toxic Air Contaminants:</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>
Other TAC's listed in attachment			-	14,401
Methyl isobutyl ketone (MIBK): Hexone:				
Methylpentanone, 4-, 2-	5,309	4,129	2,201	<u>344</u>
Phenol	3,498	26	<0.5	<u>14</u>
Sulfuric acid	31,725	23,089	38,862	<u>26,900</u>
Toluene	18,323	15,596	3,292	<u>4,791</u>
VM&P Naphtha	2,870	1,298	961	<u>74</u>
Xylene	<u>13,226</u>	<u>8,364</u>	<u>3,288</u>	<u>0</u>
Total	320,408	227,158	163,890	115,870
	(160 tons)	(114 tons)	(82 tons)	(58 tons)

## Emission Point/Segment Summary

- Point 001 INTERNAL COMBUSTION ENGINE
  - Segment 01 DISTILLATE OIL GRADES 1 & 2
  - Segment 02 NATURAL GAS
- Point 002 VAPOR DEGREASING
  - Segment 01 TRICHLOROETHANE
  - Segment 02 TRICHLOROTRIFLUOROETHANE
  - Segment 03 AGITENE, SUPER AGITENE
  - Segment 04 TURCO SOLVENT
- Point 003 SURFACE COATING
  - Segment 01 ENAMEL: GENERAL
  - Segment 02 PAINT: EPOXY PRIMER
  - Segment 03 LACQUER: GENERAL
  - Segment 04 PAINT: SOLVENT BASED ANTIFOUL
  - Segment 05 LACQUER THINNER
  - Segment 06 THINNING SOLVENT
  - Segment 07 THINNING SOLVENT
  - Segment 08 THINNING SOLVENT-MINERAL SPIRITS
  - Segment 09 THINNING SOLVENT
  - Segment 10 THINNING SOLVENTS
  - Segment 11 THINNING SOLVENTS
  - Segment 12 THINNING SOLVENTS-KEROSENE/ETHANOL
  - Segment 13 THINNING SOLVENT
- Point 004 SURFACE COATING OPERATIONS

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 001 INTERNAL COMBUSTION ENGINE

Segment 01 DISTILLATE OIL GRADES 1 & 2

Source Classification Code: 1-02-005-01 Industrial Boiler - Distillate Oil Grades 1&2

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	140	1000 gal burned
1991	79	1000 gal burned
1992	54	1000 gal burned
1993	<u>154</u>	1000 gal burned

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
630-08-0	Carbon Monoxide	700	395	270	<u>769</u>	3
10102-44-0	Nitrogen Oxides	2,300	1,580	1,080	<u>3076</u>	3
81102	Particulate Matter	140	79	54	<u>308</u>	3
7446-09-5	Sulfur Oxides	10,052	5,672	7,754	<u>9674</u>	3
43104	Volatile Organic Compounds	28	16	11	<u>39</u>	3
<hr/>						
	Volatile Organic Compounds	28	16	11	<u>39</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 001 INTERNAL COMBUSTION ENGINE

Segment 02 NATURAL GAS

Source Classification Code: 1-02-006-02 Industrial Boilers - 10-100 Mmbtu/Hr - Natural Gas

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	1,834	1000 therms
1991	1,731	1000 therms
1992	1,688	1000 therms
1993	<u>1,823</u>	1000 therms

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
630-08-0	Carbon Monoxide	6,107	5,764	5,908	<u>7,101</u>	3
10102-44-0	Nitrogen Oxides	24,447	23,074	23,632	<u>28,403</u>	3
81102	Particulate Matter	532	502	506	<u>2,780</u>	3
7446-09-5	Sulfur Oxides	110	104	101	<u>122</u>	3
43104	Volatile Organic Compounds	495	467	473	<u>1,177</u>	3
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	Volatile Organic Compounds	495	467	473	<u>1,177</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

#### Point 002 VAPOR DEGREASING

Segment 01 TRICHLOROETHANE

Source Classification Code: 4-01-002-22 1,1,1-Trichloroethane (Methyl Chloroform)

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	17.3	tons makeup used
1991	9.1	tons makeup used
1992	15	tons makeup used
1993	<u>21</u>	tons makeup used

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds:1990</u>	<u>pounds:1991</u>	<u>pounds:1992</u>	<u>pounds:1993</u>	<u>Method</u>
71-55-6	1,1,1-Trichloroethane (Methyl chloroform)	36,654	18,226	29,303	<u>40,667</u>	2

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

#### Point 002 VAPOR DEGREASING

Segment 02 TRICHLOROTRIFLUOROETHANE

Source Classification Code: 4-01-002-07 Open-Top Vapor Degreasing--Freon

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	4.41	tons makeup used
1991	1.36	tons makeup used
1992	7	tons makeup used
1993	<del>6.48</del> 1.1	tons makeup used

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	8,540	2,728	13,118	<del>2,378</del>	2

CAS#:

Chemical Abstract Services Number

Method Code:

1 Emission Test   2 Material Balance   3 EPA Emission Factor   4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 002 VAPOR DEGREASING

Segment 03 AGITENE, SUPER AGITENE

Source Classification Code: 4-01-002-96 Degreasing Units--General--Other Solvent

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	10,300	gal solvent consumed
1991	10,000	gal solvent consumed
1992	5,900	gal solvent consumed
1993	<u>13,066</u>	gal solvent consumed

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
64742-88-7	Mineral spirits	58,848	67,300	27,136	<u>49,827</u>	4
43207	Other Volatile Organic Compounds	1,201	58,300	25,575	<u>1,700</u>	2
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	Volatile Organic Compounds	60,049	125,600	52,711	<u>51,527</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 002 VAPOR DEGREASING

Segment 04 TURCO SOLVENT

Source Classification Code: 4-01-003-98 Cleaning Solvent - Misc

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	3,300	gal solvent used
1991	25	gal solvent used
1992	1	gal solvent used
1993	<u>50</u>	gal solvent used

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
71-36-3	Butyl Alcohol	297	2	<0.5	<u>0</u>	4
64-18-6	Formic acid	1,155	9	<0.5	<u>24</u>	4
67-63-0	Isopropyl alcohol (Isopropanol)	1,665	12	<0.5	<u>0</u>	4
43207	Other Volatile Organic Compounds	15,077	177	7	<u>0</u>	—
108-95-2	Phenol	3,498	26	<0.5	<u>0</u>	2
108-88-3	Toluene	1,665	12	<0.5	<u>0</u>	4
<u>75-03-2</u>	<u>Methylene Chloride</u>	—	—	—	<u>240</u>	—
	<b>Volatile Organic Compounds</b>	<b>23,357</b>	<b>238</b>	<b>7</b>	<u><b>144</b></u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 01 ENAMEL: GENERAL

Source Classification Code: 4-02-005-01 Organic Solvent-Surface Coating--Enamel--General

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	9,250	gal
1991	7,800	gal
1992	5,700	gal
1993	<u>2,952</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
78-93-3	2-Butanone (MEK: Methyl ethyl ketone)	30,433	25,662	16,160	<u>1280</u>	4
111-15-9	2-Ethoxyethyl acetate	12,025	10,140	7,410	<u>6</u>	4
43207	Other Volatile Organic Compounds	92	35,930	26,220	<u>360</u>	4
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	Volatile Organic Compounds	42,550	71,682	49,790	<u>1046</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 1-4079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 02 PAINT: EPOXY PRIMER

Source Classification Code: 4-02-006-10 Surface Coating - Primer & Etching Primer

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	4,500	gal
1991	3,000	gal
1992	1,200	gal
1993	<u>317</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
78-93-3	2-Butanone (MEK; Methyl ethyl ketone)	5,400	3,600	1,440	<u>103</u>	4
108-10-1	Methyl isobutyl ketone (MIBK; Hexone; Methylpentanone, 4,2-)	3,240	2,160	864	<u>24</u>	4
108-88-3	Toluene	3,240	2,160	769	<u>101</u>	4
1330-20-7	Xylene	11,880	7,920	3,073	<u>0</u>	4
	<u>Other VOC</u>				<u>52</u>	
	Volatile Organic Compounds	23,760	15,840	6,146	<u>280</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 003 SURFACE COATING

Segment 03 LACQUER: GENERAL

Source Classification Code: 4-02-004-10 Surface Coating Application--Lacquer

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	200	gal
1991	326	gal
1992	190	gal
1993	<u>460</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds:1990</u>	<u>pounds:1991</u>	<u>pounds:1992</u>	<u>pounds/1993</u>	<u>Method</u>
43104	Volatle Organic Compounds	1.300	2.119	1.235	<u>1445</u>	4
	<u>Methylene Chloride</u>				<u>17</u>	
	Volatle Organic Compounds	1.300	2.119	1.235	<u>1445</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 04 PAINT: SOLVENT BASED ANTIFOUL

Source Classification Code: 4-02-001-10 Surface Coating Operations - Thinning Solvents General

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	1,000	gal
1991	450	gal
1992	320	gal
1993	<u>30</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds: 1990</u>	<u>pounds: 1991</u>	<u>pounds: 1992</u>	<u>pounds: 1993</u>	<u>Method</u>
71-36-3	Buryl Alcohol	3.370	1.517	1.078	<u>7</u>	4
8032-32-4	VM&P Naphtha	2.670	1.202	855	<u>74</u>	4
	<u>Other VOC</u>				<u>1</u>	
	Volatile Organic Compounds	6.040	2.719	1,933	<u>82</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points Segments:

Point 003 SURFACE COATING

Segment 05 LACQUER THINNER

Source Classification Code: 4-02-009-09

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	2,140	gal
1991	3,137	gal
1992	1,740	gal
1993	<u>6,242</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds 1990</u>	<u>pounds 1991</u>	<u>pounds 1992</u>	<u>pounds 1993</u>	<u>Method</u>
78-93-3	2-Butanone (MEK; Methyl ethyl ketone)	4.259	6.243	2.517	<u>4,360</u>	4
71-36-3	Butyl Alcohol	2.611	3.827	1.650	<u>4,232</u>	4
67-63-0	Isopropyl alcohol (Isopropanol)	1.070	1.569	870	<u>30</u>	4
108-10-1	Methyl isobutyl ketone (MIBK; Hexone; Methylpentanone, 4-2-)	1.070	1.569	870	<u>0</u>	4
108-88-3	Toluene	7.083	10.383	1,402	<u>3,786</u>	4
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	Volatile Organic Compounds	16.093	23.591	7,309	<u>12,408</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 003 SURFACE COATING

Segment 06 THINNING SOLVENT

Source Classification Code: 4-02-009-18 Surface Coating Operations--Thinning Solvents--Mek/Toluene

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	3,200	gal
1991	2,750	gal
1992	850	gal
1993	<u>393</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
78-93-3	2-Butanone (MEK; Methyl ethyl ketone)	21,444	18,425	5,695	<u>2,502</u>	4
	Volatile Organic Compounds	21,444	18,425	5,695	<u>2,502</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 07 THINNING SOLVENT

Source Classification Code: 4-02-009-19 Organic Solvent-Surface Coating--Thinning Solvent

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	150	gal
1991	60	gal
1992	70	gal
1993	<u>114</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
108-10-1	Methyl isobutyl ketone (MIBK; Hexone; Methylpentanone, 4-, 2-)	999	400	467	<u>320</u>	4
	Volatile Organic Compounds	999	400	467	<u>320</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 003 SURFACE COATING

Segment 08 THINNING SOLVENT-MINERAL SPIRITS

Source Classification Code: 4-02-009-20 Organic Solvent-Surface Coating--Thinning Solvent--Mineral

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	48,000	gal
1991	27,000	gal
1992	10,500	gal
1993	<u>5,800</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds 1990</u>	<u>pounds 1991</u>	<u>pounds 1992</u>	<u>pounds 1993</u>	<u>Method</u>
43104	Volatle Organic Compounds	311.040	181.710	32.403	<u>8,547</u>	4
	Volatle Organic Compounds	311.040	181.710	32.403	<u>8,547</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 09 THINNING SOLVENT

Source Classification Code: 4-02-009-98 Surface Coating - Thinning Solvent

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	75	gal
1991	36	gal
1992	40	gal
1993	<u>0</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds 1990</u>	<u>pounds 1991</u>	<u>pounds 1992</u>	<u>pounds 1993</u>	<u>Method</u>
71-36-3	Buryl Alcohol	253	121	134	<u>0</u>	4
8032-32-4	VM&P Napntha	200	96	106	<u>0</u>	4
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	Volatile Organic Compounds	453	217	240	<u>0</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 10 THINNING SOLVENTS

Source Classification Code: 4-02-009-22 Thinning Solvent - Syntho Thinner

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	875	gal
1991	420	gal
1992	300	gal
1993	<u>363</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
108-88-3	Toluene	6.335	3.041	1.120	<u>819</u>	4
	Volatile Organic Compounds	6.335	3.041	1.120	<u>819</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

### Emission Points/Segments:

Point 003 SURFACE COATING

Segment 11 THINNING SOLVENTS

Source Classification Code: 4-02-009-12 Organic Solvent-Surface Coating--Thinning Solvent--Isoprop

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	15,000	gal
1991	10,000	gal
1992	5,000	gal
1993	<u>711</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds: 1990</u>	<u>pounds: 1991</u>	<u>pounds: 1992</u>	<u>pounds: 1993</u>	<u>Method</u>
67-63-0	Isopropyl alcohol (Isopropanol)	98.400	65.600	19.953	<u>2377</u>	4
	Volatile Organic Compounds	98.400	65.600	19.953	<u>2377</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

# Puget Sound Air Pollution Control Agency

110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

## Emission Statement

December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 1-4079

### Emission Points/Segments:

Point 003 SURFACE COATING

Segment 12 THINNING SOLVENTS-KEROSENE/ETHANOL

Source Classification Code: 4-02-009-98 Surface Coating - Thinning Solvent

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	2,000	gal
1991	750	gal
1992	230	gal
1993	<u>144</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
64-17-5	Ethyl alcohol (Ethanol)	6,560	4,920	1,446	<u>790</u>	4
	Volatile Organic Compounds	6,560	4,920	1,446	<u>790</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 003 SURFACE COATING

Segment 13 THINNING SOLVENT

Source Classification Code: 4-02-009-24 Organic Solvent-Surface Coating--Thinning Solvent--Xylene

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	200	gal
1991	66	gal
1992	40	gal
1993	<u>0</u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds: 1990</u>	<u>pounds: 1991</u>	<u>pounds: 1992</u>	<u>pounds: 1993</u>	<u>Method</u>
1330-20-7	Xylene	1,346	444	215	<u>0</u>	4
	Volatile Organic Compounds	1,346	444	215	<u>0</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 004 SURFACE COATING OPERATIONS

Segment 01 UNDERGROUND STORAGE TANK. GASOLINE RVP-13

Source Classification Code: 4-04-004-02 Petroleum Storage--Underground Tanks--Gasoline: Rvp13: Wor

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	71 x 10 <sup>3</sup>	gal thruput
1991	62 x 10 <sup>3</sup>	gal thruput
1992	59 x 10 <sup>3</sup>	gal thruput
1993	<u>58 x 10<sup>3</sup></u>	gal thruput

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
8006-61-9	Gasoline	1,044	1,488	1,416	<u>1380</u>	4
	Volatile Organic Compounds	1,044	1,488	1,416	<u>1380</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 005 PETROLEUM STORAGE TANKS  
 Segment 01 ELECTRONIC MANF. TOXICS (NEC)  
 Source Classification Code: 3-13-999-99

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	44	tons
1991	17	tons
1992	26	tons
1993	<u>18</u>	tons

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds:1990</u>	<u>pounds:1991</u>	<u>pounds:1992</u>	<u>pounds:1993</u>	<u>Method</u>
67-64-1	Acetone	978	1,254	924	<u>442</u>	4
7782-50-5	Chlorine	9,288	9,300	12,150	<u>8,823</u>	4
7439-92-1	Lead compounds	11	12	21	<u>451</u>	4
7664-93-9	Sulfuric acid	31,725	23,059	38,562	<u>26,900</u>	4
<hr/>		<hr/>		<hr/>		<hr/>
	Volatile Organic Compounds	978	1,254	924	<u>442</u>	

CAS#: Chemical Abstract Services Number

Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

**Puget Sound Air Pollution Control Agency**  
 110 Union Street, Suite 500, Seattle, WA 98101-2038: Claude Williams (206) 689-4066

Emission Statement  
 December 30, 1993

U S NAVY UNDERSEA WARFARE ENGINEERING

Registration: 14079

Emission Points/Segments:

Point 006 ELECTRICAL EQUIPMENT  
 Segment 01 DISTILLATE OIL (DIESEL)  
 Source Classification Code: 2-02-001-01

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1990	103 x 10 <sup>3</sup>	gal
1991	51 x 10 <sup>3</sup>	gal
1992	32 x 10 <sup>3</sup>	gal
1993	<u>51 x 10<sup>3</sup></u>	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1990</u>	<u>pounds/1991</u>	<u>pounds/1992</u>	<u>pounds/1993</u>	<u>Method</u>
630-08-0	Carbon Monoxide	1,586	785	493	<u>431</u>	3
10102-44-0	Nitrogen Oxides	6,983	3,458	2,170	<u>6,265</u>	3
81102	Particulate Matter	515	255	160	<u>547</u>	3
7446-09-5	Sulfur Oxides	14,420	7,140	4,480	<u>4,533</u>	3
43104	Volatile Organic Compounds	491	243	153	<u>153</u>	3
<hr/>						
	Volatile Organic Compounds	491	243	153	<u>153</u>	

CAS#: Chemical Abstract Services Number  
 Method Code: 1 Emission Test 2 Material Balance 3 EPA Emission Factor 4 Engineering Judgment

PSAPCA Form B - Emission Inventory 1993  
Additions to 1992 Form

## Point 003 Surface Coating

Segment 14 Adhesives--

Source Classification Code: 4-02-007-01

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1992	350	gal
1993	130	gal

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1992</u>	<u>pounds/1993</u>
67-63-0	Isopropyl Alcohol	385	77
108-88-3	Toluene	231	13
67-64-1	Acetone	N/A	17
110-54-3	Hexane	N/A	112
108-95-2	Phenol	N/A	14
108-93-0	Cyclohexane	N/A	47
<u>111-40-0</u>	<u>Diethylenetriamine</u>	<u>N/A</u>	<u>57</u>

Volatile Organic Compounds 233

Point \_\_\_\_\_

Segment \_\_\_\_, Liquefied Petroleum Gas Combustion - Propane

Source Classification Code:10201002 - Industrial; LPG - Propane

<u>Year</u>	<u>Process Quantity</u>	<u>Units</u>
1993	89	1000 gallons burned

<u>CAS #</u>	<u>Contaminant</u>	<u>pounds/1993</u>
638-08-0	Carbon Monoxide	284
10102-44-0	Nitrogen Oxides	1691
81102	Particulate Matter	55
7446-09-5	Sulfur Oxides	0.009
43104	Volatile Organic Compounds	46

PSAPCA Form B - Emission Inventory 1993  
Additions to 1992 Form

## Other Contaminants Not Already Classified

<u>CAS #</u>	<u>Contaminant</u>	<u>process quantity/1993</u>	<u>pounds/1993</u>
107-21-1	Ethylene Glycol	283 gal	2,566
	Volatile Organic Compounds		2,566
<u>CAS #</u>	<u>Contaminant</u>	<u>process quantity/1993</u>	<u>pounds/1993</u>
75-71-8	Dichlorodifluoromethane (CFC-12)	1,013 gal	11,207
75-09-2	Methylene Chloride	114 gal	628
	Negligibly Reactive Organic Compounds		11,835

# **ATTACHMENT A**

**NUWC DIVISION, KEYPORT**

## **SUPPORTING CALCULATIONS AND EMISSION FACTOR LISTING**



**ADMINISTRATIVE SENSITIVE**

**DATA CALL #33**

**5A-22**

**UIC N00253**

**NUWC DIV KEYPORT**

TELEPHONE CONVERSATION RECORD

DATE: 3 May 94  
TIME: 1000

	NAME	TITLE	LOCATION	PHONE
ORIGINATOR:	Richard Waite	Envir Eng	C/0433	396-7090
PERSON CALLED:	John Curtis		C/064	2647
SUBJECT:	COMMUTE TRIP REDUCTION PLAN			

SUMMARY:

1. Told John we are trying to calculate air emissions due to commuters, and that we need information on number of cars and an average commute distance.

2. John provided us with the following information:

a. Average commute distance is 10.5 miles.

b. Weekly number of commute trips:

Single car	6316
Car Pool (2)	1444
Car Pool (3)	233
Car Pool (4)	284
Car Pool (5)	20
Car Pool (6)	16
Van Pool (~7)	629
Bus (~8)	611

3. Per following calculations, 1717 gallons of gas are used each day for personal automobile.

$$1635 \times (10.5 \text{ mi} \times 2) / 20 \text{ mi/gal} = 1717 \text{ gal}$$

1635 is determined from single car and car/van/bus pool values listed above: divide by number of occupants, sum, and then divide by 4.5 days/week (accounting for 4,5,9 compressed work schedules).

20 mi/gal is the estimated average value for all vehicles.

RICHARD WAITE  
ENVIRONMENTAL ENGINEER

93

**SUPPORTING CALCULATIONS  
FOR PSAPCA FORM B 1993 EMISSIONS INVENTORY**

General Assumptions for Calculations of Air Emissions for 1993 PSAPCA Reporting

1. Usage rates/amounts of products containing volatile organic compounds (VOC's) and toxic air contaminants (TAC's) were determined by interviews with hazardous material coordinators, shop supervisors, and other responsible personnel to the greatest extent possible. The amount of emissions in pounds of each VOC and TAC were determined using information (specific gravity, weight percent, etc.) from the product Material Safety Data Sheets (MSDS).
2. For emissions from boats - only emissions while in the Puget Sound region are included. Assume on average one boat is in the region at any time.
3. Usage rates of hazardous materials were not available from the following locations:

Annex building A7717 - undersea tracking, shop F  
mechanical lab  
potting room  
paint locker #5  
dabob bay research  
tracking support  
electronics  
hi bay target systems

Annex Building A7721 - storage  
ship system support storage

Annex building A7792 - radio shop

Annex building A5736 - MK 46 training lab (provided 1989 usage rates)

Annex building A5094 - container refurbishment

Annex Building A5095 - container repair

IX 308 boat - forward storage

Building K0015 - env. test department

Building K0024 - env. testing department

Building K1044 - TATF building

Building K0017 - armory

Building K1049 - otto fuel storage

Building K0233 - engine, lathes, grinding  
- automatic & turret lathes

Building K0820 - machine shop

- shell repair branch

Building K0514 - shop floor

- westinghouse/hughes

- storeroom

## General Assumptions for Calculations of Air Emissions for 1993 PSAPCA Reporting

It is assumed that the missing usage rates would not significantly affect the emissions inventory values with the exception of building K0514, which uses significant amounts of mineral spirits. An estimate for the amount of mineral spirits used at this building has been determined.

4. In determining which contaminants used during 1993 were VOC's, the list of VOC's and SVOC's from EPA Method 8260 (Volatile and semivolatile organic compound analysis) was used. The definition of VOC's in the PSAPCA regulations is general, and no specific list of VOC's is given.
5. Calculations for point 006, segment 01 (electrical equipment - diesel) were done using method 3 with emission factors that were revised 4/93.
6. Lead compounds includes lead from lead processing (20 lbs) and from the use of products such as paint and solder that contain lead.
7. The fuel oil received in October 1993 (18,799 gallons) had a sulfur content of 0.05%. Prior to that the sulfur content was 0.5%. The amount of sulfur burned in November was 9,449 gallons. In December 18,600 gallons were received with a sulfur content of 0.05%. The amount of fuel burned in December was not immediately available, so it will be assumed that approximately 10,000 gallons were burned. Therefore, for the emissions calculations, it will be assumed that the sulfur content was 0.05% for 19,449 gallons and 0.5% for the remaining amount.
8. Contaminants not identified in the 1992 emissions inventory were added to the 1993 inventory only if usage was greater than 1 ton.
9. The following TAC's were not listed on the previous year's forms. They are not volatile organic compounds, and therefore it is assumed that only a small percentage of these contaminants would be discharged into the air. It is assumed that less than 1 ton each of the following TAC's would be discharged, and therefore they are not included in the 1993 emission inventory.

<u>CAS #</u>	<u>Contaminant</u>	<u>Process Qty</u>	<u>lbs used</u>
1310-73-2	Sodium Hydroxide	42,996 lbs	42,996
7681-57-4	Sodium Metabisulfite	2,002 lbs	2,002
2551-62-4	Sulfur Hexafluoride	33,000 lbs	33,000
6423-43-4	Propylene Glycol Dinitrate	17,919 gal	113,351

CONTRACT: NO406-93-DO198/D.O. FY 03

RS. Asencio

TASK B: PSAPCA AIR CONTAMINATING  
EQUIPMENT REGISTRATION  
(1993)

3/24/94

HEATING OIL - USE = 153,796 gallons

#2 FUEL OIL

$$\text{lb contaminant} = (\text{gal used}) \times (\text{emission factor})$$

Air Emission Factors for Fuel Oil Combustion

from AP-42 "Compilation of Air Pollution Emission Factors" <sup>2nd ed</sup>

Section 1.3 "Fuel Oil Combustion", Table 1.3-~~3~~<sup>4</sup>, dated 9/14/93 \*\*\*

(for Industrial Boiler, Distillate Oil)

CONTAMINANT	EMISSION FACTOR lb/10 <sup>3</sup> gal	lb Contaminant
Particulate Matter	2**	308
Sulfur Dioxide	142S* $(142)(0.5)(134,296) = 9535$ $(142)(0.05)(19.5) = 139$	9674
Sulfur Trioxide	25	
Carbon Monoxide	5	769
Nitrogen Oxides	20	3076
Volatile Organics - Total	0.252	39
Nonmethane	0.2	31
Methane	0.052	8

\* S = Weight % of sulfur in the oil

NOTE: PER RICHARD WAITE, S CONTENT = 0.5% JAN-OCT '93 - 134,296 gal  
3/28/94 = 0.05% NOV, DEC '93 - 19,500 gal

(INFO PROVIDED BY MARK MILLER)

\*\* USE VALUE FOR No. 2 OIL

\*\*\* Info from technology transfer bulletin board (Technology Transfer Network) on the Clearinghouse for Inventories and Emission Factors (CHIEF) bulletin board (accessed by modem)

CONTRACT: N00406-93-D0198/D.O. FY03

TASK B: PSAPCA AIR CONTAMINATING EQUIPMENT  
REGISTRATION (1993)

DIESEL FUEL MARINE

USAGE FOR 1993 = 51,376 gal

Emission Factors - USE AP-42, Section 3.1, Table 3.1e1 "Emission Factors for Large Uncontrolled Gas Turbines" (for fuel oil use)

(Info from technology transfer network, CHIEF bulletin board, accessed by modem)  
→ REVISION DATED 4/93

Emission Factors are based on fuel input MMBtu

The assumed energy content per Table 3.1 is 0.0239 MMBtu/lb

The specific gravity per MSDS# D0276 = 0.8762  $\Rightarrow \rho = 7.31 \text{ lb/gal}$

$$\therefore \frac{51,376 \text{ gal}}{\text{gal}} \times \frac{7.31 \text{ lb}}{\text{gal}} \times \frac{0.0239 \text{ MMBtu}}{\text{lb}} = 5482 \text{ MMBtu} \quad \frac{51,376 \text{ MMBtu}}{0.0239 \text{ MMBtu/lb}}$$

CONTAMINANT

EMISSION FACTOR  $\frac{\text{lb}}{\text{MMBtu}}$

<sup>FEWA</sup> lb CONTAMINANT

NO<sub>x</sub>

0.698

6265

CO

0.048

431

CO<sub>2</sub>

164

$1.47 \times 10^6$

Total Organic Compounds  
(as Methane)

0.017

153

SO<sub>x</sub> (as SO<sub>2</sub>)

1.015<sup>(1)</sup> = ~~0.505~~ <sup>FEWA</sup> 0.505

<sup>FEWA</sup> 45 4533

Particulates (Solids)

0.038

341

Particulates (Condensables)

0.023

206

Total Particulate

N/A

547

(1) S = percent sulfur in fuel; assume 0.5%

CONTRACT NO 0406-93-DO 158/DO EY03

RIS. AGENCIO

TASK B: PSAPCA AIR CONTAMINATING

EQUIPMENT REGISTRATION (1993)

GASOLINE

Reported usage for 1993 = 57,524 gal

Use AP-42 Section 4.4<sup>(1)</sup> (Transportation and Marketing of Petroleum Liquids)

Per section 4.2, (Emissions & Controls) for emissions from service station operations, average evaporative emissions are:

Tank filling:  
1380 mg/l of transferred gasoline, splash filling

Underground tank breathing:  
120 mg/l of throughput

Motor Vehicle Refueling:  
1320 mg/l of dispensed gas

Spillage Loss:  
80 mg/l of dispensed gasoline

Total Losses = 2900 mg/l of gasoline

Convert:  $\frac{2900 \text{ mg}}{\text{lit gas}} \times \frac{\text{lit}}{0.26418 \text{ gal}} \times \frac{0.0022046 \text{ lb}}{\text{g}} \times \frac{\text{g}}{1000 \text{ mg}} = 0.24 \text{ lb/gal} = 24 \text{ lb}/10 \text{ gal}$

∴ Total Emissions =  $\frac{57,524 \text{ gal}}{\text{gal}} \times 0.24 \text{ lb} = 1380 \text{ lbs}$

- Assume all emissions are VOCs ⇒ 1380 lbs VOC

- Assume no controls during tank filling

(1) Revision ~~added~~ from Technology Transfer Network on the Clearinghouse for Inventories and Emission Factors (CHIEF) Bulletin Board, accessed by modem 3/29/94.

CONTRACT: N00406-93-D0198 / D.O. FY03

R.S. Asencio

TASK B: PSARCA AIR CONTAMINATING EQUIPMENT  
REGISTRATION (1993)

NATURAL GAS

1993 USAGE = 1,822,559 THERMS

Use air emission factors for natural gas consumption from AP-42

"Compilation of Air Pollution Emission Factors"

Section 1.4, Tables 1.4.1 and 1.4.2, 1.4.3, dated 9/14/93<sup>(1)</sup>  
for small industrial boilers, uncontrolled emissions

To calculate emissions: lb contaminant = (ft<sup>3</sup> used) x (emission factor)

Convert from THERMS to ft<sup>3</sup> used

per AP-42 section 1.4.1, the average gross heating value of natural gas is 1000 BTU/scf

1,822,559 Therms	105,506 MJ	ft <sup>3</sup>	BTU	1000 KJ	= 202.88 x 10 <sup>6</sup> ft <sup>3</sup>
	Therm	1000 BTU	0.9478 KJ	MJ	

Natural Gas Consumed

CONTAMINANT	EMISSION FACTOR lb/10 <sup>6</sup> ft <sup>3</sup>	lb CONTAMINANT
Filterable Particulate	6.2	126 x 10 <sup>3</sup> <sup>1258</sup>
Condensable Particulate	7.5	1522
Total Particulate	N/A	2780
SO <sub>2</sub>	0.6	122
CO	35	7101
NO <sub>x</sub>	140	28403
CO <sub>2</sub>	1.2 x 10 <sup>5</sup>	24.3 x 10 <sup>6</sup>
Total Organic Compounds	5.8 <sup>(2)</sup>	1177

- (1) Info from Technology Transfer Network on the Clearinghouse for Inventories and Emission Factors (CHIEF) bulletin board, accessed by mxslcm
- (2) Methane comprises 52% of organic compounds

CONTRACT: N00406-93-D0198/D.O. FY03  
TASK B - PSAPCA AIR CONTAMINATING EQUIPMENT  
REGISTRATION (1993)

LEAD

Lead processed at bldg 84 was 750,000 lb. for 1993 = 375 ton

Emission Factors used for 1992 emission inventories were:

Lead = 0.2 lb/ton processed

Lead Particulate = ~~17.4 lb~~ <sup>1 lb</sup> 0.87 lb/ton processed

Also assumed a 95% efficiency for the filter system

$$\therefore \text{Lead Emissions} = (375 \text{ ton}) \left( 0.2 \frac{\text{lb}}{\text{ton}} \right) (0.05) = 3.75 \text{ lb}$$

$$\text{Lead Particulate} = (375 \text{ ton}) \left( 0.87 \frac{\text{lb}}{\text{ton}} \right) (0.05) = 16.31 \text{ lb}$$

$$\text{Total Lead Compounds} = 20 \text{ lb}$$

LEAD COMPOUNDS FROM USE OF PAINTS, SOLDER, ETC = 431 lb

$$\text{Total Lead Compounds} = 451 \text{ lbs}$$

CONTRACT: N00406-93-D0198/D0 FY03

R.S. ASENIC

TASK B: PSAPCA AIR CONTAMINATING

EQUIPMENT REGISTRATION (1993)

### OZONE DEPLETING SUBSTANCES (ODS)

Information on ODS usage for 1993 taken from quarterly ODS reports,  
subtracting contributions from Hawaii (Code 90---) and Nevada (634--).  
Total usages:

1. Carbon Tetrachloride (CARB TET) CAS# 56-23-5

$$2.8075 \text{ gal} \times 13.23 \text{ lb/gal} = \underline{37 \text{ lbs}}$$

2. Trichlorofluoromethane (CFC 11) CAS# 75-69-4

$$4.5962 \text{ gal} \times 12.32 \text{ lb/gal} = 57 \text{ lbs}$$

3. Trichlorotrifluoroethane (CFC 113) CAS# 76-13-1

(1,1,2-Trichloro-1,2,2-trifluoroethane)

$$226.8751 \text{ gal} \times 13.06 \text{ lb/gal} = 2963 \text{ lbs}$$

4. Dichlorodifluoromethane (CFC-12) CAS# 75-71-8

$$1013.2760 \text{ gal} \times 11.06 \text{ lb/gal} = 11207 \text{ lbs}$$

5. Chlorodifluoromethane (CFC-22) CAS# 75-45-6

$$68.6527 \text{ gal} \times 10.09 \text{ lb/gal} = 693 \text{ lb}$$

6. Bromochlorodifluoromethane (HAL 1211) CAS# 35-35-93

$$4.2808 \text{ gal} \times 18.34 \text{ lb/gal} = 79 \text{ lb}$$

7. Bromotrifluoromethane (HAL 1301) CAS# 75-63-8

(Trifluorobromomethane)

$$18.7420 \text{ gal} \times 15.74 \text{ lb/gal} = 295 \text{ lb}$$

8. 1,1,1 Trichloroethane (MC) CAS# 71-55-6

$$3752.4720 \text{ gal} \times 11.06 \text{ lb/gal} = 41502 \text{ lb}$$

CONTRACT NO0406-93-D0198/P.O. F103  
 TASK B PSARCA AIR CONTAMINATING  
 EQUIPMENT REGISTRATION (1993)

R.S. Asencio

PROPANE - USAGE = 31,000 gallons

(Properties for propane from table 9-16 of Chemical Engineers Handbook)

$$\frac{31,000 \text{ gal liquid}}{36.28 \frac{\text{ft}^3 \text{ (vapor)}}{\text{gal (liquid)}}} = 1,124,680 \text{ ft}^3 \text{ of vapor}$$

Use air emission factors for Liquefied Petroleum Gas Combustion from AP-42, Section 1.5, Table 1.5-1, dated 9/14/93 (Taken from Technology Transfer Network on the Clearinghouse for Inventories and Emission Factors (CHIEF) bulletin board, accessed by modem).

Use values for Industrial Propane Use:

Contaminant	Emission Factor $\frac{\text{lb}}{10^3 \text{ gal}}$	lb Contaminant
Particulates (filterable)	0.6	19
Sulfur Oxides (SO <sub>2</sub> )	0.105 <sup>(1)</sup> = (6.10 x 100095) = 9.5 x 10 <sup>-6</sup>	0.003
Nitrogen Oxides	19	589
Carbon Monoxide	3.2	99
Total Volatile Organics	0.5	16
Carbon Dioxide	12,500	3,875,000

(1) S = sulfur content, gr/100 ft<sup>3</sup> gas vapor  
 per Texaco sulfur content = 18 ppmw = .0018% by weight

$$S = \frac{.000018 \times 4.235 \times 10^6 \text{ gal}}{36.28 \frac{\text{ft}^3}{\text{gal}}} \times \frac{453.59 \text{ g}}{10^6} = .00095 \text{ g/ft}^3 \text{ gas}$$

CONTRACT: N00406-93-D0198/D.O. FY03

R.S. Asencio

TASK B: PSAPCA AIR CONTAMINATING EQUIPMENT  
REGISTRATION (1993)

WASTE STREAM DEDUCTIONS FROM EMISSIONS

- Assume some waste streams are deducted as reported in the 1992 revised form B - with same weight % of contaminant

(A) TRICHLOROETHANE - (Methyl Chloroform)  
waste streams deducted

<u>WITN</u>	<u>lbs disposed</u>	<u>percent Methyl Chloroform (MC)</u>	<u>lbs MC disposed</u>
6- Aerosol Solvents (Halogenated)	1167	30%	350
17- Aerosol Solvents (Halogenated)	12	30%	3.6
120- Paints & Thinners	9543	5%	477
426- Clean-up Debris	63	6%	4
			<u>835</u>

(B) TRICHLOROFLUOROETHANE

<u>WITN</u>	<u>lbs disposed</u>	<u>% CFC113</u>	<u>lbs CFC113 Disposed</u>
6- Aerosol Solvents	1167	20%	233
17- Aerosol Solvents	12	20%	2.4
57- Freon & Heavy Metals	374	90%	338
69- Resin Flux	32	8%	3
197- Alcohol & Solvents	311	3%	9
			<u>585</u>

(C) AGITENE SLIPER AGITENE

<u>WITN</u>	<u>lbs disposed</u>	<u>% Solvent</u>	<u>lbs solvent disposed</u>
96- Cleaning Compound, Solvent	9333	85%	7933
195- Otto Fuel & Agitene	30043	85%	25,537
			<u>33,470</u>

(D) ENAMEL GENERAL

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed</u>
62- Aerosol Paints (non-Halogenated)	667	10% MEK 45% Other Solvents	66.7 lbs MEK 300 lbs other VOC
120- Paints & Thinners	9543	13% MEK	<u>1241</u> lbs MEK 1608

WASTE STREAM DEDUCTIONS - CONTINUED

(E) PAINT: EPOXY PRIMER

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed</u>
35- Aerosol Paints (Chlorinated)	246	25% toluene 25% xylene	61.5 lbs toluene 61.5 lbs xylene
			<u>123 lbs</u>

(F) LACQUER THINNER

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed</u>
120- Paints & Thinners	9543	20% thinner	1909 lbs thinner
137- Cleaning Compound (Solvent)	2621	50% toluene 15% butyl alcohol 30% MEK	1311 lbs toluene 393 lbs butyl alcohol 786 lbs MEK
120: Using MSDS T0048- Assume thinner is		31% Butyl Acetate 12% MEK = 229 lb 12% Toluene = 229 lb 11% Butyl Ak = 210 lb	4399 lbs

(G) THINNING SOLVENT - MINERAL SPIRITS

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed</u>
52- OTTO Fuel Contaminated mineral spirits	21010	85% VOC	17859
446- Adhesive (non-halogenated)	-	5% VOC	

(H) SURFACE COATINGS - THINNING SOLVENTS

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed</u>
17- Aerosol Solvents	12	40% Toluene	4.8 lbs toluene
120- Paints & Thinners	9543	7% Toluene	668 lbs
439- Solvents	-	9% Toluene	<u>673</u>

# WASTE STREAM DEDUCTIONS - CONTINUED

## (I) SURFACE COATINGS - THINNING SOLVENTS

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs disposed, Isopropanol</u>
17- Aerosol Solvents	12	10% Isopropyl Alc	1.2
69- Resin Flux	32	70% Isopropyl Alc	22.4
79- Alcohols (Isopropanol, Methanol)	411	70% Isopropanol	287.7
197- Alcohol & Solvents	311	97% Isopropanol	301.67
271- Oil Fuel & Alcohol	14904	8% Isopropanol	<u>1192</u>
			1805

## (J) THINNING SOLVENTS - ETHANOL

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs ethyl alcohol disp</u>
35- Aerosol Paints (Halogenated)	246	3% ethyl alc	7.4
79- Alcohols	411	20% ethyl alc	<u>82.2</u>
			89.6

## (K) THINNING SOLVENT - XYLENE

<u>WITN</u>	<u>lbs disposed</u>	<u>%</u>	<u>lbs xylene disposed</u>
137- Cleaning Compound (Solvent)	2621	1%	26 lbs
166- Adhesive, liquid	0	9%	<u>26 lbs</u>
			26 lbs

CONTRACT: N00406-93-D0198/D.O.FY93  
TASK B: PSAPCA AIR CONTAMINATING  
EQUIPMENT REGISTRATION (1993)

R.S. Asencio

WASTE STREAM REDUCTIONS

ADDITIONAL WASTE STREAMS CONTAINING MINERAL SPIRITS -

<u>WITN</u>	<u>lbs disposed</u>	<u>% Mineral Spirits</u>	<u>lbs Mineral Spirits</u>
462 - Paint Waste Contaminated with Bz	36 lb	35%	12.6
503 - Otto fuel After body Flush	32,990	32%	10,557 <sup>810</sup>
543 - Cleaning Compound Solvent	24	33%	8
			<u>10,578</u>
			TOTAL

## 1993 PSAPCA SUMMARY FOR FORM B

Point 002; Segment 03: Agitene, Super Agitene

Gallons Used: 13,066

Dipropylene Glycol Methyl Ether

<u>MSDS #</u>	<u>lbs</u>
A0047	236
<u>S0174</u>	<u>1,464</u>
Total	1,700

Mineral Spirits

<u>MSDS #</u>	<u>lbs</u>
A0047	11,577
<u>S0704</u>	<u>71,720</u>
Total	83,297

Point 002; Segment 04: Turco Solvent

Gallons Used: 50

MSDS # T0222:

VOC's:

Toluene	72 lbs
<u>Phenol</u>	<u>72 lbs</u>
Total VOC's	144 lbs

Negligibly Reactive Organic Compounds:

Methylene Chloride 240 lbs

Non-VOC's:

Formic Acid	24 lbs
<u>Hydroxyacetic Acid</u>	<u>24 lbs</u>
Total	lbs

## 1993 PSAPCA SUMMARY FOR FORM B

Point 003; Segment 01: Enamel, General

Gallons Used: 2,952

CAS # 78-93-3, 2-Butanone (MEK, Methyl Ethyl Ketone)

<u>MSDS #</u>	<u>lbs</u>
C0439	1.3
E0475	19
E0531	531
E0532	59
E0533	16
E0572	22
P0541	11
P0567	12.4
P0863	3.6
<u>S0703</u>	<u>5</u>
Total	680

CAS # 111-15-9, 2-Ethoxyethyl Acetate (cellosolve acetate)

<u>MSDS #</u>	<u>lbs.</u>
C0439	1.3
<u>P0863</u>	<u>4.8</u>
Total	6

## 1993 PSAPCA SUMMARY FOR FORM B

## Other VOC's:

## Ethylene glycol

<u>MSDS #</u>	<u>lbs.</u>
C0295	8
C0850	836
C0862	1.1
C0863	1.1
C0864	0.66
C0865	1.3
C0866	1.3
C0867	1.1
C0868	1.1
E0398	5
K0235	17
K0239	6
P0781	8.6
<u>P0784</u>	<u>1.1</u>
Total	889

## Epichlorhydrin

<u>MSDS #</u>	<u>lbs.</u>
<u>E0153</u>	<u>23</u>
Total	23

## 1993 PSAPCA SUMMARY FOR FORM B

## Toluene

<u>MSDS #</u>	<u>lbs.</u>
E0417	20
E0475	6
E0532	24
E0533	6
P0293	6.2
P0156	15
P0530	1.3
P0541	8
P0567	5
P0663	62
P0807	69
P0854	2.4
P0855	3
P0863	1.7
P0918	2.8
P0920	79
<u>S0703</u>	<u>20</u>
Total	331

## Isobutyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
E0417	12
<u>P0663</u>	<u>9</u>
Total	21

## Butyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
E0479	7
E0532	24
E0533	6
<u>P0855</u>	<u>6</u>
Total	43

## 1993 PSAPCA SUMMARY FOR FORM B

## Acetone (2-propanone)

<u>MSDS #</u>	<u>lbs.</u>
E0532	316
E0533	85
P0516	11
P0663	123
P0807	52
P0876	9.3
<u>S0703</u>	<u>4</u>
Total	600

## Methyl Isobutyl Ketone (MIBK; Hexone)

<u>MSDS #</u>	<u>lbs.</u>
E0532	24
E0533	6
P0541	8
P0854	2
<u>P0855</u>	<u>4</u>
Total	44

## Ethylbenzene

<u>MSDS #</u>	<u>lbs.</u>
<u>P0541</u>	<u>1.3</u>
Total	1.3

## Isopropyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
<u>P0855</u>	<u>6</u>
Total	6

## Hexane

<u>MSDS #</u>	<u>lbs.</u>
P0876	9.3

## SEMI VOC's:

## Bis(2-ethylhexyl)phthalate

<u>MSDS #</u>	<u>lbs.</u>
C0439	1.3

## 1993 PSAPCA SUMMARY FOR FORM B

Dibutyl Phthalate

<u>MSDS #</u>	<u>lbs.</u>
E0153	9

## OTHER NON-VOC:

Hexylene glycol

<u>MSDS #</u>	<u>lbs.</u>
A0271	179
<u>A0341</u>	<u>24</u>
Total	203

1-nitropropane

<u>MSDS #</u>	<u>lbs.</u>
C0439	1.3

2-butoxyetanol (Ethylene glycol monobutyl ether; butyl cellosolve)

<u>MSDS #</u>	<u>lbs.</u>
E0475	6
P0854	3
P0855	9
<u>P0861</u>	<u>2</u>
Total	20

Petroleum Naphtha

<u>MSDS #</u>	<u>lbs.</u>
E0571	357

Naphtha

<u>MSDS #</u>	<u>lbs.</u>
E0576	15

Butylacetate

<u>MSDS #</u>	<u>lbs.</u>
P0567	9.3
<u>P0863</u>	<u>1.7</u>
Total	11

## 1993 PSAPCA SUMMARY FOR FORM B

## Zinc Chromate

<u>MSDS #</u>	<u>lbs.</u>
P0650	50

## n-butane

<u>MSDS #</u>	<u>lbs.</u>
P0807	21

## Carbon Black

<u>MSDS #</u>	<u>lbs.</u>
C0295	11
C0862	1
C0871	0.5
E0530	1
P0293	2
P0516	1.3
P0650	25
P0852	3.2
<u>S0765</u>	<u>1.6</u>
Total	47

## Methyl Propyl Ketone

<u>MSDS #</u>	<u>lbs.</u>
E0572	15

## Iron Oxide

<u>MSDS #</u>	<u>lbs.</u>
C0871	0.5
<u>P0940</u>	<u>11</u>
Total	12

## Calcium Oxide

<u>MSDS #</u>	<u>lbs.</u>
S0765	1.6

## 1993 PSAPCA SUMMARY FOR FORM B

Point 003; Segment 02: Paint-Epoxy Primer

Gallons used: 317

CAS # 78-93-3, 2-Butanone (MEK, Methyl Ethyl Ketone)

<u>MSDS #</u>	<u>lbs</u>
A0214	9
A0298	8
C0308	34
C0858	2
O0077	11.3
P0270	1.6
P0434	3
P0591	15
P0916	2
<u>S0180</u>	<u>17</u>
Total	103

Methyl Isobutyl Ketone (MIBK; Hexone)

<u>MSDS #</u>	<u>lbs.</u>
C0308	11
C0858	1
P0738	1.3
<u>S0180</u>	<u>11</u>
Total	24

Toluene

Total 162

Xylene

Total 0

Other Volatile Organics

Total 52

Other semivolatile/non-volatile

Total 314.7

## 1993 PSAPCA SUMMARY FOR FORM B

Point 003; Segment 03: Lacquer: General

Gallons used: 460

## Toluene (Toluol)

<u>MSDS #</u>	<u>lbs.</u>	<u>vol.</u>
A0433	1	
K0069	5	
L0269	6.3	
L0271	23	
L0282	1.3	
L0237	284	
L0350	9	
L0351	5.5	
L0381	2.4	
L0370	2.1	
L0398	29	
L0399	14.3	
S0033	43	
S0360	1	
S0412	3.1	
S0424	9	
S1003	7.4	
<u>T0176</u>	<u>75</u>	
TOTAL		521.4

## 1993 PSAPCA SUMMARY FOR FORM B

## 2-Propanone (Acetone)

A0433	3.4	
K0069	5	
K0077	38	
K0082	6	
L0282	5	
L0286	2.5	
L0327	28	
L0350	7	
L0351	4.4	
L0381	3.8	
L0370	3.3	
S0361	2.4	
S0412	36	
S0424	3	
<u>T0176</u>	<u>75</u>	
TOTAL		222.8

## Ethyl benzene

<u>K0069</u>	<u>3</u>	
TOTAL		3

## Methyl ethyl ketone

L0271	71.3	
L0282	5	
L0283	1.2	
L0327	110	
M0474	8.5	
M0489	10.2	
M0490	68	
P0467	8	
P0697	16	
S0033	29	
<u>T0176</u>	<u>75</u>	
TOTAL		402.2

## Butanol

L0282	0.7	
L0283	0.4	
<u>V0032</u>	<u>10</u>	
TOTAL		11.1

## 1993 PSAPCA SUMMARY FOR FORM B

Hexane		
L0370	6.6	
S0033	14	
<u>S0781</u>	<u>1.5</u>	
TOTAL		22.1

Ethyl acetate		
M0474	7.3	
M0489	5	
M0495	16	
M0512	6	
<u>M0561</u>	<u>228</u>	
TOTAL		262.3

## Negligibly Reactive Organic Compounds:

Methylene chloride		
L0020	0.1	
L0282	5	
L0283	6.34	
S0360	2	
<u>S0361</u>	<u>4</u>	
TOTAL		17.44

Methylchloroform (1,1,1-trichloroethane)		
W0156	28	
W0157	14	
<u>W0158</u>	<u>14</u>	
TOTAL		56

**Point 003; Segment 04: Paint-Solvent Based Antifoul**

Gallons used: 30

CAS # 71-36-3, Butyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
D0028	1
<u>P0449</u>	<u>6</u>
Total	7

## 1993 PSAPCA SUMMARY FOR FORM B

CAS #8032-32-4, VM&amp;P Naptha

<u>MSDS #</u>	<u>lbs.</u>
C0819	2
K0205	21
S0537	34
<u>W0081</u>	<u>17</u>
Total	74

Other VOC:

Toluene

<u>MSDS #</u>	<u>lbs.</u>
C0819	1

Other non-VOC:

n-heptane

<u>MSDS #</u>	<u>lbs.</u>
C0819	1

Point 003; Segment 05: Lacquer Thinner

Gallons Used: 6,242

CAS #78-93-3, 2-butanone (Methyl ethyl ketone; MEK)

<u>MSDS #</u>	<u>lbs.</u>
I0239	25
M0107	130
R0172	5
<u>T0048</u>	<u>5215</u>
Total	5375

Isopropyl alcohol

<u>MSDS #</u>	<u>lbs.</u>
D0059	0.1
D0141	0.06
I0239	25
<u>R0172</u>	<u>5</u>
Total	30

## 1993 PSAPCA SUMMARY FOR FORM B

Methyl isobutyl ketone (MIBK; Hexone)

<u>MSDS #</u>	<u>lbs.</u>
N/A	0

Toluene

<u>MSDS #</u>	<u>lbs.</u>
I0239	76
M0107	17
T0048	5215
<u>T0052</u>	<u>18</u>
Total	5326

Butyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
D0059	0.1
D0141	0.06
S0111	14
T0048	4781
<u>T0052</u>	<u>40</u>
Total	4835

Other VOC's

Ethylbenzene

<u>MSDS #</u>	<u>lbs.</u>
M0107	2

Other non-VOC's

Butyl Acetate

<u>MSDS #</u>	<u>lbs.</u>
D0059	0.72
D0141	1.2
M0107	11
<u>T0048</u>	<u>13,473</u>
Total	13,486

Cyclohexanone

<u>MSDS #</u>	<u>lbs.</u>
R0172	3

## 1993 PSAPCA SUMMARY FOR FORM B

Methyl n-amyl ketone (2-heptanone)

<u>MSDS #</u>	<u>lbs.</u>
S0111	7

**Point 003; Segment 06: Thinning Solvent**

Gallons used: 393

CAS # 78-93-3, 2-butanone(Methyl ethyl ketone;MEK)

<u>MSDS #</u>	<u>lbs.</u>
M0060	2211
M0269	23
M0508	235
O0047	16
<u>X0013</u>	<u>17</u>
Total	2502

**Point 003; Segment 07: Thinning Solvent**

Gallons used: 114

CAS # 108-10-1, Methyl isobutyl ketone (MIBK;hexone)

<u>MSDS #</u>	<u>lbs.</u>
A0064	19
B0115	1.4
<u>C0167</u>	<u>299.6</u>
Total	320

**Point 003; Segment 08: Mineral Spirits**

Gallons Used: 5,800

CAS #43104, Mineral Spirits (Ligroin, Skellysolve)

<u>MSDS #</u>	<u>lbs.</u>
M0509	36,714

## 1993 PSAPCA SUMMARY FOR FORM B

**Point 003; Segment 09: Thinning Solvent**

Gallons Used: 0

Butyl Alcohol: 0 lbs

VM &amp; P Naphtha: 0 lbs

**Point 003; Segment 10: Thinning Solvent- Syno Thinner - Toluene**

Gallons used: 363

<u>MSDS #</u>	<u>lbs.</u>
A0038	12.6
B0096	62
B0113	13.5
B0115	1.14
B0132	30.5
B0156	0.2
C0167	107.42
C0737	2
G0209	16
P0290	4
S0887	34
T0068	159
T0302	7.2
T0471	1037
<u>W0129</u>	<u>5</u>
Total	1492

## 1993 PSAPCA SUMMARY FOR FORM B

Point 003; Segment 11: Thinning Solvent- Organic Solvent - Isopropyl alcohol

Gallons used: 711

Isopropyl Alcohol	
<u>MSDS #</u>	<u>lbs.</u>
A0038	12.6
A0473	212.5
A0539	65.2
A0542	496
A0626	63.3
A0631	33
A0680	66
A0847	131.8
A0872	1.65
B0113	3.4
C0737	14.3
C0833	33.2
G0113	15
I0103	1405
I0191	1561
I0249	9
R0034	12.2
R0132	11.5
S0599	8.1
S0887	15
V0045	3
<u>X0013</u>	<u>9</u>
Total	4182

## 1993 PSAPCA SUMMARY FOR FORM B

**Point 003; Segment 12: Thinning Solvent- Organic Solvent - Ethyl alcohol**

Gallons Used: 144

<u>MSDS #</u>	<u>lbs.</u>
A0466	113.5
A0623	305
A0672	331
J0002	75
L0101	10
L0102	4
L0303	1.3
<u>R0259</u>	<u>40</u>
Total	880

**Point 003; Segment 13: Thinning Solvent- Organic Solvent - Xylene**

Gallons Used: 0

Total: 0 lbs

**Point 003; Segment 14: Adhesives**

Gallons used: 130

2-propanone (acetone)

<u>MSDS #</u>	<u>lbs.</u>
A0848	9.5
C0275	3
<u>N0073</u>	<u>4</u>
Total	17

Toluene

<u>MSDS #</u>	<u>lbs.</u>
A0848	6.61
C0275	3
<u>N0073</u>	<u>3</u>
Total	13

## 1993 PSAPCA SUMMARY FOR FORM B

## Isopropyl Alcohol

<u>MSDS #</u>	<u>lbs.</u>
C0341	77

## Hexane

<u>MSDS #</u>	<u>lbs.</u>
A0458	94
A0848	9.5
<u>N0073</u>	<u>8</u>
Total	112

## Phenol

<u>MSDS #</u>	<u>lbs.</u>
A0820	14

## Other:

## Cyclohexane

<u>MSDS #</u>	<u>lbs.</u>
A0458	47

## Diethylenetriamine

<u>MSDS #</u>	<u>lbs.</u>
A0820	57

**Point 005; Segment 01:Petroleum Storage Tanks - Electronic Manuf. Toxics**

## Sulfuric Acid

Gallons Used: 1781

<u>MSDS #</u>	<u>lbs.</u>
S0731	26,822
A0478	4
B0318	36
E0343	36
<u>G0122</u>	<u>1</u>
Total	26,900

## 1993 PSAPCA SUMMARY FOR FORM B

## Lead Compounds

Pounds used: 431

<u>MSDS #</u>	<u>lbs.</u>
A0216	4.3
A0397	1
A0651	13
A0687	4.83
E0240	13
E0388	6
E0391	10.4
E0404	2
F0261	251
L0256	23.6
P0530	2.4
P0637	21
P0802	1.2
P0919	66
R0132	9.6
<u>R0135</u>	<u>1.5</u>
Total	431

## Acetone

Gallons used: 162

<u>MSDS #</u>	<u>lbs.</u>
A0382	34
A0013	5.28
A0541	199
B0113	3.4
B0115	10
B0393	1.4
C0167	146.6
M0210	3.2
S0017	4.6
<u>X0013</u>	<u>35</u>
Total	442

## 1993 PSAPCA SUMMARY FOR FORM B

## OTHER TAC's NOT CATEGORIZED

## Ethylene Glycol

Gallons used: 283

<u>MSDS #</u>	<u>lbs.</u>
A0431	28
A0607	223
E0286	185
E0325	2048
T0340	28
<u>U0062</u>	<u>54</u>
Total	2566

## Sulfur Hexafluoride

Pounds used: 33,000

<u>MSDS #</u>	<u>lbs.</u>
A0008	33,000

## Sodium Hydroxide

Pounds used: 42,996

<u>MSDS #</u>	<u>lbs.</u>
B0216	0.7
C0497	42,000
C0617	5
C0910	2
F0058	11
<u>R0068</u>	<u>977</u>
Total	42,996

## 1993 PSAPCA SUMMARY FOR FORM B

CAS # 7681-57-4, Sodium Metabisulfite

Pounds used: 2,002

<u>MSDS #</u>	<u>lbs.</u>
S0708	2000
<u>Z0014</u>	<u>2</u>
Total	2002

Propylene Glycol Dinitrate

Gallons used: 17,919

<u>MSDS #</u>	<u>lbs.</u>
O0095	113,351

CAS # 75-09-2, Methylene Chloride (Dichloromethane)

Gallons used: 114

<u>MSDS #</u>	<u>lbs.</u>
B0156	0.1
C0065	8
I0137	550
M0175	5.4
N0097	42
<u>O0230</u>	<u>22</u>
Total	628

C/045

United States  
Environmental  
Protection  
Agency

Office of Air Quality  
Planning and Standards  
Technical Support Division  
Research Triangle Park, NC 27711

MARCH 1990  
EPA 450/4-90-003



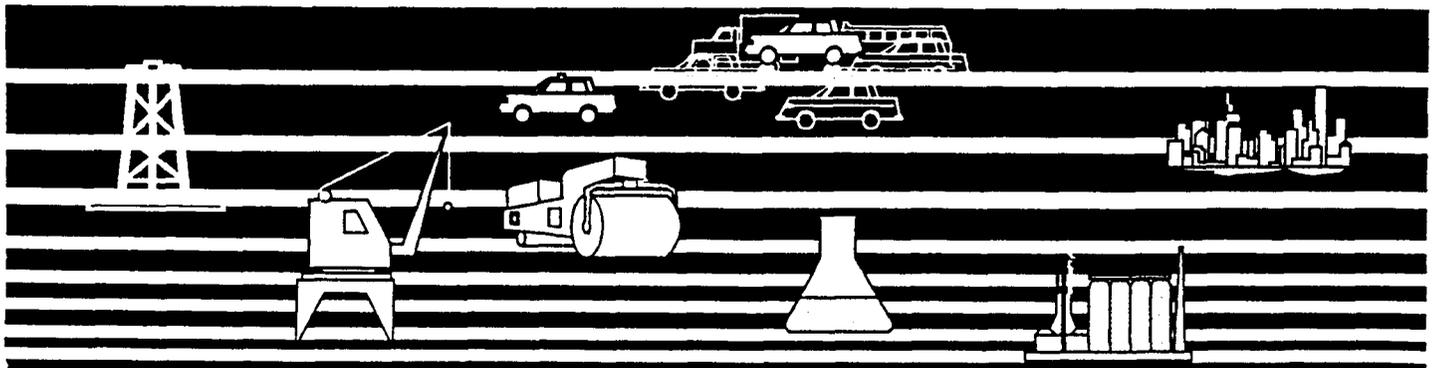
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AIR

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**AIRS FACILITY SUBSYSTEM  
SOURCE CLASSIFICATION CODES  
AND  
EMISSION FACTOR LISTING  
FOR CRITERIA AIR POLLUTANTS**

AP-42



SCC	Process Name	PART Lbs/Unit	PM10 Lbs/Unit	SOX Lbs/Unit	NOX Lbs/Unit	VOC Lbs/Unit	CO Lbs/Unit	LEAD Lbs/Unit	UNITS	NOTES
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INTERNAL COMBUSTION ENGINES - INDUSTRIAL

Distillate Oil (Diesel) - 1000-3999

2-02-001-01 - Turbine	5.0	4.8	140.0 S	67.8	4.77	15.4	---	---	1000 Gallons Burned	
2-02-001-02 - Reciprocating	33.5	32.0	31.2	469.0	32.1	102.0	---	---	1000 Gallons Burned	
2-02-001-03 - Turbine: Cogeneration	5.0	4.8	140.0 S	67.8	4.77	15.4	---	---	1000 Gallons Burned	
2-02-001-04 - Reciprocating: Cogeneration	33.5	32.0	31.2	469.0	32.1	102.0	---	---	1000 Gallons Burned	

Natural Gas - 1000-3999

2-02-002-01 - Turbine	14.0	14.0	0.6	300.0	6.9	120.0	---	---	Million Cubic Feet Burned	
2-02-002-02 - Reciprocating	10.0	10.0	0.6	3400.0	82.9	430.0	---	---	Million Cubic Feet Burned	
2-02-002-03 - Turbine: Cogeneration	14.0	14.0	0.6	413.0	12.6	115.0	---	---	Million Cubic Feet Burned	
2-02-002-04 - Reciprocating: Cogeneration	10.0	10.0	0.6	3400.0	82.9	430.0	---	---	Million Cubic Feet Burned	

Gasoline - 1000-3999

2-02-003-01 - Reciprocating	6.47	6.2	5.31	102.0	147.7 (c)	3940.0	---	---	1000 Gallons Burned	
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INTERNAL COMBUSTION ENGINES - COMMERCIAL/INSTITUTIONAL

Distillate Oil (Diesel) - 4000-4899, 4920-9999

2-03-001-01 - Reciprocating	33.5	32.0	31.2	469.0	32.1	102.0	---	---	1000 Gallons Burned	
2-03-001-02 - Turbine	5.0	4.8	140.0 S	67.8	4.77	15.4	---	---	1000 Gallons Burned	

Natural Gas - 4000-4899, 4920-9999

2-03-002-01 - Reciprocating	10.0 (c)	10.0	0.6	3400.0	82.9	430.0	---	---	Million Cubic Feet Burned	
2-03-002-02 - Turbine	14.0	14.0	0.6	413.0	12.6	115.0	---	---	Million Cubic Feet Burned	
2-03-002-03 - Turbine: Cogeneration	---	---	---	---	---	---	---	---	Million Cubic Feet Burned	
2-03-002-04 - Cogeneration	---	---	---	---	---	---	---	---	Million Cubic Feet Burned	

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Gasoline - 4000-4899, 4920-9999

2-03-003-01 - Reciprocating	6.47	6.2	5.31	102.0	147.7	3940.0	---	---	1000 Gallons Burned	
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Liquified Petroleum Gas (LPG) - 4000-4899, 4920-9999 (c)

2-03-010-01 - Propane: Reciprocating	5.0	5.0	0.35	139.0	83.0	129.0	---	---	1000 Gallons Burned	
2-03-010-02 - Butane: Reciprocating	5.0	5.0	0.35	139.0	83.0	129.0	---	---	1000 Gallons Burned	

INTERNAL COMBUSTION ENGINES - ENGINE TESTING

Aircraft - 3500-3599, 3700-3799

2-04-001-01 - Turbojet	11.8	11.3	13.0	14.6	46.0	32.7	---	---	1000 Gallons Burned	
2-04-001-02 - Turbohaft	11.8	11.3	13.0	14.6	46.0	32.7	---	---	1000 Gallons Burned	

BRAC 95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon, a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

Dennis K. Gibbs  
NAME (Please type or print)

  
Signature

Commander  
Title

3 JUNE 1994  
Date

NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT  
Activity

Naval Undersea Warfare Center Division Keyport  
BRAC 95 Data Call Number 33 Submission

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears  
Signature

Commander  
Title

7 JUNE 94  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~NAME (Please type or print)~~

~~Signature~~

~~Title~~

~~Date~~

~~Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

G. R. STERNER  
NAME (Please type or print)

G. R. Sterner  
Signature

Commander  
Naval Sea Systems Command

6/7/94  
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

P. W. DRENNON  
NAME (Please type or print)

P. W. Drennon  
Signature

ACTING  
Title

6/24/94  
Date

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NUWC HQ DATA CALL 12 211  
AMENDMENT 1

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

NAME (Please type or print)

Signature

Title

Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

NAME (Please type or print)

Signature

**G. R. STERNER**

Commander  
Naval Sea Systems Command

Date

10/18/94

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

W. A. EARNER

NAME (Please type or print)

Signature

Title

Date

27 OCT 1994

BRAC-95 CERTIFICATION

Reference: SECNAV NOTE 11000 dtd 8 Dec 93

In accordance with policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in the BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

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I certify the information contained herein is accurate and complete to the best of my knowledge and belief.

ACTIVITY COMMANDER

RADM SCOTT L. SEARS  
NAME (Please type / print)

COMMANDER  
Title

NUWC  
Activity

Scott L. Sears  
Signature

17 OCTOBER 1994  
Date

**FOR OFFICIAL USE ONLY**

**ENERGETICS JOINT CROSS SERVICE ANALYSIS  
DATA CALL #12 AMENDMENT #1**

**Activity Name:** NUWC

**UICs:** 68934 (NUWC Newport)  
- 66604 (NUWC DIV Newport)  
- 00253 (NUWC DIV Keyport)  
70024 (NUWC DET New London)

The Naval Undersea Warfare Center (NUWC) and its associated divisions and detachments have no major capital investment in energetic laboratory/processing facilities and equipment utilized for the research and development of energetics. Therefore, NUWC submits a negative response for this data call.

**FOR OFFICIAL USE ONLY**

# Document Separator

**DATA CALL SUPPLEMENT  
FOR  
JOINT CROSS SERVICE GROUP - DEPOT MAINTENANCE**

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## **DATA CALL SUPPLEMENT FOR JOINT CROSS SERVICE GROUP-DEPOT MAINTENANCE**

This supplement is designed to facilitate the cross service analysis required of the 1995 Base Realignment and Closure (BRAC-95) process. It requests data in a standardized format that will be used by the Joint Cross Service Group-Depot Maintenance (JCSG-DM) to develop closure and realignment alternatives to be given to the Military Departments for their analysis and final recommendations. The JCSG-DM Data Call consists of two sections, one for capacity measurements and a second measuring "measures of merit". This Data Call has been formatted to assist the preparer in providing the required information with the minimum amount of effort. If questions arise, contact your Military Department BRAC-95 office for clarification.

### **Notes in the context of this data call:**

1. Base your responses on workload as programmed for your activity. Unless otherwise specified, use workload mixes as programmed in the FYDP.
2. Direct Labor Hours (DLH) is the common unit of measure unless specifically noted otherwise in the question.
3. Information requested in this supplement may duplicate data requested by BRAC 95 data calls from the individual Military Departments. If this occurs, read both questions carefully to ensure that they are in fact asking for identical information, and if that is the case, transfer information from one data call to the other.
4. These questions should be passed up and down the chain of command without editing or rewriting. This standardized data call is designed to support an auditable process by having each activity (regardless of Military Department assigned) respond to the same question.
5. "Core" capability calculations are to be performed in accordance with Office of the Under Secretary of Defense (Logistics) Memorandum dated November 15, 1993 (Subject: Policy for Maintaining Core Depot Maintenance Capability).
6. Capacity and utilization index calculations will be performed in accordance with the Defense Depot Maintenance Council approved update to DoD 4151.15H (Depot Maintenance Capacity/Utilization Index Measurement) dated December 5, 1990.
7. All calculations will assume a one shift, 40 hour work week.



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8. Workload, capabilities, and capacities will be measured by commodity groups. A detailed breakout of the JCSG-DM commodity groups is contained in the following box. Insert the commodity groups applicable to your depot maintenance activity into the tables whenever a specific break out is requested by the question. Individual Military Departments in their Service specific data calls, may measure data in different commodity groups or categories, but for the Joint Cross Service analysis, these commodity groups must be utilized.

9. Data will be amounts as of the end of the applicable fiscal year.



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**JOINT CROSS SERVICE - DEPOT MAINTENANCE  
Commodity Groups List**

- |   |  |
|---|--|
| <p>1. Aircraft Airframes:<br/>a. Rotary<br/>b. VSTOL<br/>c. Fixed Wing<br/>    (1) Transport / Tanker / Bomber /<br/>    (2) Command and Control<br/>    (3) Light Combat<br/>    (4) Admin / Training<br/>d. Other</p> <p>2. Aircraft Components<br/>Dynamic Components<br/>Aircraft Structures<br/>Hydraulic/Pneumatic<br/>Instruments<br/>Landing Gear<br/>Aviation Ordnance<br/>Avionics/Electronics<br/>APUs<br/>Other</p> <p>3. Engines (Gas Turbine)<br/>Aircraft<br/>Ship<br/>Tank<br/>Blades / Vanes (Type 2)</p> <p>4. Missiles and Missile Components<br/>Strategic<br/>Tactical / MLRS</p> <p>5. Amphibians<br/>Vehicles<br/>Components (less GTE)</p> <p>6. Ground Combat Vehicles<br/>Self-propelled<br/>Tanks<br/>Towed Combat Vehicles<br/>Components (less GTE)</p> <p>7. Ground and Shipboard Communications<br/>and Electronic Equipment</p> | <p>Radar<br/>Radio Communications<br/>Wire Communications<br/>Electronic Warfare<br/>Navigational Aids<br/>Electro-Optics / Night Vision<br/>Satellite Control / Space Sensors</p> <p>8. Automotive / Construction Equipment</p> <p>9. Tactical Vehicles<br/>Tactical Automotive Vehicles<br/>Components</p> <p>10. Ground General Purpose Items<br/>Ground Support Equipment (except<br/>aircraft)<br/>Small Arms / Personal Weapons<br/>Munitions / Ordnance<br/>Ground Generators<br/>Other</p> <p>11. Sea Systems<br/>Ships<br/>Weapons Systems</p> <p>12. Software<br/>Tactical Systems<br/>Support Equipment</p> <p>13. Special Interest Items<br/>Bearings Refurbishment<br/>Calibration (Type I)<br/>TMDE</p> <p>14. Other</p> |
|---|--|



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## Table of Acronyms

\$/DLH	Cost per Direct Labor Hour
\$K	Thousands of Dollars
ADCAP	Advanced Capability
ADMIN	Administrative; administration
AFB	Air Force Base
AICUZ	Air Installations Compatible Use Zone
AIMID	Aviation Intermediate Maintenance Department
AOC\$	Annual Operating Cost (dollars)
ASW	Anti-Submarine Warfare
ATF	Acoustic Test Facility
CALS	Computer-Aided Logistics System
CAPTOR	Encapsulated Torpedo
CASREP	Casualty Report
CASS	Consolidated Automated Support System
CCN	Category Code Number
CCS	Combat Control System
CFR	Code of Federal Regulations
DBOF	Defense Business Operating Fund
DLH	Direct Labor Hour
DLR	Depot Level Repairable
DMS/MS	Diminishing Manufacturing Resources, Material Shortage
DWS/CS	Defensive Weapons System/Command System
DoD	Department of Defense
EDMICS	Engineering Data Management Information Control System
ESQD	Explosive Safety Quantity Distance
FCS	Fire Control System
FISC	Fleet Industrial Supply Center
FMS	Foreign Military Sales
FY	Fiscal Year
FYDP	Future Year Defense Plan
GTE	Gas Turbine Engines
HDGP	Heavyweight Data Gathering Program
HERF	Hazardous Electronic Radiation - Fuels
HERO	Hazardous Electronic Radiation - Ordnance
HERP	Hazardous Electronic Radiation - Personnel
HW	Hazardous Waste
IMA	Intermediate Maintenance Activity
IRM	Information Resource Management
ISE	In-Service Engineering
ISEA	In-Service Engineering Agent
JCSG-DM	Joint Cross Service Group - Depot Maintenance
KSF	Thousands of Square Feet
MOSS	Mobile Submarine Simulator



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MSRA	Module Screening and Repair Activity
MUC	Meritorious Unit Commendation
NAS	Naval Air Station
NOC	Naval Ordnance Center
NRFI	Not Ready For Issue
NUWC	Naval Undersea Warfare Center
ORDALT	Ordnance Alteration
PACNORWEST	Pacific Northwest
PCA	Physical Configuration Audit
PDLR	Progressive Depot Level Repair
PRV	Plant Replacement Value
PSNS	Puget Sound Naval Shipyard
QDR	Quality Discrepancy Report
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RFI	Ready For Issue
RMC	Regional Maintenance Center
RPM	Real Property Maintenance
SECNAV	Secretary of the Navy
SF	Square Feet
SLMM	Submarine Launched Mobile Mine
SPAS	Shop Process Automation System
SSTD	Surface Ship Torpedo Defense
SUBASE	Submarine Base
TATF	Transducer Automated Test Facility
TCEB	Torpedo Certification Examination Board
TDA	Technical Direction Agent
TDS	Technical Data System
TMDR	Technical Manual Discrepancy Report
TMMA	Technical Manual Maintenance Activity
TPS	Test Program Set
TRF	Trident Refit Facility
TTF	Trident Training Facility
USW	Undersea Warfare
UWEF	Underwater Weapons Evaluation Facility
WAC	Washington Administrative Code
WG	Wage Grade



**ADMINISTRATIVE SENSITIVE**

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**DATA CALL SUPPLEMENT  
FOR  
JOINT CROSS SERVICE GROUP - DEPOT MAINTENANCE**

**CAPACITY**

**1. Capacity Utilization**

1.1 Calculate the capacity index for the commodity groups applicable to depot maintenance work at your activity. Provide your answers expressed in direct labor hours (DLHs) in Table 1.1.a by commodity groups for the Fiscal Years requested.

Table 1.1.a: **Capacity Index**

COMMODITY GROUP	INDEX (DLHs)				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	1,180,248	1,085,828	1,009,820	1,009,820	1,009,820
<b>TOTAL</b>	1,180,248	1,085,828	1,009,820	1,009,820	1,009,820

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



**ADMINISTRATIVE SENSITIVE**

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**1. Capacity Utilization, continued**

**1.2** Calculate the utilization index for the commodity groups applicable to depot maintenance work at your activity. Provide your answers expressed as a percentage (%) in Table 1.2.a by commodity groups for the Fiscal Years requested.

Table 1.2.a: **Utilization Index**

COMMODITY GROUP	INDEX (%)				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	84	88	82	85	87
<b>TOTAL</b>	84	88	82	85	87

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
A1-2  
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NUWC DIV KEYPORT

**1. Capacity Utilization, continued**

**1.3** Assuming (a) the current projected total workload remains as assigned; (b) that sufficient production demand is available to justify maximum hiring, with no significant investment in capital equipment; and (c) no major Military Construction additional to that already approved and funded: what is the maximum extent to which operations, by commodity group, could be expanded for depot maintenance work at your activity, based on the current and future planned workload mixes? Please provide your response in the absolute maximum number of direct labor hours (DLHs).

**Table 1.3.a: Maximum Potential Capacity**

COMMODITY GROUP	INDEX (DLHs)				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	1,333,680	1,226,985	1,141,096	1,141,096	1,141,096
<b>TOTAL</b>	1,333,680	1,226,985	1,141,096	1,141,096	1,141,096

\*Includes the following Undersea Warfare Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



**ADMINISTRATIVE SENSITIVE**

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 A1-3  
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 NUWC DIV KEYPORT

## CAPACITY

### 2. Plant Replacement Value

2.1 What is the estimated Plant Replacement Value (PRV) as of the end of each Fiscal Year of your depot maintenance activity expressed in thousands of dollars (\$K) as a function of the facilities and equipment? Provide your answer in Table 2.1.

Table 2.1: Expenditures and Equipment Values

PRV	\$ K				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
Facilities	87,685	98,738	105,613	109,204	111,762
Equipments	66,313	69,297	72,415	75,674	79,079
<b>TOTAL</b>	<b>153,998</b>	<b>168,035</b>	<b>178,028</b>	<b>184,878</b>	<b>190,841</b>



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
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NUWC DIV KEYPORT

## CAPACITY

### 3. Programmed Workload

3.1 Given the current configuration and operation of your activity, provide the programmed depot level workload by commodity group in Tables 3.1.a and 3.1.b. Express your answer in both dollars (\$K) and direct labor hours (DLH) for the Fiscal Years requested.

Table 3.1.a: Programmed Workload

COMMODITY GROUP	\$ K				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	55,804	54,472	45,814	47,374	48,861
<b>TOTAL</b>	55,804	54,472	45,814	47,374	48,861

\*Includes the following Undersea Warfare Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



**ADMINISTRATIVE SENSITIVE**

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Table 3.1.b: Programmed Workload

COMMODITY GROUP	DLHs				
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	986,888	953,320	830,260	860,153	874,396
<b>TOTAL</b>	986,888	953,320	830,260	860,153	874,396

\*Includes the following Undersea Warfare Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
A3-2  
UIC N00253  
NUWC DIV KEYPORT

## CAPACITY

### 4. Service Centers of Excellence

4.1 If your activity has been designated as a Service Center of Excellence for any of the commodity groups, please identify them below.

#### Centers of Excellence

#### Systems/Technologies

Heavyweight Torpedo

MK 48 Torpedo  
MK 48 ADCAP Torpedo

Lightweight Torpedo

MK 46 Torpedo  
MK 50 Torpedo

Submarine USW Combat Systems

CCS MK 1  
CCS MK 2  
FCS MK 113 Mod 9  
DWS/Command System MK 118  
AN/BQQ-5 Sonar, AN/BQQ-6 Sonar,  
AN/BQQ-9 Sonar, AN/BQR-15 Sonar,  
AN/BQR-21 Sonar  
TRIDENT Sonar Operator Trainer  
Defensive Weapons Maintenance Lab

Surface ASW Combat System

AN/SQQ-89 ASW Combat System  
FCS MK 111  
FCS MK 114  
FCS Panel MK 309

Undersea Targets & Vehicles

MK 30 Mobile Target  
MK 28 Target  
MK 27 Mobile Target (FMS Only)  
MK 40 Mobile Target (FMS Only)  
Undersea Vehicles



**ADMINISTRATIVE SENSITIVE**

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Undersea Warfare Mines

MK 67 Submarine Launched Mobile Mine  
MK 60 CAPTOR Mine  
Conventional Mines

Undersea Warfare  
Countermeasures

Mod 7 Surface Ship Torpedo Defense System  
Countermeasure (SSTD)  
MK 70 Mobile Submarine Simulator (MOSS)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
A4-2  
UIC N00253  
NUWC DIV KEYPORT

**DATA CALL SUPPLEMENT  
FOR  
JOINT CROSS SERVICE GROUP - DEPOT MAINTENANCE**

**MEASURES OF MERIT**

**Geographic**

**1. Location**

**1.1** Specify any strategic importance or military value consideration of your activity accruing from its geographical location.

The geographic location of NUWC Division, Keyport is a key asset contributing to its strategic value. Its location on Puget Sound in close proximity to several other Navy and DoD installations permits support of, and access to, regional Navy operations. Of critical importance are the unique environments for undersea ranges required for testing of torpedoes and USW systems.

Many synergistic relationships have been developed and continue to be developed among the Navy's regional activities, providing effective and efficient support to the Fleet. NUWC Division, Keyport's resources and technical expertise are readily available to support Fleet requirements. Colocated Fleet resources provide Fleet platforms for testing and enhancement of undersea systems. Recent initiatives to focus Navy maintenance resources on a regional basis affords NUWC Division, Keyport an opportunity to, further contribute to and be supported by, other activities.

The complex of undersea ranges for torpedo testing, which is made possible by the Puget Sound waters, cannot be duplicated anywhere else. The Dabob Bay range site provides an exceptionally quiet and secure operating environment. The Nanoose range site affords a very large operating area and deeper depths. The nearby Quinault Range site provides ideal shallow water with a sandy bottom, required for range operations in a littoral environment. All of these ranges are unique in the world, for their soft bottom and non-destructive depths, which permit recovery of virtually all undersea weapons and vehicles which are ranged. Savings associated with this recovery capability are in excess of \$1.5B over the past 25 years.

The following table provides specific information concerning the strategic benefits of the locations of NUWC Division, Keyport facilities and operations at Keyport, WA with respect to other area commands, geographic features, and the unique facilities which the geography makes possible.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
1-1  
UIC N00253  
NUWC DIV KEYPORT

Activity

Location

Description of Strategic  
Importance/Military Value

NUWC Division,  
Keyport

Keyport, WA

**Proximity to Northwest Range  
System**

- Proximity of the depot/engineering complex to the unique undersea ranges in the region provides ready access to sites for firing depot processed weapons and undersea vehicles for full operational tests. Its proximity minimizes transportation delays and costs.
- Proximity of the depot to the ranges permits prompt disassembly of weapons to arrest corrosive processes and save expensive hardware for further use.
- The Northwest Range System comprises a unique combination of undersea range environments, especially well-suited for torpedo testing and Undersea Warfare operations.
- The bodies of water in Puget Sound afford a variety of depths, without exceeding crush depth of torpedoes. Soft bottom of ranges prevents damage of torpedoes on impact with range floor. Permits recovery of intact weapons off bottom of ranges. The 25 year estimated savings from recovery of torpedoes exceeds \$1.5B.
- Dabob Bay Range site is acclaimed for its exceptionally quiet and secure environment which is required for certain types of range operations.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

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UIC N00253

NUWC DIV KEYPORT

NUWC Division,  
Keyport (cont'd)

Keyport, WA

- Quinault Range site is the Navy's only permanently instrumented shallow water range, providing undersea operations in a littoral environment.
- Nanoose Range site is a joint US/Canada site operated under a formal International Agreement for some 30 years to mutual benefit, with reduced costs for both allied partners.

**Proximity to Torpedo Explosive Operating Complex**

- Located only five miles from the depot complex, the Torpedo Explosive Operating Complex provides the torpedo depot with properly sited facilities for safe assembly and test of weapons with their warheads. This permits final processing of torpedoes in a warshot configuration after maintenance operations in the depot.
- The Torpedo Explosive Operating Complex is designed in compliance with strict Explosive Safety Quantity Distance (ESQD) and Hazardous Electronic Radiation-Ordnance (HERO) requirements.

**Proximity to Torpedo Reserve Inventory**

- An extensive complex of ordnance storage magazines houses the Navy's reserve inventory of torpedoes. Its proximity to the depot permits fast, responsive access to the depot complex for preparation and delivery to the Ready For Issue inventory in a mobilization scenario.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

1-3

UIC N00253

NUWC DIV KEYPORT

NUWC Division,  
Keyport (cont'd)

Keyport, WA

**Proximity to Puget Sound Naval Shipyard**

- Close proximity to Puget Sound Naval Shipyard (PSNS) permits reciprocal industrial support to make effective use of the activities' respective capabilities. PSNS provides local access to selected heavy industrial capabilities which are not available at NUWC Division, Keyport. NUWC Division, Keyport offers specialized light industrial capabilities.
- PSNS and NUWC are partners in a reciprocal agreement to provide complementary use of plating capabilities, thereby providing cost-effective, non-duplicative capabilities.
- NUWC Division, Keyport's Combat System depot delivers refurbished and upgraded equipment to PSNS for installation on submarines during availabilities. Keyport's depot personnel provide technical support during installation.

**Proximity to Trident Refit Facility (TRF) and Submarine Squadron 17**

- NUWC Division, Keyport provides engineering and maintenance support to TRF and Squadron 17 on request to assist in resolution of problems on Trident submarine combat systems.
- Keyport's Combat Systems Depot provides refurbished and upgraded equipment for Trident Combat Systems for installation on OHIO Class submarines.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

NUWC Division,  
Keyport (cont'd)

Keyport, WA

- Proximity to Submarine Squadron 17 at SUBASE, Bangor allows secure range support to OHIO Class submarines for pre-deployment ship trials. Service includes post-operation data analysis and shipboard equipment evaluations.

**Proximity to Naval Air Station (NAS), Whidbey Island**

- NUWC Division, Keyport's possession of and expertise with the AN/USM-636 Consolidated Automated Support System (CASS) constitutes a significant regional resource for maintenance of avionics for NAS, Whidbey Island.
- With CASS as the cornerstone automated test equipment for Naval aviation electronics, NUWC Division, Keyport is poised to offer substantial local support for test, repair, and engineering support of avionics.
- Proximity to Naval Air Station, Whidbey Island affords ready access to planes for air launch of torpedoes on ranges, which in turn is an important capability to the torpedo depot.
- Proximity to Naval Air Station, Whidbey Island provides valuable training opportunities for ASW aircraft crews on the ranges.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

NUWC Division,  
Keyport (cont'd)

Keyport, WA

**Proximity to Trident Training Facility (TTF)**

- NUWC Division, Keyport Combat Systems Depot performs repair and overhaul of Trident combat systems equipment in support of TTF.

**Naval Regional Maintenance Center (RMC)**

- NUWC Division, Keyport's location in the Puget Sound region makes its maintenance, engineering, and industrial capabilities available to formation and operation of the Pacific Northwest Regional Maintenance Center. Together with other Navy maintenance facilities (Puget Sound Naval Shipyard, Trident Refit Facility, AIMD Whidbey Island, SIMA Puget Sound), coordination of all activities' capabilities and capacities on a regional basis will more efficiently satisfy Fleet maintenance requirements.
- NUWC Division, Keyport is an active participant in CINCPACFLT's initiative to formalize regional maintenance operations.
- NUWC Division, Keyport has been recognized within the region for its strong capabilities in electronics maintenance, process automation, design and process engineering, and information resource management.



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NUWC DIV KEYPORT

NUWC Division,  
Keyport (cont'd)

Keyport, WA

**Regional Technical/Industrial  
Infrastructure**

- Location in a region with a robust private sector industrial complex provides access to many required products, processes, and services within the region.
- Location in a region known for its high technology workforce provides access to an excellent skill and talent pool.

**Transportation Infrastructure**

- Location in a major port gateway provides excellent access to air, sea, and rail transportation services.
- Proximity to McChord Air Force Base provides excellent access to military transportation services for worldwide shipment of depot products.

**Military Support Facilities**

- Location in a region with several other major military installations (especially Navy) permits access to a wide range of support services for military personnel.

**Climate**

- Moderate climate of the region make reductions of operations a rarity due to inclement weather.

**Utilities**

- Location in a region with large water resources harnessed for hydroelectric power provides electric power at exceptionally low costs.

NUWC Division, Keyport also performs depot maintenance on conventional mines at its detachment in Hawthorne, NV. Specific strategic advantages and benefits deriving from its geographic location are identified below.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

NUWC Detachment, Hawthorne, NV

**Unpopulated Area**

- Hawthorne is located in an area with unlimited explosive arcs.
- Site is remote from direct or terrorist attacks.

**Climate**

- Exceptionally dry climate is well-suited for long-term storage of material.

**Army Command Tenant**

- NUWC Detachment Hawthorne is a tenant activity of Hawthorne Army Ammunition Plant. This reduces the requirement and cost for support infrastructure.



**ADMINISTRATIVE SENSITIVE**

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UIC N00253  
NUWC DIV KEYPORT

## Geographic, continued

### 2. Environmental Compliance

*Answers to the following questions need to reflect the particular workloads or processes affected by the environmental restrictions/compliance.*

**2.1** Is your activity in full compliance with all Federal, state, and local environmental regulations? If not in full compliance, provide a comprehensive list of individual regulations that require actions to be taken. What compliance waivers have been granted? When must the activity come into compliance?

<u>Type</u>	<u>Regulation</u>	<u>Waiver (Date Expires)</u>	<u>Date Must be in Compliance</u>
HW	40 CFR 260-270	Memo of Agreement (MOA) (expiration date N/A)	FY 96

Note: As documented by an MOA with EPA, NUWC Division, Keyport will relocate its hazardous waste storage facility and construct a new building for storage. A new fully compliant facility is under construction at this time (MILCON P-370).

HW	WAC 173-303	N/A	July 4, 1994
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Note: Current cleaning and metal finishing facility sumps lack secondary containment, interstitial monitoring, and high level alarms. The existing facility also is located on a National Priority List (NPL) site requiring remedial action. MILCON Project P-336 "Regional Cleaning and Metal Preparation Facility Consolidations", programmed for FY 96, will establish a new facility meeting environmental compliance regulations and includes demolition of the existing facility to support remediation of the NPL site.

HW	WAC 173-303	N/A	July 4, 1994
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Note: Inactive underground hazardous waste storage tanks have been identified for RCRA closure.

No depot maintenance workloads or processes have been, or are expected to be, affected by the above environmental situations, pending satisfactory compliance by the dates shown.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

2.2 Has any actual or programmed work at this installation been restricted or delayed because of environmental considerations, such as air or water quality? If so, provide the details of the impact of the restrictions or delays.

Programmed Work      Restriction/Delay   Describe Impact

Actual/programmed work has not been restricted or delayed because of environmental considerations.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
2-2  
UIC N00253  
NUWC DIV KEYPORT

## Geographic, continued

### 3. Environmental Restrictions

*Answers to the following questions need to reflect the particular workloads or processes affected by the environmental restrictions/compliance.*

**3.1** Are there any special programs relating to environmental or industrial waste considerations for your activity? If so, provide the details.

#### Awards

- 1994 - Secretary of the Navy Pollution Prevention Team Award. This award reflects use of Total Quality principles to make 25% reductions in hazardous waste generated.
- 1993 - The first-ever Secretary of the Navy Meritorious Unit Commendation for Environmental Achievement.
- 1993 - Finalist, Secretary of the Navy Pollution Prevention and Recycling Award.
- 1993 - Finalist, Governor's Outstanding Achievement in Pollution Prevention Award. This award reflects achievements in meeting state voluntary waste reduction goals.
- 1992 - Kitsap County Industrial Recycling Award. This award reflects accomplishments in reducing solid waste generated.
- 1991 - Finalist, Secretary of the Navy Industrial Installation Environmental Quality Award. This award is for accomplishments made in the environmental programs at Keyport.
- 1989 - Finalist, Secretary of the Navy Natural Resources Conservation Award. This award reflects the achievements in habitat restoration, wetlands protection, and resource conservation.

a. Program Name: Pollution Prevention Program

Scope of Applicability: All industrial waste.

Description: An agreement with Washington State Department of Ecology requires reduction of Hazardous Materials used and Hazardous Waste generated by 50% by 1995. Seven unique teams made up of various industrial, environmental, and support personnel were formed to develop and implement pollution prevention projects. The team uses Total Quality principles to accomplish their tasks. The program considers all forms of pollution (air, water, soil, industrial waste) in a comprehensive multimedia approach.

b. Program Name: Integrated Industrial Recycling Program



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

Scope of Applicability: All industrial waste.

Description: A self-funded program for evaluating and implementing recycling opportunities in industrial operations and wastestreams. Program generates revenues from the sale of industrial wastes. Revenues are reinvested into the program.

c. Program Name: Hazardous Waste Management Program

Scope of Applicability: All industrial waste.

Description: A comprehensive program to control the collection, movement, storage, treatment, and disposal of hazardous and industrial waste generated. The program uses an innovative information system to link generators and site managers together, and all costs are charged back to the customer.

d. Program Name: Hazardous Material Management Program

Scope of Applicability: All industrial activities.

Description: This program ensures all hazardous material is tracked through a life-cycle process. The program links all locations which use or store hazardous materials through the same innovative information system described above. The program meets all the requirements of Emergency Planning Community Right to Know Act (E.O. #12856).

e. Program Name: Air Quality Program

Scope of Applicability: All industrial activities with air emissions.

Description: This program inventories, permits, controls, and aggressively reduces the amount of air pollutants emitted from industrial processes. All air operators attend annual training to enhance their qualifications in order to maintain equipment and reduce air emissions.

f. Program Name: Water Quality Program

Scope of Applicability: All industrial activities.

Description: This program inventories, monitors and aggressively reduces pollutants from effluents generated by industrial processes. The program is linked to the hazardous material management and pollution prevention programs to help target reduction of chemicals contributing to water pollution.

g. Program Name: Environmental Review of Industrial Activities

Scope of Applicability: All industrial operations.



**ADMINISTRATIVE SENSITIVE**

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UIC N00253  
NUWC DIV KEYPORT

Description: This program ensures environmental assessments are conducted on all industrial and construction operations. The program is integrated with the Division's Facilities Engineering program to guarantee complete review and coverage of all projects. The program reduces environmental impact of such operations.

h. Program Name: Natural Resources Management Program

Scope of Applicability: All industrial activities.

Description: This program ensures the compatibility of industrial operations with the surrounding environment. It manages all environmentally sensitive areas and conducts enhancement projects for wetlands and habitat to protect these fragile environments.

i. Program Name: Environmental Compliance Self Evaluation Program

Scope of Applicability: All industrial activities.

Description: Comprehensive program which conducts continuous review of compliance status of all industrial operations. Program provides instant feedback to industrial operators so they know where compliance emphasis needs to be placed.

j. Program Name: Drinking Water Program

Scope of Applicability: All industrial activities.

Description: This program ensures an adequate supply of clean drinking water is provided to NUWC Division, Keyport. The program operates a drinking water system which includes source management, collection, treatment, and distribution.

k. Program Name: Installation Restoration Program

Scope of Applicability: All industrial sites.

Description: This program actively pursues the cleanup of soils and groundwater contaminated by past industrial practices. The program involves the community, county, state, and federal representatives working with this Division to ensure total involvement in the process. The program has successfully completed removal actions at several sites.

3.2 Within what provisions must the activity operate with regard to disposal of hazardous wastes and radioactive materials?

<u>Type</u>	<u>Provisions</u>	<u>Describe</u>
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**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
3-3  
UIC N00253  
NUWC DIV KEYPORT

HW	40 CFR 260-270	All federal regulations pertaining to management and disposal of hazardous waste.
	WAC 173-303	Washington State Dangerous Waste Regulations.
	Puget Sound Air Pollution Control Agency Regulations	Operating under the authority of the Revised Code of Washington (RCW), this agency regulates discharges to the atmosphere and establishes control and mitigation methodologies.
	Puget Sound Water Quality Authority	Operating under the authority of the Revised Code of Washington (RCW), this agency regulates discharges (Point and Non-Point Source) to the Puget Sound and its tributaries and establishes protection and mitigation measures for the Puget Sound.
Radioactive	10 CFR 30 49 CFR 173	Radioactive materials are disposed of in accordance with Navy Radioactive Material Permits (NRC License equivalent).



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
3-4  
UIC N00253  
NUWC DIV KEYPORT

**Geographic, continued**

**4. Other Colocated Activities**

**4.1** Are there any colocated activities that directly benefit or relate to the depot maintenance activity? If yes, list and describe the impact of each. Include benefits derived from being colocated.

The broad mission and assignments of NUWC Division, Keyport create many beneficial relationships of colocated activities.

The mix of colocated assignments at NUWC Division, Keyport results in several internal relationships and benefits which can best be characterized as synergistic. Resources and facilities are shared among colocated assigned activities. Personnel can be applied to several types of tasks among these assigned activities, resulting in the best utilization of expertise and sharing of information. Colocated activities internal to NUWC Division Keyport include depot maintenance, in-service engineering, undersea ranges, torpedo explosive operations, and environmental testing. The summary result of these relationships is an activity which accomplishes its total mission assignments more effectively and efficiently than the tasks could be accomplished separately.

Specific details of these relationships and benefits of collocation are described in the following tabular listing and in responses to questions 4.2 and 4.3.

<u>Colocated Activity</u>	<u>Benefit/Relationship</u>	<u>Describe Impact</u>
Pacific Northwest Range System	<ul style="list-style-type: none"><li>• Provides unique colocated capability for testing of torpedoes following depot maintenance processing.</li><li>• Sample test of weapons ensures that processes and materials used in depot maintenance produce weapons which meet the operational requirements of the Fleet. Provides Fleet ships a safe range to experience and learn new undersea weapons systems with experts on hand for guidance.</li></ul>	<ul style="list-style-type: none"><li>• Improved weapon system reliability. Quick resolution of test anomalies and rapid retest with range close at hand.</li><li>• Offers more range opportunities at lower cost.</li></ul>



**ADMINISTRATIVE SENSITIVE**

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UIC N00253  
NUWC DIV KEYPORT

In-Service Engineering (Torpedoes, Combat Systems, Undersea Targets)

- Provides for close coordination of depot maintenance processes and operations with in-service engineering responsibilities for maintenance engineering, technical documentation, configuration management, modifications and upgrades, and reliability/maintainability analysis.
- In-service engineering personnel obtain first-hand knowledge of hardware problems.
- Improved life-cycle support for undersea systems. Reduced duplication of effort at multiple facilities and redundant engineering efforts. Puts engineering, maintenance, and testing in same locale.

Torpedo Explosive Operating Complex

- These facilities provide the initial stock point inventory support for the Fleet. Collocation with Torpedo Explosive Operating Complex provides capability to prepare and test weapons with warheads at completion of depot processing. Rapid and safe handling of explosive components for all undersea weapons.
- Safe and efficient handling of weapons components local to the depot process-not across high population areas.

Industrial Base

- Colocated industrial support enhances depot maintenance operations by providing depot maintenance shops with precision parts and materials when they are not available from the private sector. Fabricates hardware to drawing for obsolete parts, for last source, and for small lot quantities. Keyport fabricates Fleet hardware on short notice when other sources fail to deliver on time for deployment.
- Provides core capability surge capacity.
- Industrial support, surge capability, can quickly eliminate a Fleet shortage or emergent need for parts. Close to depot engineering and can provide repair or fabrication of unique parts on site and quickly.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

4-2

UIC N00253

NUWC DIV KEYPORT

Calibration Laboratory

- Provides responsive access to calibration resources for depot maintenance equipment. Minimizes downtime for calibration and repair of specialized test equipment which is critical to maintaining production schedules.
- Efficiency of depot operations. Require less investment in equipment, faster response time, with less chance of equipment damage.

Ordnance Storage Facility

- Provides safe, protected storage of reserve inventory of torpedoes.
- Collocation with depot facility affords quick access to the depot for preparing weapons for replenishment of Fleet inventories in the event of combat requirements.
- Inventory of reserve assets can selectively be used as a source of replacement hardware for depot maintenance repairs. This saves considerable cost of procuring new material.
- Ready access to war reserve assets. Quick turnaround of weapons just in time for Fleet needs with no delay to Navy ships or planes.
- Substantial cost savings for replacement hardware.

Torpedo Production Proofing

- Proofing (Acceptance Test and Evaluation) relies on depot support for equipment failure analysis and problem screening. The depot test equipment (many one of a kind) and the depot engineering capabilities provide on-site support that would otherwise need to be done at the vendor's facilities. The depot support during development and production allows repair and logistics problems to be identified, then corrected early in the process.
- Lowered cost and improved schedule for torpedo proofing.
- Information exchange that improves maintenance, production, and reliability.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

4-3

UIC N00253

NUWC DIV KEYPORT

Foreign Military  
Sales (FMS)

- Support of international customers is accomplished at the depot. Programs supported are MK 46 and MK 48 Torpedoes, Mobile Targets, and Combat Systems.
- Repair of depot level repairable (DLR) components similar to USN assets is accomplished.
- Cost efficiencies are realized for both US and international customers, by performing this work at one activity.
- International customers receive the benefit of receiving latest configuration upgrades to systems.
- Cost reduction for both USN and international customers.
- Customers benefit from USN depot expertise and improved system reliability improvements.

Depot Engineering

- Provides on-line engineering support to Depot process; resolves test equipment and procedural issues.
- Designs/develops new depot level test equipment required for new/modified systems.
- Procedures are maintained in compliance with applicable regulations and safety considerations.
- Synergy between similar in-service and proofing engineering support functions.
- Efficient and timely engineering direction for Depot functions.
- Ensures compliance to regulations.
- Improved material reliability.
- New programs are supported efficiently.
- Strong support to TDA and Program Sponsors.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
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UIC N00253  
NUWC DIV KEYPORT

Intermediate  
Maintenance  
Activity (IMA)

- Failures detected during routine IMA level maintenance are repaired and corrected in a very timely manner and at a significant cost savings.
- Test equipment upgrades/repair can be accomplished simultaneously.
- Costly and time consuming use of formal supply system for DLR's is avoided.
- Corrective actions developed during Depot repair can be implemented in real time at IMA.
- Shared engineering and other infrastructure resources reduces overall costs.
- Efficient and timely repair of Depot level components.
- Problem detection and resolution.
- Significant cost reduction through concurrent repairs and shared infrastructure.

Environmental Test  
Facility

- The Environmental Test Facility provides support for depot engineering through environmental conditioning of repairables prior to stress and screen test.
- Provides failure analysis of failed components received in the depot.
- Provides environmental test capability for unique undersea weapon systems hardware procured by the Navy.
- Synergism is realized between the depot and the environmental test activities with economies of not packaging and shipping to another facility.



**ADMINISTRATIVE SENSITIVE**

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4-5  
UIC N00253  
NUWC DIV KEYPORT

USW Information  
Resource  
Management (IRM)

- Shop Process Automation System (SPAS) provides on-line "Client-Server" collection of shop processing information; provides for a quality product by verification of mechanic certification, procedure and process compliance, and correct hardware/software baseline use; and collects discrepancy, process, configuration, logistics, etc. information.
- Technical Data Systems (TDS) collects Reliability, Logistics, Maintainability, Availability, and Performance Information; provides for historical tracking, trend analysis, fault isolation, inventory, and configuration management.
- Engineering Data Management Information Control System (EDMICS) provides an on-line electronic central repository of all technical/ engineering drawings and documents. It is the only government-owned CALS Compliant system.
- Improved weapon/ vehicle quality.
- Efficient utilization of resources and equipment by using common IRM systems across weapon programs and across Center functions.
- Assures weapon quality and reliability tracking. The system assists in fault isolation and efficient use of resources due to commonality of the system across numerous programs, and facilitates effective sharing of information between IMA, Contractor, ISE, and Depot functional areas.
- Assures personnel and programs have easy, and immediate access to the latest revisions of all technical documents and drawings related to their programs.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

4-6

UIC N00253

NUWC DIV KEYPORT

Supply System  
Stock Point

- NUWC Division, Keyport serves as a designated Supply System Stock Point for Undersea Warfare System repairable components. This service reduces added costs of shipping and stocking at remote stock points, since the designated depot for items stocked is colocated at the stocking activity. This also reduces the number of "pipeline" quantities necessary to sustain efficient throughput to meet Fleet readiness demands. Stock point collocation provides for the expeditious induction of repairable assets into the depot process since repairables are stocked waiting for induction as required by planned or emergent replacement needs. This greatly simplifies inventory control and accuracy (NUWC Division, Keyport has been recognized for inventory accuracy between 98 and 100% over the last 5 years.)
- Results in significantly reduced cost of investment for supply inventory due to shorter turnaround time in transportation and induction of assets.
- Improves response time of depot to repair requirements.



**ADMINISTRATIVE SENSITIVE**

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4-7  
UIC N00253  
NUWC DIV KEYPORT

#### 4. Other Colocated Activities, continued

4.2 Do colocated activities support, or are they supported by, the depot maintenance activity?

<u>Colocated Activity</u>	<u>Describe Relationship</u>
Pacific Northwest Range System	<ul style="list-style-type: none"><li>• NUWC, Division Keyport's Range Complex supports depot maintenance. Weapons prepared by the depot can be tested quickly and economically to ensure a high quality repair process is maintained. Weapons can be tested with little chance of loss or damage.</li></ul>
In-Service Engineering	<ul style="list-style-type: none"><li>• In-Service Engineering Assignments and depot provide mutual reciprocal support. Depot enhancements or improvements can be quickly evaluated and applied to Fleet processes. In-service engineers have immediate access to depot hardware and equipment to solve problems and explore anomalies encountered by Fleet operators.</li></ul>
Torpedo Explosive Operating Complex	<ul style="list-style-type: none"><li>• NUWC, Division Keyport's Torpedo Explosive Operating Complex supports depot with warhead processing. The proximity of the Explosive Complex offers in-service engineers and depot engineers access to the full spectrum weapon system for problem resolution versus dealing with parts of the system at a time.</li></ul>
Industrial Base	<ul style="list-style-type: none"><li>• Industrial base supports depot operations. This facility supports Keyport's depot operations to ensure repaired items are delivered to the Fleet on time. This facility is essential for supporting Fleet needs in the event of war. It provides a surge capacity for emergency repairs and enhances the depot's capability to maintain Fleet weapons systems readiness. It ensures sustainability of Fleet readiness for the future.</li></ul>



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

- |   |   |
|---|---|
| Calibration Laboratory                  | <ul style="list-style-type: none"> <li>• NUWC, Division Keyport's Calibration Laboratory supports depot operations. This lab is directly linked to the National Standard Lab and provides unique service to Keyport, as well as other military facilities. All depot test equipment and tools are calibrated through this lab.</li> </ul>   |
| Ordnance Storage Facility               | <ul style="list-style-type: none"> <li>• Torpedo depot supports preparation and surveillance of reserve torpedoes. Torpedoes are received, stored, and issued as ready for issue ammunition from this facility. This storage facility provides the only storage available for <u>explosive components</u> on which Keyport performs depot repair and testing. The depot repair and testing of explosive components is a vital link in the support of undersea weapons as a system versus component repair.</li> </ul> |
| Torpedo Production Proofing             | <ul style="list-style-type: none"> <li>• The depot supports proofing with test/repair and screening capabilities. On-site capability saves time and cost in test acceptance of new equipment.</li> </ul>  |
| Foreign Military Sales (FMS)            | <ul style="list-style-type: none"> <li>• Support of international customers is provided by the depot. The FMS customer has a U.S. activity to deal with for undersea weapons maintenance.</li> </ul>  |
| Depot Engineering                       | <ul style="list-style-type: none"> <li>• Depot engineering functions support depot maintenance. Depot engineering provides responsive capability to resolve technical problems in the depot maintenance process, analyzes failure data, and improves depot processes.</li> </ul>  |
| Intermediate Maintenance Activity (IMA) | <ul style="list-style-type: none"> <li>• Torpedo/target depots support the IMA's. The depot provides a responsive source of repair and test of assets beyond the capability of intermediate maintenance.</li> </ul>   |



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
 4-9  
 UIC N00253  
 NUWC DIV KEYPORT

## Environmental Test Facility

- The Environmental Test Facility and the depot support each other. When hardware is procured for undersea weapons, the Environmental Test Facility performs contractual testing to accept items used in depot maintenance to return weapons to service. The environmental lab and depot repair activity share expensive test equipment for both functions. To split locality on these functions would require two sets of some expensive undersea weapons test equipment that only exists at NUWC Division, Keyport.

## Supply System Stock Point

- The Supply System Stock Point function both supports and is supported by the depot operations. The synergy of the two operations, while independent functions, greatly enhances efficiency and economics of the overall depot maintenance process for Fleet support of undersea weapon systems. It minimizes pipeline quantities and throughput times and simplifies inventory control and logistics.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
4-10

UIC N00253  
NUWC DIV KEYPORT

USW Information Resource  
Management

- The Shop Process Automation System (SPAS) supports the Depot Maintenance Activity by collocating depot process information; providing mechanic, process, procedure, and material and software verification; and by utilizing information and providing information to other colocated activities, including the IMA, fabrication, contractor support, manufacturers, etc. The system is used to assure quality depot support is provided, and (due to the commonality) allows for the efficient use of personnel and resources between the various programs and activities.
- The Technical Data Systems (TDS) supports the depot as the repositories for all failure, reliability, performance, maintenance, availability, etc. information on the major underwater systems. The depot provides information to the TDS for historical tracking, logistics tracking, asset management, trend analysis, failure analysis, etc.; and utilizes this information in the TDS for assistance in fault isolation, repair, quality tracking, etc. Since the TDS is utilized by various undersea programs and functional activities, the system provides the depot with on-line access to information received by the IMA's, Proofing Activity, contractor and manufacturer activities, etc.
- The Engineering Data Management Information Control System (EDMICS) supports the depot by providing on-line technical documentation and technical drawings to depot, fabrication and development, ISE, and IMA personnel. The state-of-the-art system allows depot personnel immediate access to the latest drawings and technical documentation.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
4-11  
UIC N00253  
NUWC DIV KEYPORT

**Geographic, continued**

**4. Other Colocated Activities, continued**

**4.3** How would these activities and the depot maintenance activity function if they were not colocated?

<u>Colocated Activity</u>	<u>Describe Impact If Not Colocated</u>
Pacific Northwest Range System	<ul style="list-style-type: none"><li>• Reduced and more expensive in-water testing of torpedoes at some other ranges, with resultant loss of performance data.</li><li>• Substantially higher losses of expensive torpedoes by testing on ranges without recovery capability.</li><li>• If not colocated, the system approach to depot maintenance of weapons is lost, as well as ownership of the total process for the depot engineers and workers.</li></ul>
In-Service Engineering	<ul style="list-style-type: none"><li>• Degraded knowledge of hardware problems by in-service engineering personnel.</li><li>• Poorer access by depot to accurate technical information and requirements.</li><li>• Loss of visibility, and systems approach to full support of undersea weapons for the Fleet, which is the main function of in-service engineering. Manuals, hardware, drawings, test equipment, support equipment, and weapons are maintained in a systems approach versus the least desirable method, a component by component approach.</li><li>• Increased time and cost to resolve engineering related deficiencies discovered by the depot.</li></ul>



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
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UIC N00253  
NUWC DIV KEYPORT

Torpedo Explosive Operating Complex

- Inability to complete assembly and test of weapons for warshot configuration delivery to the Fleet inventory.
- Engineering support for explosive depot operations would be separate from area where work is performed.
- The Navy would lose the systems approach to Weapons maintenance and repair and rely on a disjointed explosives maintenance and inert maintenance with little systems integration.

Industrial Base

- Substantially degraded ability to respond to emergent requirements for light industrial support to meet depot maintenance production requirements and schedules.
- Less able to guarantee timely delivery of weapons to the Fleet.
- May not be able to fabricate Fleet hardware for which this division is the last source, parts are obsolete, or emergent small quantities are needed. Will not be able to fabricate on short notice hardware that other sources fail to deliver on time for deployments.

Calibration Laboratory

- Frequent disruption of production operations due to less responsive calibration support; missed schedules; and inefficient operations.
- Would need more equipment to operate at same level due to transportation delays.
- On-site calibration of large test equipment would require travel time and budgets not currently required.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
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UIC N00253  
NUWC DIV KEYPORT

Ordnance Storage Facility

- Reduced responsiveness in surging to quickly deliver reserve torpedoes to the Fleet in a mobilization scenario.
- Loss would result in multiple handling of weapons before delivery to the Fleet with more chance for error.
- Loss of a safe, controlled, highly specialized facility for handling new design, prototype, and non-standard explosive components separate from standard weapons handling.

Torpedo Production Proofing

- Loss of on-site test support would delay acceptance and eliminate the synergy of repair process development during acceptance.

Foreign Military Sales (FMS)

- Support of international customers by other activities would significantly increase their costs.
- Cost savings to the U.S. Navy through expanded workload from FMS customers would not be realized.
- System configuration and performance reliability of the components needing repair and upgrade would not be realized.

Depot Engineering

- Timely resolution of test equipment and process problems not addressed.
- Synergy between depot functions, in-service engineering, and depot engineering would not exist.
- Real-time support to new or development programs would not be accomplished.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

Intermediate Maintenance Activity  
(IMA)

- Timeliness and significant cost savings achieved by concurrent repair of failed components would be lost.
- Sharing of engineering, resources, and infrastructures would not occur.

Environmental Test

- If not colocated, the depot would be required to acquire specific unique undersea weapons test equipment (those equipments previously shared with Environmental Test) to conduct some required test after depot repairs are completed.
- Timely delivery to the Fleet of undersea weapons hardware procured, environmentally tested and ranged at Keyport for the Navy, would be impacted due to the loss of synergism between depot and environmental test resulting from separation of the activities.

Supply System Stock Point

- Considerable loss of efficiency due to increased pipeline quantities and throughput times.
- Added costs for shipping and stocking at remote stockpoints, loss of precious time for induction of assets for emergent needs, and added cost of inventory and logistic support for oversight of scattered inventories.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
4-15  
UIC N00253  
NUWC DIV KEYPORT

USW Information Resource  
Management

- Due to the requirement for immediate, high-speed data access, and the volumes of data utilized and provided by the depot (especially in the area of technical drawings and shop processing information), without the collocation of the numerous Information Resource Management (IRM) systems with the depot maintenance functions, the performance of the systems, the ability of the depot to efficiently perform these functions, and the cost savings realized by the collocation of these systems would be significantly compromised. The EDMICS system alone stores several trillion bytes of data, to handle the enormous quantities of data associated with technical drawing and documents.
- Without collocation, the cost savings and efficiencies realized from these system would be eliminated, and the processes supported by these systems would be returned to inefficient, error prone, and labor intensive manual processes.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
4-16  
UIC N00253  
NUWC DIV KEYPORT

## 5. Encroachment

5.1 Have operations at this activity been at all constrained to accommodate requests of the local communities?

Type of Encroachment   Operation Impacted   Describe

Local community concerns have not constrained the mission and operations of NUWC Division, Keyport. Open communications with local community groups have fostered understanding and cooperation with the general public.

5.2 Indicate any encroachment constraints on current or future operations that would restrict future expansion.

Type of Encroachment   Constraint on Expansion   Describe

There are no encroachment issues that impact or will impact mission performance. NUWC Division, Keyport monitors areas of potential concern stemming from its operations to ensure that encroachment does not become an issue.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
5-1  
UIC N00253  
NUWC DIV KEYPORT

## MEASURES OF MERIT

### Facilities and Equipage

#### 6. Unique or Peculiar Facilities

6.1 List unique or peculiar testing facilities, excluding equipment (e.g. runways, railheads, ports, tracks, ponds, etc.).

#### Test Facility

#### Describe uniqueness/Peculiarity

Pacific Northwest Range System

- The NUWC Division, Keyport system of undersea ranges is unique in providing high accuracy performance testing of undersea weapons and vehicles in shallow, medium, and deep depth environments.
- The Dabob Range site is recognized as the world's quietest and most secure saltwater range.
- The Quinault Range site is the only permanently instrumented shallow-water range, well-suited for testing in the littoral environment.
- The Nanoose Range site constitutes a shared facility with our close Canadian allies, which satisfies critical testing needs of both forces at reduced cost for each nation through shared support.
- Range firing/retrieval platforms include capability for retrieval of valuable weapons from deep bottom sites. The soft bottom in combination with depths which do not crush the weapons permits retrieval of intact weapons.
- Located in close proximity to depot facilities for quick access to depot turnaround of hardware. Minimizes degradation of weapons from corrosive compounds after range test. Minimizes transportation costs and delays.



ADMINISTRATIVE SENSITIVE

DATA CALL #14

6-1

UIC N00253

NUWC DIV KEYPORT

Torpedo Explosive  
Operating Complex

- Only U.S. depot/industrial facility with necessary provisions for assembling and testing explosives in complete warshot configuration for all torpedoes (MK 46, MK 50, MK 48, and MK 48 ADCAP).
- Satisfies all ESQD requirements in a facility outfitted with the required test systems.

Transducer Automated  
Test Facility (TATF)

- TATF is the only test facility in the Department of Defense which is able to perform testing of acoustic transducers for all U.S. Torpedoes (MK 46, MK 50, MK 48, MK 48 ADCAP) in production volumes. The facility employs highly automated collection and analysis of test data to keep costs low and throughput high.
- Provides self-contained shore-based testing of acoustic transducers to the extreme depths required to simulate operating environments and verify conformance with design specifications.
- Located adjacent to depot facilities, providing rapid turnaround of test articles.

Underwater Weapons  
Evaluation Facility  
(UWEF)

- UWEF is a unique land-based instrumented waterfilled pressure vessel in which undersea weapons can be tested under controlled conditions for portions of their operating envelope. It is the only such facility which provides for combined testing of both the propulsion systems and acoustics portions of the torpedoes.
- The completely controlled environment of this unique facility permits repeatability of tests not possible in natural bodies of water.
- Test in an enclosed vessel greatly reduces risk of damaged or lost hardware due to failure of the weapon system.
- For testing scenarios which do not require open water ranges, UWEF can provide system testing at reduced cost.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

6-2

UIC N00253

NUWC DIV KEYPORT

Environmental Test Facility

- Consists of a unique complex of environmental testing capabilities tailored to the requirements of torpedoes and undersea vehicles.
- Includes dynamic test capability for functional testing of undersea weapons hardware in combination with vibration, temperature, and pressure testing.
- Provides land-based test of torpedo propulsion systems under realistic operational conditions.
- Contains high-energy radiographic capability for x-ray analysis of warheads.
- Includes centrifuge facility specifically designed for torpedo test requirements.
- Vibration test facility is one of few sites with necessary size and force to test complete torpedoes to required specifications.
- Located adjacent to depot facilities, it provides rapid turnaround of test articles.

Torpedo Depot

- The torpedo depot facility is the only site (DoD or private sector) having the necessary combination of testing capabilities required to support depot operations for all torpedo components and subassemblies. The complex at NUWC Division, Keyport contains the testing capabilities and infrastructure to perform depot maintenance on MK 46, MK 50, MK 48, and MK 48 ADCAP Torpedoes.
- Includes automated test capability for most all electronics components and subassemblies.
- Unique, high accuracy, automated 3-axis rate-motion test system provides required test capability for gyro control systems employed in torpedoes.
- Acoustic test facilities are collected with the depot to provide in-water testing for depot related hardware.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-3  
UIC N00253  
NUWC DIV KEYPORT

USW Combat Systems  
Depot

- **Sonar System Testing**  
Only AN/BQQ-5 System Test Facility designed for integration testing of depot refurbished units prior to delivery to the Fleet for installation.
- Designed to be reconfigurable for testing of selected AN/BQQ-6 equipment.
- Additional testing capabilities include automatic continuity and isolation testing of cables, harnesses, and backplane chassis.
- **Combat Control System Testing**  
Unique CCS MK 1 System Test Facility designed for integration testing and/or unit-level testing of depot refurbished units prior to delivery to the Fleet for installation.
- Test facility is built to a configuration not available at other Navy/DoD maintenance sites.
- Additional testing capabilities include specialized standalone test sets used for testing equipment in the DWS/CS MK 118, AN/BSY-1, interface subsystems equipment, and retained equipment utilized in the CCS MK 2 system.
- **MK 113 Fire Control System Testing**  
Only MK 113 Fire Control System Lab/Test Facility available for testing of equipment and subassemblies prior to delivery to the Fleet.
- **Special Sonar System Testing (AN/BQQ-9, AN/BQR-15, AN/BQR-19, AN/BQR-21)**  
The Navy's only Lab/Test Facility available for testing of the associated sonar systems equipment and subassemblies.
- **CV/ASWM (Carrier ASW Module) System Testing**  
The Navy's only shore-based facility that houses a complete set of the three deployed system configurations. Provides capability for test of electronic subassemblies repaired in the depot.



ADMINISTRATIVE SENSITIVE

DATA CALL #14

6-4

UIC N00253

NUWC DIV KEYPORT

Undersea Targets Depot

- This facility is the only Navy location with the necessary combination of testing capabilities required to support depot operations for all Undersea Targets components and subassemblies.
- The targets depot provides sole support to three countries on three different target systems. It provides the only depot repair and logistics support for four U.S. Fleet IMA's. The repair and logistics integration permits fulfillment of Fleet requirements with minimum resources.

Torpedo Intermediate  
Maintenance Activity  
(IMA)

- IMA facilities for Mk 46, MK 48, and MK 50 torpedoes, as well as mobile targets are uniquely consolidated within NUWC Division, Keyport. The capacity of these facilities allows for support of multiple configurations, as well as for large scale maintenance and test efforts. Efficiencies result due to these capabilities.
- The capacity of these facilities allows for support of multiple configurations, as well as for large scale maintenance and test efforts. Efficiencies result due to these capabilities.
- These IMA facilities are the only sites world wide that concurrently support maintenance, proofing, R&D, and troubleshooting/failure analysis efforts.
- Unique testing capabilities/equipment allow for multi-faceted support of all maintenance, proofing, and test programs.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-5  
UIC N00253  
NUWC DIV KEYPORT

## MEASURES OF MERIT

### Facilities and Equipage

#### 6. Unique or Peculiar Facilities

6.2 Indicate the reasons that these facilities are required by the depot maintenance function.

#### Test Facility

#### Reasons Required for Maintenance

Pacific Northwest Range System

- Ranges constitute a vital resource for operational testing of torpedoes. This real world testing environment establishes confidence in the adequacy and quality of the processes used in depot maintenance. It provides an important validation of processes designed to ensure that deployed weapons will perform as required in the hands of the Fleet.
- Ranges with capability to consistently recover weapons are required in order to be able to retain costly weapons in the inventory and perform run/failure analysis.

Torpedo Explosive Operating Complex

- The Torpedo Explosive Operating Complex provides the necessary capability to complete processing of weapons hardware/systems maintained in the depot and configure torpedoes as warshot units ready to be delivered to the Fleet.
- Its unique testing capability in an explosive-safe environment permits test of completely assembled weapons to ensure that the system is operational before delivery to Fleet inventory. There is no industry/private sector capability to accomplish these explosives operations.
- Its location at a safe site in proximity to the depot facility minimizes transportation/packaging and handling of partially completed weapons.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

6-6

UIC N00253

NUWC DIV KEYPORT

Transducer Automated  
Test Facility (TATF)

- TATF provides necessary acoustic testing of transducer assemblies for torpedoes to ensure that all performance parameters are being satisfied prior to being assembled onto the weapon. Testing covers all critical acoustic/electro-acoustic parameters defined in weapons specifications.
- TATF achieves the necessary testing in an efficient, cost-effective process made possible by high automation for testing in production volumes.

Underwater Weapons  
Evaluation Facility  
(UWEF)

- UWEF permits rapid turnaround of test articles and test results, which is not achievable in open undersea ranges.
- UWEF permits very specific testing under carefully controlled conditions.

Environmental Test  
Facility

- Unique capabilities of the Environmental Test Facility provide necessary test of undersea warfare systems (especially weapons) to ensure that depot maintenance processes are producing units which continue to meet all required performance characteristics with respect to environmental conditions.
- The environmental facilities also test hardware in process to ensure that no unacceptable degradation has occurred due to age or other factors.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-7  
UIC N00253  
NUWC DIV KEYPORT

Torpedo Depot

- Comprises the complete range of test capability required to test components and subassemblies of torpedoes at all levels of assembly. Weapons supported are MK 46, MK 50, MK 48, and MK 48 ADCAP. Permits the depot to replenish Fleet inventories of complete weapons, functional subassemblies, and discrete modules with confidence of delivering quality operational hardware.
- Supports proofing and research and development requirements for production and developmental programs. Support of IMA level test equipment is also provided.

USW Combat Systems Depot

- Provides capability to perform functional operations test of mission essential equipment after accomplishment of depot refurbishment, restoration, or repair.
- Operational testing is required to verify that equipment and systems are Ready for Issue (RFI) prior to delivery and installation on Fleet platforms. Failure to test units prior to shipment increases costs and adds risk to Fleet schedules due to excessive troubleshooting incurred after installation on submarine platforms. Experience has shown that system level testing significantly reduces system installation time, costs, and risks.
- Test facilities provide essential testing resource for systems, subassemblies, and units to satisfy emergent Fleet casualty reports (CASREPs). Required hardware is quickly repaired and tested to restore the Fleet to full operational readiness.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-8  
UIC N00253  
NUWC DIV KEYPORT

Undersea Targets Depot

- Comprises the complete range of test capability required to test components and subassemblies of Undersea Targets at all levels of assembly. Permits the depot to replenish Fleet inventories of complete targets, functional subassemblies, and discrete modules with confidence of delivering quality operational hardware.

Torpedo Intermediate  
Maintenance Activity  
(IMA)

- Failed components from maintenance actions, proofing, and R&D efforts feed the depot maintenance function.
- Test equipment and procedures in the IMA's at Keyport are supported by the depot.
- Assembles and integrates full up weapons, less warhead assembly.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-9  
UIC N00253  
NUWC DIV KEYPORT

## MEASURES OF MERIT

### Facilities and Equipage

#### 6. Unique or Peculiar Facilities

6.3 How could the depot maintenance functions be performed without these specialized facilities?

##### Test Facility

##### Describe Testing Alternatives

Pacific Northwest  
Range System

- There are no alternative ranges which can provide the combination of capabilities to accomplish the required testing. Specifically, NUWC Division Keyport's ranges permit runs of negatively buoyant weapons and bottom recovery of intact weapons. This has permitted in excess of \$1.5 billion of hardware to be recovered and reused after range testing.
- Transshipment of weapons to distant (>1500 miles) ranges would permit some similar testing. However, these ranges do not have the required tracking accuracy, and use of distant ranges would entail additional costs. At other ranges, hardware which sinks to the bottom will crush under pressure, resulting in loss of significantly more hardware. Hardware losses will also occur due to corrosion of parts after the range run of the weapon. Quick access to the depot arrests this corrosion, saving many parts.

Torpedo Explosive  
Operating Complex

- Without the Explosive Operating Complex, the depot could not complete processing of weapons configured to warshot configuration. The depot would have no facility to complete assembly of the weapons with their warheads and perform necessary testing to verify that all weapon subsystems are operating correctly prior to delivery into Fleet inventory.
- There is no private sector alternative for accomplishing this explosives processing and testing.



ADMINISTRATIVE SENSITIVE

DATA CALL #14

6-10

UIC N00253

NUWC DIV KEYPORT

Transducer Automated  
Test Facility (TATF)

- No other facility is designed to accomplish specification testing of torpedo acoustic transducers in production volumes.
- Alternative would entail shipment of transducers to a remote site with slower test turnaround, substantial interference with other testing requirements at the remote site, and shipping delays and costs.

Undersea Weapons  
Evaluation Facility  
(UWEF)

- There is no other land-based facility which can perform the combination of in-water acoustic and propulsion systems testing of torpedoes and undersea targets.
- Alternatives are to not perform the tests in the tightly controlled conditions which this facility permits. Tests would have to be run on undersea ranges without the ability to control many environmental test parameters. Test runs cannot be aborted and hardware recovered as readily on undersea ranges as they can in the UWEF.

Environmental Test  
Facility

- The dynamic test capability of the Environmental Test Facility is unique.
- Alternative is to perform static bench testing in place of dynamic simulation conditions, at a cost of undiscovered intermittent failures occurring in weapons run on the ranges and delivered to the Fleet.

Torpedo Depot

- Test capability of the depot is a vital component of the depot's operation. Torpedo hardware (components, subassemblies, complete weapons) simply must be tested prior to delivery to Fleet inventories. There are no alternatives, since NUWC Division Keyport depot is the only facility of its kind with the full scope of testing capabilities required.



**ADMINISTRATIVE SENSITIVE**

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NUWC DIV KEYPORT

USW Combat Systems  
Depot

- For systems and equipment undergoing depot maintenance, Alternative 1 is to ship units and systems directly to the destination platform for installation. Units and systems would require test at system light-off. Impacts are very high risk to schedule of ship availabilities and likely increase in cost of overhaul. This approach entails test of complex systems with an unacceptably high number of unknowns as causes of operational failures. The shipboard environment is a much more difficult location in which to identify and correct failures.
- For systems and equipment undergoing depot maintenance, Alternative 2 is to design, develop, and fabricate special-purpose unit test equipment for each unique piece of equipment employed in sonar and combat control systems. Impacts would be extremely high development costs and high life-cycle maintenance costs for unique test equipment. While an improvement over Alternative 1, this costly approach cannot test for proper collective operation of system units with each other.
- For test of subassemblies and components required to satisfy an emergent immediate Fleet requirement, the alternative is to send untested hardware. This alternative entails a high degree of risk that the Fleet will not receive operating material to correct a critical deficiency.

Undersea Targets  
Depot

- Test capability in the depot is a vital component of the depot's operation. Undersea Target hardware (components, subassemblies, complete weapons) simply must be tested prior to delivery to Fleet inventories. There are no alternatives, since NUWC Division, Keyport depot is the only facility of its kind with the full scope of testing capabilities required.



**ADMINISTRATIVE SENSITIVE**

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6-12  
UIC N00253  
NUWC DIV KEYPORT

Torpedo Intermediate  
Maintenance Activity  
(IMA)

- The cost to perform depot maintenance would increase significantly without performing concurrent repair from the on-site IMA.
- Timeliness of depot repair of components would be impacted negatively without the colocated IMA's.
- Shipping and storage costs would increase without the colocated IMA's.
- Weapons could not be prepared as an all up round.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
6-13

UIC N00253  
NUWC DIV KEYPORT

**Facilities and Equipage, continued**

**7. Buildings and Their Condition**

7.1 List the buildings used to perform the depot maintenance functions by category code numbers (five or six digit CCNs), identifying their current condition (adequate, substandard, and inadequate) in Table 7.1 in thousands of square feet (KSF).

**Table 7.1: Facility Conditions**

CCN	Facility Type	Condition / Area (# KSF)			Comments
		Adequate	Substandard	Inadequate	
216-40	Torpedo Shop	32.5	45.0	9.6	
216-60	Quality Evaluation Laboratory	2.3	0.0	0.0	
216-77	Ammunition-Explosive Maintenance Storage	28.4	0.0	0.0	
218-10	Container Repair and Test Facility	34.5	0.0	0.0	
315-20	Underwater Weapons Systems Laboratory	188.0	49.2	0.0	



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

CCN	Facility Type	Condition / Area (# KSF)			Comments
		Adequate	Substandard	Inadequate	
317-20	Electrical and Electronic Systems Laboratory	74.4	0.0	0.0	
318-10	Propulsion Equipment Laboratory	1.4	0.0	0.0	
320-10	Underwater Equipment Laboratory	6.4	0.0	0.0	
421-32	Inert Storehouse	3.9	0.0	0.0	
423-10	Liquid Propellant Storage	N/A	N/A	N/A	Sized by capacity in gallon, not KSF
831-10	Sewage & Comb. Sewage Industrial Treatment Plant	N/A	N/A	N/A	Sized by capacity in gallon, not KSF
831-14	Industrial Waste Treatment Building	8.3	0.0	0.0	



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

CCN	Facility Type	Condition / Area (# KSF)			Comments
		Adequate	Substandard	Inadequate	
<b>Total</b>		380.1	94.2*	9.6**	

\*Substandard under current seismic evaluation criteria.

\*\*Denotes existing cleaning and metal finishing facilities which are inadequate to meet environmental compliance regulations and are located over a National Priority List (NPL) site requiring remedial action. MILCON Project P-336 "Regional Cleaning and Metal Preparation Facility Consolidations," programmed for FY 96, will enable NUWC Division, Keyport to perform cleaning and metal finishing operations in compliance with environmental regulations and allow demolition of the existing facilities for remediation of the NPL site.



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UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Facilities and Equipage, continued**

7.2 In Table 7.2.a, identify space available for expansion by building type for those facility category code numbers (five or six digit CCNs) that are most important to your mission. An activity's expansion capability is a function of its ability to reconfigure/rehabilitate existing underutilized facilities to accept new or increased requirements.

**Table 7.2.a: Space Available for Expansion**

Building ID / Type	CCN	Installation Space (KSF)			Total
		Adequate	Substandard	Inadequate	
Underwater Weapons Systems Laboratory	315-20	18	21	0	39
Torpedo Shop	216-40	0	2	0	2
Inert Storehouse	421-32	4	0	0	4
General Storage	441-35	4	0	0	4
<b>TOTAL:</b>		26	23	0	49



DATA CALL #14

7-4

UIC N00253

**ADMINISTRATIVE SENSITIVE NUWC DIV KEYPORT**

**Facilities and Equipage, continued**

**8. Unique and/or Peculiar Capabilities and Capacities**

**8.1** What unique and/or peculiar capabilities and capacities does the depot maintenance activity possess?

Depot Maintenance Capability/Capacity

Describe Why Unique/Peculiar

Torpedo Depot Maintenance

- NUWC Division, Keyport is the only activity, public or private, with the necessary facilities, equipment, and infrastructure to conduct the complete range of torpedo depot maintenance.
- Only facility with the equipment and processes required to test and repair depot level repairables for MK 46, MK 50, MK 48, and MK 48 ADCAP weapons. Specialized equipment includes automated test equipment (HP 9500, ATS-80, Teradyne L210) and manual test benches designed for fault isolation.
- Located adjacent to undersea ranges for in-water testing of torpedoes.
- Unique capacity to test torpedo acoustic transducers in production volumes.
- Only depot complex with required facilities and permits to assemble and test torpedoes with warheads.
- Only site with facilities, processes, and permits to reclaim, store, and/or dispose of hazardous materials related to torpedo fuels (e.g., Otto fuel, lithium).



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

8-1

UIC N00253

NUWC DIV KEYPORT

- Collocated with appropriate type and quantity of ordnance storage bunkers which allow storage of reserve inventories of torpedoes which can be readily drawn out and processed by the depot for emergent Fleet requirements in the event of major combat scenarios.
- Only depot complex with the necessary facilities, equipment, and personnel to provide the Title 10 core capacity for torpedo depot maintenance.

USW Combat Systems Depot

- NUWC Division, Keyport is the only depot activity with the systems and test equipment required to accomplish component, subassembly, and unit test of combat systems hardware.
- Extensive facilities comprised of the tactical equipment, unique power and cooling utilities, and complex interconnect cabling.
- Only depot complex with the necessary facilities, equipment, and personnel to provide the Title 10 core capacity to respond to a mobilization requirement for USW Combat Systems depot maintenance.

Undersea Targets Depot

- NUWC Division, Keyport is the only depot activity with the systems and test equipment required to accomplish component, subassembly, and complete system test of Undersea Targets hardware.

Submarine Launched Mobile Mine (SLMM) Depot

- NUWC Division, Keyport is the only depot activity with the systems and test equipment required to accomplish component, subassembly, and complete system test of SLMM hardware.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

8-2

UIC N00253

NUWC DIV KEYPORT

#### Reclamation of Otto Fuel

- Only depot complex with the necessary facilities, equipment, and personnel to provide the Title 10 core capacity to respond to a mobilization requirement for SLMM depot maintenance.
- NUWC Division Keyport is the only site with the facility to reprocess Otto fuel, which is used as the propulsion fuel for the MK 46, MK 48, and MK 48 ADCAP Torpedoes.
- This capability reclaims large amounts of highly hazardous material from around the world and makes it available for reuse, thereby avoiding significant disposal costs and procurement costs.

#### Foreign Military Sales

- The torpedo and target depots provide the only capability worldwide to fully test and repair all depot level repairable (DLR) components in these combined weapon systems.
- The depots maintain the procedures, equipment, material and resource capacity to support all users (USN and international) of these weapon systems.

#### Depot Engineering

- NUWC Division, Keyport maintain a strong contingent of engineering expertise to develop, maintain, and improve the unique depot processes for undersea warfare systems. Undersea warfare systems operate under extreme environmental conditions and employ complex technology. Depot engineering knowledge of system requirements, as well as test equipment and software constitutes a capability vital to the depot maintenance operation.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

8-3

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NUWC DIV KEYPORT

8.2 Separately list the depot maintenance facilities and equipment which are one of a kind within the Service and/or DoD.

Facility/Equipment

Describe Why It Is One of a Kind

Torpedo Depot

- Only Navy/DoD facility with equipment capable of testing all torpedo repairables to Ready-for-Issue specifications.
- Depot automated test equipment and associated Test Program Sets (TPS) employed for specification acceptance testing and fault isolation of torpedo electronics is of a unique configuration, existing only at NUWC Division, Keyport. This equipment is specifically configured in its range of capabilities and physical interfaces to satisfy the testing requirements of USW electronics.
- MK 46 Fueling Robot is a unique robotic facility for fueling and defueling MK 46 Torpedoes with hazardous Otto fuel. This greatly reduces the potential for human contact with hazardous material.
- MK 46 Engineering Control System is a unique automated process control system specifically designed for the MK 46 overhaul process. It incorporates interactive video job instructions and automated torquing stations.
- MK 50 Engineering Control System is the only automated configuration control and process monitoring system specifically designed for the MK 50 Torpedo overhaul process.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

8-4

UIC N00253

NUWC DIV KEYPORT

Pacific Northwest Range System

- MK 48 Data Gathering Process is an automated process control system specifically designed for the requirements of MK 48 Torpedo depot maintenance processes.

- Only complex of instrumented undersea ranges in proximity to depot maintenance facilities. This permits both prompt turnaround of ranged weapons in depot facilities and ready access to ranges for test of weapons processed through the depot.
- Only complex of undersea ranges with several operating depths and soft bottom which permits recovery of valuable torpedo hardware.

Lithium Decontamination Facility

- Only Navy/DoD facility with equipment, processes, and permits for disassembly, clean-up, and decontamination of hardware resulting from MK 50 Torpedo lithium boiler breach.

Otto Fuel Reclamation Facility

- Only Navy/DoD facility with equipment and processes capable of reclaiming residual Otto fuel after MK 46, MK 48, and MK 48 ADCAP Torpedo range testing. Process involves separation of fuel from sea water. Robotic fueling/defueling systems are employed. Reclaimed fuel is reusable for subsequent range testing.

Underwater Weapons  
Evaluation Facility

- Unique Navy/DoD land-based facility which permits simultaneous operational test and monitoring of acoustic and propulsion systems for torpedoes and targets.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14  
8-5

UIC N00253

NUWC DIV KEYPORT

Torpedo Explosive Operating  
Complex

- Only Navy/DoD facilities designed and certified for assembly and testing of warheads to all torpedoes.
- Facilitized with required test systems in buildings designed to meet safety requirements for ordnance (e.g., ESQD and HERO).



**ADMINISTRATIVE SENSITIVE**

DATA CALL #14

8-6

UIC N00253

NUWC DIV KEYPORT

**9. Acreage Available for Building**

**9.1** What acreage on the installation does the government own in the proximity of the depot maintenance area that could be used for future expansion? Identify in the table below the real estate resources which have the potential to facilitate future development and for which you are the plant account holder or into which, though a tenant, your activity could reasonably expect to expand. Developed area is defined as land currently with buildings, roads, and utilities where further development is not possible without demolition of existing improvements. Report in "Restricted" areas that are restricted for future development due to environmental constraints (e.g. wetlands, landfills, archaeological sites), operational restrictions (e.g. ESQD arcs, HERO, HERP, HERF, AICUZ, ranges) or cultural resources restrictions. Identify the reason for the restriction when providing the acreage.

**Table 9.1: Real Estate Resources**

Land Use	Total Acres	Developed Acreage	Available for Development	
			Restricted	Unrestricted
Maintenance	35	35	0	0
Operational	163	136	25 A, E	2
Training	0	0	0	0
R & D	0	0	0	0
Supply & Storage	1,010	666	320 B	24
Admin	27	27	0	0



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Housing	75	50	25 A, C	0
Recreational	50	40	10 C, D, E	0
Forestry Program	768	1	735 A	30
Agricultural Outlease Program	0	0	0	0
Hunting/Fishing Programs	0	0	0	0
Other	90	10	73 A, E	7
Total:	2,218	965	1,190	63

- A. Steep Slopes
- B. Explosive QD Arcs
- C. Quality of Life
- D. Archeological
- E. Wetlands



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Facilities and Equipage, continued**

**10. Administrative Space**

**10.1** What amount in square feet of administrative space could be made available to the depot maintenance function?

<u>Current Use</u>	<u>Square Feet</u>	<u>Potential Use (Be Specific)</u>
Personnel (B.1)	5,000	Electronic Module Repair, Inert Storage
Supply/Comptroller (B.12)	10,755	Torpedo/Target/Mine Depot
Military Housing (B.35)	2,205	Electronic Module Repair, Inert Storage
Command Headquarters	9,000	Electronic Module Repair, Inert Storage
Facility Engineering (B.94)	10,164	Electronic Module Repair, Inert Storage
Security (B.812/916)	2,539	Electronic Module Repair, Inert Storage
Safety (B.913)	3,708	Electronic Module Repair, Inert Storage
Supply (B.938/944/945/957)	<u>3,632</u>	Electronic Module Repair, Inert Storage
Total: 47,003		



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## 11. Industrial Waste

11.1 Are there any inhibiting factors that would limit future expansion on the base?  
Provide the details if applicable.

Inhibiting Factor                      Provide Detailed Description

There are no inhibiting factors that would limit future expansion on the base.

NUWC Division, Keyport has developed an outstanding comprehensive industrial waste management program to ensure that there are no inhibiting factors which would limit future expansion of the base. This program has received national recognition through such awards as the 1994 Secretary of the Navy Pollution Prevention Team Award and the first-ever Secretary of the Navy Meritorious Unit Commendation for Environmental Achievement in 1993. The program aggressively manages the entire spectrum of solid waste management, including paper and scrap metal wastes, hazardous wastes, wastewaters, air emissions, and effluent discharges. This flexible program handles high volume wastes (5,000,000 gallons of wastewater per year) as well as exotic wastes (Otto Fuel monopropellants and lithium metals). It is designed to reduce operational and disposal costs by ardently seeking out waste minimization and recycling opportunities. The program is fully integrated throughout this Division, and all hazardous materials and wastes are tracked and managed by a relational Environmental Management Information System.



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**MEASURES OF MERIT**

**Workload and Capabilities**

*Answers to the following questions are to reflect programmed amounts by commodity group, by activity in direct labor hours by Fiscal Year for FY 1996 through FY 1999.*

**12. Core Capabilities (DoD)**

**12.1** What is the amount of core capability required to support your own Service? Provide your answers in Table 12.1.a by commodity group for the Fiscal Years requested.

**Table 12.1.a: Service Required Core**

COMMODITY GROUP	Capability (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	825,379	825,379	825,379	825,379
<b>TOTAL</b>	825,379	825,379	825,379	825,379

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Workload and Capabilities, continued**

**12. Core Capabilities (DoD), continued**

**12.2** What is the amount of capability retained for the performance of other Services core? Provide your answers in Table 12.2.a by commodity group for the Fiscal Years requested.

**Table 12.2.a: Core Capability Retained for Other Services**

COMMODITY TYPE	Capability (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	0	0	0	0
Total	0	0	0	0

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Workload and Capabilities, continued**

**12. Core Capabilities (DoD), continued**

**12.3** What portion of the Service Core capability identified in the 12.1a above is identified as Service-Controlled Core (Title 10 responsibility)? Provide your answer in Table 12.3.a by commodity group for the Fiscal Years requested.

Table 12.3.a: **Service-Controlled Core (Title 10)**

COMMODITY GROUP	Capability (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	825,379	825,379	825,379	825,379
TOTAL	825,379	825,379	825,379	825,379

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Workload and Capacities, continued**

**13. Core Workloads**

**13.1** What are your total Core Workloads to be applied against capabilities identified in Tables 12.1a and 12.2a)? Provide your answer (DLH) in Table 13.1.a by commodity group for the Fiscal Year requested.

**Table 13.1a Total Core Workloads**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	820,692	703,082	698,012	733,969
<b>TOTAL</b>	820,692	703,082	698,012	733,969

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**14. Other Workloads (Above Core)**

**14.1** What above core workloads do you perform by these source categories? Use the most appropriate category, but do not duplicate workload on more than one table. Provide answers in Tables 14.1.a through 14.1.g by commodity group for the Fiscal Years requested.

**Table 14.1.a: FMS Above Core Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	9,663	12,670	9,545	8,931
<b>TOTAL</b>	9,663	12,670	9,545	8,931

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**14. Other Workloads (Above Core), continued**

**Table 14.1.b: Interservice Above Core Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	0	0	0	0
<b>TOTAL</b>	0	0	0	0

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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Table 14.1.c: Other Agency Above Core Workload

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	0	0	0	0
<b>TOTAL</b>	0	0	0	0

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**14. Other Workloads (Above Core), continued**

Table 14.1.d: Last Source of Repair Workload

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	0	0	0	0
<b>TOTAL</b>	0	0	0	0

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Workload and Capabilities, continued**

**14. Other Workloads (Above Core), continued**

**Table 14.1.e: Within Service Above Core Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	0	0	0	0
<b>TOTAL</b>	0	0	0	0

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Workload and Capabilities, continued**

**14. Other Workloads (Above Core), continued**

**Table 14.1.f: Low Quantity Above Core Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	8,297	8,526	8,514	8,514
<b>TOTAL</b>	8,297	8,526	8,514	8,514

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**14. All Other Workloads (Above Core), continued**

Table 14.1.g: All Other Workload (Above Core)

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	114,668	105,982	144,082	122,982
<b>TOTAL</b>	114,668	105,982	144,082	122,982

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workloads and Capabilities, continued**

**14. Other Workloads (Above Core), continued**

**Table 14.1.h: Total Above Core Workload  
(Sum of Tables 14.1.a through 14.1.g)**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	132,628	127,178	162,141	140,427
<b>TOTAL</b>	132,628	127,178	162,141	140,427

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**15. Unique and/or Peculiar Workloads (Refer to Question 8.1)**

**15.1** What amount of the workload reported in question 8.1 is Core? Provide your answer in Table 15.1 by commodity groups for the Fiscal Years requested.

**Table 15.1: Unique and/or Peculiar Total Core Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	820,692	703,082	698,012	733,969
<b>TOTAL</b>	820,692	703,082	698,012	733,969

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**Workload and Capabilities, continued**

**15. Unique and/or Peculiar Workloads (Refer to Question 8.1), continued**

**15.2** What amount of the workload reported in question 8.1 is non-Core? Provide your answer in table 15.2 by commodity group for the Fiscal Years requested.

**Table 15.2: Non-Core Unique and/or Peculiar Workload**

COMMODITY GROUP	Workload (DLHs)			
	FY 1996	FY 1997	FY 1998	FY 1999
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, Other USW Systems)*	132,628	127,178	162,141	140,427
<b>TOTAL</b>	132,628	127,178	162,141	140,427

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

## Workload and Capabilities, continued

### 16. Scope of Work Performed

16.1 Indicate the services/functions performed at this activity that are associated with depot maintenance, but not generally classified or considered as integral to the depot maintenance functions.

#### Service/Function

#### Description

Undersea Ranges

- Undersea ranges operated by NUWC Division, Keyport are a resource which provides an important opportunity to perform operational tests of undersea weapons systems and platforms. The ranges afford a capability to test systems in shallow-water, medium depth, deep depth, and open ocean environments. They are instrumented to provide accurate tracking of location and recording of telemetry data for weapons, targets, and submarines.
- The undersea range complex operated at NUWC Division, Keyport has the unique depth and bottom characteristics which permit recovery of intact torpedoes from the floor of the ranges. This important and unique feature precludes the loss of large numbers of very expensive weapons. In the past 25 years, this Division's recovery vehicles have recovered over 2,900 units from the sea bottom, saving over \$1.5 to \$2 billion in hardware replacement costs.



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Hazardous Material Processing

- NUWC Division, Keyport provides processing of specific hazardous materials associated with undersea weapons systems. Specifically, facilities and processes are employed to process unspent fuel and contaminated hardware from torpedo propulsion systems. Unspent fuel from MK 46, MK 48, and MK 48 ADCAP Torpedoes is collected and processed for reutilization, rather than disposing of it, resulting in significant cost savings. Contaminated hardware from lithium-reactor vessels used in propulsion of MK 50 Torpedoes are decontaminated and residual wastes are safely disposed of. NUWC Division, Keyport is the worldwide center for collection and processing of these hazardous materials.

Environmental Test Facility

- Provides vibration and temperature cycling tests combined with functional operation in a laboratory setting through land-based propulsion test services.
- Diagnoses comprehensive and intermittent failures that occur in dynamic range and Fleet operations.
- Provides dynamic non-destructive testing and operation of rebuilt and upgraded hardware to disclose workmanship defects.
- Provides quality evaluation of spare parts procurement by testing periodic samples of production runs.

Instrument Calibration

- Provides Level II calibration services for all depot measurement Calibration devices used in acceptance testing. Calibration standards are traceable to the National Bureau of Standards.

Failure Analysis

- Provides chemical, radiographic, and mechanical failure analysis services of recurrent failure modes and of hardware failing after depot maintenance.



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Undersea Weapons  
Storage

- War reserve undersea weapons are prepared for storage and stored in bunkers at NUWC Division, Keyport. The weapons are stored in a recoverable state, should a mobilization scenario require more than the inventory immediately available to the Fleet. Bunker areas and stored weapons are monitored for safety, security, and any indications of degradation of the weapons.

Information Resource  
Management (IRM)

- NUWC Division, Keyport develops and manages Information Resource systems and software for tracking torpedo inventory configuration, maintenance processes, and operations. These systems serve as a networked, on-line resource for maintenance and management sites associated with torpedo operations throughout the United States.
- NUWC Division, Keyport provides analysis, reporting, and data storage for in-water test programs.
- Undersea Weapon repair, turnaround, alteration, and configuration information is reported to and stored by the IRM facility.

Torpedo In-Service  
Engineering

- In-service engineering tasks encompass test support, technical documentation maintenance, performance and maintenance data analysis, maintenance engineering, Fleet technical support, data management, supply support, and technical oversight of repair facilities.

Combat Systems In-Service  
Engineering

- Encompasses operation of the Technical Manual Maintenance Activity, Fleet training support, supply support operations, Test Set program development, and Diminishing Manufacturing Sources and Material Shortages tasks.



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Supply System Stock Point

- NUWC Division, Keyport serves as a designated Supply System Stock Point for Undersea Warfare System repairable components. This service reduces added costs of shipping and stocking at remote stock points since the designated depot for items stocked is collocated at the stocking activity. This also reduces the number of "pipeline" quantities necessary to sustain efficient throughput to meet Fleet readiness demands. Stock point collocation provides for the expeditious induction of repairable assets into the depot process, since repairables are stocked waiting for induction as required by planned or emergent replacement needs. This greatly simplifies inventory control and accuracy (NUWC Division, Keyport has been recognized for inventory accuracy between 98 and 100% over the last 5 years.)

Depot Engineering

- Provides responsive engineering support to the depot in the form of technical oversight, procedure generation, compliance with regulations and safety concerns and failure analysis.
- Synergy with in-service and IMA support engineering efforts creates efficiencies and improved reliability of weapon systems.



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## Quality Program

- NUWC Division, Keyport's quality program provides a focused commitment to continuous improvement of all functions and processes. This Division is recognized as a national leader in implementing the principles of Total Quality while pursuing its vision, "Quality for our Customers...Improvement for our Future!" The success of these efforts was recently demonstrated when NUWC Division, Keyport received the 1994 National Quality Improvement Prototype Award as one of only three winners in the entire Federal Government. When announcing the awards, Michele Hunt, Director of the Federal Quality Institute, said, "These organizations are among the very best in government. They exemplify the vision of the Vice President's National Performance Review--a government that works better and costs less. The employees in these defense centers are demonstrating what a customer-centered government can do when there is a strong shared vision and a commitment to excellence throughout the organization." In recognizing NUWC Division, Keyport's achievement, The Honorable John H. Dalton, Secretary of the Navy, said, "You were the only Navy applicant selected as a 1994 Finalist. Your selection as a Winner for a first time applicant is unusual in the history of this award and is a credit to your people...the men and women who made this happen, both civilian and military...I congratulate you on a job extremely well done and an award that is very well deserved!"



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16.2 Describe how these services/functions are related to accomplishment of the depot maintenance mission, and the benefits of these relationships.

<u>Service/Function</u>	<u>Description</u>
Undersea Ranges	<ul style="list-style-type: none"><li>• Undersea ranges provide the resources for periodic test of weapons systems processed by the depot. These operational tests afford an important opportunity to ensure that the maintenance processes and tests accomplished in the depot continue to ensure that high quality systems are delivered to the Fleet.</li><li>• Location of the depot in close proximity to the ranges ensures that weapons which are ranged can be quickly processed to minimize corrosive damage to internal propulsion hardware. Hydrogen cyanide is a corrosive by-product of fuel combustion which causes significant damage to hardware if not processed quickly. Close location of the depot to the ranges allows most hardware to be reused in the weapons, saving significant costs of replacing components.</li></ul>
Hazardous Material Processing	<ul style="list-style-type: none"><li>• Operation of the specialized facilities for processing of hazardous materials constitutes a resource at which the depot can safely dispose of and/or reprocess them. This service provides a cost-effective, environmentally safe method for dealing with these hazardous and toxic substances.</li></ul>
Environmental Test Facility	<ul style="list-style-type: none"><li>• The depot maintenance functions provided by the combination of functions available cannot be obtained locally. Static diagnostic bench testing would have to be performed in place of testing under dynamic simulation conditions at a cost of undiscovered intermittent failures occurring in the Fleet and on the ranges. Periodic testing of spare parts procurement would have to be performed at the nearest government facilities in San Diego.</li></ul>



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- Instrument Calibration
  - On site calibration support enables the depot to maintain a minimal amount of shop equipment due to quick turnarounds. Special and emergency calibrations are facilitated. Test capabilities of the Calibration Lab are sometimes utilized for performing special depot tests.
  
- Failure Analysis
  - Provides the means for determining emerging depot maintenance requirements due to aging, over use, and misuse. Provides the means for improving the workmanship practices employed in the depot maintenance processes.
  
- Undersea Weapons Storage
  - Depot facilities prepare the weapons for bunkering in a recoverable state. Depot personnel monitor the bunkered weapons and bunkering facility to assure the recoverability of the weapons.
  
- Information Resource Management (IRM)
  - Undersea Weapon repair, turnaround, alteration, and configuration information is reported to the IRM facility by the depot and the IMA's. Depot engineers use this data to assist in failure analysis of hardware.



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**ADMINISTRATIVE SENSITIVE NUWC DIV KEYPORT**

Combat Systems In-Service  
Engineering

- The sonar and combat systems depot labs provide a synergistic relationship with Technical Manual Maintenance Activity functions, such as Technical Manual Discrepancy Reports (TMDR's.) TMDR's benefit from lab use by hands-on validations and verification of proposed changes.
- Fleet training uses lab and depot repair functions for developing curriculum, designing/developing pre-faulted modules, and validating them in actual system performance tests.
- System test facilities and depot repair benefit supply support operations by providing Fleet support (e.g., CASREP's and urgent material requests). Components are tested in system labs prior to Fleet delivery.
- Test Program Set (TPS) development engineering also supports depot test, repair, and troubleshooting operations. This link provides the most in-depth knowledge available for repair support. TPS engineering benefits by proximity to where the tests are actually used, and can target test design to specific failure modes not seen at the manufacturer (e.g., component age-related failures).
- DMS/MS works hand-in-hand with depot repair by testing new designs and solutions in circuit cards or depot labs to ensure solution validity and viability. Required upgrades can be made at the depot with DMS/MS oversight. Additionally, the depot can bring new DMS/MS cases directly to the DMS/MS working group, who can validate the case on-site.



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Supply System Stock Point • The Supply System Stock Point function both supports and is supported by the depot operations. The synergy of the two operations, while independent functions, greatly enhances efficiency and economics of the overall depot maintenance process for Fleet support of undersea weapon systems. It minimizes pipeline quantities and throughput times and simplifies inventory control and logistics.

Depot Engineering • Colocating depot engineering support with the depot achieves time and cost efficiencies.

- The quality and reliability of the work performed by the depot is enhanced by having on-site engineering support.
- Compliance with regulations and safety rules is ensured by having on-site engineering support.

Quality Program • Quality of products and processes is fundamental to depot operations to ensure that weapon systems delivered to customers are of high quality.

- The 1994 National Quality Improvement Prototype Award winning quality program provides focused attention on continuous improvement of depot operations to maximize performance and value to the customer. This installation-wide commitment ensures integration of depot quality initiatives with all operations at NUWC Division, Keyport.



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## Workload and Capabilities, continued

### 17. Interface with Customers

17.1 Indicate any special functions that the depot maintenance function performs that require close interface with customers, such as on-site workloads (e.g. technical assistance, crash/battle damage repairs, modification/upgrade installations).

<u>Service/Function</u>	<u>Describe Required Interface/Relationship/Benefit</u>
On-Site Fleet Support	<ul style="list-style-type: none"><li>• Technical assistance is provided on-site to both US Fleet and FMS IMAs and depots. In the case of IMAs this usually involves repair of test equipment or on-site installation of weapon modifications/upgrades. In the case of FMS depots the technical support is initial set up and periodic reviews.</li></ul>
ORDALT Verifications	<ul style="list-style-type: none"><li>• NUWC Division, Keyport depot facilities are tasked and used by the In-Service Engineering Agent to perform the verification walk through of new ordnance alterations and modifications. In the case of the MK 50 Torpedo, the depot automated test equipment provides the means for In-Service Engineering to validate software changes for Depot/Factory Test Equipment.</li></ul>
Combat Weapon System Material Receipt and Deliveries	<ul style="list-style-type: none"><li>• Constant communication is required to coordinate receipt of materials prior to a refurbishment. Constant communication is also required with the installation site to assure continually changing delivery requirements are met.</li><li>• Coordination is maintained throughout the shipyard installation process. Technical assistance, including on-site visits, are performed to assist in the installation.</li></ul>
Module Screening and Repair Activity Support	<ul style="list-style-type: none"><li>• Close interface with MSRA activity is required for rehosting of depot Test Program Sets to the MSRA (I-level).</li></ul>
Physical Configuration Audit (PCA)	<ul style="list-style-type: none"><li>• Validation of physical configurations involves depot engineering to ensure testability and maintainability.</li></ul>



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Technical Manual  
Verification

- During the development of Technical Manuals for new systems, depot engineering personnel provide on-site support at contractor facilities to ensure technical adequacy and maintainability of the technical documentation.

Progressive Depot Level  
Repair (PDLR)

- The depot provides modified depot repair procedures to the PDLR and performs walk-throughs and modifications to existing PDLR repair procedures. Depot engineering provides engineering support and failure analysis for the PDLR.

Heavyweight Data  
Gathering Program

- Heavyweight Depot engineers and technicians travel to all IMA's and, using IMA personnel, perform a structured teardown of heavyweight torpedoes. All personnel and hardware discrepancies found during the teardown process are recorded. This data is used by the ISEA, IMA's, and depot to improve torpedo hardware, depot repair, and IMA turnaround processes.

Quality Discrepancy  
Report (QDR) Responses

- Depot repaired hardware found by the IMA as defective is returned to the Depot with a QDR. The Depot reviews the QDR and performs failure analysis on the failed hardware. If the failure was due to depot work, the hardware is repaired at no cost to the customer. The results of the failure analysis are reported to the IRM, and changes to the depot repair process/procedures are made as required.



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**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

Torpedo Certification  
Evaluation Board (TCEB)

- A Depot representative is a member of the TCEB team and participates in recertification of the IMA's. This provides an opportunity for depot personnel to review the IMA operations and provide input as required to assist the IMA to improve their processes and transport new ideas from the IMA's to the depot.

Foreign Military Sales  
(FMS)

- Depot personnel provide technical assistance to international customers, both on-site and in a consulting role.
- International trainees visit and train in depot facilities as part of short and longer term training programs. These programs include MK 46 Torpedo maintenance, Quality Assurance, MK 48 Torpedo maintenance, and mobile targets.
- Depot personnel assist with in-country certification assists.
- Repair of components and test equipment for international customers is accomplished.

Ready For Issue  
Verification (RFIV)

- NUWC Division, Keyport depot engineers and technicians make regular trips to each Fleet IMA. A randomly selected weapon is disassembled and any problems (personnel or material) are identified. The disassembly and problem identification is a joint IMA/depot personnel effort. This program is key for ongoing training of IMA personnel and provides a measure of Fleet readiness.

MK 541 Test System  
Upgrades

- NUWC Division, Keyport's depot technicians go to the Fleet IMA, access test set condition and then develop a refurbishment plan. After required materials are identified, the upgrades are conducted on-site as a cooperative effort with IMA & Depot personnel.



DATA CALL #14  
17-3  
UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**MEASURES OF MERIT**

**Costs**

**18. Real Property Maintenance (RPM)**

**18.1** What is your activity's backlog of real property maintenance for facilities performing depot maintenance as of 30 September 1993 (express in \$K)?

NUWC Division, Keyport has zero critical maintenance backlog.

**18.2** What were your activity's annual RPM expenses (in \$K) for Fiscal Years 1990-1993?

Provide your answers in Table 18.2.

**Table 18.2: Real Property Maintenance Expenses**

	<b>FY 1990</b>	<b>FY 1991</b>	<b>FY 1992</b>	<b>FY 1993</b>
RPM Expenses (\$K)	1,367	1,807	1,725	1,967



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18-1  
UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**19. Annual Operating Costs (Excludes Materials used in Depot Maintenance Workloads)**

**19.1** What were the total depot maintenance actual annual operating costs for your activity (AOC/\$K), excluding materials, used in depot maintenance workloads for Fiscal Years 1990-1993? What was the cost per direct labor hour (\$DLH) for actual executed hours reported in the DBOF? Provide your answers in Table 19.1.a.

Table 19.1: Annual Operating Costs

EXPENSE	FY 1990	FY 1991	FY 1992	FY 1993
AOC (\$ K)	64,178	59,087	60,746	62,032
\$ / DLH	47.97	50.80	51.44	54.31



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19-1  
UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Costs, continued**

**20. Environmental Compliance**

**20.1** What were your total depot maintenance actual and programmed environmental compliance costs (expressed in \$K) for Fiscal Years 1990-1997? Provide your answers in Table 20.1.

Table 20.1: **Environmental Compliance Costs**

<b>COST(\$K)</b>	<b>FY 1990</b>	<b>FY 1991</b>	<b>FY 1992</b>	<b>FY 1993</b>	<b>FY 1994</b>	<b>FY 1995</b>	<b>FY 1996</b>	<b>FY 1997</b>
Actual	985	1089	2243	1172	1200			
Programmed					2,288	1044	1,513	1379

**20.2** If spending is accomplished as programmed above, what will be the remaining costs (backlog at the end of Fiscal Year 1997 expressed in \$K) to bring existing facilities/equipment into environmental compliance?

The projected backlog after FY 97 is \$250K.



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20-1  
UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**21. Local Wage Rate**

**21.1** What were your Department of Labor local wage rates for a WG-11, step 3 for Fiscal Years 1991 through 1994?

Table 21.1: Wage Rate

Wage Rate	FY 1991	FY 1992	FY 1993	FY 1994
WG-11 / Step 3	\$14.99	\$15.61	\$16.18	\$16.82



DATA CALL #14  
21-1  
UIC N00253

**ADMINISTRATIVE SENSITIVE** NUWC DIV KEYPORT

**Costs, continued**

**22. Programmed Capital Investments**

**22.1** How much is programmed for new mission equipment for Fiscal Years 1996 through 1999? Provide your answer (in \$K) in Table 22.1.

**22.2** How much is programmed for replacement equipment for Fiscal Years 1996 through 1999? Provide your answer (in \$K) in Table 22.1.

**Table 22.1: Programmed Capital Investments**

<b>TYPE</b>	<b>FY 1996</b>	<b>FY 1997</b>	<b>FY 1998</b>	<b>FY 1999</b>
New Mission (\$K)	0	0	0	0
Replacement (\$K)	907	1,800	1,177	417



DATA CALL #14  
22-1  
UIC N00253

ADMINISTRATIVE SENSITIVE NUWC DIV KEYPORT

Naval Undersea Warfare Center Division Keyport  
BRAC 95 Data Call 14 Submission

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears  
Signature

Commander  
Title

11 May 94  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~NAME (Please type or print)~~

~~Signature~~

~~Title~~

~~Date~~

~~Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

G. R. STERNER  
NAME (Please type or print)

G. R. Sterner  
Signature

Commander  
Naval Sea Systems Command

5-1394  
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

J. B. Greene, Jr.  
NAME (Please type or print)

J. B. Greene, Jr.  
Signature

Acting  
Title

27 May 1994  
Date

**BRAC-95 CERTIFICATION**

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with the policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**ACTIVITY COMMANDER**

NAME: Dennis K. Gibbs  
(Please type or print)

  
Signature

Commander  
Title

11 May 94  
Date

**NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT**  
Activity

Title \_\_\_\_\_  
 Operations (Logistics)  
 NAME (Please type or print) \_\_\_\_\_  
 Deputy Chief of Naval Operations (Logistics)  
 S. F. Loftus  
 DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
 DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)  
 Signature \_\_\_\_\_  
 Date 23 FEB 1994

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

Activity \_\_\_\_\_  
 Title Major Des ST Comm L  
 NAME (Please type or print) K. P. Mally  
 Signature \_\_\_\_\_  
 Date 2/17/94  
 MAJOR CLAIMANT LEVEL

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

Activity \_\_\_\_\_  
 Title \_\_\_\_\_  
 NAME (Please type or print) \_\_\_\_\_  
 Signature \_\_\_\_\_  
 Date \_\_\_\_\_  
 NEXT ECHelon LEVEL (if applicable)

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

Activity \_\_\_\_\_  
 NAVAL UNDERSEA WARFARE CENTER  
 Title \_\_\_\_\_  
 COMMANDER  
 NAME (Please type or print) S. L. SEARS  
 Signature \_\_\_\_\_  
 Date 10 February 94  
 NEXT ECHelon LEVEL (if applicable)

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

Signature \_\_\_\_\_  
 Date \_\_\_\_\_  
 NEXT ECHelon LEVEL (if applicable)

SEARX  
2/16/94  
37

# Document Separator

**CAPACITY ANALYSIS:  
DATA CALL #4 WORK SHEET FOR  
TECHNICAL CENTER or LABORATORY: Naval Undersea Warfare Center Division,  
Keyport**

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\*\*\*\*\*If any responses are classified, attach a separate classified annex. \*\*\*\*\*

7 April 1994



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
i  
UIC N00253  
NUWC DIV KEYPORT

**1. Historical and Projected Workload.** Use Tables 1.1, 1.2, 1.3 & 1.4 below to provide historical and currently projected workload data for your activity in terms of funding and workyears. Assume previous BRAC closures and realignments are implemented on schedule. Dollar amounts should be in then-year dollars. Workyears should be separated for in-house government efforts and on-site contractor work.

a. Use Table 1.1 to provide data on your site.

b. Use Table 1.2 to provide data on your Detachments that did not receive this Data Call directly. Compile the information from all of these Detachments into one table. Attach a list of the titles & UIC's of the Detachments included in the table.

c. For FY's 1993 thru 1997 provide a breakout of the "Total Funds Budgeted" line showing the appropriation and amounts of funding budgeted from your major customers. Major resource Sponsors are defined as, but not limited to, all systems commands, ONR, SSPO, CNO, FLT CINCS, Other DON, Other DOD by Department, Other Federal Government, All other. Use Table 1.3 to report this breakout for your site. Use Table 1.4 to report this breakout for your compiled Detachments that did not receive this Data Call directly. Provide separate tables for FY's 1993 thru 1997.

Use the following definitions when providing data for the tables below:

Workyears: Consistent with those used in the preparation of inputs to the President's budget.

In-House government efforts or In-House workyears: Includes both military and civil servant employees

On-Site Contractor workyears: Actual or estimated workyears performed by support contractors with workyears defined consistent with the definition used in the President's budget.

On-site Contractors: Those contractors that occupy space directly on the site on nearly a full time basis.

Total Funds Budgeted: The funds used as inputs to the President's Budget.

Civilian Personnel On-Board: Full Time Permanent employees (FTP).



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-1  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.1 Historical and Projected Workload for NUWC Division, Keyport  
(UIC N00253)**

<b>Fiscal Year</b>	<b>Total Funds Budgeted (\$K)</b>	<b>Total Funds Received w/o Direct Cite (\$K)</b>	<b>Direct Cite Funds Received (\$K)</b>	<b>Budgeted Wkyrs</b>	<b>Actual In-House Wkyrs</b>	<b>Actual Onsite Contract Wkyrs</b>
86	257,617	230,341	433	3,277	3,293	1,104
87	273,314	218,337	<463>	3,173	3,149	1,272
88	289,011	301,928	260	3,147	3,059	1,208
89	262,223	280,624	2,421	3,018	3,050	1,315
90	297,696	335,281	15,147	3,160	3,278	1,278
91	286,109	345,352	2,109	3,452	3,490	1,415
92	282,320	342,697	429	3,432	3,348	1,376
93	282,954	313,890	879	3,159	3,014	1,237
94	246,990			2,681.1		
95	216,305			2,498.9		
96	203,747			2,228.9		
97	194,331			2,206.9		



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-2  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.2 Historical and Projected Workload for Detachments of NUWC Division, Keyport (UIC N00253)**

<b>Fiscal Year</b>	<b>Total Funds Budgeted (\$K)**</b>	<b>Total Funds Received w/o Direct Cite (\$K)</b>	<b>Direct Cite Funds Received (\$K)</b>	<b>Budgeted Wkys</b>	<b>Actual In-House Wkys</b>	<b>Actual Onsite Contract Wkys</b>
86	21,383	19,119	0	258	251	106
87	22,686	18,123	0	210	227	122
88	23,989	25,061	0	204	221	123
89	21,767	23,293	0	204	215	124
90	24,710	27,830	0	226	229	123
91	23,748	28,665	0	224	228	112
92*	23,433	28,445	0	238	262	95
93	23,486	26,054	0	211	223	82
94	25,340			187.9		
95	23,802			173.1		
96	24,355			167.1		
97	22,366			165.1		

\* Arctic Submarine Laboratory reassigned to NUWC Division, Keyport, January 1992

\*\* NUWC Division, Keyport budgets, receives, manages, and bills funds for all detachments. Detachments not budgeted separately.

Detachment listings for data included in Table 1.2

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4

1-3

UIC N00253

NUWC DIV KEYPORT

**TABLE 1.3 FY 1993 BREAKOUT OF FUNDS BUDGETED for NUWC Division, Keyport  
(UIC N00253 )**

SPONSOR	RDT&E(N)							Other RDT &E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0.0	0.0	0.0	0.0	5,224.1	0.0	0.0	0.0	43,916.2	0.0	8,985.2	80,185.4	617.4	6,285.9	0.0
NAVSEA	0.0	0.0	0.0	0.0	503.7	0.0	0.0	0.0	26,200.8	0.0	34,307.4	26,361.4	3,638.9	1,462.6	0.0
SPCC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4,338.2	0.0	1,011.2	0.0	6,329.2	0.0	0.0
NAVAIR	0.0	0.0	0.0	0.0	538.5	0.0	0.0	0.0	1,294.1	0.0	517.2	5,234.1	0.0	103.7	0.0
OPTEVFOR	0.0	0.0	0.0	0.0	1,182.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
PACFLT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,539.8	0.0	0.0	0.0	0.0	0.0	0.0
SPAWAR	0.0	0.0	0.0	0.0	205.5	0.0	0.0	0.0	534.2	0.0	251.3	0.0	179.5	0.0	0.0
OTHER NAVY	0.0	0.0	0.0	0.0	1,049.9	0.0	0.0	0.0	5,242.5	0.0	245	0.0	0.0	11,955.7	37.7
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,475.3

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data. The data shown above excludes detachment funding.

Dollars in thousands.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-4  
UIC N00253  
NUWC DIV KEYPORT

**TABLE 1.3 FY 1994 BREAKOUT OF FUNDS BUDGETED for NUWC Division, Keyport  
(UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT &E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	6,663	0	0	0	49,001	0	7,800	55,120	381	4,258	0
NAVSEA	0	0	0	0	50	0	0	0	22,312	0	20,212	22,583	396	2,381	0
SPCC	0	0	0	0	0	0	0	0	4,967	0	0	2,420	0	8,840	0
NAVAIR	0	0	0	0	180	0	0	0	3,795	0	100	8,500	100	172	0
OPTEVFOR	0	0	0	0	2,666	0	0	0	0	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	116	0	0	0	0	0	0
SPAWAR	0	0	0	0	525	0	0	0	772	0	0	0	611	0	0
OTHER NAVY	0	0	0	0	981	0	0	0	1,795	0	0	0	0	18,943	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data. The data shown above excludes detachment funding.

Dollars in thousands.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-5  
UIC N00253  
NUWC DIV KEYPORT

**TABLE 1.3 FY 1995 BREAKOUT OF FUNDS BUDGETED for NUWC Division, Keyport  
(UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT& E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	4,318	0	0	0	49,112	0	3,786	44,772	100	5,240	0
NAVSEA	0	0	0	0	50	0	0	0	17,172	0	17,925	21,366	1,559	1,474	0
SPCC	0	0	0	0	0	0	0	0	3,718	0	379	2,120	0	6,009	0
NAVAIR	0	0	0	0	95	0	0	0	3,447	0	630	6,826	1,000	150	0
OPTEVFOR	0	0	0	0	2,455	0	0	0	0	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0
SPAWAR	0	0	0	0	516	0	0	0	771	0	0	0	443	0	0
OTHER NAVY	0	0	0	0	50	0	0	0	1,561	0	0	0	0	18,846	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	50	265

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data. The data shown above excludes detachment funding.

Dollars in thousands.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-6  
UIC N00253  
NUWC DIV KEYPORT

**TABLE 1.3 FY 1996 BREAKOUT OF FUNDS BUDGETED for NUWC Division, Keyport  
(UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT &E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	4,708	0	0	0	50,532	0	4,479	46,168	106	5,555	0
NAVSEA	0	0	0	0	53	0	0	0	13,213	0	16,450	21,793	998	2,528	0
SPCC	0	0	0	0	0	0	0	0	3,907	0	218	2,141	0	6,357	0
NAVAIR	0	0	0	0	100	0	0	0	3,653	0	668	7,236	1,060	159	0
OPTEVFOR	0	0	0	0	2,458	0	0	0	1	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	107	0	0	0	0	50	0
SPAWAR	0	0	0	0	0	0	0	0	695	0	0	0	484	0	0
OTHER NAVY	0	0	0	0	53	0	0	0	1,628	0	0	0	0	5,958	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	281

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data. The data shown above excludes detachment funding.

Dollars in thousands.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-7  
UIC N00253  
NUWC DIV KEYPORT

**TABLE 1.3 FY 1997 BREAKOUT OF FUNDS BUDGETED for NUWC Division, Keyport  
(UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT& E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	4,956	0	0	0	42,607	0	3,458	45,197	0	5,139	0
NAVSEA	0	0	0	0	58	0	0	0	13,721	0	15,897	19,982	477	2,387	0
SPCC	0	0	0	0	0	0	0	0	4,828	0	238	2,338	0	6,963	0
NAVAIR	0	0	0	0	109	0	0	0	3,989	0	729	7,901	1,157	174	0
OPTEVFOR	0	0	0	0	2,526	0	0	0	0	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	116	0	0	0	0	58	0
SPAWAR	0	0	0	0	0	0	0	0	733	0	0	0	0	0	0
OTHER NAVY	0	0	0	0	58	0	0	0	1,691	0	0	0	0	6,448	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	307

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data. The data shown above excludes detachment funding.

Dollars in thousands.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
1-8  
UIC N00253  
NUWC DIV KEYPORT

**TABLE 1.4 FY 1993 BREAKOUT OF FUNDS BUDGETED for Detachments of NUWC Division, Keyport (UIC N00253)**

SPONSOR	RDT&E(N)						Other RDT&E	Other Appropriation					All Other		
	6.1	6.2	6.3a	6.3b	6.4	6.5		6.6	OMN	APN	OPN	WPN		SCN	Other Navy
PEO'S	0	0	0	0	2,610	0	0	2,384	0	386	215	1,671	742	0	
NAVSEA	0	0	0	0	0	0	0	6,689	0	214	984	189	35	0	
SPCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NAVAIR	0	0	0	0	0	0	0	416	160	0	0	0	0	0	
OPTEVFOR	0	0	0	0	2,373	0	0	158	0	19	0	0	0	0	
PACFLT	0	0	0	0	0	0	0	1,532	0	0	0	0	0	0	
SPAWAR	0	0	0	0	126	0	0	941	0	0	0	0	0	0	
OTHER NAVY	0	0	0	0	459	0	0	465	0	90	0	0	628	0	
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data.

Dollars in thousands.

Detachment listings for data included in Table 1.4

- Name/Location/UIC
- NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)
- NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)
- NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)
- NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



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**TABLE 1.4 FY 1994 BREAKOUT OF FUNDS BUDGETED for Detachments of NUWC Division, Keyport (UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT&E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	2,105	0	0	0	735	0	405	35	3,100	1,160	0
NAVSEA	0	0	0	0	400	0	0	0	6,416	0	89	523	696	0	0
SPCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVAIR	0	0	0	0	0	0	0	0	917	0	100	0	0	0	0
OPTEVFOR	0	0	0	0	0	0	0	0	3,945	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	1,304	0	0	0	0	0	0
SPAWAR	0	0	0	0	0	0	0	0	846	0	600	0	0	0	0
OTHER NAVY	0	0	0	0	810	0	0	0	17	0	80	0	0	1,007	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data.

Dollars in thousands.

Detachment listings for data included in Table 1.4

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



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**TABLE 1.4 FY 1995 BREAKOUT OF FUNDS BUDGETED for Detachments of NUWC Division, Keyport (UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT&E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	2,350	0	0	0	724	0	405	75	2,970	990	0
NAVSEA	0	0	0	0	0	0	0	0	6,979	0	0	527	1,060	0	0
SPCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVAIR	0	0	0	0	0	0	0	0	875	0	0	0	0	0	0
OPTEVFOR	0	0	0	0	0	0	0	0	3,343	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	1,345	0	0	0	0	50	0
SPAWAR	0	0	0	0	0	0	0	0	798	0	0	0	0	0	0
OTHER NAVY	0	0	0	0	660	0	0	0	0	0	0	0	0	651	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data.

Dollars in thousands.usands.

Detachment listings for data included in Table 1.4

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



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**TABLE 1.4 FY 1996 BREAKOUT OF FUNDS BUDGETED for Detachments of NUWC Division, Keyport (UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT& E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	2,350	0	0	0	669	0	405	75	2,560	570	0
NAVSEA	0	0	0	0	0	0	0	0	6,659	0		450	890	0	0
SPCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVAIR	0	0	0	0	0	0	0	0	847	0	0	0	0	0	0
OPTEVFOR	0	0	0	0	0	0	0	0	5,225	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	1,344	0	0	0	0	50	0
SPAWAR	0	0	0	0	0	0	0	0	740	0	0	0	0	0	0
OTHER NAVY	0	0	0	0	660	0	0	0	0	0	0	0	0	861	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data.

Dollars in thousands.

Detachment listings for data included in Table 1.4

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



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**TABLE 1.4 FY 1997 BREAKOUT OF FUNDS BUDGETED for Detachments of NUWC Division, Keyport (UIC N00253)**

SPONSOR	RDT&E(N)							Other RDT& E	Other Appropriation						
	6.1	6.2	6.3a	6.3b	6.4	6.5	6.6		OMN	APN	OPN	WPN	SCN	Other Navy	All Other
PEO'S	0	0	0	0	2,350	0	0	0	669	0	405	75	2,310	510	0
NAVSEA	0	0	0	0	0	0	0	0	6,659	0		450	720	0	0
SPCC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAVAIR	0	0	0	0	0	0	0	0	847	0	0	0	0	0	0
OPTEVFOR	0	0	0	0	0	0	0	0	4,000	0	0	0	0	0	0
PACFLT	0	0	0	0	0	0	0	0	1,345	0	0	0	0	0	0
SPAWAR	0	0	0	0	0	0	0	0	690	0	0	0	0	0	0
OTHER NAVY	0	0	0	0	660	0	0	0	0	0	0	0	0	701	0
OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NUWC Division, Keyport's budget normally includes detachments, consistent with the congressional budget in which detachments are not budgeted separately. However, for purposes of this data call, detachment data was separated from NUWC Division, Keyport data.

Dollars in thousands.

Detachment listings for data included in Table 1.4

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42309)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)



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**2. Current Class 2 Assets.** Complete Tables 2.1 thru 2.6 below as directed. Tables 2.1, 2.2 & 2.3 will define the Class 2 property owned or leased by your activity (less Detachments). Tables 2.4, 2.5 & 2.6 will define the combined Class 2 assets owned or occupied at your Detachment sites which did not receive this Data Call directly. Report space holdings and assignments as of 31 March 1994. Provide numbered notes to explain imminent changes, additions & deletions such as previous BRAC realignments, MILCON (including BRAC related MILCON) & Special Projects that are currently programmed in the FYDP. Give the project number & title, cost, short description, quantity of additional square footage, award date, estimated/actual construction start date and estimated BOD. Square footage of space is to be reported in "Gross Floor/Building Area" (GF/BA) as defined in NAVFAC P-80. Many of the P-80 Category Code Numbers (CCN's) have assets that are reported in units of measure other than square feet (SF). The only unit of measure desired for this Data Call is SF. Only report the assets in each CCN that are normally reported in SF.

For your Site:

- a. Use Table 2.1 below to indicate the total amount of Class 2 space at your site for which you are the plant account holder as of 31 March 1994.
- b. Use Table 2.2 below to indicate the total amount of your Class 2 space reported in Table 2.1 that is assigned to your tenant commands and/or independent activities at your site as of 31 March 1994.
- c. Use Table 2.3 below to indicate the total amount of Class 2 space, for which you are not the plant account holder, but which is utilized/leased by you (less Detachments). Provide numbered notes to identify the title and UIC of the plant account holder/lessor, quantity of leased space and the associated lease cost.



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**Table 2.1 Main Site Class 2 Assets of NUWC Division, Keyport (UIC N00253)**

Building Type	NAVFAC (P-80) Category Code	Gross Floor/Building Area (KSF)			
		Adequate	Substandard	Inadequate	Total
Operational & Training	100	48	21		69
Maintenance & Production	200	224	99	10	333
Science labs	310				
Aircraft labs	311				
Missile and Space labs	312				
Ship and Marine labs	313				
Ground Transportation labs	314				
Weapon and Weapon Systems labs	315	508	128		636
Ammunition, Explosives, & Toxics labs	316				
Electrical Equip. labs	317	78			78
Propulsion labs	318	2			2
Miscellaneous labs	319	9			9
Underwater Equip. labs	320	50			50
Technical Services labs	321	1	5		6
Supply Facilities	400	629	50	1	680
Hospital & other Medical	500		3		3
Administrative Facilities	600	56	5		61
Housing & Community	700	196	5		201
Utilities & Grounds	800	33	0	1	34
Other					
<b>Totals</b>		<b>1,834</b>	<b>316</b>	<b>12</b>	<b>2,162</b>



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d. In accordance with NAVFACINST 11010.44E, an Inadequate facility cannot be made Adequate for its present use through "economically justifiable means". For all the categories above where Inadequate facilities are identified provide the following information:

(1) FACILITY TYPE/CODE:

The Plating Shop/216-40 includes Buildings 72 and 1019. Supporting facilities include Storehouse/441-10 (Building 181), Electrical Substation/812-09 (Building 760), and Heating Plant/821-09 (Building 509).

(2) WHAT MAKES IT INADEQUATE?

The facilities are located on a National Priority List (Environmental Superfund) Site.

(3) WHAT USE IS BEING MADE OF THE FACILITY?

Metal preparation and cleaning and supporting facilities.

(4) WHAT IS THE COST TO UPGRADE THE FACILITY TO SUBSTANDARD?

The existing facilities cannot be upgraded to Substandard. A new facility (MILCON P-336) is required to provide an environmentally compliant metal preparation and cleaning facility with supporting functions and to allow demolition and remediation of the existing area.

(5) WHAT OTHER USE COULD BE MADE OF THE FACILITY AND AT WHAT COST?

No other use is possible due to site remediation requirements.

(6) CURRENT IMPROVEMENT PLANS AND PROGRAMMED FUNDING:

MILCON P-336, Regional Cleaning and Metal Preparation Consolidations, is a \$5.3 million FY 96 MILCON Program project that will provide the needed improvements. It will relocate the primary and supporting functions into one facility, and the existing facilities mentioned in d.(1) above will be demolished as part of the site remediation. This project is consolidated with Puget Sound Naval Shipyard's MILCON P-262 upgrade bearing the same title. By developing a cooperative regional approach, metal cleaning and preparation costs in the Pacific Northwest will



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be substantially reduced while protecting the critical core capabilities of both activities. The separate but unique and complementary plating facilities will reduce capital costs by over \$7 million and will save \$5.7 million annually through the elimination of plating duplications and by out-sourcing low-use, non-core plating work. This approach also eliminates duplicative environmental waste streams and provides best value services that support readiness and sustainability requirements in an environmentally responsible manner.

(7) HAS THIS FACILITY CONDITION RESULTED IN C3 OR C4 DESIGNATION ON YOUR BASEREP?

Yes, C-3 on line J Asset Category Facility Condition. The Facility Condition designation will be upgraded to C-1 upon completion of MILCON P-336.



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**Table 2.3 Class 2 Space Utilized/Leased by NUWC Division, Keyport (UIC N00253)**

Building Type	NAVFAC (P-80) Category Code	GF/BA (KSF)			
		Adequate	Substandard	Inadequate	Total
Operational & Training	100				
Maintenance & Production	200	6			6
Science labs	310				
Aircraft labs	311				
Missile and Space labs	312				
Ship and Marine labs	313				
Ground Transportation labs	314				
Weapon and Weapon Systems labs	315	17			17
Ammunition, Explosives, and Toxics labs	316				
Electrical Equip. labs	317	9			9
Propulsion labs	318				
Miscellaneous labs	319				
Underwater Equip. labs	320				
Technical Services labs	321				
Supply Facilities	400				
Hospital & other Medical	500				
Administrative Facilities	600	7			7
Housing & Community	700				
Utilities & Grounds	800				
Other					
	<b>Totals</b>	<b>39</b>			<b>39</b>



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For your Detachment sites not receiving this Data Call directly:

e. Use Table 2.4 below to indicate the combined total amount of Class 2 space that is occupied by your Detachments for which you are the plant account holder as of 31 March 1994. Attach a list with the titles and UIC's of these Detachments.

f. Use Table 2.5 below to indicate the total amount of your Class 2 space reported in Table 2.4 that is assigned to tenant commands and/or independent activities as of 31 March 1994. Include numbered notes to indicate the Detachment site that hosts the tenant.

g. Use Table 2.6 below to indicate the combined total amount of Class 2 space utilized/leased by your Detachments for which you are not the plant account holder. Provide numbered notes to indicate the quantity of leased space and their associated rental cost.



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**Table 2.4 Class 2 Assets of NUWC Division, Keyport Occupied by All Detachments**

Building Type	NAVFA C (P-80) Category Code	GF/BA (KSF)			
		Adequate	Substandard	Inadequate	Total
Operational & Training	100	19	24		43
Maintenance & Production	200	56	1		57
Science labs	310	43			43
Aircraft labs	311				
Missile and Space labs	312				
Ship and Marine labs	313				
Ground Transportation labs	314				
Weapon and Weapon Systems labs	315	103			103
Ammunition, Explosives, and Toxics labs	316				
Electrical Equip. labs	317	1			1
Propulsion labs	318				
Miscellaneous labs	319	8			8
Underwater Equip. labs	320	2			2
Technical Services labs	321				
Supply Facilities	400	360			360
Hospital & other Medical	500				
Administrative Facilities	600	9			9
Housing & Community	700	11			11
Utilities & Grounds	800				
Other					
<b>TOTALS</b>		612	25		637



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Detachment listing for data included in Table 2.4

Name/Location/UIC

NAVUNSEAWARCEN DET Hawthorne, Hawthorne, NV (UIC N41869)

NAVUNSEAWARCEN DET Hawaii, Lualualei, HI (UIC N35266)

NAVUNSEAWARCEN DET San Diego, San Diego, CA (UIC N42039)

NAVUNSEAWARCEN DET Arctic Submarine Laboratory, San Diego, CA (UIC N68951)

h. In accordance with NAVFACINST 11010.44E, an Inadequate facility cannot be made Adequate for its present use through "economically justifiable means". For all the categories above where Inadequate facilities are identified provide the following information:

- (1) FACILITY TYPE/CODE:
- (2) WHAT MAKES IT INADEQUATE?
- (3) WHAT USE IS BEING MADE OF THE FACILITY?
- (4) WHAT IS THE COST TO UPGRADE THE FACILITY TO SUBSTANDARD?
- (5) WHAT OTHER USE COULD BE MADE OF THE FACILITY AND AT WHAT COST?
- (6) CURRENT IMPROVEMENT PLANS AND PROGRAMMED FUNDING:
- (7) HAS THIS FACILITY CONDITION RESULTED IN C3 OR C4 DESIGNATION ON YOUR BASEREP?

Answer: There are NO inadequate facilities at any of NUWC Division, Keyport's detachments.



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**Table 2.6 Class 2 Space Utilized/Leased by Detachments of NUWC Division Keyport  
(UIC N00253)**

Building Type	NAVFAC (P-80) Category Code	GF/BA (KSF)			Total
		Adequate	Substandard	Inadequate	
Operational & Training	100				
Maintenance & Production	200				
Science labs	310				
Aircraft labs	311				
Missile and Space labs	312				
Ship and Marine labs	313				
Ground Transportation labs	314				
Weapon and Weapon Systems labs	315				
Ammunition, Explosives, and Toxics labs	316				
Electrical Equip. labs	317				
Propulsion labs	318				
Miscellaneous labs	319				
Underwater Equip. labs	320				
Technical Services labs	321				
Supply Facilities	400				
Hospital & other Medical	500				
Administrative Facilities	600				
Housing & Community	700				
Utilities & Grounds	800				
Other					
<b>Totals</b>					

No space is leased.



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**3. Class 2 Space Available for Expansion.** An activity's expansion capability is a function of its ability to reconfigure and/or expand existing facilities to accept new or increased roles. Such a reconfiguration may require rehabilitation or buildout of a space to support the new or expanded role. A space expansion could include converting an underutilized storage space into laboratory spaces, or build out of a high bay area into a multifloor office/laboratory space. All questions refer to Class 2 property for which you are the plant account holder as of 31 March 1994. Do not report any currently programmed changes or additions previously reported in question #2 above. Expansion opportunities must follow the guidance of NAVFAC P-80 for the appropriate facility category code, as well as applicable fire and safety codes. Personnel loading density should not exceed those specified in the P-80. Space is only available if it is currently unoccupied or the current occupants are officially designated for relocation. Report space as Net Floor Area (NFA) as defined in the P-80. Do not include opportunities that are being reported by your Detachments who received this Data Call directly. Reported expansion opportunities must be able to accommodate the necessary ancillary facilities and equipment, such as adequate parking space, required to support the amount of people projected.

a. What is the maximum quantity of space that could be made available for expansion to accommodate other functions and/or increased efforts? Report in terms of the "Current NFA" as shown in Tables 3.1 & 3.2. 41K SQFT.

b. How much of the space reported in question 3.a. above is currently available with minimal or no reconfiguration costs? Report in terms of the "Current NFA" as shown in Tables 3.1 & 3.2. 24K SQFT.

c. Use Table 3.1 below to indicate the constrained growth opportunities for accepting expanded or new roles. Constrained growth is defined as growth limited to buildings and structures currently on your Class 2 plant account. Add numbered notes to highlight and explain opportunities that require remediation or waiver of a restriction or encumbrance as part of the expansion. Provide lettered notes to clearly identify each opportunity with the title & UIC of the site it refers to. The "Current NFA (KSF)" column total should match the quantity provided in question #3.a. above. Annotate those opportunities that were used to obtain the answer to question #3.b. above. Report space once, do not use the same space for different expansion opportunities. Include in this table space that will become available once planned downsizing (separate from BRAC realignments) has been completed, provide the estimated completion date of the downsizing effort.

d. Use Table 3.2 below to indicate additional unconstrained growth opportunities for accepting expanded or new roles. Unconstrained growth allows for construction of new facilities on existing buildable Class 1 property. The only constraint being that the land must currently be on your plant account holdings as of 31 March 1994 and free of existing land use constraints. Limit new buildings to three stories. Add numbered notes to highlight and



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explain additional opportunities that would require remediation or waiver of a land use constraint as part of the expansion. Provide lettered notes to clearly identify each opportunity with the title & UIC of the site it refers to. Do not include space that has been reported in Table 3.1.

## **DISCUSSION AND NUMBERED/LETTERED NOTES - SECTION 3.0**

### **SECTION 3.1 - CONSTRAINED growth opportunities**

#### **DISCUSSION**

Table 3.1 identifies open spaces to be created from FY 96 through FY 99 by approximating the effects of workload and personnel reductions as currently projected.

NUWC Division, Keyport has plans in place to demolish 17,800 SF of well-maintained but obsolete buildings that have exceeded their expected useful life. These facilities are poorly insulated and are a drain on energy and maintenance resources. This space demolition will support downsizing and workload consolidation efforts.

NUWC Division, Keyport is in the process of eliminating 39,000 SF of leased space that was acquired in past years of rapid workload expansion. This includes 15,000 SF of adequate Class II property, as well as 24,000 SF of Class II equivalent holdings. This space is being replaced by focused MILCON construction, which supports downsizing and consolidation of operations.

NUWC Division, Keyport has consolidated operations to create 10,000 SF of administrative and shop areas for SUBDEVGRU ONE at the Undersea Warfare Annex. This effort allowed early relocation of SUBDEVGRU ONE to the Pacific Northwest as a result of a BRAC-93 action. This Division has viable contingency plans to accommodate emergent mobilization needs and other BRAC-impacted organizations that may have needs in this geographic region.



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**Table 3.1 Constrained Class 2 Space Available for Expansion at NUWC Division, Keyport  
(UIC N00253 )**

	Building # / Category Code (3 digit)	Cat Code Number	Additional Capacity Provided By Expansion			Height of High Bay (FT)	Estimated Cost of Rehab (\$K)	NOTES NUMBER/ LETTER
			Current NFA (KSF)	Added Cap. NFA (KSF)	# of Personnel Offices			
*	SOCAL -Bldg 871	315-20	10		5	NA	0	A
*	944	610-10	1		12	NA	0	B
*	951	315-20	4		33	13	60	C
*	5091	315-20	9		80	14	40	D
	5093	315-20	9		90	14	50	1, E
	5095	218-10	9		90	14	70	2, F
	110	216-40		1	9	10	0	G
	185	315-20		3	30	17	15	G
	80L	171-20		1	8	NA	10	G
	5736	315-20		4	40	10	10	G
	48	213-58		1	8	NA	10	G
	105S	315-20		2	20	30	50	G
	206	315-20		5	47	12	60	H
	515	721-12		8	NA	NA	60	3, H
	84	216-40		2	24	23	25	H
	Office Personnel Reductions FY 96	315-20		16	160	NA	0	H
	111-117	421-32		4	36	10	0	I
	894L	315-20		5	50	NA	20	I



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**Table 3.1 Constrained Class 2 Space Available for Expansion at NUWC Division, Keyport  
(UIC N00253 )**

Building # / Category Code (3 digit)	Cat Code Number	Additional Capacity Provided By Expansion			Height of High Bay (FT)	Estimated Cost of Rehab (\$K)	NOTES NUMBER/ LETTER
		Current NFA (KSF)	Added Cap. NFA (KSF)	# of Personnel Offices			
35	721-11		12	120	NA	50	3, I
98U	315-20		4	40	NA	50	I
Office Personnel Reductions FY 97	315-20		12	115	NA	0	I
950	315-20		2	15	13	0	J
478L	315-20		6	55	16	60	J
Office Personnel Reductions FY 98	315-20		6	59	NA	60	J
735	441-35		4	36	14	80	K
11	159-64		1	14	NA	300	4, K
99	371-15		3	33	NA	100	4, K
478U	315-20		2	20	NA	150	K
1003	315-20		25	250	NA	3,200	L
1050	317-20		23	230	NA	3,000	L
<b>Totals</b>			<b>41</b>	<b>152</b>	<b>NA</b>	<b>NA</b>	



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NOTES - Numbers and letters correspond to Table 3.1.

\* Indicates spaces used to calculate square footage currently available for expansion at minimal or no cost. Answer to question 3.b.

1. This space is occupied by SUBDEVGRU ONE for a period of 1-2 years.
2. This building is encumbered by an Explosive Safety Quantity Distance arc. A waiver would be required to conduct non-weapons related work in this building.
3. This building is Bachelors Enlisted Quarters controlled by CNO directive. A letter of approval from CNO (NAVPERS) would be required to use this space for other unrelated functions.
4. This building is located on a pier that lacks an approved fire protection system. The repair estimate is \$450K for a single project to install fire protection systems in Bldgs 11 and 99.
  - A. Location for this single line item is NAVUNSEAWARCEN DET SAN DIEGO CA, UIC 42039. Space is currently available for use.
  - B. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. Space is currently available for consolidation out of this building, providing open office space at low cost.
  - C. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. Space is currently available for consolidation out of this building by September 1994, providing open shop or lab space. Cost to rehabilitate the space could run from no cost up to \$60K, depending on planned use.
  - D. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. Space is currently available for consolidation out of this building by September 1994, providing open shop or lab space. Cost to rehabilitate the space could be from no cost up to \$40K depending on planned use.
  - E. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. Space is on temporary loan to SUBDEVGRU ONE for a period of 1-2 years. After SUBDEVGRU ONE vacates, the space will be open for shop, office, or lab space. Cost to rehabilitate the space could be no cost up to \$120K, depending on planned use.



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- F. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. Operations in the building are in a downsizing trend, and the space could be vacated to accommodate unplanned mobilization requirements. The resulting open space will be light industrial shop, but it could be converted to lab or office at reasonable cost.
- G. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. NUWC Division, Keyport planning calls for this space to be vacated in FY 95 by consolidation of functions and downsizing. Cost to modify the space for similar shop, lab, or storage operations would be insignificant.
- H. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. NUWC Division, Keyport planning calls for this space to be vacated in FY 96 by consolidation of functions and downsizing. Cost to modify the space for similar shop, lab, or storage operations would be insignificant.
- I. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. NUWC Division, Keyport planning calls for this space to be vacated in FY 97 by consolidation of functions and downsizing. Cost to modify the space for similar shop, lab, or storage operations would be insignificant.
- J. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. NUWC Division, Keyport planning calls for this space to be vacated in FY 98 by consolidation of functions and downsizing. Cost to modify the space for similar shop, lab, or storage operations would be insignificant.
- K. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. NUWC Division, Keyport planning calls for this space to be vacated in FY 95 by consolidation of functions and downsizing. This is currently storage area or spaces requiring considerable separation from adjacent functions. Cost to modify the space for similar shop, lab, or storage operations could be considerable.
- L. Location for this line item is NAVUNSEAWARCENDIV KEYPORT WA, UIC N00253. This space could be provided by construction of a third floor on an existing two story structure. The structure was designed and built to accommodate this expansion. Considerable cost and lead time would be required.



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**DISCUSSION AND NUMBERED/LETTERED NOTES - SECTION 3.0**

**SECTION 3.2 - UNCONSTRAINED Growth Opportunities**

**DISCUSSION**

Table 3.2 lists Class II assets for building and expansion through potential construction on existing NUWC Division, Keyport Class I property. None of the data provided in Table 3.2 was used in calculation of question 3.b. The land is available for construction of Class II as required to fulfill mission requirements. These include CCN's 315, 320, 200, 400, and others to accommodate laboratory, shop, office, and storage.



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**Table 3.2 Unconstrained Class 2 Space Available for Expansion at NUWC Division, Keyport  
(UIC N00253)**

Building # / Category Code (3 digit)	Cat Code Number	Additional Capacity Provided By Expansion			Height of High Bay (FT)	Estimated Cost of Rehab (\$K)	NOTES NUMBER/ LETTER
		Current NFA (KSF)	Added Cap. NFA (KSF)	# of Personnel Offices			
Keyport	As Required	NA	161	NA	12	21,800	1, A
Keyport	As Required	NA	889	NA	12	109,200	2, A
Keyport	As Required	NA	56	NA	12	7,500	3, A
Undersea Warfare Annex	As Required	NA	1,180	NA	12	159,000	1, B
Undersea Warfare Annex	As Required	NA	14,510	NA	12	1,775,200	4, B
Undersea Warfare Annex	As Required	NA	3,435	NA	12	463,700	5, B
<b>TOTAL</b>		NA	20,231	NA	NA	NA	



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NOTES - Numbers and letters to correspond to Table 3.2.

1. This area is identified as available for new construction with no restrictions. This area covers spaces planned for, but as yet unprogrammed, MILCON projects.
2. This area is available and buildable; however, construction on this site would involve a trade-off with quality of life for NUWC Division, Keyport military residents and employees. This space is set aside for greenbelt, parking, or wetlands. In the case of wetlands, environmental permits and/or waivers would be required to allow construction.
3. This space is encumbered by an Explosive Safety Quantity Distance arc generated by torpedo fuel storage. Waivers would be required for construction.
4. This area is located in an Explosive Safety Quantity Distance arc generated by torpedo storage bunkers. Waivers would be required for functions that are not directly related to explosive ordnance functions.
  - A. Location for this line item is NAVUNSEAWARCENDIV Keyport WA, UIC N00253.
  - B. Location for this line item is Undersea Warfare Annex, NAVUNSEAWARCENDIV Keyport WA, UIC N00253.



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#### 4. Class 1 Space Available for Expansion.

a. Identify in Table 4.1 below the real estate resources which have the potential to facilitate future development, and for which you are the plant account holder as of 31 March 1994, or into which, though a tenant, your activity could reasonably expect to expand. Complete a separate table for each individual site (i.e., main base, outlying airfields, special off-site areas, etc.) and Detachments that did not receive this Data Call directly. The unit of measure is acres. Developed area is defined as land currently with buildings, roads, and utilities where further development is not possible without demolition of existing improvements. Include in "Restricted" acreage that is restricted for future development due to environmental constraints (e.g., wetlands, landfills, archaeological sites), operational restrictions (e.g., ESQD arcs, HERO, HERP, HERF, AICUZ, ranges) or cultural resources restrictions. Identify the reason for the restriction when providing the acreage in the table. Specify any entry in "Other" (e.g. submerged lands).

b. Are there any constraints such as parking, utilities, legal restrictions that limit the potential for using Undeveloped land for expansion?

None, except there are four National Priority List (Superfund) sites totalling 15 acres at Keyport. If the Division were closed, these sites would have to be cleaned before the land could be turned over to public use at an estimated cost of \$100 million. The remaining spaces are unrestricted and available for expansion as indicated.

c. Explain the radio frequency constraints/opportunities within your Class 1 holdings.

NUWC Division, Keyport does not have any radio frequency constraints which affect or restrict overall Class 1 utilization or operations.

Radio frequency constraints apply only within the confines of 11 test facilities at NUWC Division, Keyport and 10 explosives operating buildings at the Undersea Warfare Annex. Constraints apply only during loading and off-loading of exercise torpedoes at the Keyport/Bangor Dock and at Pier 1.

The overall Hazardous Electronic Radiation-Ordnance constraints are minimal relative to the overall land area. Hazardous Electronic Radiation-Personnel and Hazardous Electronic Radiation-Fuels restrictions, when applied, are limited to vessels only.



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**Table 4.1 Class 1 Resources of NUWC Division, Keyport (UIC: N00253)**  
**Site Location: MAIN SITE**

Land Use	Total Acres	Developed Acreage	Available for Development	
			Restricted	Unrestricted
Maintenance	35	35	0	0
Operational	163	136	25 <sup>A, E, F</sup>	2
Training	0	0	0	0
R & D	0	0	0	0
Supply & Storage	1,010	666	320 <sup>B</sup>	24
Admin	27	27	0	0
Housing	75	50	25 <sup>A, C</sup>	0
Recreational	50	40	10 <sup>C, D, E</sup>	0
Navy Forestry Program	768	1	737 <sup>A</sup>	30
Navy Agricultural Outlease Program	0	0	0	0
Hunting/Fishing Programs	0	0	0	0
Other	90	10	73 <sup>A, E</sup>	7
<b>Total:</b>	<b>2,218</b>	<b>965</b>	<b>1,190</b>	<b>63</b>

- A Steep Slopes
- B QD Arcs
- C Quality of Life
- D Archeological
- E Wetlands
- F Environmental

d. Of the total Unrestricted Acres reported above, how much of it has existing roads and/or utilities that could support expansion efforts? 33 Acres. Explain.  
 Nine acres at Keyport and 24 acres at Undersea Warfare Annex have existing roads and/or utilities that could support expansion efforts.



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**5. Base Infrastructure Capacity.** Provide base infrastructure data as of 31 March 1994. Provide numbered notes to explain imminent changes, additions & deletions driven by previous BRAC realignments, MILCON (including BRAC related MILCON) & Special Projects that are currently programmed in the FYDP. Give the project number & title, cost, short description, quantity of additional square footage, award date, estimated/actual construction start date and estimated BOD.

a. Utilize Table 5.1 below to provide information on your activity's base infrastructure capacity and load. Do not report this information if you are a tenant activity.

**Table 5.1 Base Infrastructure Capacity & Load**

	<b>On Base Capacity</b>	<b>Off base long term contract</b>	<b>Normal Steady State Load</b>	<b>Peak Demand</b>
<b>Electrical Supply (KWH)</b>	2,300 KW	*20,000 KW	4,650	7,300
<b>Natural Gas (CFH)</b>	0	*60,000	27,000	45,000
<b>Sewage (GPD)</b>	0	*500,000	250,000	350,000
<b>Potable Water (GPD)</b>	*1,000,000	*500,000	325,000	580,000
<b>Steam (PSI &amp; lbm/Hr)</b>	*67,500 @ 250	0	22,500 @ 110 PSI	37,500 @ 110 PSI
<b>Long Term Parking</b>	20	0	10	20
<b>Short Term Parking</b>	1,714	20	1,420	1,645

\* Amounts shown contain capacity to support loading above existing requirements.



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b. Maintenance, Repair & Equipment Expenditure Data: Use Table 5.2 below to provide data on facilities and equipment expenditures at your activity. Project expenditures to FY 1997. Do not include data on Detachments who have received this Data Call directly. Do not report this information if you are a tenant activity. The following definitions apply:

Maintenance of Real Property (MRP) Dollars: MRP is a budgetary term used to gather the expenses or budget requirements for facility work including recurring maintenance, major repairs & minor construction (non-MILCON) inclusive of all Major Claimant funded Special Projects. It is the amount of funds spent on or budgeted for maintenance and repair of real property assets to maintain the facility in satisfactory operating condition. For purposes of this Data Call, MRP includes all M1/R1 and M2/R2 expenditures.

Current Plant Value (CPV) of Class 2 Real Property: The hypothetical dollar amount to replace a Class 2 facility in kind with today's dollars. Example: the cost today to replace a wood frame barracks with a wood frame barracks.

Acquisition Cost of Equipment (ACE): The total cumulative acquisition cost of all "personal property" equipment maintained at your activity which includes the cost of installed equipment directly related to mission execution, such as lab test equipment. Class 2 installed capital equipment that is an integral part of the facility will not be reported as ACE.



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**Table 5.2 Maintenance, Repair & Equipment Expenditure Data  
for NUWC Division, Keyport (UIC: N00253 )**

<b>Fiscal Year</b>	<b>MRP (\$M)</b>	<b>CPV (\$M)</b>	<b>ACE (\$M)</b>
1985	7.2	320.0	102
1986	6.9	330.0	111
1987	7.5	343.3	125
1988	4.2	366.5	142
1989	6.8	376.4	158
1990	6.8	394.6	160
1991	8.0	400.0	196
1992	7.2	409.6	222
1993	7.6	324.1	228
1994	7.5	350.9	261
1995	7.8	365.3	272
1996	7.6	373.7	283
1997	7.6	387.1	294

Note: CPV was obtained from annual detailed inventory of Naval Shore Facilities, P-164. No P-164 was available for FY 1985, 1986, and 1991. The numbers provided for FY 1985, 1986, and 1991 are best estimates.



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c. Training Facilities:

(1) By facility Category Code Number (CCN), provide the usage requirements for each course of instruction required for all formal schools on your installation. A formal school is a programmed course of instruction for military and/or civilian personnel that has been formally approved by an authorized authority (i.e., Service Schools Command, Weapons Training Battalion, Human Resources Office). Do not include requirements for maintaining unit readiness, GMT, sexual harassment, etc. Include all applicable 171-xx, 179-xx CCN's.

Type of Training Facility/CCN	School	Type of Training	FY 1993 Requirements			FY 2001 Requirements		
			A	B	C	A	B	C
Applied Instruction Building/171-20	MK 46	MK 46 (Mod 5) Torpedo Intermediate Maint (FMS)	12	390	4,680	12	390	4,680
Applied Instruction Building/171-20	MK 46	MK 46 (Mod 5) Test Equipment (FMS)	8	660	5,280	8	660	5,280
Applied Instruction Building/171-20	MK 46	MK 46 (Mod 1/2) Test Equipment Inter. Maint. (FMS)	6	450	2,700	6	450	2,700
Applied Instruction Building/171-20	MK 46	MK 46 ASROC (FMS)	40	60	2,400	40	60	2,400
Applied Instruction Building/171-20	MK 46	MK 46 Familiarization (5-day) (FMS)	12	40	480	30	40	1,200
Applied Instruction Building/171-20	MK 46	MK 46 Familiarization (3-day) (FMS)	77	24	1,848	125	24	3,000
Applied Instruction Building/171-20	MK 46	MK46 Torpedo Storage & Issue (FMS)	12	60	720	24	60	1,440



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Type of Training Facility/CCN	School	Type of Training	FY 1993 Requirements			FY 2001 Requirements		
			A	B	C	A	B	C
Applied Instruction Building/171-20	MK46	MK46 Torpedo Surface Operator Class (FMS)				8	120	960
Applied Instruction Building/171-20	MK 46	MK46 Torpedo Technician Advanced (FMS)				12	180	2,160
Applied Instruction Building/171-20	MK 46	MK 46 Torpedo QA for Supervisors (FMS)				40	60	2,400
Applied Instruction Building/171-20	MK 46	MK 46 (Mod 1) PHII and Mod 2 Tech Op for Officers & Managers (FMS)				20	120	2,400
Applied Instruction Building/171-20	MK 46	MK 46 (Mod 5) for Officers & Managers (FMS)				20	120	2,400
Applied Instruction Building/171-20	MK46	MK 46 (Mod 1) PH II/Mod 2 IMA Refresher (FMS)				20	120	2,400
Applied Instruction Building/171-20	MK46	MK46 (Mod 5) Torpedo IMA Refresher (FMS)				20	120	2,400

A = STUDENTS PER YEAR

B = NUMBER OF HOURS EACH STUDENT SPENDS IN THIS TRAINING FACILITY FOR THE TYPE OF TRAINING RECEIVED

C = A x B



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(2) By Category Code Number (CCN), complete the following table for all training facilities aboard the installation. Include all 171-xx and 179-xx CCN's.

**For example:** in the category 171-10, a type of training facility is academic instruction classroom. If you have 10 classrooms with a capacity of 25 students per room, the design capacity would be 250. If these classrooms are available 8 hours a day for 300 days a year, the capacity in student hours per year would be 600,000.

Type Training Facility/CCN	Total Number	Design Capacity (PN) <sup>1</sup>	Capacity (Student HRS/YR)
Solder Training/171-20		16	39,200
Weapons Sys. & Gen. /171-20		70	171,500
Weapons Sys. & Gen./171-20		183	230,580
Weapons Sys. & Gen./171-10		183	230,580
Small Arms Range/179-40		16	31,360
Training Course/179-50		25	219,000

<sup>1</sup> Design Capacity (PN) is the total number of seats available for students in spaces used for academic instruction; applied instruction; and seats or positions for operational trainer spaces and training facilities other than buildings, i.e., ranges. Design Capacity (PN) must reflect current use of the facilities.



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(3) Describe how the Student HRS/YR value in the preceding table was derived.

Design Capacity	Days Avail.	Hrs. Avail.	Capacity
16	245	10	39,200
70	245	10	171,500
183	126	10	230,580
183	126	10	230,580
16	245	8	31,360
25	365	24	219,000



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**6. Ship Berthing Capacity.** If your activity has the capacity to berth ships fill out the data sheets provided at TAB A.

**7. Operational Airfield Capacity.** If your activity owns and operates an operational airfield fill out the data sheets provided at TAB B.

**8. Depot Level Maintenance Capacity.** Fill out the data sheets provided at TAB C if you or your subordinate activities perform depot level maintenance on a piece of equipment or system.

**9. Ordnance Storage Capacity.** If your activity has the capability to store or maintain weapons and ordnance fill out the data sheets provided at TAB D.



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**TAB A**

**SHIP BERTHING CAPACITY**

**Note:** Question numbers in [ ]'s are for internal BSAT purposes.



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## SHIP BERTHING CAPACITY

1. [11.]For each Pier/Wharf at your facility list the following structural characteristics. Indicate the additional controls required if the pier is inside a Controlled Industrial Area or High Security Area. Provide the average number of days per year over the last eight years that the pier was out of service (OOS) because of maintenance, including dredging of the associated slip:

Table 11.1

Pier/Wharf & Age <sup>1</sup>	CCN <sup>2</sup>	Moor Length (ft)	Design Dredge Depth <sup>3</sup> (ft) (MLLW)	Slip Width <sup>4</sup> (ft)	Pier Width (ft) <sup>5</sup>	CIA/Security Area? (Y/N) <sup>6</sup>	ESQD Limit <sup>7</sup>	# Days OOS for Maint.
Pier 1 46* yrs	151-20	495	21	N/A	768 <sup>A</sup>	N	N/A	< 7
Pier 2 46* yrs	151-20	950	19	1@17.5 5@20.0 1@37.5	48 <sup>A, B</sup>	N	N/A	< 7
KB Dock 42* yrs	151-20	975	30	N/A	24 <sup>A</sup>	N	N/A	< 7

<sup>1</sup>Original age and footnote a list of MILCON improvements in the past 10 years.

<sup>2</sup>Use NAVFAC P-80 for category code number.

<sup>3</sup>Comment if unable to maintain design dredge depth.

<sup>4</sup>Water distance between adjacent finger piers.

<sup>5</sup>Indicate if RO/RO and/or Aircraft access.

<sup>6</sup>Describe the additional controls for the pier.

<sup>7</sup>Net explosive weight. List all ESQD waivers that are in effect with expiration date.

<sup>A</sup>No RO/RO access.

<sup>B</sup>Float plane access.

\* These small piers have been rebuilt, enhanced, and had major replacement of structural components (all less than MILCON projects) which make the above ages virtually meaningless.



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2. [12.] For each Pier/Wharf at your facility, list the following ship support characteristics:

**Table 12.1**

Pier/Wharf	OPNAV 3000.8 (Y/N)	Shore Pwr (KVA) & 4160V (KVA)	Comp. Air Press. & Capacity <sup>1</sup>	Potable Water (GPD)	CHT (GPD)	Oily Waste <sup>1</sup> (gpd)	Steam (lbm/hr & PSI) <sup>2</sup>	Fendering limits <sup>3</sup>
Pier 1	N	750 KVA <sup>A</sup>	3,000 psi	700K	72K	N/A <sup>B</sup>	N/A	NONE
Pier 2	N	612 KVA <sup>A</sup>	120 psi	700K	72K	N/A <sup>B</sup>	N/A	NONE
K/B Dock	N	1,000 KVA <sup>A</sup>	120 psi	288K	158K	N/A <sup>B</sup>	N/A	NONE

<sup>1</sup> List only permanently installed facilities.

<sup>2</sup> indicate if the steam is certified steam.

<sup>3</sup> Describe any permanent fendering arrangement limits on ship berthing.

<sup>A</sup> No 4160V KVA capacity.

<sup>B</sup> No permanent facilities.



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3. [13.]For each pier/wharf listed above state today's normal loading, the maximum capacity for berthing, maximum capacity for weapons handling evolutions, and maximum capacity to conduct intermediate maintenance.

**Table 13.1**

<b>Pier/Wharf</b>	<b>Typical Steady State Loading<sup>1, B</sup></b>	<b>Ship Berthing Capacity<sup>B</sup></b>	<b>Ordnance Handling Pier Capacity<sup>2</sup></b>	<b>IMA Maintenance Pier Capacity<sup>3</sup></b>
Pier 1	2-YTT's	2-YTT's	N/A	2 ea. 186' max. length <sup>A</sup>
Pier 2	1-TRB, 4-OP's, 1-Admiral's Barge	10 Small Craft	N/A	10 Small Craft <sup>A</sup>
K/B Dock	1-YTT, 1-TWR, 2-TRB, 1-NM	2-YTT's or 1-YTT & 1-TWR, plus 3-TRB's	N/A	N/A <sup>A</sup>

- <sup>1</sup> Typical pier loading by ship class with current facility ship loading.
- <sup>2</sup> List the maximum number of ships that can be moored to conduct ordnance handling evolutions at each pier/berth without berth shifts. Consider safety, ESQD and access limitations.
- <sup>3</sup> List the maximum number of ships that can be serviced in maintenance availabilities at each pier without berth shifts because of crane, laydown or access limitations.
- <sup>A</sup> Keyport's piers are small boat facilities. Pier 2 is equipped with a 126'x55' small boat boathouse. This Division performs both intermediate and depot level maintenance on diesel engines, pumps, electrical, and hulls up to 85' length. NUWC Division, Keyport is equipped with a full machine shop and shipboard crane maintenance capability and is a certified weight test facility. NUWC Division, Keyport can drydock up to an 85' retriever with an 18' maximum beam.
- <sup>B</sup> Vessel-class types are as follows: YTT-Yard Torpedo Test; TRB-Torpedo Retriever Boat; OP-Oil Pollution; TWR-Torpedo Weapons Retriever; NMB-Noise Measurement Boat.



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4. [14.] For each pier/wharf listed above, based on Presidential Budget 1995 budgeted infrastructure improvements in the Presidential Budget 1995 through FY 1997 and the BRAC-91 and BRAC-93 realignments, state the expected normal loading, the maximum capacity for berthing, maximum capacity for weapons handling evolutions, and maximum capacity to conduct intermediate maintenance.

Table 14.1

Pier/Wharf	Typical Steady State Loading <sup>1, B</sup>	Ship Berthing Capacity <sup>B</sup>	Ordnance Handling Pier Capacity <sup>2</sup>	IMA Maintenance Pier Capacity <sup>3</sup>
Pier 1	2-YTT's	2-YTT's	N/A	2 ea. 186' max. <sup>A</sup>
Pier 2	1-TR, 4-OP's, 1-Admiral's Barge	10 Small Craft	N/A	10 Small Craft <sup>A</sup>
K/B Dock	1-YTT, 1-TWR, 2-TR, 1-NM	2-YTT's or 1-YTT & 1-TWR plus 3-TR's	N/A	N/A <sup>A</sup>

<sup>1</sup> Typical pier loading by ship class with current facility ship loading.

<sup>2</sup> List the maximum number of ships that can be moored to conduct ordnance handling evolutions at each pier/berth without berth shifts. Consider safety, ESQD and access limitations.

<sup>3</sup> List the maximum number of ships that can be serviced in maintenance availabilities at each pier without berth shifts because of crane, laydown, or access limitations.

<sup>A</sup> Keyport's piers are small boat facilities. Capabilities will not be diminished or increased as a result of the referenced budgets or realignments.

<sup>B</sup> Vessel-class types are as follows: YTT-Yard Torpedo Test; TRB-Torpedo Retriever Boats; OP-Oil Pollution; TWR-Torpedo Weapons Retriever; NMB-Noise Measurement Boat.



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5. [15.a.] How much pier space is required to berth and support ancillary craft (tugs, barges, floating cranes, etc.) currently at your facility? Indicate if certain piers are uniquely suited to support these craft.

Pier 2 is designed specifically for ancillary craft. It is equipped with five covered slips for small boat moorage. Non-covered moorage exists for five additional craft. Dedicated current loading consists of one Torpedo Retriever Boat, four Oil Pollution Boats, and one Admiral's Barge.

6. [15.b.]What is the average pier loading in ships per day due to visiting ships at your base. Indicate if it varies significantly by season.

Not Applicable. Keyport has pier facilities adequate for our range craft, which are shallow draft and no longer than 186 feet. Combatant berthing is not available.

7. [15.c.]Given no funding or manning limits, what modifications or improvements would you make to the waterfront infrastructure to increase the cold iron ship berthing capacity of your installation? Provide a description , cost estimates, and additional capacity gained.

Not Applicable. Keyport has pier facilities adequate for our range craft, which are shallow draft and no longer than 186 feet. Combatant berthing is not available.

8. [15.d.]Describe any unique limits or enhancements on the berthing of ships at specific piers at your base.

Not Applicable. Keyport has pier facilities adequate for our range craft, which are shallow draft and no longer than 186 feet. Combatant berthing is not available.



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**TAB B**

**OPERATIONAL AIRFIELD CAPACITY**

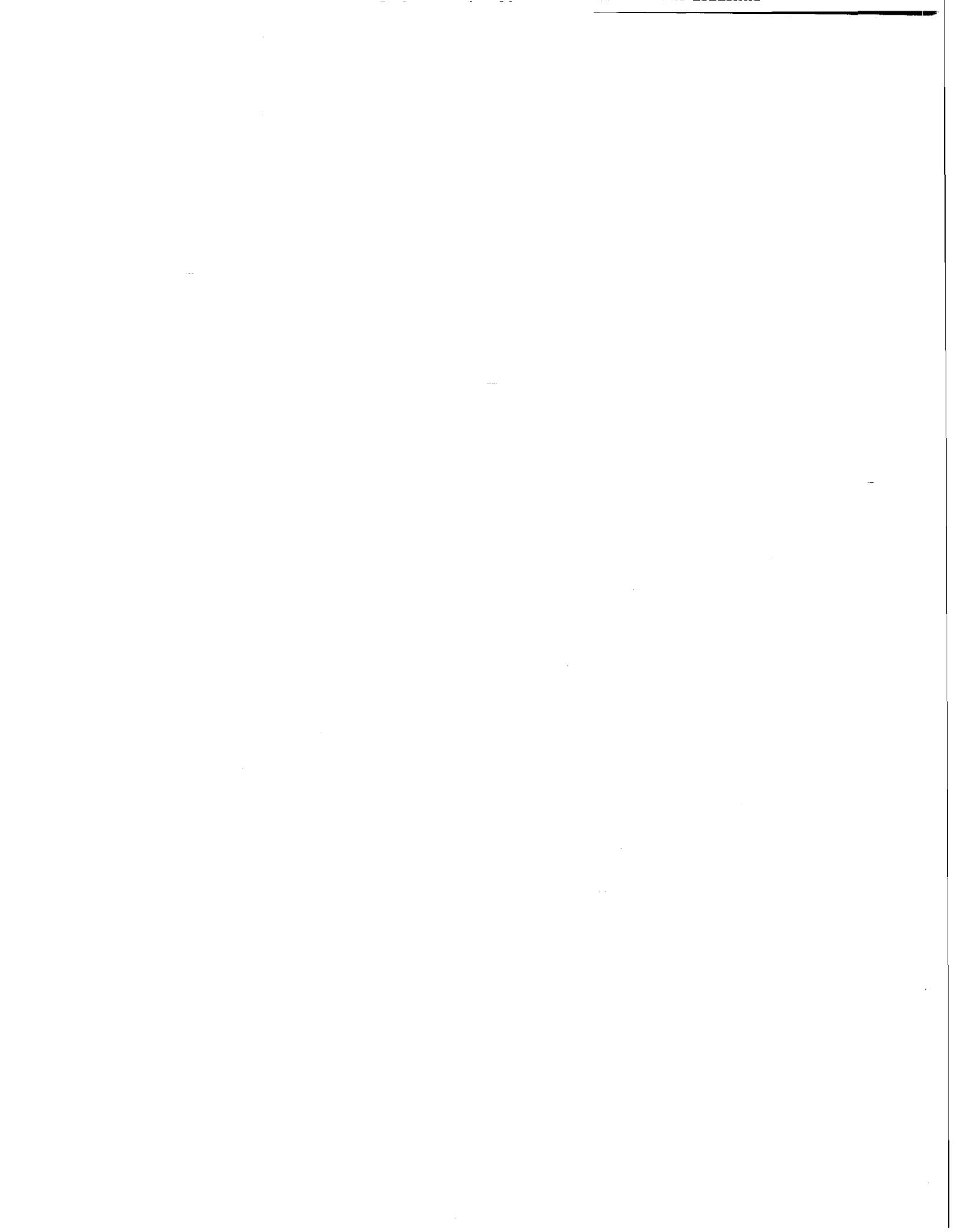
**Note:** Question numbers in []'s are for internal BSAT purposes.

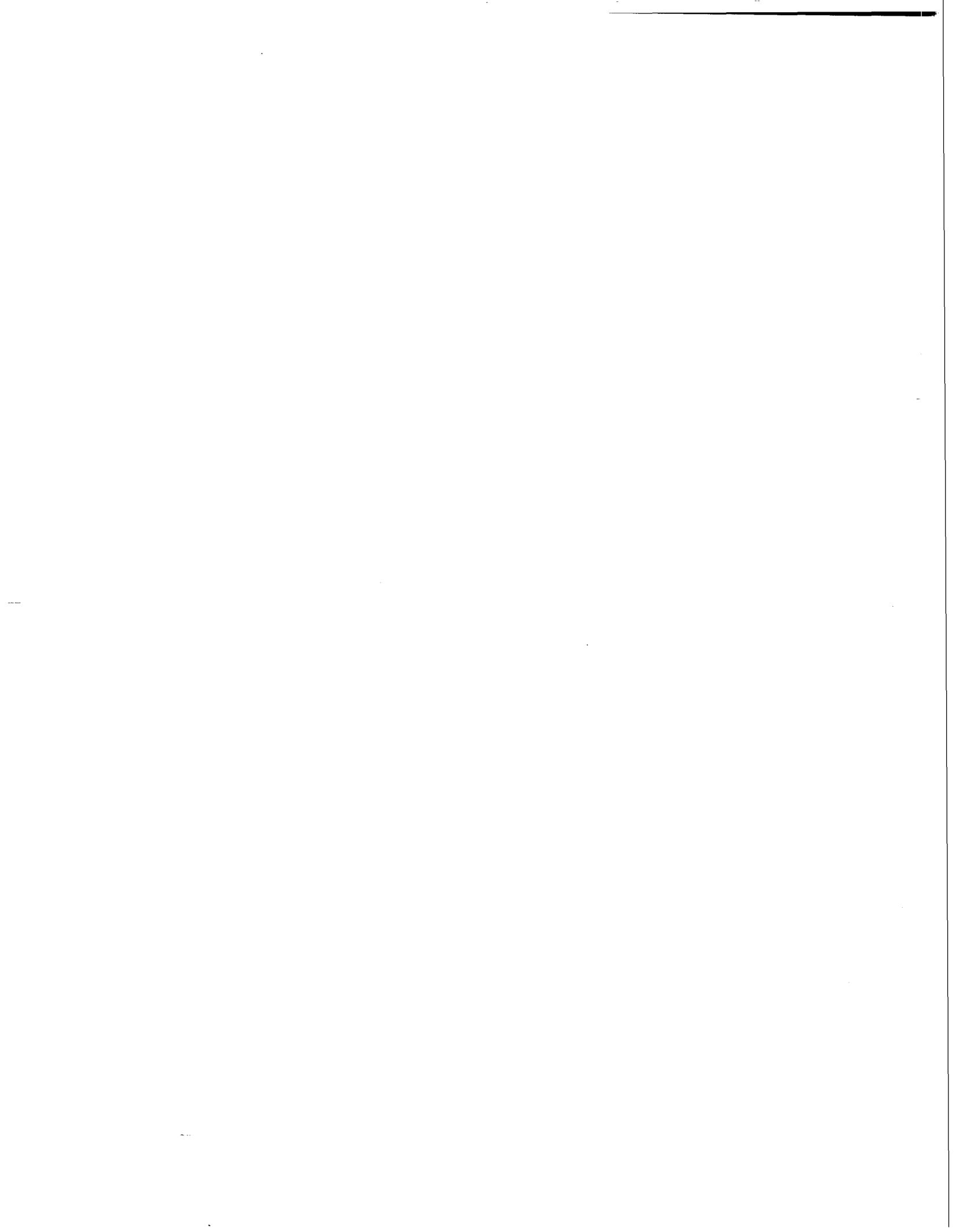
**Note:** NUWC Division, Keyport does not operate an airfield; hence, this Tab does not apply and is not provided.



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**TAB C**

**DEPOT LEVEL MAINTENANCE CAPACITY**



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## Maintenance and Industrial Activities

Activities that actually perform Depot Level Maintenance should complete **PART I** of this TAB. Warfare Center Headquarters (Owners & Operators) whose subordinate activities actually perform Depot Level Maintenance should complete **PART II** of this TAB. Depot and/or industrial workload capacity is to be reported as a function of the following categories for the period requested.

### JCSG-DM: Maintenance and Industrial Activities

Commodity Groups List	
1. Aircraft Airframes: Rotary VSTOL Fixed Wing Transport/Tanker /Bomber /Command and Control Light Combat Admin/Training Other	7. Ground and Shipboard Communications and Electronic Equipment Radar Radio Communications Wire Communications Electronic Warfare Navigational Aids Electro-Optics/Night Vision Satellite Control/Space Sensors
2. Aircraft Components Dynamic Components Aircraft Structures Hydraulic/Pneumatic Instruments Landing Gear Aviation Ordnance Avionics/Electronics APUs Other	8. Automotive/Construction Equipment
3. Engines (Gas Turbine) Aircraft Ship Tank Blades/Vanes (Type 2)	9. Tactical Vehicles Tactical Automotive Vehicles Components
4. Missiles and Missile Components Strategic Tactical/MLRS	10. Ground General Purpose Items Ground Support Equipment (except aircraft) Small Arms/Personal Weapons Munitions/Ordnance Ground Generators Other
5. Amphibians Vehicles Components (less GTE)	11. Sea Systems Ships Weapons Systems
6. Ground Combat Vehicles Self-propelled Tanks	12. Software Tactical Systems Support Equipment
	13. Special Interest Items Bearings Refurbishment Calibration (Type I) TMDE
	14. Other



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Refer to the following notes when filling out the tables in this TAB.

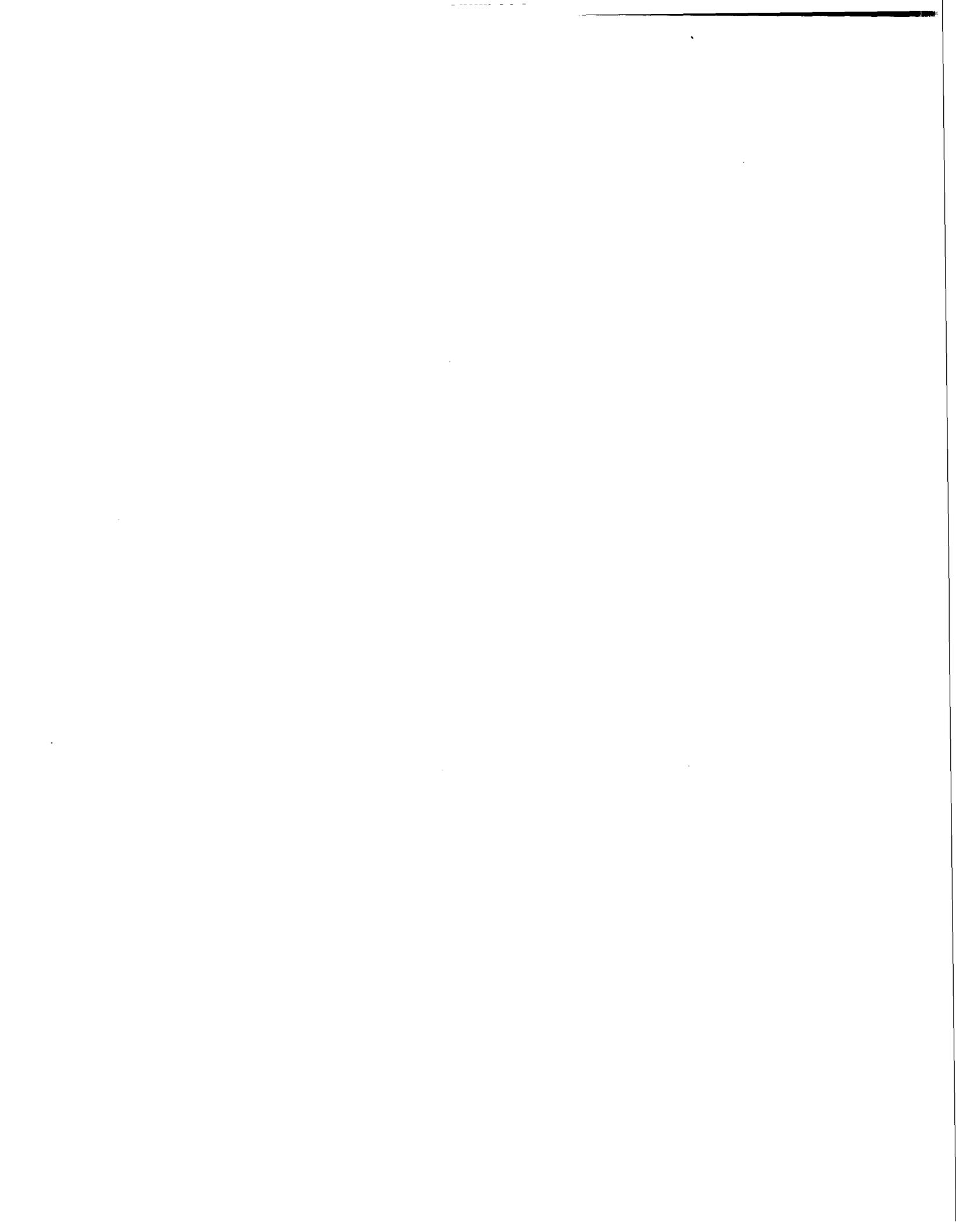
*Notes:*

1. "Production" equates to the number of items processed per Fiscal Year (FY), unless otherwise specified.
2. Base your responses for FY 1994 and previous years on executed workload, and for FY 1995 and subsequent years on workload as programmed. Unless otherwise specified, use workload mixes as programmed. In estimating projected workload capabilities, use the Activity's configuration as of completion of implementation of the BRAC-88/91/93 actions.
3. Use single shift operations (1-8-5) as the basis for your calculations. Report in specified units of throughput and Direct Labor Man Hours (DLMHs).
4. If any responses are classified, so annotate the applicable question and include those responses in a separate classified annex.
5. Capacity Index and Utilization Index will be calculated in accordance with the Defense Depot Maintenance Council approved update to Department of Defense Instruction (DoDInst) 4151.15H, "Depot Maintenance Capacity/Utilization Index Measurement."
6. The Major Owner/Operator questions will be answered by the Major Claimant/Systems Commander.
7. Utilize the tables provided to answer each question. Answer the questions for all of the commodity groups that are applicable to your activity. In the Aircraft Airframes and Engines (Gas Turbine) commodity groups break out the information by aircraft type, model, series or by engine type as applicable when filling out the tables.



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**PART I: MAINTENANCE & INDUSTRIAL ACTIVITIES**

**1. Historic and Predicted Workload**

1.1 Given the current configuration and operation of your activity, provide the depot/industrial level maintenance by commodity group (from the List above) that was executed in and is programmed for the Fiscal Years (FY) requested in units throughput (Tables 1.1.a and 1.1.b) and in Direct Labor Man Hours (DLMHs) (Tables 1.1.c and 1.1.d). Add additional rows as required to report all commodity types serviced at this activity.

**Table 1.1.a: Historic and Predicted Depot/Industrial Workload**

Commodity Type	Throughput (Units) **							
	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	49,565	51,318	45,625	49,842	42,303	33,404	34,980	29,970
<b>Total:</b>	49,565	51,318	45,625	49,842	42,303	33,404	34,980	29,970

- \* Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

\*\*Note: The units shown reflect only work performed by the Naval Undersea Warfare Center. The Center does not have visibility into the total (i.e., public and private) depot maintenance requirement for Undersea Warfare systems.



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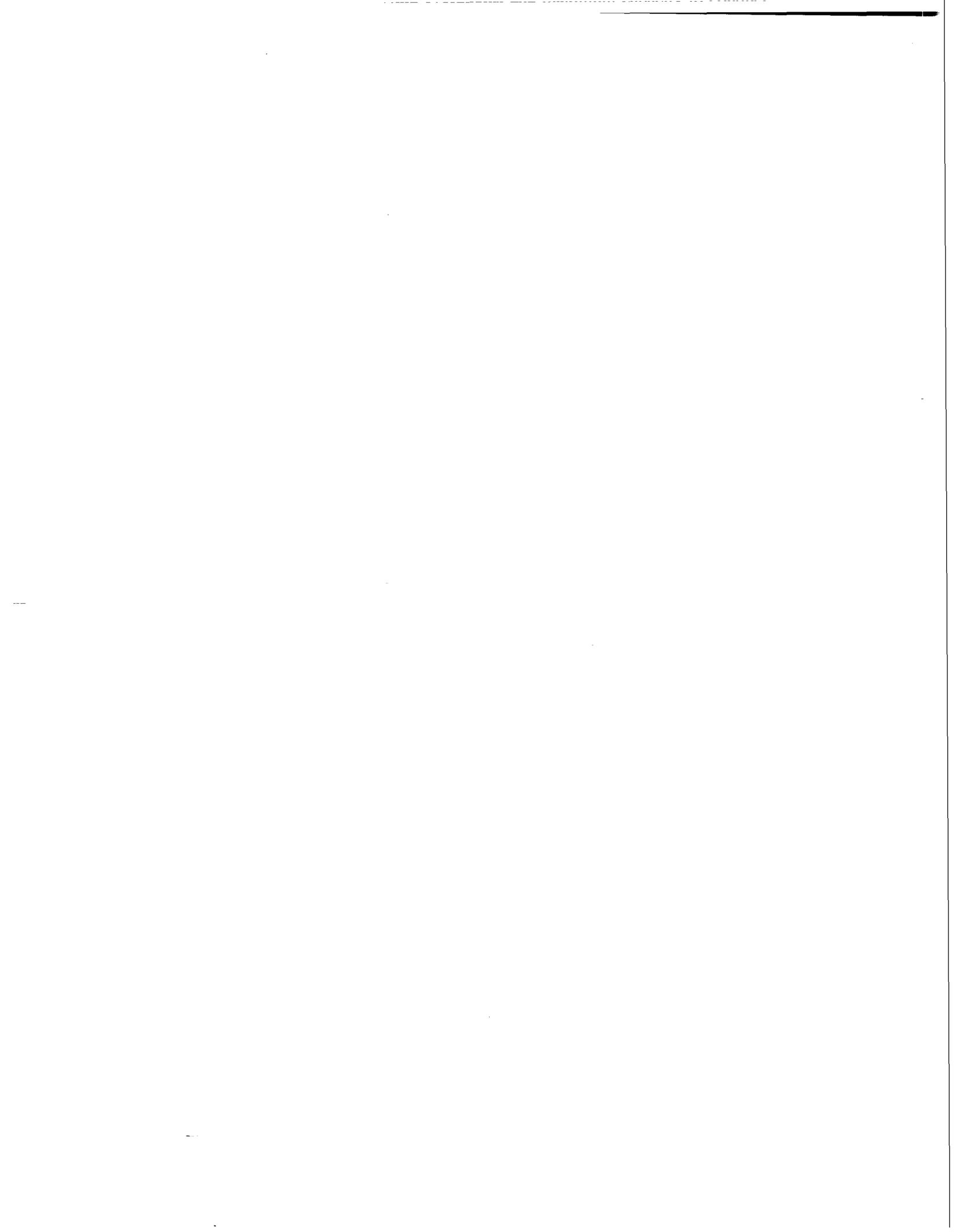


Table 1.1.b: **Historic and Predicted Depot/Industrial Workload**

Commodity Type	Throughput (Units) **							
	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	34,162	24,899	24,806	24,701	25,653	27,145	27,038	27,222
<b>Total:</b>	34,162	24,899	24,806	24,701	25,653	27,145	27,038	27,222

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

\*\*Note: The units shown reflect only work performed by the Naval Undersea Warfare Center. The Center does not have visibility into the total (i.e., public and private) depot maintenance requirement for Undersea Warfare systems.



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Table 1.1.c: **Historic and Predicted Depot/Industrial Workload**

Commodity Type	Throughput (DLMHs) **							
	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	1,380,230	1,449,065	1,426,120	1,272,565	1,337,870	1,163,135	1,180,903	1,142,183
<b>Total:</b>	1,380,230	1,449,065	1,426,120	1,272,565	1,337,870	1,163,135	1,180,903	1,142,183

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

\*\*Note: The hours shown reflect only work performed by the Naval Undersea Warfare Center. The Center does not have visibility into the total (i.e., public and private) depot maintenance requirement for Undersea Warfare systems.



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Table 1.1.d: **Historic and Predicted Depot/Industrial Workload**

Commodity Type	Throughput (DLMHs) **							
	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	1,057,018	986,888	953,320	830,260	860,153	874,396	866,094	878,800
<b>Total:</b>	<b>1,057,018</b>	<b>986,888</b>	<b>953,320</b>	<b>830,260</b>	<b>860,153</b>	<b>874,396</b>	<b>866,094</b>	<b>878,800</b>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

\*\*Note: The hours shown reflect only work performed by the Naval Undersea Warfare Center. The Center does not have visibility into the total (i.e., public and private) depot maintenance requirement for Undersea Warfare systems.



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1.2 For each commodity type reported in Tables 1.1.a through 1.1.d, assume (a) the current projected total depot/industrial workload remains as assigned; (b) that sufficient production demand is available to justify maximum hiring, optimum (repeat order manufacturing lead times) procurement, and maximum equipment support; and (c) no major MILCON additional to that already programmed: what is the maximum extent to which depot / industrial maintenance operations could be expanded at this activity, based on the current and future planned workload mixes, for the requested period? Please provide your response in both the absolute maximum number of hours and DLMHs that could be processed at this activity by applicable commodity group. Add additional rows as necessary to accommodate all commodity types serviced at this activity.

Table 1.2.a: Maximum Potential Depot/Industrial Workload

Commodity Type	Throughput (Units)						
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	33,648	30,956	28,789	28,789	28,789	28,789	28,789
<b>Total:</b>	33,648	30,956	28,789	28,789	28,789	28,789	28,789

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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Table 1.2.b: Maximum Potential Depot/Industrial Workload

Commodity Type	Throughput (DLMH's)						
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	1,333,680	1,226,985	1,141,096	1,141,096	1,141,096	1,141,096	1,141,096
<b>Total:</b>	1,333,680	1,226,985	1,141,096	1,141,096	1,141,096	1,141,096	1,141,096

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)



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**1.3** Provide details of your calculations, including assumptions on additional space utilized, major equipment required, production rates, and constraints that limit increased workload by commodity group at this activity.

The maximum potential capacity reported in Table 1.2a is based on more intense staffing of work positions through additional hiring to achieve utilization of 2000 hours per year per position. Resulting capacity is increased by a factor of 1.13 (2000/1765).

**1.4** Given an environment unconstrained by funds or manning, what Industrial Plant Equipment (IPE) would you change (add, delete, or modify) to increase your activity's capability to perform workload in each of the applicable commodity groups? Describe quantitatively how the changes above would increase your activity's depot/industrial level maintenance capabilities. What would the associated costs be? What would be the payback period and return on investment?

NUWC Division, Keyport is the sole Navy/DOD facility with its capability focused on the unique requirements for depot maintenance of undersea warfare weapons and combat systems. Within the commodity group systems supported at this facility, present facilities and equipment are adequate for all projected workload, including required mobilization surge. No major industrial plant equipment will be required to continue to provide the anticipated depot maintenance support for these systems.

Future investments in capital equipment and modifications to existing facilities for depot maintenance will be made in response to evolving technologies, obsolescence of equipment, and opportunities for productivity enhancements associated with current assigned depot commodities.

**1.5** Are there any environmental, legal, or otherwise limiting factors that inhibit further the development of depot/industrial level workload and this activity (AICUZ encroachment, pollutant discharge, etc.)?

There are no limiting factors that will inhibit further development of depot/industrial workload at NUWC Division, Keyport.



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## 2. Workload Summary

2.1 Enter the information from the Predicted and Potential Workload sections of the previous question into the table below and calculate the variance between projected and potential workloads. Again, clearly identify each commodity and include all commodities serviced at this activity.

Table 2.1.a: PREDICTED WORKLOAD VARIANCE FOR FY 1995

FY 1995 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	24,899	33,648	<8,749>	986,888	1,333,680	<346,792>
Total	N / A	N / A	N / A	986,888	1,333,680	<346,792>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.b: PREDICTED WORKLOAD VARIANCE FOR FY 1996

FY 1996 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	24,806	30,956	<6,150>	953,320	1,226,985	<273,665>
Total	N / A	N / A	N / A	953,320	1,226,985	<273,665>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.c: PREDICTED WORKLOAD VARIANCE FOR FY 1997

FY 1997 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	24,701	28,789	<4,088>	830,260	1,141,096	<310,836>
Total	N / A	N / A	N / A	830,260	1,141,096	<310,836>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.d: PREDICTED WORKLOAD VARIANCE FOR FY 1998

FY 1998 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	25,653	28,789	<3,136>	860,153	1,141,096	<280,943>
Total	N / A	N / A	N / A	860,153	1,141,096	<280,943>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.e: **PREDICTED WORKLOAD VARIANCE FOR FY 1999**

FY 1999 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	27,145	28,789	<1,644>	874,396	1,141,096	<266,700>
<b>Total</b>	<b>N / A</b>	<b>N / A</b>	<b>N / A</b>	<b>874,396</b>	<b>1,141,096</b>	<b>&lt;266,700&gt;</b>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.f: PREDICTED WORKLOAD VARIANCE FOR FY 2000

FY 2000 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	27,038	28,789	<1,751>	866,094	1,141,096	<275,002>
<b>Total</b>	<b>N / A</b>	<b>N / A</b>	<b>N / A</b>	<b>866,094</b>	<b>1,141,096</b>	<b>&lt;275,002&gt;</b>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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Table 2.1.g: **PREDICTED WORKLOAD VARIANCE FOR FY 2001**

FY 2001 Commodity Type	Product (units)			DLMHs		
	Predicted Workload	Potential Workload	Variance	Predicted Workload	Potential Workload	Variance
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	27,222	28,789	<1,567>	878,800	1,141,096	<262,296>
<b>Total</b>	<b>N / A</b>	<b>N / A</b>	<b>N / A</b>	<b>878,800</b>	<b>1,141,096</b>	<b>&lt;262,296&gt;</b>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

<sup>1</sup> This workload is not duplicative of any previously reported workload. Detail all production categorized as "other".



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**PART II: HEADQUARTERS**

The following section is being submitted by Commander, Naval Undersea Warfare Center as part of COMNUWC's response to Data Call #4. As such, it has been certified for accuracy by COMNUWC and is not included in the Division Keyport certification process. It has been reproduced and is included with NUWC Division, Keyport's submission for Data Call #4 to provide a complete document.

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## **PART II: HEADQUARTERS (MAJOR OWNERS & OPERATORS)**

### **1. Interservicing Candidates**

1.1 Specify all depot and/or industrial workload programs, performed by any of your activities, that are possible candidates for interservicing, *both* in to and out from the activity. Provide detailed supporting data for your recommendations.

There are no undersea warfare systems which are good candidates for depot maintenance interservicing out of NUWC Division, Keyport. Supporting data for this conclusion are as follows:

- Undersea warfare is a mission area which is unique to the Navy. The systems and weapons employed in undersea warfare are specialized in their design and maintenance processes to meet the unique requirements of this environment.
- Elements of these systems which are unique to undersea warfare and which in combination make NUWC Division, Keyport uniquely qualified to perform the depot maintenance include:
  - Test and repair of acoustic torpedo transducers.
  - Pressure testing to extreme depths.
  - Operational testing in instrumented undersea ranges.
  - Requirements for facilities and processes to handle and process unique hazardous materials (e.g., fuel, and lithium boilers) in a manner which is safe for personnel and the environment.
  - Requirements for facilities and processes to safely handle explosives.
- NUWC Division, Keyport has maintained a focus on depot maintenance for undersea warfare systems which is reflected in its depot maintenance Centers of Technical Excellence. To a substantial degree, the assigned Centers of Technical Excellence rely on shared use of capital equipment and facilities. The resulting synergism would be lost if workload associated with individual Centers of Technical Excellence was relocated from NUWC Division, Keyport. Significant capital investments would be required to meet the need for creating duplicate capabilities. These Centers of Technical Excellence are:
  - Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)

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# 1. Interservicing Candidates (Cont.)

## 1.1 (Cont.)

- Submarine USW Combat Systems
  - Surface ASW Combat Systems
  - Undersea Targets and Vehicles
  - Undersea Warfare Mines
  - Undersea Warfare Countermeasures
- The depot maintenance facilities and workforce at NUWC Division, Keyport are employed as a resource to support other related functions in undersea warfare. Colocation of the maintenance depot with in-service engineering for systems and proofing of weapons creates a synergy which enables all of these functions to be accomplished more effectively than each could be performed in isolation. In the case of post range torpedo maintenance, the close proximity of the depot shops to the NUWC Division, Keyport ranges minimizes the time delay between operation and maintenance. Keeping this time span as short as possible is fundamental to minimizing corrosion of the torpedo propulsion systems. As this time span increases, an increasing amount of scrapped hardware results.
  - Undersea warfare systems employed by the forces of the Special Warfare Command are good candidates for interservicing depot maintenance at NUWC Division, Keyport. These systems are typically few in deployed number and specialized in nature. Consequently, they are systems for which it is difficult to make good cost-effective, life cycle depot assignments in the private sector. NUWC Division, Keyport's demonstrated experience and extensive facilities for maintenance of undersea warfare systems make it a logical site for accomplishment of this depot maintenance work.
  - NUWC Division, Keyport's extensive capabilities and focus on undersea warfare systems provides an opportunity to further consolidate depot maintenance for selected systems presently supported at other organic activities. Systems and equipment which are candidates for consolidation include undersea mines, mine countermeasures, acoustic countermeasures, and towed sonar systems.
  - Depot maintenance workload requirements for systems used at regional military activities, both within the Navy and in other Services, are candidates for accomplishment at NUWC Division, Keyport. The Navy's initiative to

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**1. Interservicing Candidates (Cont.)**

**1.1 (Cont.)**

consolidate and perform more maintenance on a regional basis can readily be applied to all regional activities, including Fort Lewis Army Base and McChord Air Force Base. Where there is a good fit between regional requirements and NUWC Division, Keyport's capability and capacity, it is appropriate to employ the resources to satisfy the need.

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## **2. Core Requirements**

**2.1** Given the current programmed configuration and operation for these activities, provide the projected Core Workload, Directed workload, Core "Plus" Workload, and Workload required to be retained to meet the Secretary of the Navy's Title 10 responsibilities. Within each Fiscal Year (FY) requested, provide your response in Units of throughput (where applicable) and Direct Labor Man Hours (DLMHs) for the categories in the following Tables. Core workload includes all Core work performed for other Military Departments (please specify such work within each commodity category).

- Core workload calculations are to be performed in accordance with the Office of the Under Secretary of Defense (Logistics) (OUSD(L)) Memorandum dated 15 November 1993 (subject: "Policy for Maintaining Core Depot Maintenance Capability").
- Directed workload includes: Foreign Military Sales (FMS); Low Quantity Non-Core; Low Quantity Above Core; Best Value; Engineering Support; and Last Source of Repair. Directed workload is tabulated in Section 2.2, following.
- Core-Plus workload is the sum of Core workload and Directed workload.
- Title 10 workload is that portion of Core workload that must be retained within the Department of the Navy in order to meet the Secretary of the Navy's Title 10 responsibilities.

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Table 2.1.a: Workload Requirements FY 1993

FY 1993 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	820,583	321,600	1,142,183	820,583
Total:	820,583	321,600	1,142,183	820,583

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.b: Workload Requirements FY 1994

FY 1994 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	825,379	231,639	1,057,018	825,379
Total:	825,379	231,639	1,057,018	825,379

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.c: Workload Requirements FY 1995

FY 1995 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	820,504	166,384	986,888	825,379
Total:	820,504	166,384	986,888	825,379

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.d: Workload Requirements FY 1996

FY 1996 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	820,692	132,628	953,320	825,379
<b>Total:</b>	<b>820,692</b>	<b>132,628</b>	<b>953,320</b>	<b>825,379</b>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.e: **Workload Requirements FY 1997**

FY 1997 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	703,082	127,178	830,260	825,379
<b>Total:</b>	<b>703,082</b>	<b>127,178</b>	<b>830,260</b>	<b>825,379</b>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.f: Workload Requirements FY 1998

FY 1998 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	698,012	162,141	860,153	825,379
<b>Total:</b>	<b>698,012</b>	<b>162,141</b>	<b>860,153</b>	<b>825,379</b>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.g: Workload Requirements FY 1999

FY 1999 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	733,969	140,427	874,396	825,379
Total:	733,969	140,427	874,396	825,379

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.1.h: Workload Requirements FY 2000

FY 2000 Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	733,579	132,515	866,094	825,379
<b>Total:</b>	<b>733,579</b>	<b>132,515</b>	<b>866,094</b>	<b>825,379</b>

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

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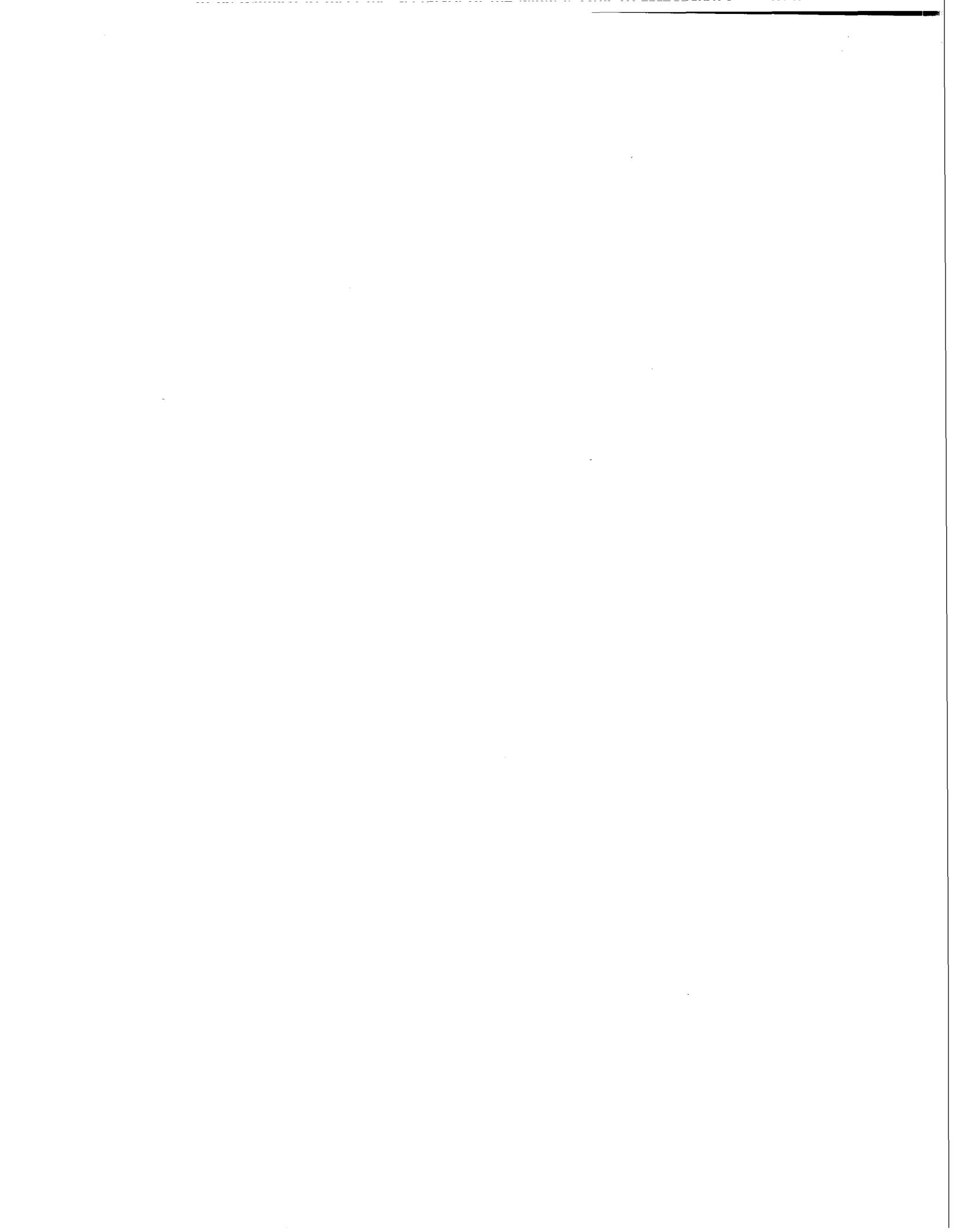
**Table 2.1.i: Workload Requirements FY 2001**

<i>FY 2001</i> Commodity Type	Core Workload (DLMHs)			
	Core Workload	Directed Workload	Core "Plus" Workload	Title 10 Workload
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	753,409	125,391	878,800	825,379
<b>Total:</b>	<b>753,409</b>	<b>125,391</b>	<b>878,800</b>	<b>825,379</b>

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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**2.2** Given the current programmed configuration and operation of the NADEPs, provide the projected Directed Workload. Within each Fiscal Year (FY) requested, provide your response in units throughput (where available) and Direct Labor Man Hours (DLMHs) for the categories requested.

- Foreign Military Sales (FMS) include airframe, engine, and component maintenance and manufacturing support.
- Modifications (Mods) include *only those modifications* performed concurrently with scheduled depot level work packages constituting Core workload.
- Low Quantity Non-Core (LQNC) is that Non-Core workload with insufficient programmed quantity for competition. This category also includes above threshold Core workload for weapons systems which have a total projected workload greater than the computed core quantity (above core workload).
- Best Value (BV) includes items that have been offered for maintenance under competitive rules and no offerer has provided a bid that is equal to or better than the value provided by a current organic source.
- Engineering Support (Engr) consists of Engineering Support to field, modify, operate, and maintain aviation weapon systems (i.e., RCM analysis, defining maintenance intervals, developing maintenance concepts, modification management, industrial support, investigations, bulletins, and flight safety, and environmental issues).
- Last Source of Repair (LSOR) comprises Non-Core workload which has been offered for maintenance under competitive rules and no offerer has provided a bid, and for which a workload requirement exists and the organic depot is the only remaining source of repair.

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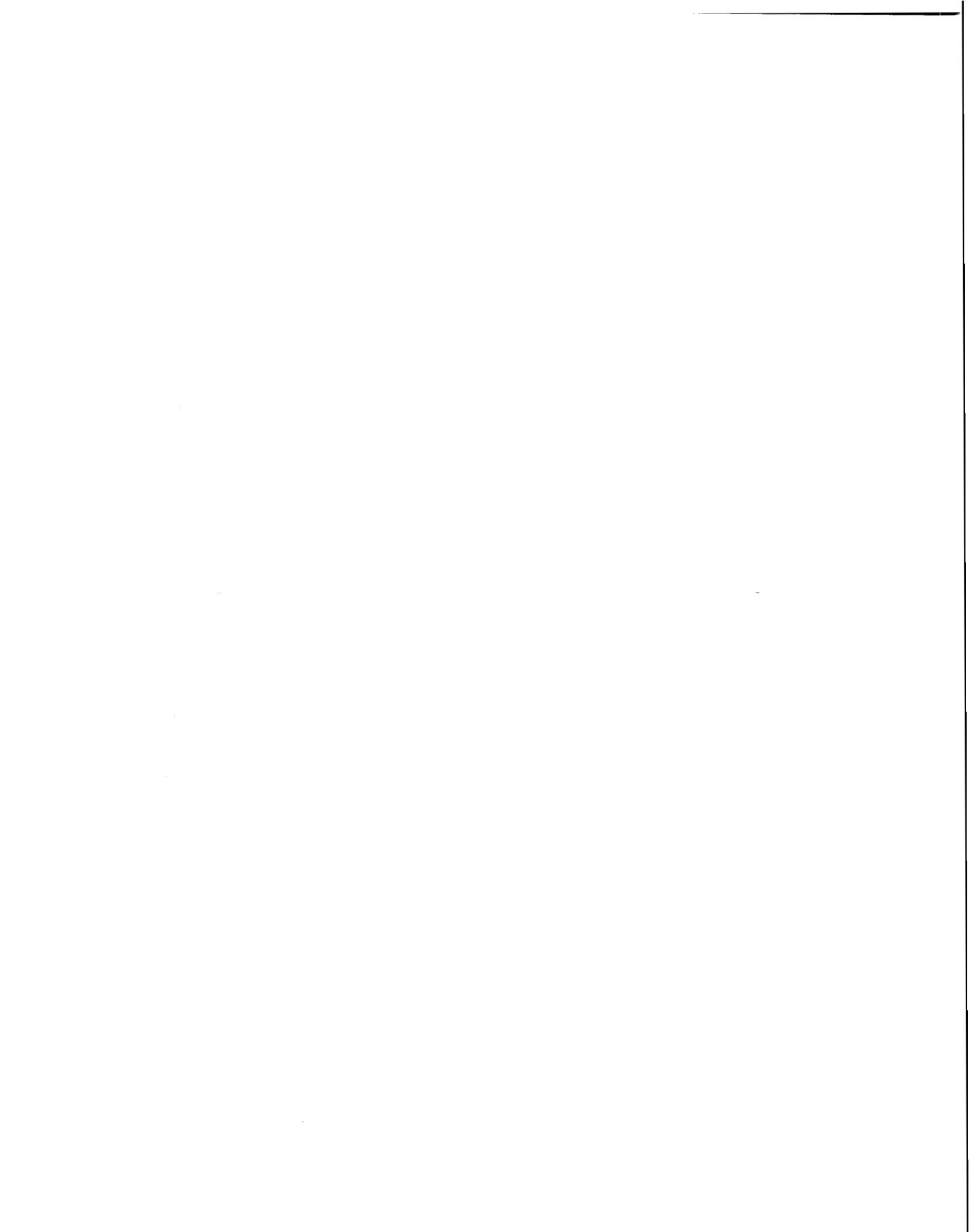
Table 2.2.a: Directed Workloads - FY 1993

FY 1993 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	911	2,135	2,436	871	2,085	0	8,438
FY 1993 Total:	911	2,135	2,436	871	2,085	0	8,438

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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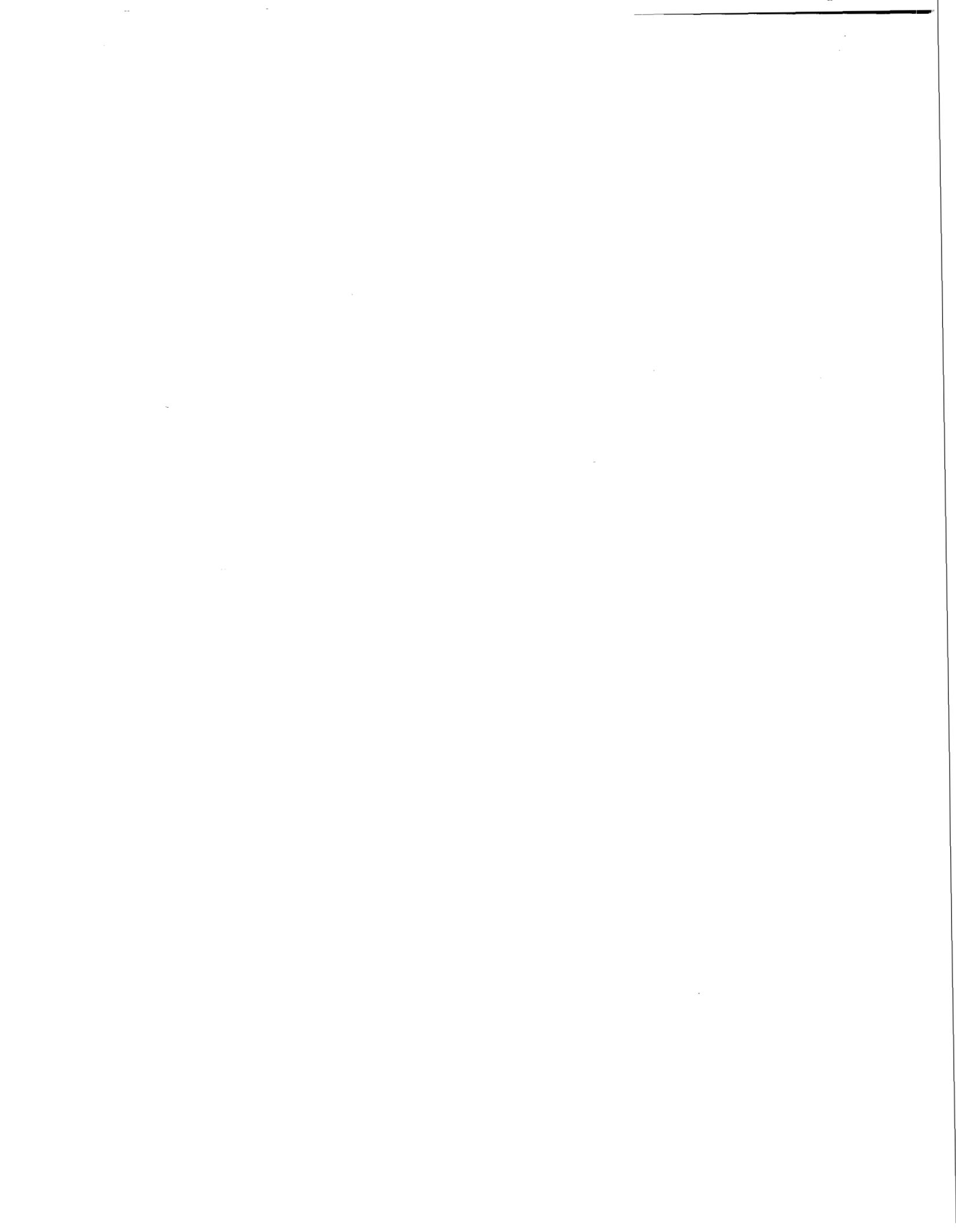
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**Table 2.2.b: Directed Workloads - FY 1994**

FY 1994 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	330	2,129	2,188	1,024	1,816	0	7,487
<b>FY 1994 Total:</b>	<b>330</b>	<b>2,129</b>	<b>2,188</b>	<b>1,024</b>	<b>1,816</b>	<b>0</b>	<b>7,487</b>

\*Includes the following Undersea Warfare (USW) Systems:  
 - Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)  
 - Lightweight Torpedoes (MK 46 and MK 50)  
 - USW Combat Systems (Sonar and Fire Control)  
 - Undersea Targets (MK 30)  
 - Other USW Systems (Mines, Acoustic Countermeasures)



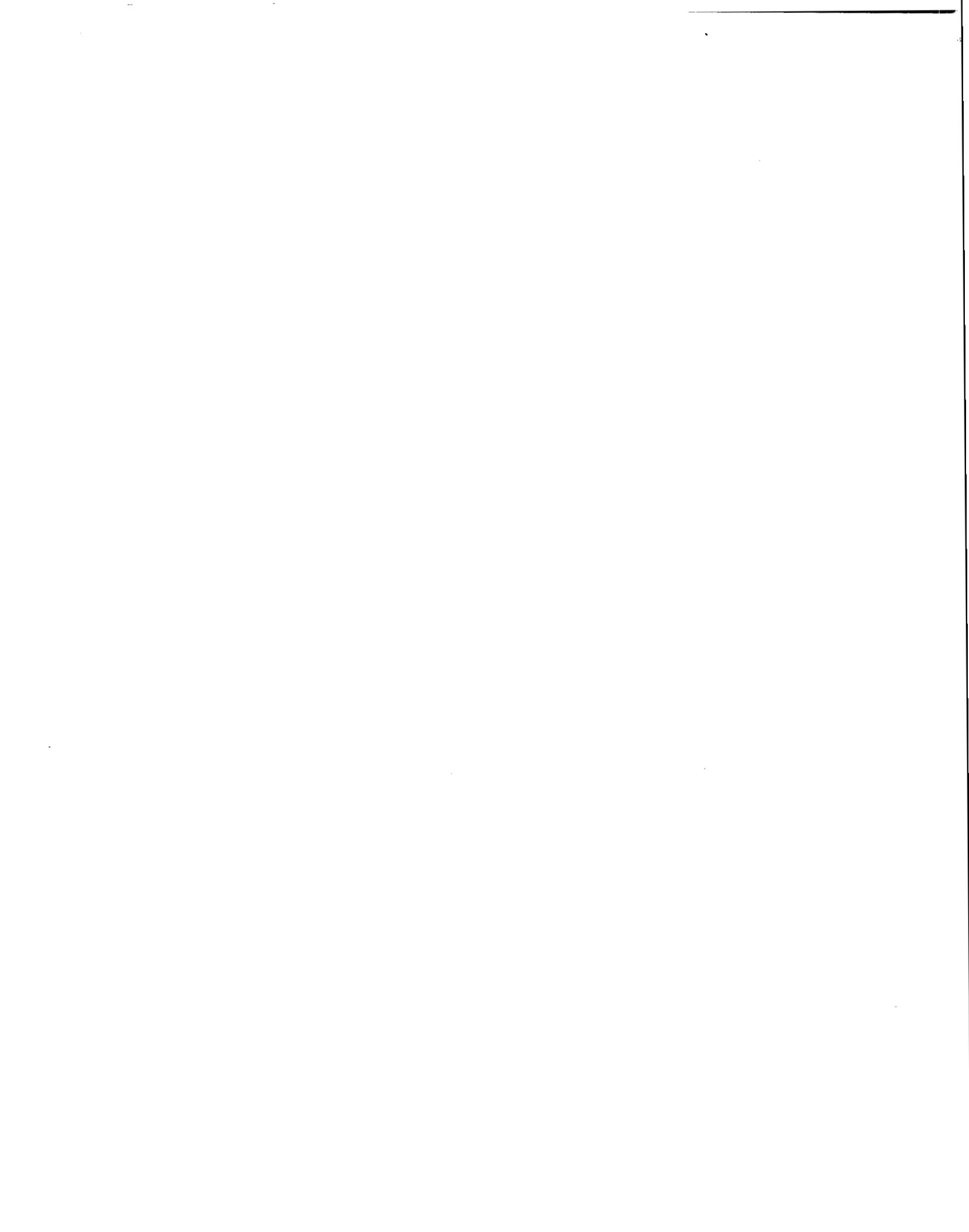


Table 2.2.c: Directed Workloads - FY 1995

FY 1995 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	263	1,065	609	577	1,683	0	4,197
FY 1995 Total:	263	1,065	609	577	1,683	0	4,197

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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Table 2.2.d: Directed Workloads - FY 1996

FY 1996 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	251	1,474	216	0	1,510	0	3,451
FY 1996 Total:	251	1,474	216	0	1,510	0	3,451

\*Includes the following Undersea Warfare (USW) Systems:

- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
- Lightweight Torpedoes (MK 46 and MK 50)
- USW Combat Systems (Sonar and Fire Control)
- Undersea Targets (MK 30)
- Other USW Systems (Mines, Acoustic Countermeasures)

Table 2.2.e: Directed Workloads - FY 1997

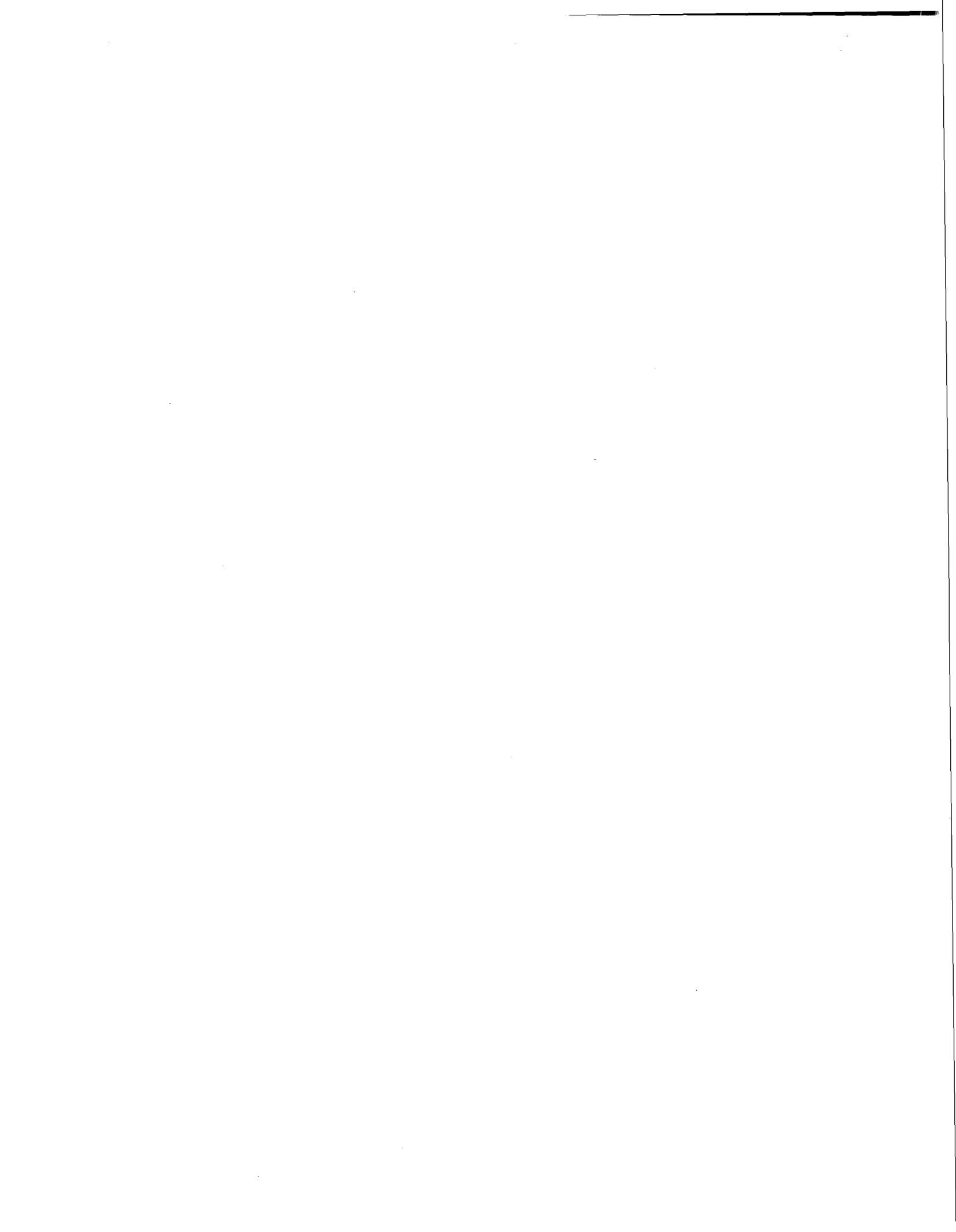
FY 1997 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	377	1,835	254	0	1,318	0	3,784
FY 1997 Total:	377	1,835	254	0	1,318	0	3,784

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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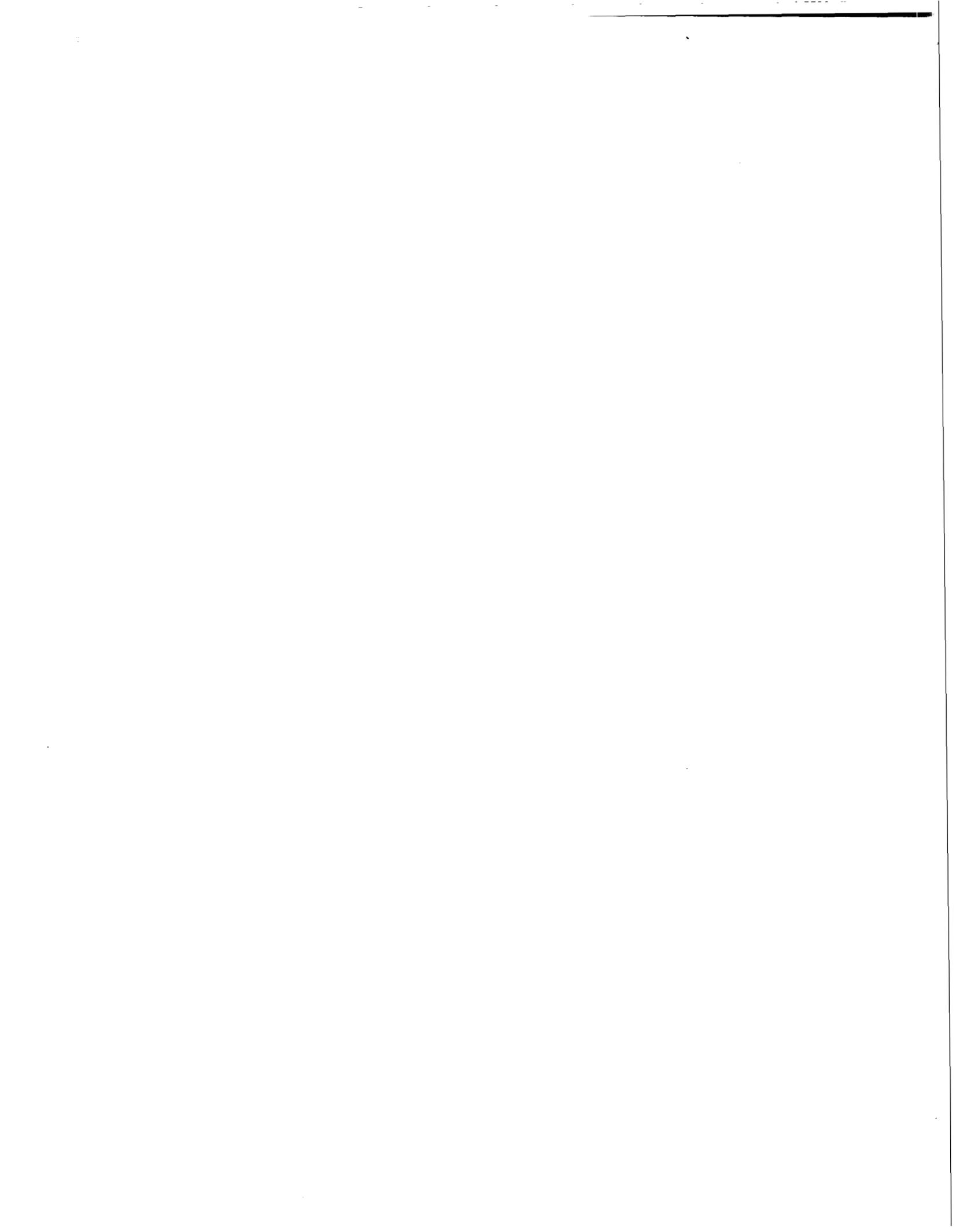


Table 2.2.g: Directed Workloads - FY 1999

FY 1999 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	277	2,732	264	0	1,086	0	4,359
FY 1999 Total:	277	2,732	264	0	1,086	0	4,359

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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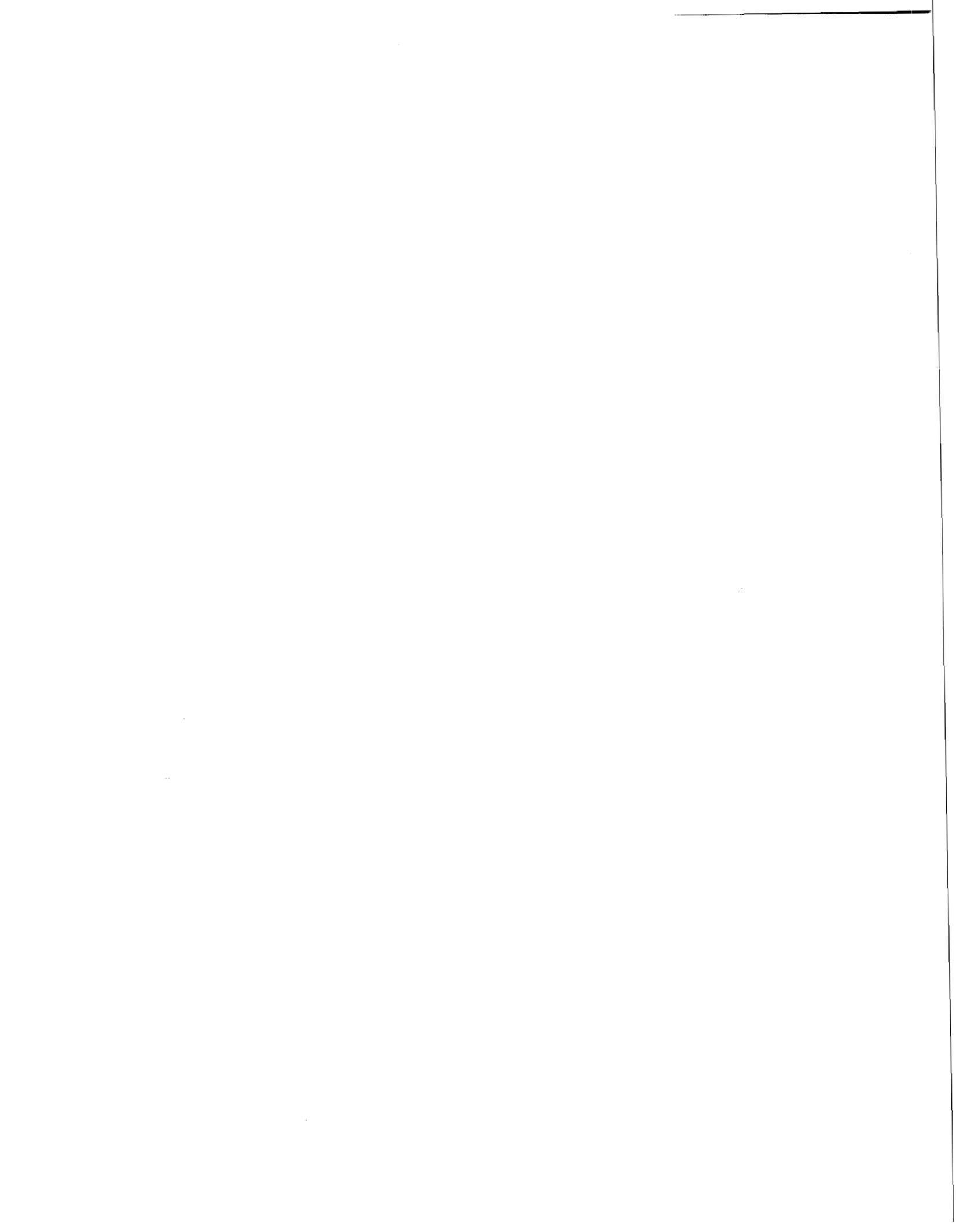


Table 2.2.i: Directed Workloads - FY 2001

FY 2001 Commodity	Units Throughput						Total
	FMS	Mods	LQNC	BV	Engr	LSOR	
11. Weapons Systems (Torpedoes, USW Combat Systems, Undersea Targets, other USW Systems)*	384	2,186	264	0	1,051	0	3,885
FY 2001 Total:	384	2,186	264	0	1,051	0	3,885

- \*Includes the following Undersea Warfare (USW) Systems:
- Heavyweight Torpedoes (MK 48 and MK 48 ADCAP)
  - Lightweight Torpedoes (MK 46 and MK 50)
  - USW Combat Systems (Sonar and Fire Control)
  - Undersea Targets (MK 30)
  - Other USW Systems (Mines, Acoustic Countermeasures)

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### 3. Organization

3.1 Can the depot/industrial level workload be transferred to other sources such as other Navy activities, interservice to other DoD entities, or outsourced to commercial activities? Identify all applicable considerations to your recommendations.

The depot maintenance operations at NUWC Division, Keyport cannot be transferred to other sources without sacrificing significant technical synergies and degrading the cost-effectiveness with which the facilities and workforce are employed. Factors leading to this conclusion are summarized as follows:

- The Department of Defense and Navy have a responsibility under Title 10 (USC) to maintain a ready and controlled source of capability and capacity to respond to a mobilization scenario. This core capability and capacity for Undersea Warfare Systems has been developed, maintained, and sized at NUWC Division, Keyport to satisfy this responsibility.
- NUWC Division, Keyport is the only facility (organic or private sector) which has the complete range of capabilities and capacities to accomplish depot maintenance on its assigned USW systems (Torpedoes, USW Combat Systems, Undersea Targets, and other USW Systems).
- Substantial specialized facilities have been developed specifically to be able to work on undersea weapons and systems. These facilities cannot be transferred to or recreated at another site without incurring prohibitive costs. Specific facilities which fall into this category are identified below:
  - Ready for Issue Facilities that are explosive certified and capable of final test and preparation of warshot weapons.
  - Instrumented underwater ranges for testing and tracking performance of torpedoes.
  - Otto fuel facility for fueling and defueling torpedoes.
  - Lithium decontamination facility for processing lithium boilers from MK 50 Torpedoes.
  - Explosive Storage Magazines for lay-up and bunkering of war reserve warheads.
  - Environmental Test Labs with shaker tables, environmental chambers, and failure analysis labs.
  - Transducer Automated Test Facility (TATF) for test of acoustic

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### 3. Organization (cont.)

#### 3.1 (cont.)

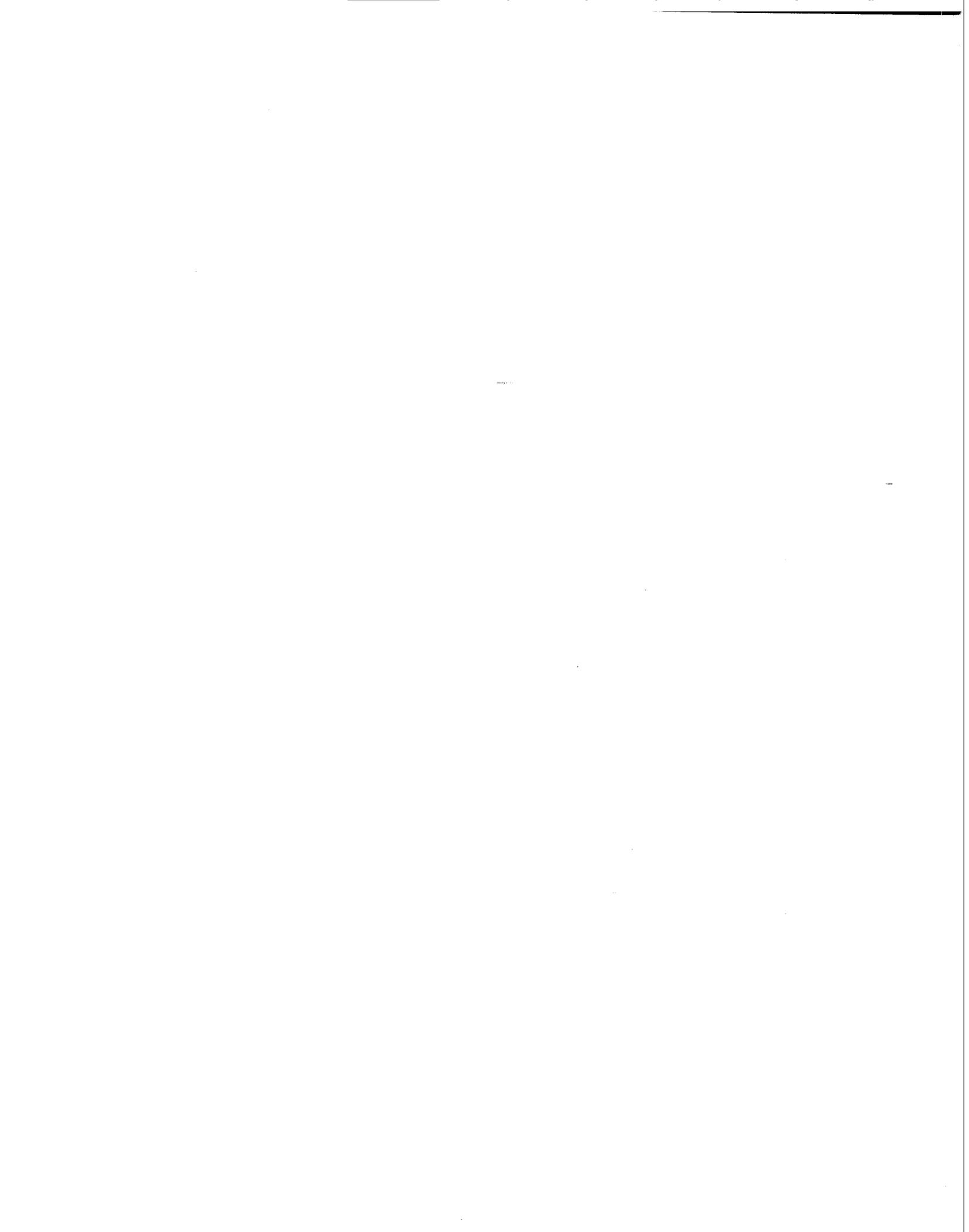
- transducers in production volumes.
  - Automated Material Handling Facility providing 151,000 cubic feet of environmentally controlled vertical storage available for lay-up and bunkering of war reserve torpedoes.
  - Industrial Waste Facility for handling waste flows resulting from the torpedo overhaul evolution.
- Several specialized facilities and capabilities which are integral to depot operations are also key resources for operations other than depot maintenance. Facilities in this category include:
    - Instrumented underwater ranges which are also used for sample proofing and acceptance of new production torpedoes, as well as test and evaluation of modifications and new designs. In addition to medium and deep depth instrumented ranges, NUWC Division, Keyport has a shallow water range to adapt to the recent shift of focus to the littoral environment.
    - Systems laboratories for combat systems (sonar and fire control) which support testing for depot maintenance as well as in-service engineering operations.
    - Torpedo fueling and defueling facilities are also an integral part of processes for turnaround of exercise configuration torpedoes and preparation of new production torpedoes for in-water proofing.

Transfer of the depot maintenance operations from NUWC Division, Keyport to a source outside the Navy would undermine the Navy's Title 10 responsibility to preserve a core capability to sustain readiness and minimize technical risk. The depot maintenance workload programmed for accomplishment at NUWC Division, Keyport approaches the minimum workload which can be accomplished and still effectively maintain core capability.

The facilities and technical expertise of the workforce operate synergistically with other functions at NUWC Division, Keyport to enable each function to be performed more effectively with a broader technical perspective. Not only are facilities and equipment shared, but equally important, the technical personnel are able to acquire expertise from

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**TAB D**  
**ORDNANCE STORAGE CAPACITY**



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NUWC DIV KEYPORT



## ORDNANCE STORAGE CAPACITY

Please answer the following questions if your activity performs any stowage or maintenance on any of the following ordnance commodity types:

ORDNANCE COMMODITY TYPES		
Mines	Expendables	LOE: Rockets
Torpedoes	INERT	LOE: Bombs
Air Launched	CADS/PADS	LOE: Gun Ammo (20mm-16")
Threat	Strategic Nuclear	LOE: Small Arms (up to 50 cal.)
Surface Launched	Tactical Nuclear	LOE: Pyro/Demo
Threat		Grenades/Mortars/Projectiles
Other Threat		

### 1. Ordnance Stowage and Support

1.1 Provide present and predicted inventories (coordinate with inventory control manager) and maximum rated capability of all stowage facilities at each weapons storage location controlled by this activity. In predicting the out year facility utilization, distribute overall ordnance compliment to the most likely configuration. The maximum rated capability is also an out year projection taking into account any known or programmed upgrades that may increase current stowage capacity. When listing stowage facilities, group by location (e.g. main base, outlying field, special area).



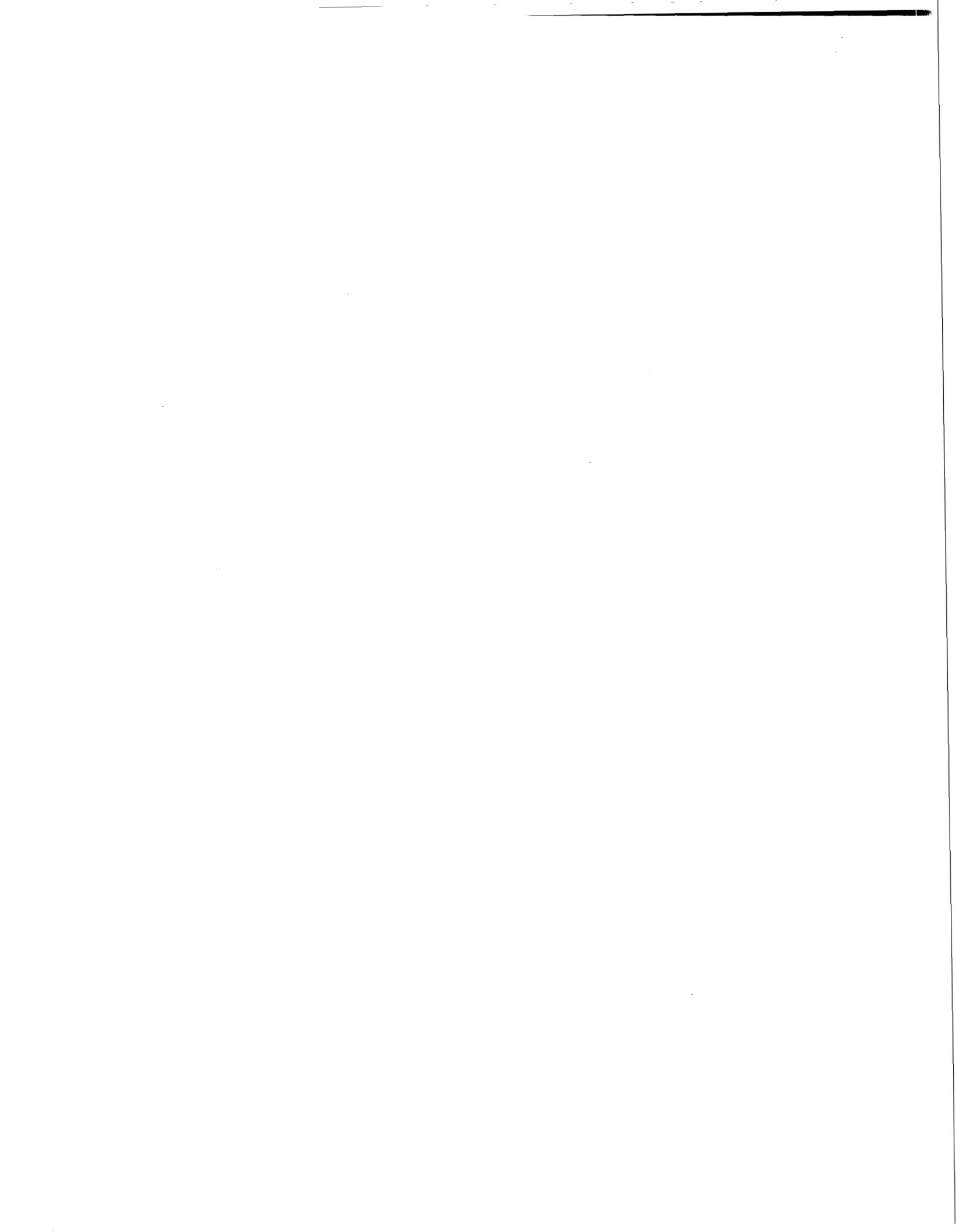
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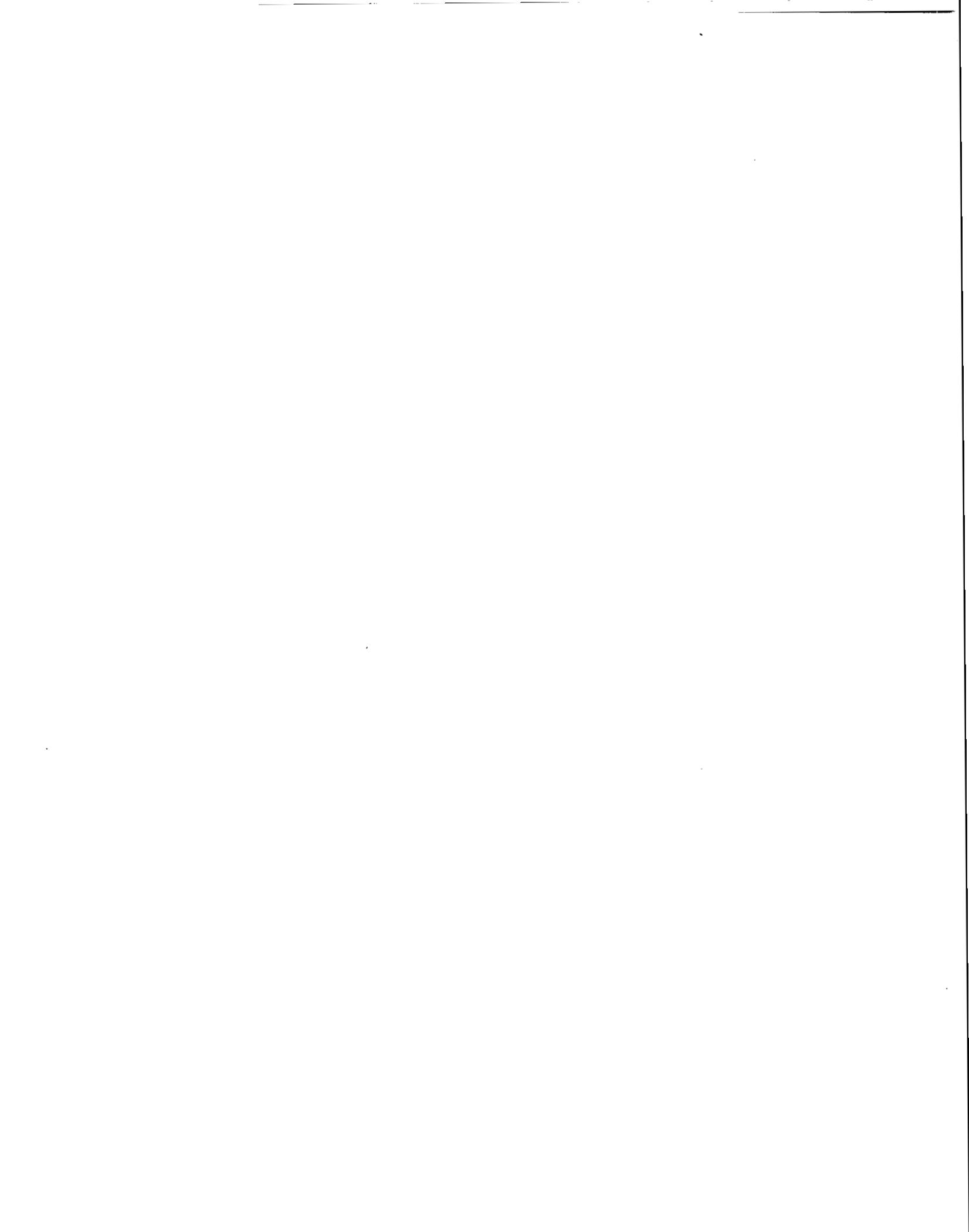
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NUWC DIV KEYPORT





**Table 1.1: Total Facility Ordnance Stowage Summary  
NUWC Division, Keyport**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
5072	11	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5073	50	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5075	14	5,000	70 <sup>8</sup>	5,000	70 <sup>8</sup>	5,000
5076	63	5,000	25 <sup>7</sup>	5,000	350 <sup>2</sup>	5,000
5077	161	5,000	100 <sup>9</sup>	5,000	200 <sup>10</sup>	5,000
5078	50	5,000	150 <sup>9</sup>	5,000	300 <sup>10</sup>	5,000
5079	100	5,000	100 <sup>5</sup>	5,000	100 <sup>5</sup>	5,000
5080	60	5,000	100 <sup>9</sup>	5,000	300 <sup>10</sup>	5,000
5081	350	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5082	84	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5083	350	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5084	68	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5085	32	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5086	96	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5087	88	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5088	102	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5089	148	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-2  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.1: Total Facility Ordnance Stowage Summary  
NUWC Division, Keyport**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
5113	110	5,000	110 <sup>4</sup>	5,000	110 <sup>4</sup>	5,000
5114	110	5,000	110 <sup>4</sup>	5,000	110 <sup>4</sup>	5,000
5115	96	5,000	110 <sup>4</sup>	5,000	110 <sup>4</sup>	5,000
5116	110	5,000	110 <sup>4</sup>	5,000	110 <sup>4</sup>	5,000
5117	64	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5118	210	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5119	56	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5120	50	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5121	62	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5122	250	5,000	250 <sup>3</sup>	5,000	250 <sup>3</sup>	5,000
5123	58	5,000	250 <sup>3</sup>	5,000	250 <sup>3</sup>	5,000
5124	70	5,000	250 <sup>3</sup>	5,000	250 <sup>3</sup>	5,000
5125	162	5,000	250 <sup>3</sup>	5,000	250 <sup>3</sup>	5,000
5126	187	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5127	157	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5128	6	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5129	96	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5130	152	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-3  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.1: Total Facility Ordnance Stowage Summary  
NUWC Division, Keyport**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
5131	55	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5132	94	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5133	39	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5134	15	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5135	55	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5136	240	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5137	350	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5138	54	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5139	82	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5140	336	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5141	28	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5142	57	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5143	59	5,000	110 <sup>6</sup>	5,000	110 <sup>6</sup>	5,000
5144	350	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5145	350	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5146	50	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5147	240	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5148	280	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-4  
UIC N00253  
NUWC DIV KEYPORT

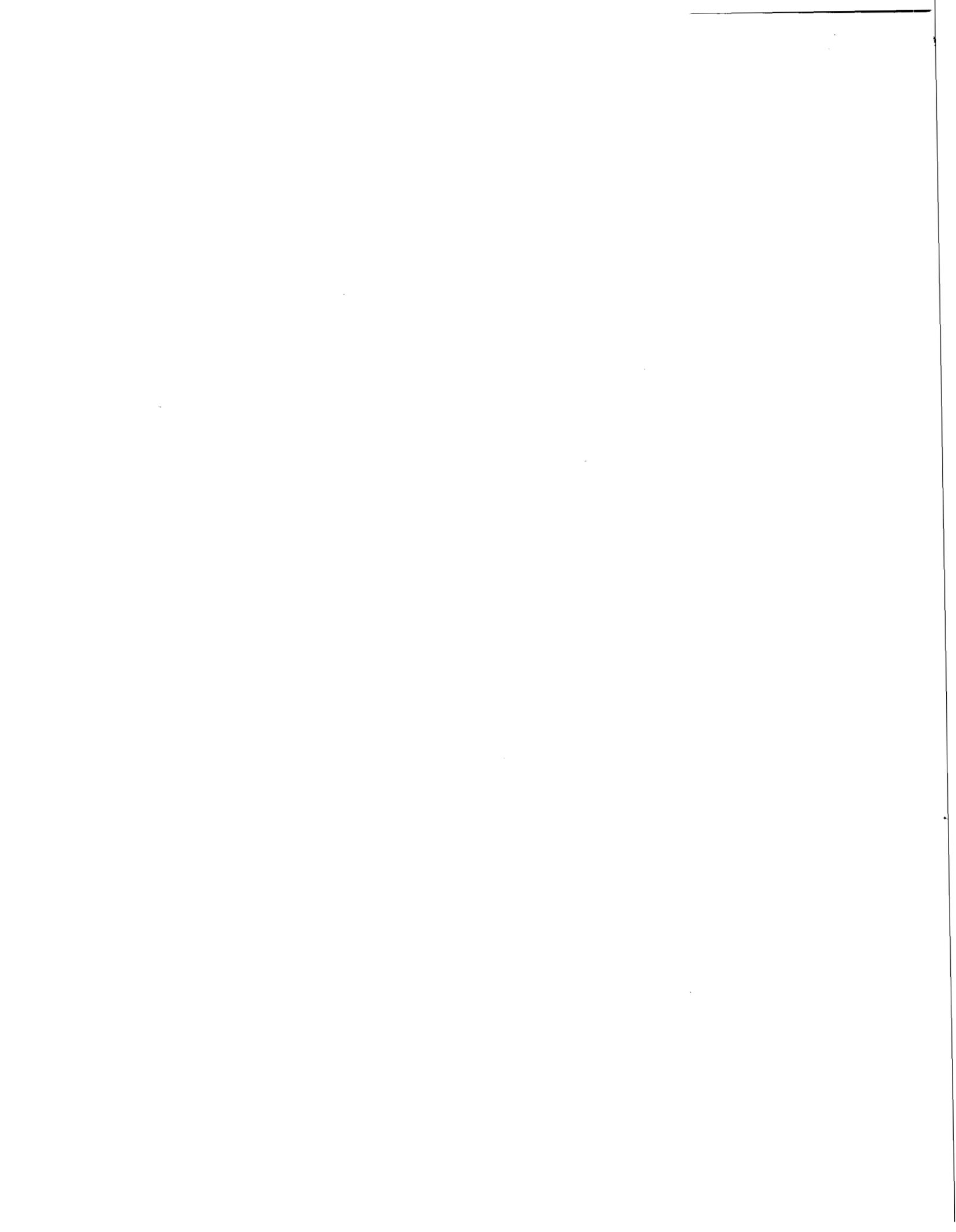
**Table 1.1: Total Facility Ordnance Stowage Summary  
NUWC Division, Keyport**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
5149	71	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5150	108	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5151	20	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5152	140	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5153	16	5,000	440 <sup>11</sup>	5,000	660 <sup>12</sup>	5,000
5154	108	5,000	350 <sup>3</sup>	5,000	350 <sup>3</sup>	5,000
5155	215	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5156	289	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5240	48	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5241	50	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5242	32	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5254	50	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5255	0	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5256	1	5,000	350 <sup>2</sup>	5,000	350 <sup>2</sup>	5,000
5258	46	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5259	51	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5260	98	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5261	37	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-5  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.1: Total Facility Ordnance Stowage Summary  
NUWC Division, Keyport**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
5270	324	5,000	400 <sup>1</sup>	5,000	400 <sup>1</sup>	5,000
5057	20	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5058	42	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5060	56	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5062	43	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5064	99	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5068	99	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5069	85	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5070	116	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5071	94	5,000	440 <sup>13</sup>	5,000	660 <sup>14</sup>	5,000
5098	82	10,000	2,000 <sup>13</sup>	10,000	2,250 <sup>14</sup>	10,000
5196	157	10,000	2,000 <sup>13</sup>	10,000	2,250 <sup>14</sup>	10,000
5198	194	10,000	2,000 <sup>13</sup>	10,000	2,250 <sup>14</sup>	10,000
5199	330	10,000	2,000 <sup>13</sup>	10,000	2,250 <sup>14</sup>	10,000
5252	1,177	10,000	2,000 <sup>13</sup>	10,000	2,250 <sup>14</sup>	10,000
<b>TOTALS</b>	<b>10,755</b>	<b>455,000</b>	<b>37,255</b>	<b>455,000</b>	<b>45,660</b>	<b>455,000</b>



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-6  
UIC N00253  
NUWC DIV KEYPORT

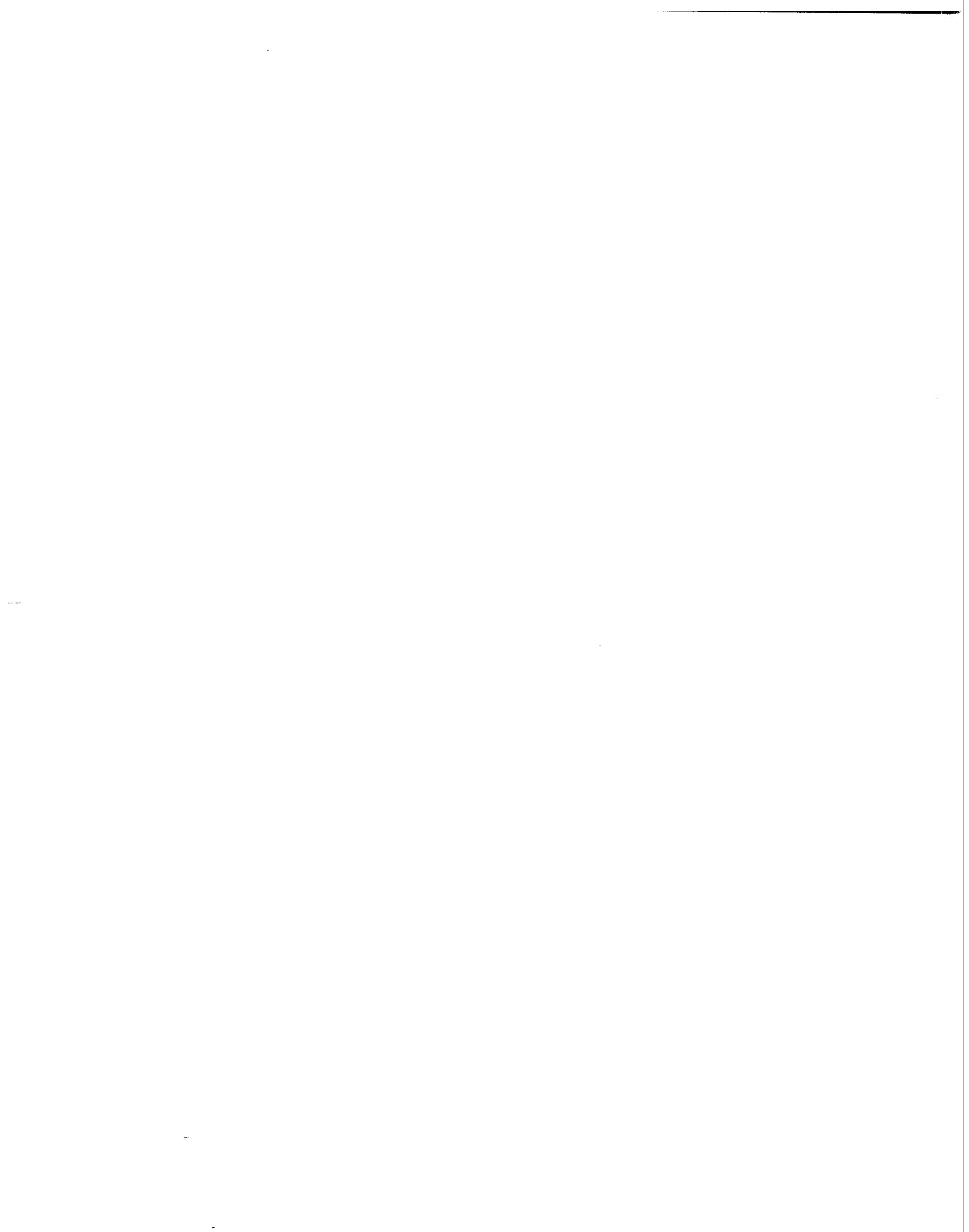
Notes correspond to Table 1.1:

- (1) Physical Capacity, MK 48 Torpedo Deep Stow
- (2) Physical Capacity, MK 46 All-Up-Round Reserves
- (3) Working Level Capacity, Torpedo Warheads
- (4) Active Inventory, MK 48 All-Up-Round
- (5) FMS, MK 48 All-Up-Round
- (6) Working Level Capacity, MK 48/ADCAP All-Up-Round
- (7) FMS, MK 46 All-Up-Round
- (8) Physical Capacity, ASROC All-Up-Round
- (9) Working Level Capacity, MK 50 All-Up-Round
- (10) Magazine Net Explosive Weight Capacity
- (11) Working Level Capacity, Expendables
- (12) Physical Capacity, Expendables
- (13) Working Level Inert Capacity, Expendables
- (14) Physical Capacity Inert Expendables



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-7  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.1: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
7504*	88.125	2,000	95	2,000	95	2,000
7511*	93.75	2,000	95	2,000	95	2,000
4901	375	10,000	585	10,000	585	10,000
4902	500	10,000	585	10,000	585	10,000
4903	562.5	10,000	585	10,000	585	10,000
4904	585	10,000	585	10,000	585	10,000
4905	571.25	10,000	585	10,000	585	10,000
4906	500	10,000	585	10,000	585	10,000
4907	531.25	10,000	585	10,000	585	10,000
4908	500	10,000	585	10,000	585	10,000
4911	585	10,000	585	10,000	585	10,000
4912	531.25	10,000	585	10,000	585	10,000
4913	465	10,000	585	10,000	585	10,000
4914	437.5	10,000	585	10,000	585	10,000
4915	406.25	10,000	585	10,000	585	10,000
4916	562.5	10,000	585	10,000	585	10,000
4917	500	10,000	585	10,000	585	10,000
4918	500	10,000	585	10,000	585	10,000
4919	531.25	10,000	585	10,000	585	10,000



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
 D1-8  
 UIC N00253  
 NUWC DIV KEYPORT

**Table 1.1: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

Facility Number	PRESENT INVENTORY		PREDICTED INVENTORY FY 2001		MAXIMUM RATED CAPABILITY	
	TONS	SQ FT	TONS	SQ FT	TONS	SQ FT
4920	531.25	10,000	585	10,000	585	10,000
4921	375	10,000	585	10,000	585	10,000
5004	406.25	10,000	585	10,000	585	10,000
5005	375	10,000	585	10,000	585	10,000
5006	562.5	10,000	585	10,000	585	10,000
5011	531.25	10,000	585	10,000	585	10,000
5035	531.25	10,000	585	10,000	585	10,000
5038	460.75	10,000	585	10,000	585	10,000
10520A	500	10,000	585	10,000	585	10,000
<b>TOTALS</b>	<b>13,106.88</b>	<b>264,000</b>	<b>15,400</b>	<b>264,000</b>	<b>15,400</b>	<b>264,000</b>

\*Explosive magazines. All other facilities listed are inert component warehouses.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-9  
UIC N00253  
NUWC DIV KEYPORT

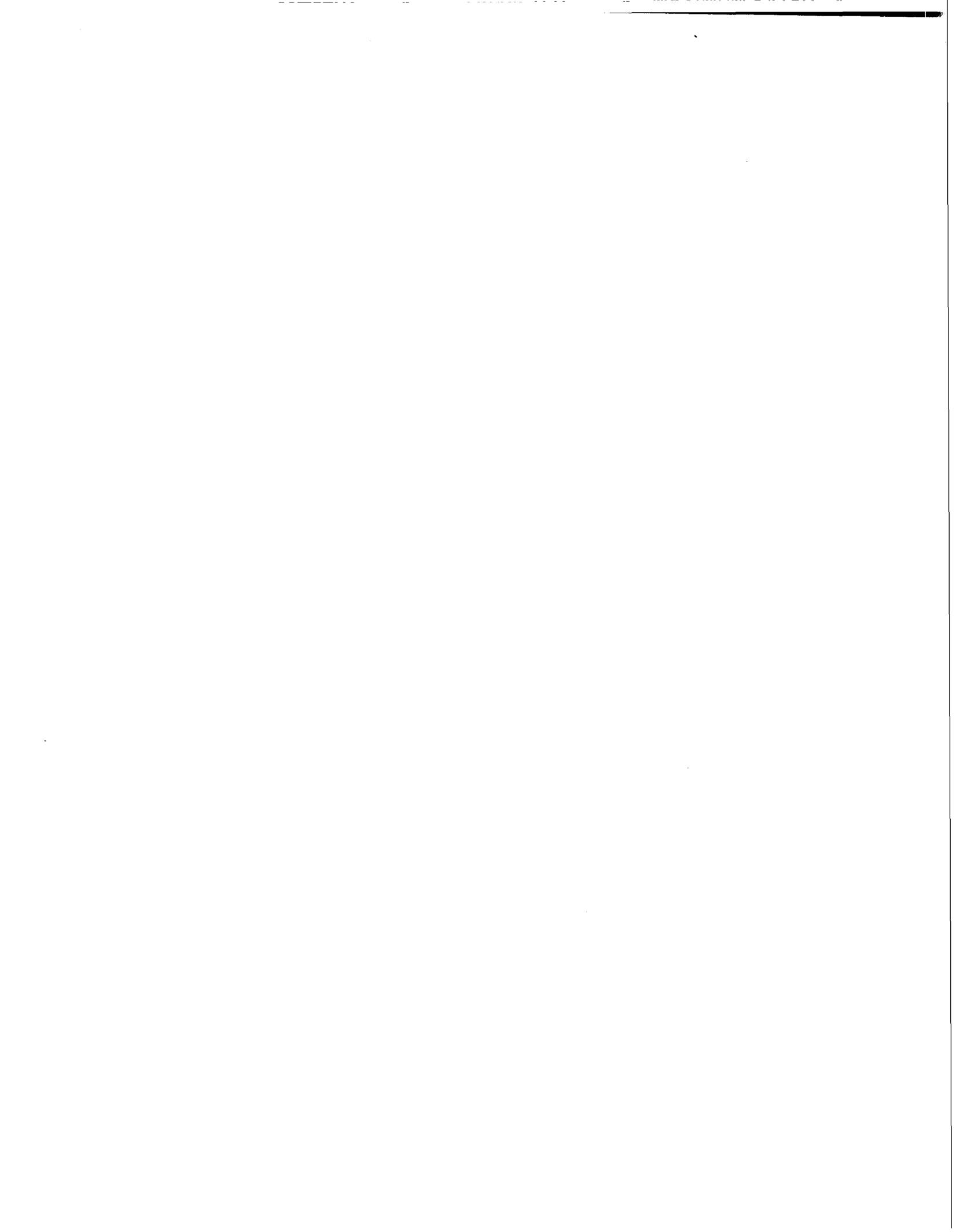
**1.2** For each Stowage facility identified in question 1.1 above, identify the type of facility (specify if "igloo", "box", etc.). Identify the type of ordnance commodity (from the list above) which are currently stowed in that facility and all other ordnance types which, given existing restrictions, could be physically accommodated in that stowage facility. Specify below if such additional accommodation would require a modification of the facility (e.g. enhanced environmental controls, ESQD waiver).

- Identify the reason(s) for which this ordnance is stored at your facility from the following list: own activity use (training); own activity use (operational stock); Receipt/Segregation/Stowage/Issue (RSSI); transshipment/awaiting issue; deep stow (war reserve); deep stow (awaiting Demil); other. Explain each "other" entry in the space provided, including ordnance stowed which is not a DON asset.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-10  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Division, Keyport**

Facility Number/Type	Currently Stowed Commodity Type(s)	Reason for Stowage at your Activity	Commodity Type(s) Which Can Be Stowed
5072 EARTH COVERED	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5073 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5075 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5076 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5077 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5078 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5079 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5080 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5081 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5082 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5083 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5084 EARTH COVERED	SMALL ARMS	ONLY TORPEDO DEPOT: NOTE 4	SEE NOTE 6
5085 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5086 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5087 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5088 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5089 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5113 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5114 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5115 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5116 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5117 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
 D1-11  
 UIC N00253  
 NUWC DIV KEYPORT

**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Division, Keyport**

Facility Number/Type	Currently Stowed Commodity Type(s)	Reason for Stowage at your Activity	Commodity Type(s) Which Can Be Stowed
5118 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5119 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
120 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5121 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5122 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5123 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5124 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5125 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5126 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5127 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5128 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5129 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5130 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5131 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5132 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5133 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5134 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5135 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5136 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 3	SEE NOTE 5
5137 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5138 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-12  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.2: Total Facility Ordnance Stowage Summary  
NUWC Division Keyport**

Facility Number/Type	Currently Stowed Commodity Type(s)	Reason for Stowage at your Activity	Commodity Type(s) Which Can Be Stowed
5139 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5140 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5141 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5142 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5143 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5144 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5145 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5146 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5147 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 2	SEE NOTE 5
5148 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 2	SEE NOTE 5
5149 EARTH COVERED	PYRO	ONLY TORPEDO DEPOT: NOTE 4	SEE NOTE 6
5150 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5151 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5152 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5153 EARTH COVERED	ROCKETS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5154 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5155 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5156 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5240 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5241 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5242 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-13  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.2: Total Facility Ordnance Stowage Summary  
NUWC Division Keyport**

Facility Number/Type	Currently Stowed Commodity Type(s)	Reason for Stowage at your Activity	Commodity Type(s) Which Can Be Stowed
5254 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5255 EARTH COVERED	EMPTY	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5256 EARTH COVERED	EXPENDABLES	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5258 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5259 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5260 EARTH COVERED	WARHEADS	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5261 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 3	SEE NOTE 5
5270 EARTH COVERED	TORPEDOES	ONLY TORPEDO DEPOT: NOTE 2	SEE NOTE 5
5057 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5058 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5060 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5062 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5064 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5068 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5069 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5070 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5071 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	SEE NOTE 5
5098 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	INERT
5196 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	INERT
5198 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	INERT
5199 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	INERT
5252 INERT	INERT	ONLY TORPEDO DEPOT: NOTE 1	INERT



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-14  
UIC N00253  
NUWC DIV KEYPORT

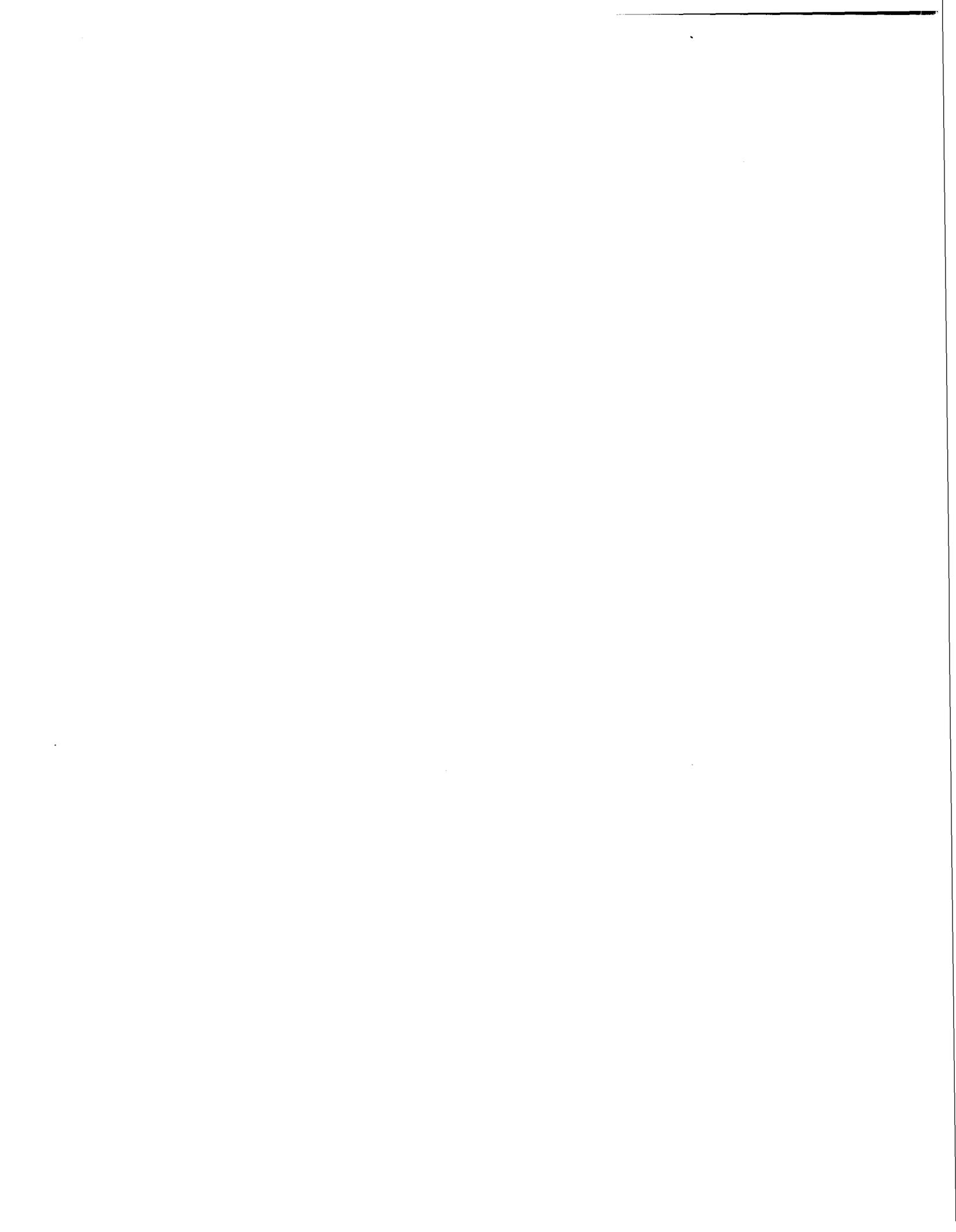
Notes:

- 1 Depot Overhaul Point/Stock Point Operation.
- 2 Not Ready for Issue Deferred Maintenance.
- 3 Deep Stow/Other.
- 4 Submarine Fleet Support.
- 5 Mines, Torpedoes, Expendables and Inert Materials in Support of Fleet Support and Depot/IMA Operations.
- 6 CADS/PADS, Small Arms, or Pyro.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-15  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

FACILITY NUMBER/TYPE	CURRENTLY STOWED COMMODITY TYPE(S)	REASON FOR STOWAGE AT YOUR ACTIVITY	COMMODITY TYPES(S) WHICH CAN BE STOWED
7504 IGLOO	Mine Components: Arming Devices	Torpedo/Mine Depot Storage Support	Mine Components (expl) Torpedo Components (expl)
7511 IGLOO	Torpedo Components: Chamber & Valve Igniters Propellant	Torpedo/Mine Depot Storage Support	Torpedo Components (expl) Mine Components (expl)
4901 INERT	Mine Components: Spacers Cable Assemblies	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4902 INERT	Mine Components: Shield Assemblies Deep Stow (war reserve)	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4903 INERT	Mine Components: Test Sets Sonar Transmitters Power Supplies	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4904 INERT	Mine Components: Production Support Material MNS Material	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4905 INERT	Mine Components: Arming Wires Hydrophones Instrument Racks	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4906 INERT	Mine Components: Fairings DST Kit Components	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-16  
UIC N00253  
NUWC DIV KEYPORT

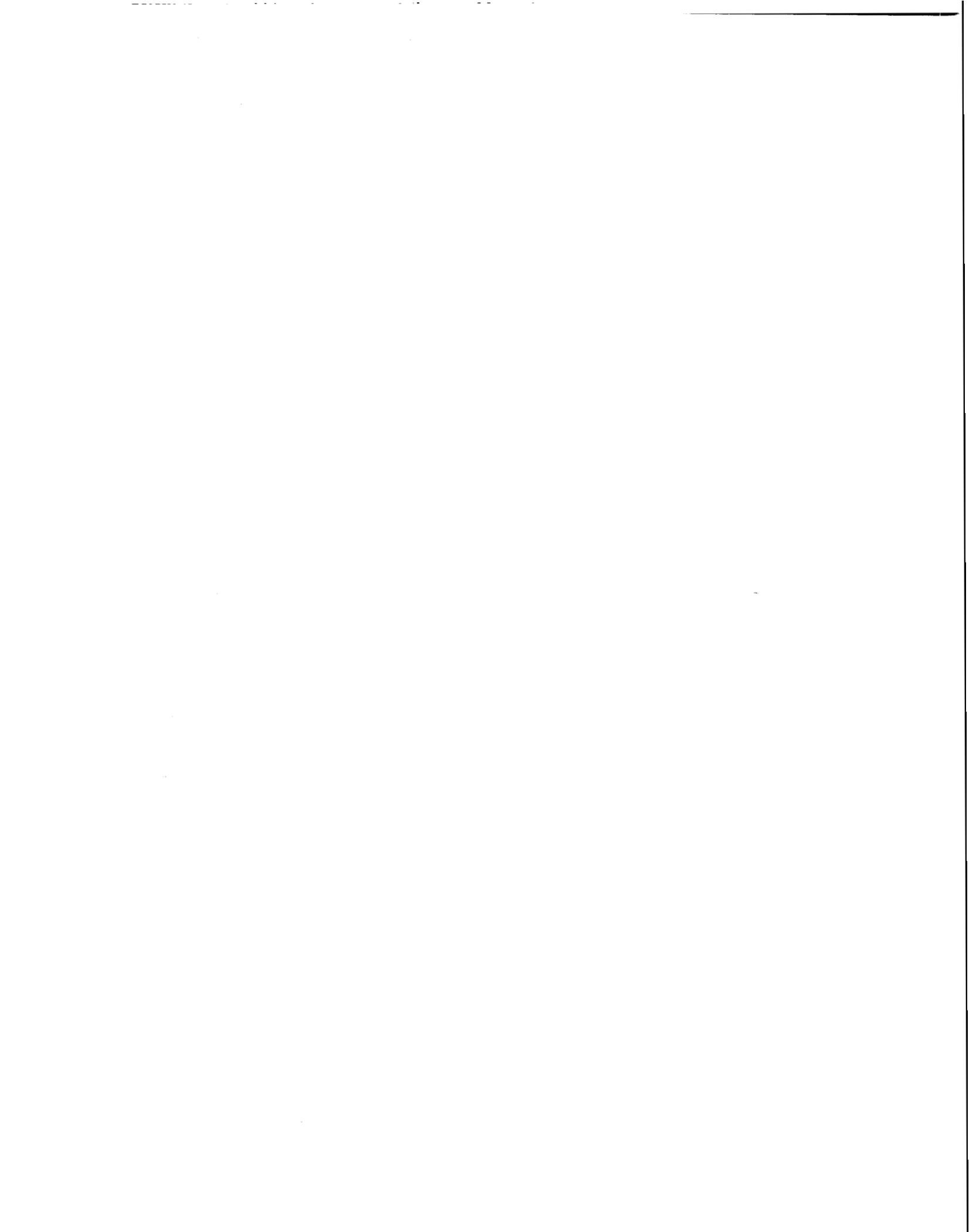
**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

FACILITY NUMBER/TYPE	CURRENTLY STOWED COMMODITY TYPE(S)	REASON FOR STOWAGE AT YOUR ACTIVITY	COMMODITY TYPES(S) WHICH CAN BE STOWED
4907 INERT	Mine Components: Deep Stow (demil) Firing Mechanisms	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4908 INERT	Mine Components: Refrigeration Units for Batteries SLMM Material	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4911 INERT	Mine Components: Depth Compensators Parapaks MK 6 Support Matl	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4912 INERT	Mine Components: Float Assemblies MK 36 Cases	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4913 INERT	Mine Components: Junction Boxes DST Kits Sterilizers	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4914 INERT	Mine Components: Cable Assemblies Mud Agitators Suspension Lugs	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4915 INERT	Mine Components: Actuation Counter Clock Delays Fairings	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4916 INERT	Mine Components: Fins Firing Mechanisms Fairings	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-17  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

FACILITY NUMBER/TYPE	CURRENTLY STOWED COMMODITY TYPE(S)	REASON FOR STOWAGE AT YOUR ACTIVITY	COMMODITY TYPES(S) WHICH CAN BE STOWED
4917 INERT	Mine Components: Performed Packing Gaskets Search Coils	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4918 INERT	Mine Components: Anchors Explosive Sections (inert) Mechanism Sections	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4919 INERT	Mine Components: Circuit Breakers Hydrostatic Switches Extender Mechanisms	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4920 INERT	Mine Components: Parapaks Release Mechanisms Control Units	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
4921 INERT	Mine Components: Arming Devices (inert) Adapter Assemblies Containers, Shipping and Storage	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
5004 INERT	Mine Components: Consumable Supplies Deep Stow (demil)	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-18  
UIC N00253  
NUWC DIV KEYPORT

**Table 1.2: Total Facility Ordnance Stowage Summary NUWC Detachment Hawthorne (UIC N41869)**

FACILITY NUMBER/TYPE	CURRENTLY STOWED COMMODITY TYPE(S)	REASON FOR STOWAGE AT YOUR ACTIVITY	COMMODITY TYPES(S) WHICH CAN BE STOWED
5005 INERT	Torpedo Components: CVA Support Matl Containers	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
5006 INERT	Mine Components: Fairings MK 46 Batteries Drums (Otto Fuel)	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
5011 INERT	Mine Components: Fins	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
5035 INERT	Mine Components: Mechanism Sections Anchor & Mechanism Sections (subassemblies)	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
5038 INERT	Mine Components: MK 65 Cases Parapaks Fairings	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)
10520A INERT	Mine Components: MK 65 Cases	Mine Depot Storage Support	Mine Components (inert) Torpedo Components (inert)



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-19  
UIC N00253  
NUWC DIV KEYPORT

1.3 Identify the rated category, rated NEW and status of ESQD arc for each stowage facility listed above.

Table 1.3: Facility Rated Status  
NUWC Division, Keyport

Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established( Y/N)	Waiver (Y/N)	Waiver Expiration Date
5072 EARTH COVERED	1.1	5K	YES	NO	N/A
5073 EARTH COVERED	1.1	20K	YES	NO	N/A
5075 EARTH COVERED	1.1	15K	YES	NO	N/A
5076 EARTH COVERED	1.1	8K	YES	NO	N/A
5077 EARTH COVERED	1.1	20K	YES	NO	N/A
5078 EARTH COVERED	1.1	30K	YES	NO	N/A
5079 EARTH COVERED	1.1	95K	YES	NO	N/A
5080 EARTH COVERED	1.1	30K	YES	NO	N/A
5081 EARTH COVERED	1.1	160K	YES	NO	N/A
5082 EARTH COVERED	1.1	60K	YES	NO	N/A
5083 EARTH COVERED	1.1	160K	YES	NO	N/A
5084 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5085 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5086 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5087 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5088 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5089 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5113 EARTH COVERED	1.1	160K	YES	NO	N/A
5114 EARTH COVERED	1.1	160K	YES	NO	N/A
5115 EARTH COVERED	1.1	160K	YES	NO	N/A
5116 EARTH COVERED	1.1	160K	YES	NO	N/A



ADMINISTRATIVE SENSITIVE

DATA CALL #4  
D1-20  
UIC N00253  
NUWC DIV KEYPORT

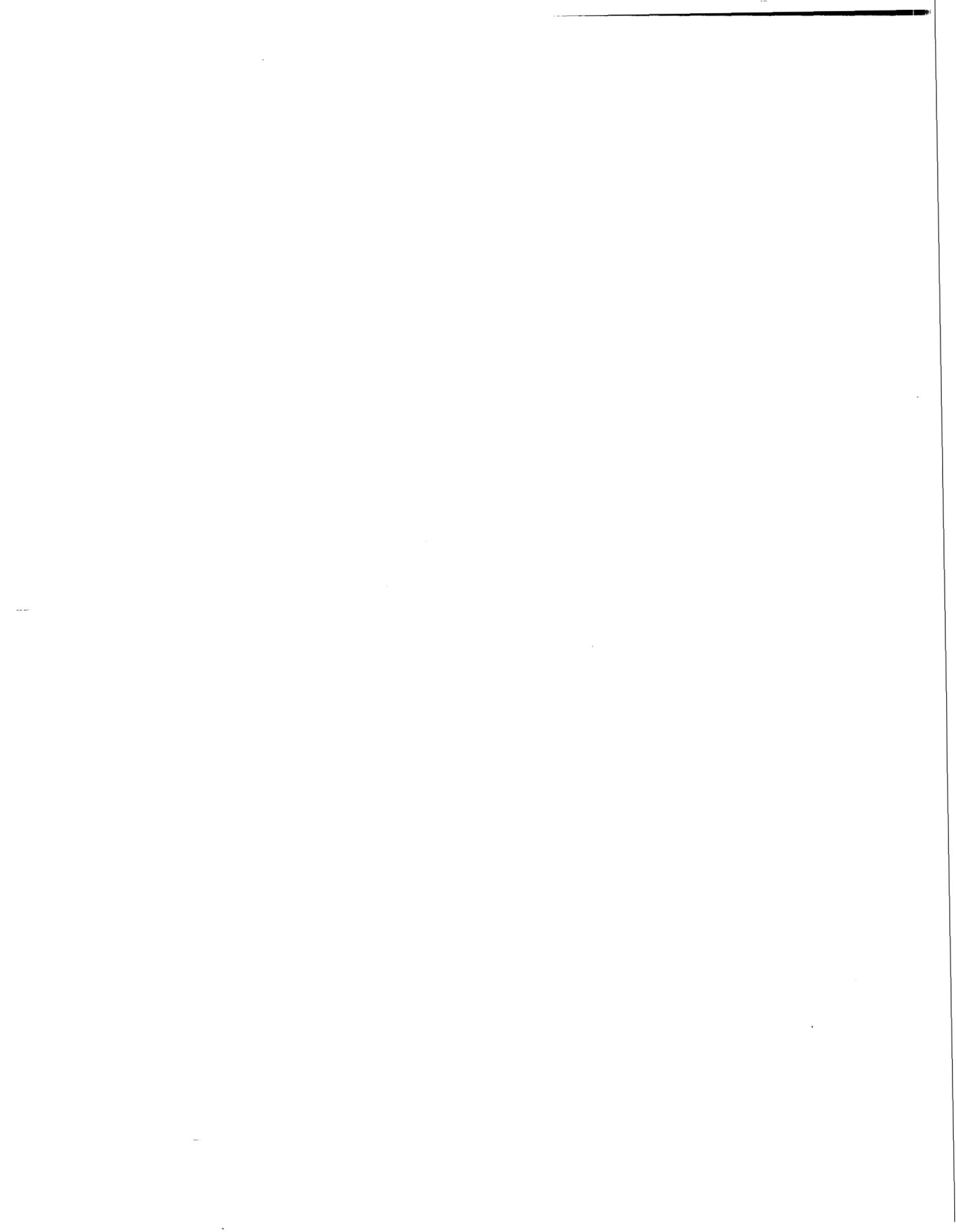
**Table 1.3: Facility Rated Status  
NUWC Division Keyport**

Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established (Y/N)	Waiver (Y/N)	Waiver Expiration Date
5117 EARTH COVERED	1.1	160K	YES	NO	N/A
5118 EARTH COVERED	1.1	160K	YES	NO	N/A
5119 EARTH COVERED	1.1	130K	YES	NO	N/A
5120 EARTH COVERED	1.1	130K	YES	NO	N/A
5121 EARTH COVERED	1.1	130K	YES	NO	N/A
5122 EARTH COVERED	1.1	130K	YES	NO	N/A
5123 EARTH COVERED	1.1	130K	YES	NO	N/A
5124 EARTH COVERED	1.1	130K	YES	NO	N/A
5125 EARTH COVERED	1.1	130K	YES	NO	N/A
5126 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5127 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5128 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5129 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5130 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5131 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5132 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5133 EARTH COVERED	1.1	160K	YES	NO	N/A
5134 EARTH COVERED	1.1	160K	YES	NO	N/A
5135 EARTH COVERED	1.1	160K	YES	NO	N/A
5136 EARTH COVERED	1.1	160K	YES	NO	N/A
5137 EARTH COVERED	1.1	40K	YES	NO	N/A



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-21  
UIC N00253  
NUWC DIV KEYPORT



**Table 1.3: Facility Rated Status  
NUWC Division Keyport**

Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established (Y/N)	Waiver (Y/N)	Waiver Expiration Date
5138 EARTH COVERED	1.1	40K	YES	NO	N/A
5139 EARTH COVERED	1.1	40K	YES	NO	N/A
5140 EARTH COVERED	1.1	40K	YES	NO	N/A
5141 EARTH COVERED	1.1	130K	YES	NO	N/A
5142 EARTH COVERED	1.1	130K	YES	NO	N/A
5143 EARTH COVERED	1.1	130K	YES	NO	N/A
5146 EARTH COVERED	1.1	150K	YES	NO	N/A
5147 EARTH COVERED	1.1	160K	YES	NO	N/A
5148 EARTH COVERED	1.1	160K	YES	NO	N/A
5149 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5150 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5151 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5152 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5153 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5154 EARTH COVERED	1.2	PC <sup>1</sup>	YES	NO	N/A
5155 EARTH COVERED	1.1	130K	YES	NO	N/A
5156 EARTH COVERED	1.1	130K	YES	NO	N/A
5240 EARTH COVERED	1.1	40K	YES	NO	N/A
5241 EARTH COVERED	1.1	40K	YES	NO	N/A
5242 EARTH COVERED	1.1	40K	YES	NO	N/A
5254 EARTH COVERED	1.1	40K	YES	NO	N/A



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-22  
UIC N00253  
NUWC DIV KEYPORT

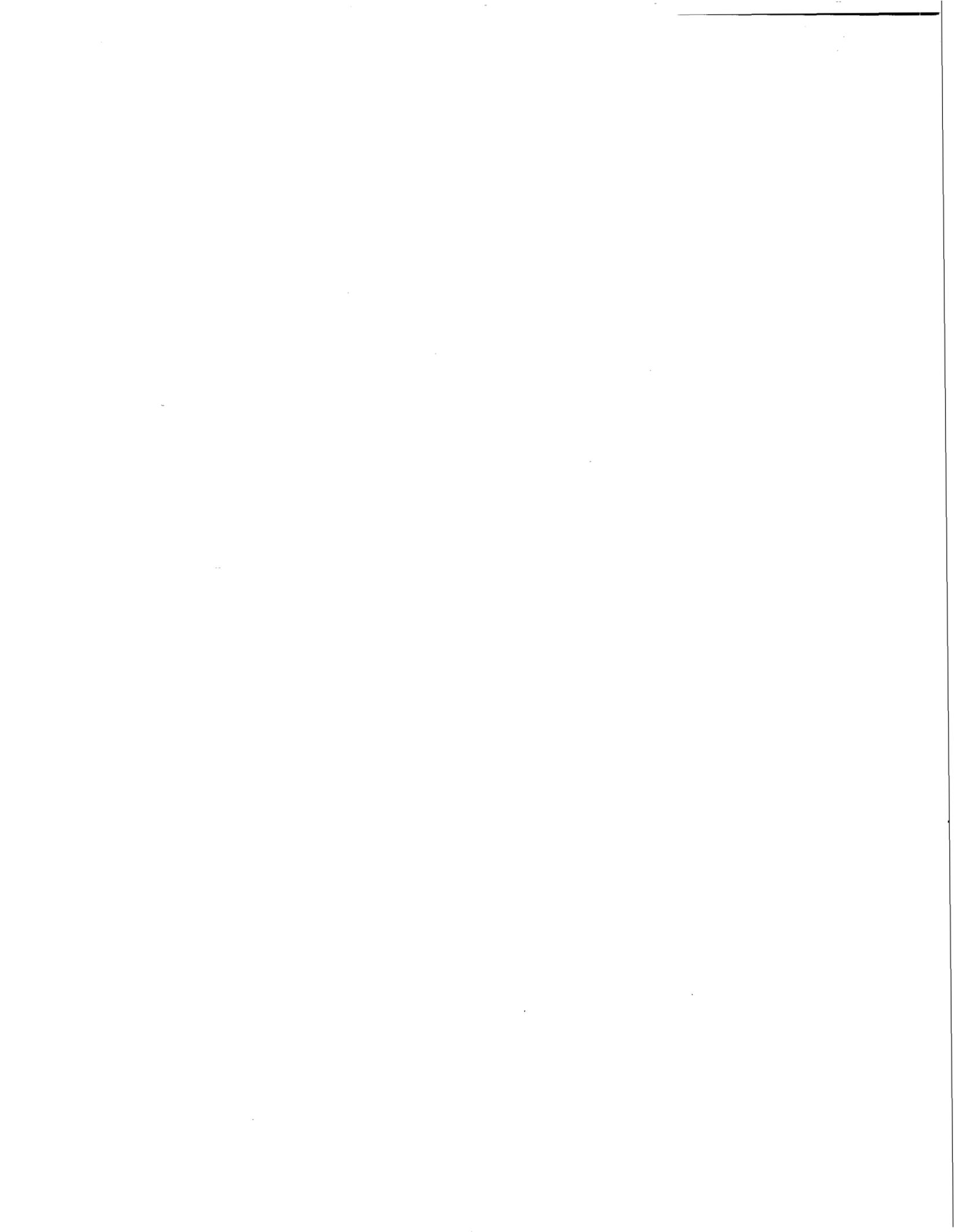
**Table 1.3: Facility Rated Status  
NUWC Division Keyport**

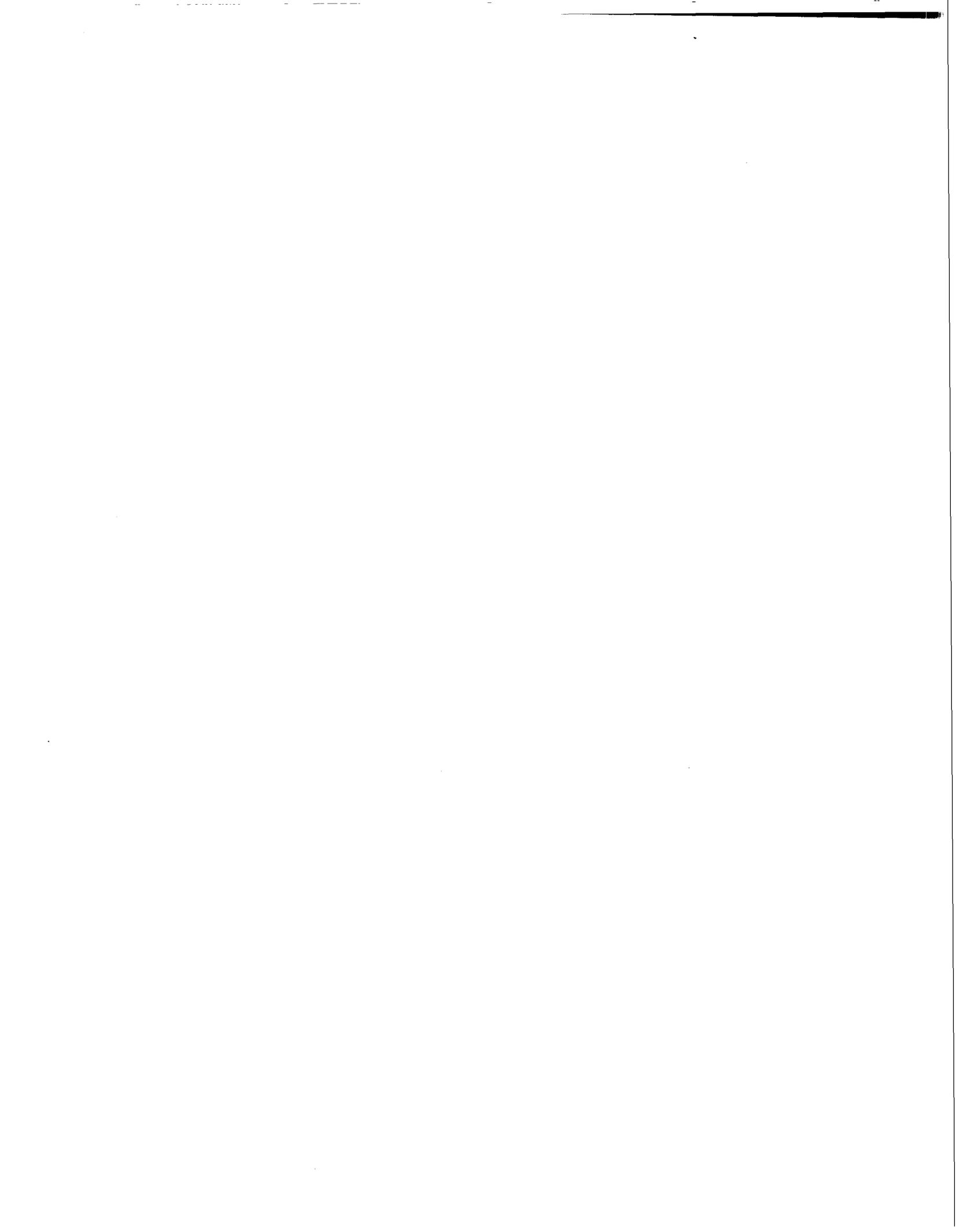
Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established (Y/N)	Waiver (Y/N)	Waiver Expiration Date
5255 EARTH COVERED	1.1	40K	YES	NO	N/A
5256 EARTH COVERED	1.1	70K	YES	NO	N/A
5258 EARTH COVERED	1.1	160K	YES	NO	N/A
5259 EARTH COVERED	1.1	160K	YES	NO	N/A
5260 EARTH COVERED	1.1	160K	YES	NO	N/A
5261 EARTH COVERED	1.1	160K	YES	NO	N/A
5270 EARTH COVERED	1.1	160K	YES	NO	N/A
5057 EARTH COVERED	0	0	NO	NO	N/A
5060 EARTH COVERED	0	0	NO	NO	N/A
5064 EARTH COVERED	0	0	NO	NO	N/A
5068 EARTH COVERED	0	0	NO	NO	N/A
5069 EARTH COVERED	0	0	NO	NO	N/A
5070 EARTH COVERED	0	0	NO	NO	N/A
5057 EARTH COVERED	0	0	NO	NO	N/A
5060 EARTH COVERED	0	0	NO	NO	N/A
5064 EARTH COVERED	0	0	NO	NO	N/A
5068 EARTH COVERED	0	0	NO	NO	N/A
5069 EARTH COVERED	0	0	NO	NO	N/A
5070 EARTH COVERED	0	0	NO	NO	N/A
5071 EARTH COVERED	0	0	NO	NO	N/A
5098 INERT WHSE	0	0	NO	NO	N/A



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-23  
UIC N00253  
NUWC DIV KEYPORT





**Table 1.3: Facility Rated Status  
NUWC Division Keyport**

Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	ESQD Arc		
			Established (Y/N)	Waiver (Y/N)	Waiver Expiration Date
5198 INERT WHSE	0	0	NO	NO	N/A
5199 INERT WHSE	0	0	NO	NO	N/A
5252 INERT WHSE	0	0	NO	NO	N/A

Notes:

(1) PC represents 1.2, 1.3, or 1.4 explosion hazard class at physical capacity.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-24  
UIC N00253  
NUWC DIV KEYPORT

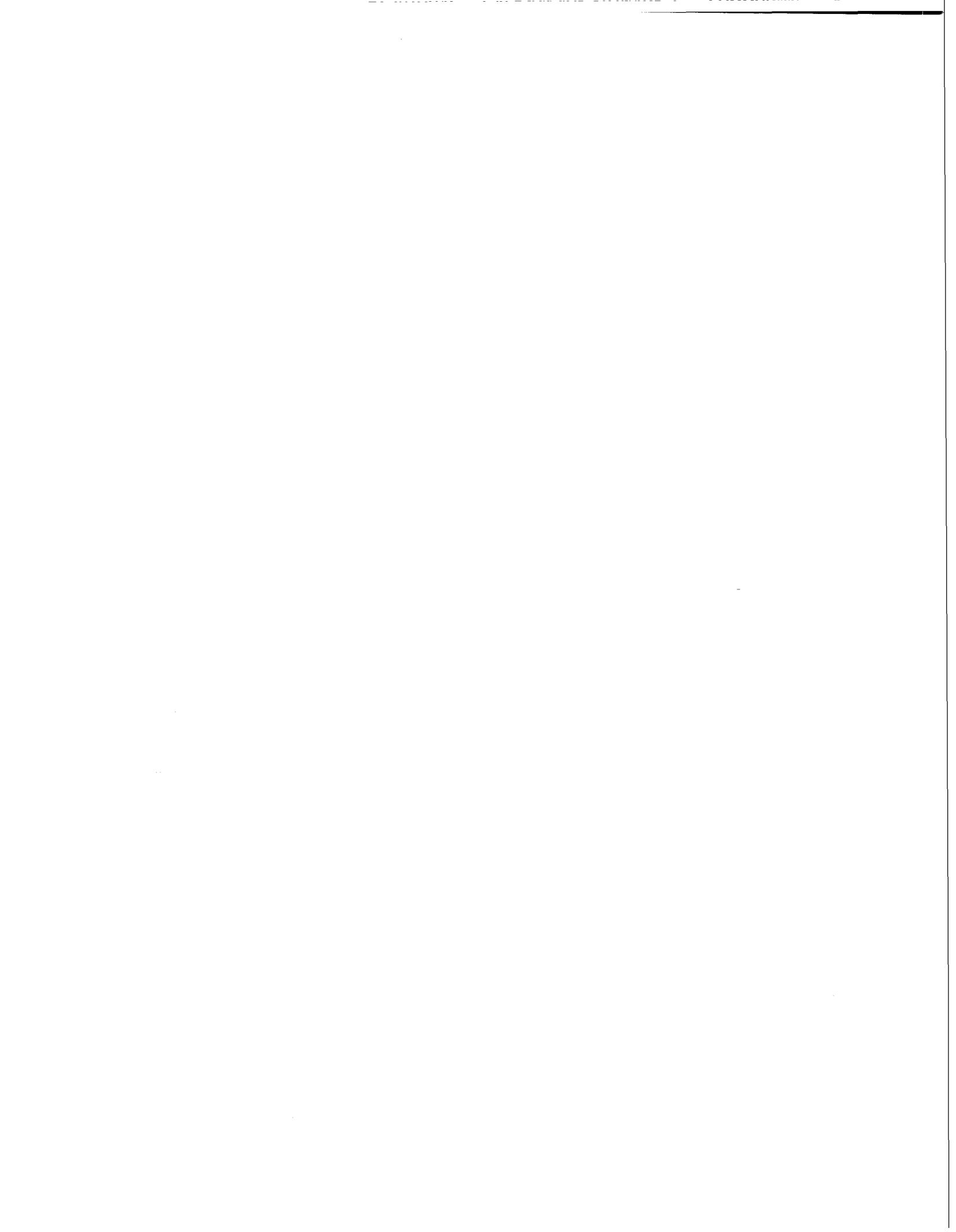
**Table 1.3: Facility Rated Status  
NUWC Detachment Hawthorne**

Facility Number/ Type	Hazard Rating (1.1-1.4)	Rated NEW	Established (Y/N)	ESQD Arc Waiver (Y/N)	Waiver Expiration Date
75-04	1.1	250,000 HE	Y	N	N/A
75-11	1.3 C 1.4 C&G	250,000 HE	Y	N	N/A



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-25  
UIC N00253  
NUWC DIV KEYPORT



**1.4 Identify any restrictions which prevent maximum utilization of your facilities. If restrictions are based on facility conditions, specify reason, the cost to correct the deficiency, and identify any programmed projects that will correct the deficiency and/or increase your capability.**

The 72 magazines and 8 explosive operating facilities (e.g., Ready for Issue (RFI) and warhead maintenance facilities) collocated at Naval Undersea Warfare Center Division, Keyport's Undersea Warfare Annex constitute the Navy's only resource for consolidation and storage of torpedoes being laid-up or "bunkered" as a result of reductions in Fleet platforms. Of the more than 10,000 MK 46 lightweight torpedoes in the Navy's inventory, approximately 5,000 will be laid up, torn down, or undergo conversion in the next few years. Furthermore, the U.S. Navy's entire MK 48 heavyweight torpedo inventory will be "bunkered" or stored in a "not ready for issue" condition in the magazines of the Undersea Warfare Annex. These magazines and explosive operating facilities at the Undersea Warfare Annex represent this Nation's only complex where Navy torpedoes will undergo explosive warhead removal, defueling, environmental remediation, long term storage, and reliability assessment, all within the confines of this Annex. The NUWC Division, Keyport's Undersea Warfare Annex's magazines are dedicated to torpedo storage, and as such, they represent the only explosive torpedo storage facilities available to accommodate this many torpedoes. In the event of war, the facilities of the Undersea Warfare Annex are contiguous to the torpedo depots, torpedo IMA's, and the light industry support facilities of the Naval Undersea Warfare Center Division, Keyport. This will allow reconstitution of these torpedo assets, providing the Navy with surge capacity and a timely second strike load out capability. Fleet platforms located at the deep water ports of the Naval Submarine Base, Bangor and the new Fleet homeport at Naval Station Everett will be served by these facilities, as well as NAVAIR's antisubmarine warfare efforts supported at NAS Whidbey Island. The magazines and explosive operating facilities of the Undersea Warfare Annex represent an asset that can not be replicated in the private sector due to: (1) cost to duplicate, (2) lack of waterfront real-estate and pier facilities, (3) lack of requisite Explosives Safety Quantity Distance arcs, and (4) lack of required environmental support facilities for fueling and hazardous waste.

The 72 magazines of the Undersea Warfare Annex have always been restricted from their maximum 500K pounds constructed explosive storage capability due to: (1) inhabited building distance separation requirements, (2) proximate station boundary fences that allowed public encroachment, and (3) multiple explosive operating sites within the area. There are no existing Explosives Safety Quantity Distance arc waivers and none are required. The existing torpedo ordnance facilities are capable of meeting the Navy-wide storage requirements necessary to accommodate Fleet force reductions. In the event of war, dedicated torpedo explosive operating facilities within the Undersea Warfare Annex are capable of supporting torpedo surge, second strike, and inventory reconstitution.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-26  
UIC N00253  
NUWC DIV KEYPORT

1.5 Identify if your activity performs any of the following functions on any of the ordnance commodities previously listed. Technical support includes planning, financial, administrative, process engineering and SOP support. Within each related function identify each ordnance commodity type for which you provide these services and the total Direct Labor Man Hours (DLMHs) expended (FY 1994); identify only those DLMHs expended by personnel under your command.

**Table 1.5: Related Ordnance Support  
NUWC Division Keyport**

Related Functions	Performed? (Y/N)	Type of Commodity	DLMHs
Maintenance Depot IMA	Y Y	MINES, TORPEDOES EXPENDABLES, INERT	968.8K
Testing	Y	MINES, TORPEDOES EXPENDABLES, INERT	281.7K
Manufacturing	Y	MINES, TORPEDOES EXPENDABLES, INERT	187.3K
Outload	Y*	TORPEDOES EXPENDABLES	3.9K
Technical Support	Y	MINES, TORPEDOES EXPENDABLES, INERT	462.4K

\*On/offload in support of COMSUBPAC Ohio Class (Trident) submarines and fast attack submarines being hosted by Submarine Group Nine in the Pacific Northwest. This effort also includes the preparation and shipment support for commercial and military vehicular and air modes used to transport weapons and component parts to CONUS and OCONUS activities.



**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-27  
UIC N00253  
NUWC DIV KEYPORT

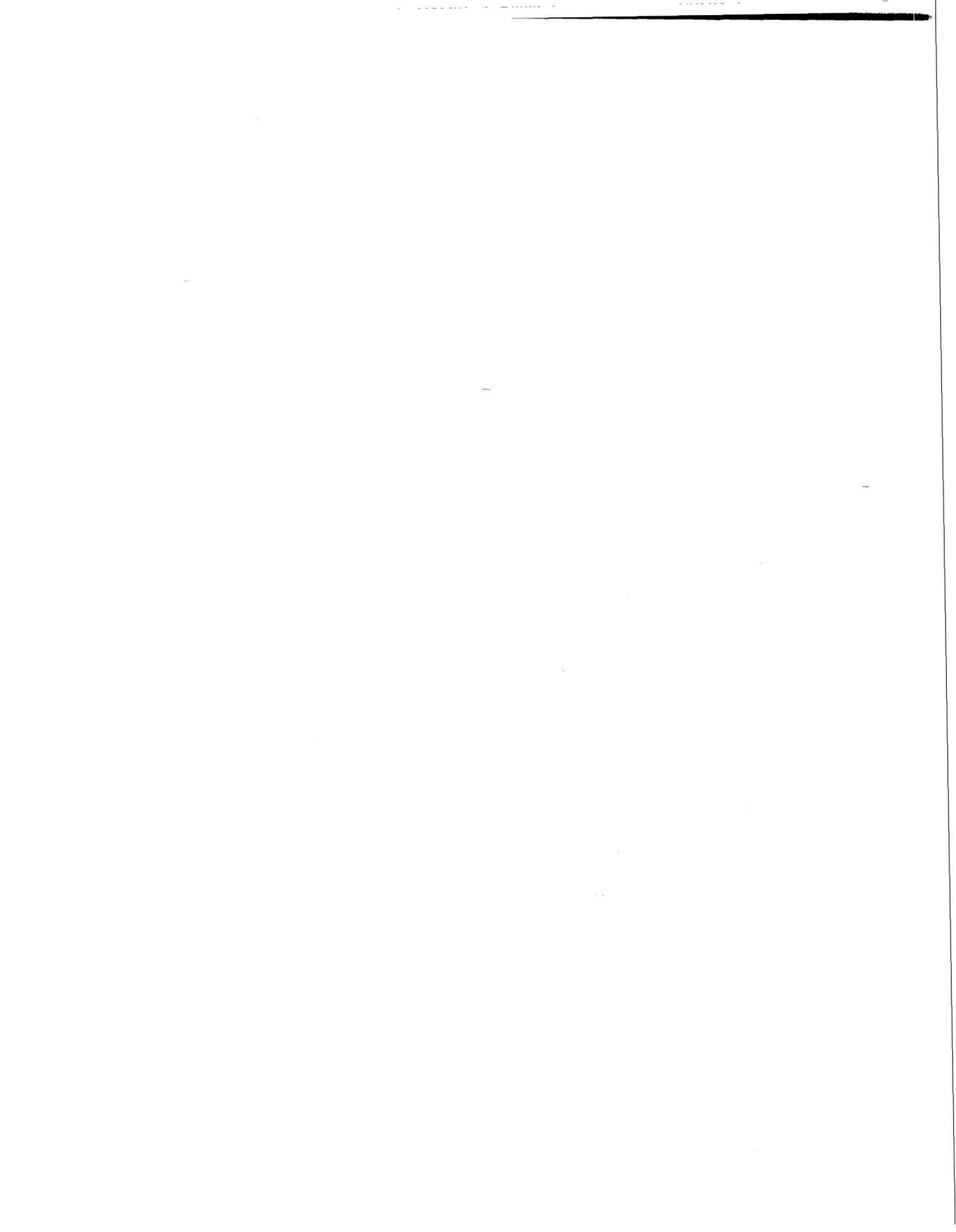
**Table 1.5: Related Ordnance Support  
NAVUNSEAWARCEN DET Hawthorne**

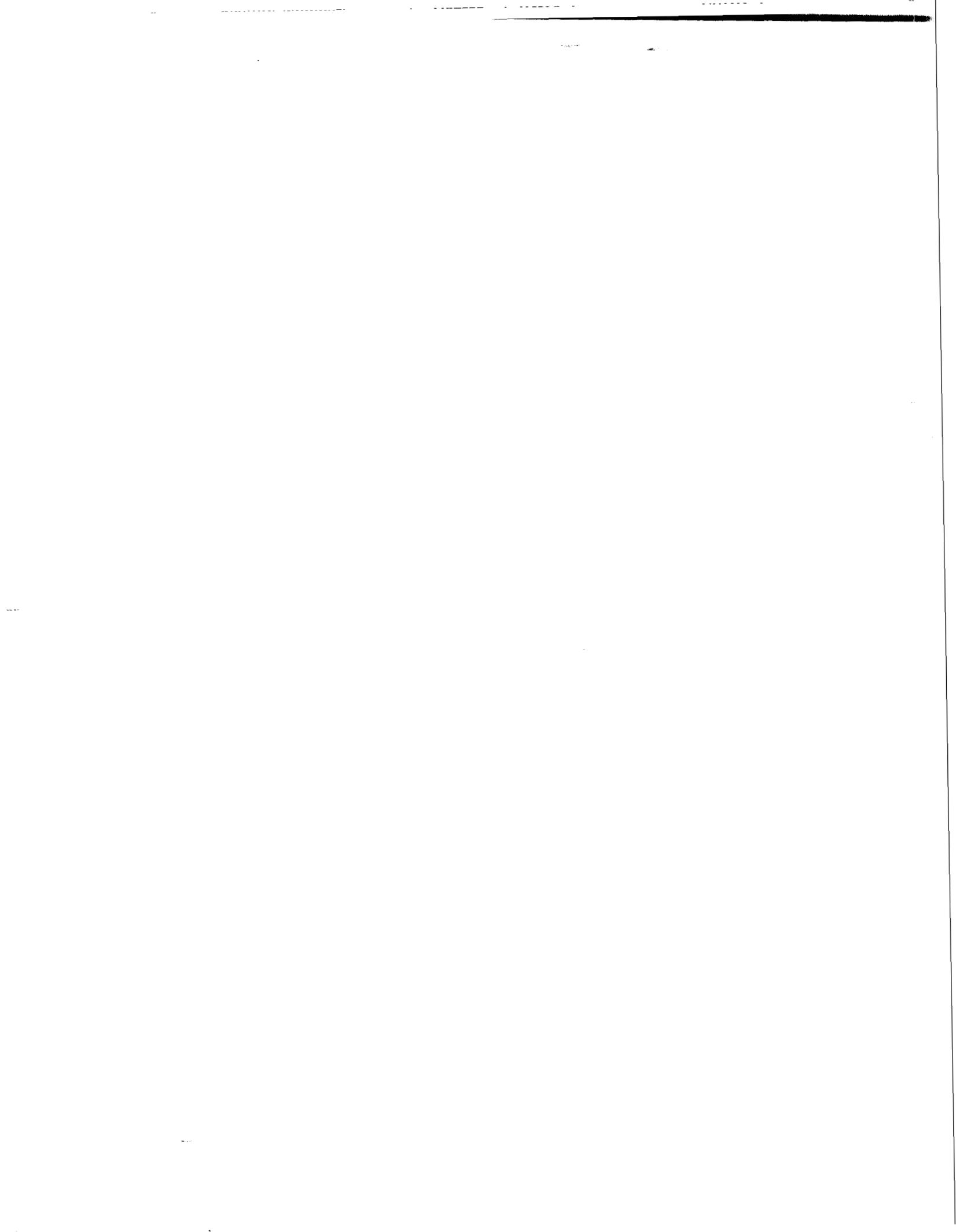
Related Functions	Performed? (Y/N)	Type of Commodity	DLMHs
Maintenance (Specify Level)	Y (Depot & IMA)	Mine & Torpedo Components	34,378
Testing	Y	Mine&Torpedo Components	560
Manufacturing	N	N/A	N/A
Outload	N	N/A	N/A
Technical Support	Y	Mine & Torpedo Components	5,280

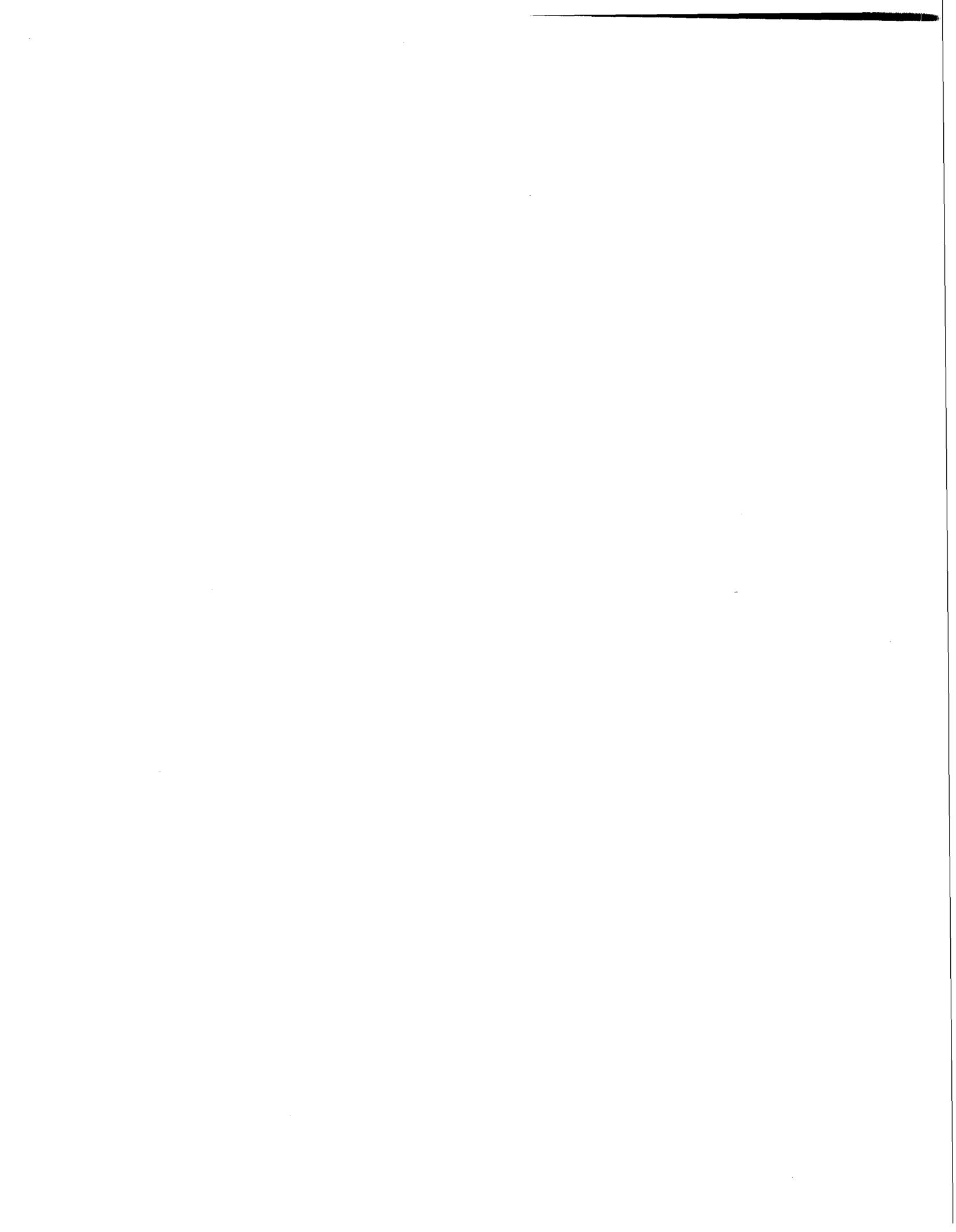


**ADMINISTRATIVE SENSITIVE**

DATA CALL #4  
D1-28  
UIC N00253  
NUWC DIV KEYPORT







Naval Undersea Warfare Center Division Keyport  
BRAC 95 Data Call 4 Submission

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

NEXT ECHELON LEVEL (if applicable)

RADM Scott L. Sears  
NAME (Please type or print)

Scott L. Sears  
Signature

Commander  
Title

11 May 1994  
Date

Naval Undersea Warfare Center  
Activity

~~I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.~~

~~NEXT ECHELON LEVEL (if applicable)~~

~~NAME (Please type or print)~~

~~Signature~~

~~Title~~

~~Date~~

~~Activity~~

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

MAJOR CLAIMANT LEVEL

G. R. STERNER  
NAME (Please type or print)

G. R. Sterner  
Signature

Commander  
Naval Sea Systems Command

5-13-94  
Date

Activity

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

DEPUTY CHIEF OF NAVAL OPERATIONS (LOGISTICS)  
DEPUTY CHIEF OF STAFF (INSTALLATIONS & LOGISTICS)

J. B. Greene, Jr.  
NAME (Please type or print)

J. B. Greene Jr.  
Signature

Acting  
Title

27 May 1994  
Date

**BRAC-95 CERTIFICATION**

Reference: SECNAVNOTE 11000 of 08 December 1993

In accordance with the policy set forth by the Secretary of the Navy, personnel of the Department of the Navy, uniformed and civilian, who provide information for use in BRAC-95 process are required to provide a signed certification that states "I certify that the information contained herein is accurate and complete to the best of my knowledge and belief."

The signing of this certification constitutes a representation that the certifying official has reviewed the information and either (1) personally vouches for its accuracy and completeness or (2) has possession of, and is relying upon a certification executed by a competent subordinate.

Each individual in your activity generating information for the BRAC-95 process must certify that information. Enclosure (1) is provided for individual certifications and may be duplicated as necessary. You are directed to maintain those certifications at your activity for audit purposes. For purposes of this certification sheet, the commander of the activity will begin the certification process and each reporting senior in the Chain of Command reviewing the information will also sign this certification sheet. This sheet must remain attached to this package and be forwarded up the Chain of Command. Copies must be retained by each level in the Chain of Command for audit purposes.

I certify that the information contained herein is accurate and complete to the best of my knowledge and belief.

**ACTIVITY COMMANDER**

NAME: Dennis K. Gibbs  
(Please type or print)

  
Signature

Commander  
Title

11 May 94  
Date

**NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT**  
Activity