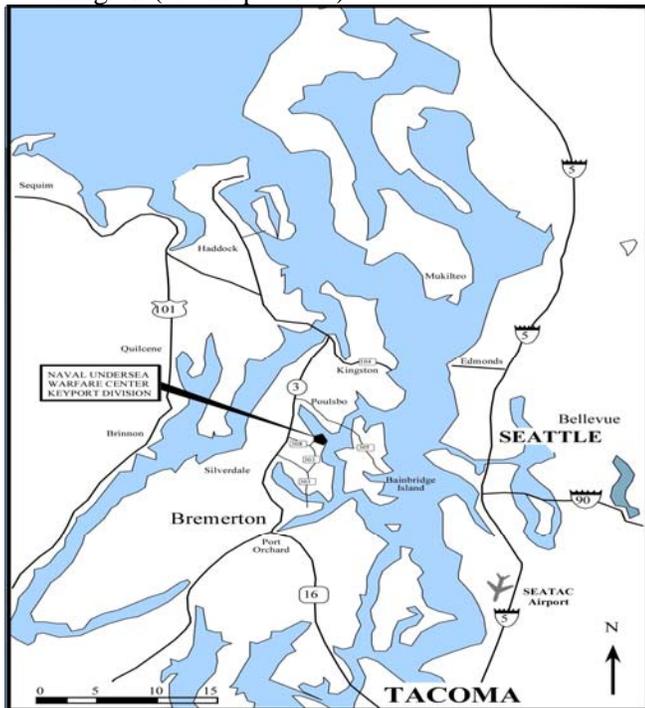


**DEPARTMENT OF ECOLOGY**  
**Draft Dangerous Waste Permit**  
**U.S. Navy**  
**Naval Undersea Warfare Center Division Keyport**  
**Keyport, Washington 98345 -7610**  
**ID Number: WA1 170 023 419**

The Washington State Department of Ecology (Ecology) is issuing a **draft permit** to the Naval Undersea Warfare Center (NUWC) Division, Keyport (NUWC Division, Keyport). NUWC Division, Keyport is on property owned by Naval Base Kitsap, Keyport (NBK). The draft permit has requirements for storage and treatment of dangerous waste. NUWC Division, Keyport is in Kitsap County near Keyport, Washington (see map below).



Ecology will make a final decision on this permit after we receive and evaluate public comments.

Ecology has determined that issuing this permit does not require preparation of an environmental impact statement (EIS) under the State Environmental Policy Act (SEPA). This fact sheet summarizes:

- ✓ Activities at the dangerous waste management facility, including waste storage and treatment.
- ✓ Requirements in the draft permit for operating and closing the facility.
- ✓ Environmental cleanup at the facility.
- ✓ Reasons for not requiring an EIS under SEPA.
- ✓ Ecology's process to make final decisions.

**Comment Period**

**On:** Draft Permit and SEPA determination

**Dates:** November 30, 2007 through January 15, 2008.

**Submit comments on permit to:**

Martin Werner  
Hazardous Waste & Toxics Reduction Program  
Department of Ecology  
PO Box 47600  
Olympia, WA 98504-7600  
E-Mail Address – [mwer461@ecy.wa.gov](mailto:mwer461@ecy.wa.gov)

Comments must be postmarked or hand delivered by January 15, 2008. You may hand deliver comments to the Ecology street address below.

**Public Hearing** on January 8, 2008. See page 2 for more information.

**Review the information** Ecology used to make their tentative decisions to issue the permit, between 9 a.m. and 4:30 p.m., at:

Department of Ecology  
Hazardous Waste & Toxics Reduction Program  
300 Desmond Drive, Lacey, WA 98503  
Contact: Martin Werner - (360) 407-6710

Or:

Naval Undersea Warfare Center  
610 Dowell Street, Keyport, WA 98345  
Contact: Diane Jennings (360) 396-2699.

Or during library hours at:

Silverdale Branch of the Kitsap Library  
3450 NW Carlton Street  
Silverdale, WA 98383

For more information or a copy of Ecology's draft permit and fact sheet:

- ✓ Contact Martin Werner at the mailing address, e-mail address, or phone number listed earlier; or
- ✓ Visit our web site:  
<http://www.ecy.wa.gov/programs/hwtr/index.html>

## A. Facility Overview and History

NUWC Division, Keyport is a U.S. Navy Base. It tests, evaluates and refurbishes undersea warfare systems and components. The base generates dangerous waste while conducting these operations.

The Navy manages dangerous wastes in a single building on the base until they send wastes sent off site for treatment and recycling or disposal. Dangerous waste management operations that require a dangerous waste management permit are in this building. This fact sheet generally referred to that building as “facility.” The facility stores waste and does limited waste treatment. The facility does not incinerate or dispose of any dangerous wastes on the base.

The diagram below shows the location of the facility on the Navy base.



The facility can also accept waste from other U.S. military bases. Currently, this is not a large part of the facility’s operations. Most of the waste the facility manages is from the NUWC Division, Keyport Base.

The Navy has been operating a facility under “interim status” at NUWC Division, Keyport since November 1980. In 1990, the United States Environmental Protection Agency (EPA) and Ecology determined the location was not suitable for a permanent facility. It was over an old landfill that needed to be cleaned up. In 1994, the Navy constructed a new building strictly for dangerous waste management operations. Now, the Navy manages waste in that building under interim status.

Facilities can operated under “interim status” if they existed before becoming subject to the dangerous waste regulations. Interim status allows a facility operate while they and Ecology complete the processes leading

to a permit decision.

Ecology requires a facility with interim status to submit a detailed permit application (Washington Administrative Code, or WAC, 173-303-806(2)). The permit application provides design and operating information about the facility. If Ecology determines the facility can meet regulatory requirements, they prepare a draft permit for public notice (WAC 173-303-840(2)). The permit incorporates most of the permit application.

After careful review, Ecology determined the NUWC Division, Keyport permit application was adequate and has prepared this draft permit for public review.

The permit will allow the Navy to continue their operations. They will continue to accept and manage the same types of wastes as they have been for years. Section D of this fact sheet summarizes the facility’s operations and requirements in this draft permit.

## B. Procedures for Reaching Final Decisions

The public may review and comment on this draft permit. Ecology will consider all public comments before deciding whether to issue a final permit. WAC 173-303-840(3) through (9) describe the public review process.

Ecology is also issuing a determination of non-significance (DNS) under the State Environmental Policy Act (SEPA; Chapter 197-11 WAC). After review of the completed environmental checklist, permit application, and other information on file with the agency, Ecology determined this proposal does not require an environmental impact statement (EIS). The proposal does not have a probable significant adverse impact on the environment. This determination is also open for public review and comment.

### Public Comment Period

November 30, 2007 through January 15, 2008 is the public comment period on Ecology’s tentative decisions to issue a dangerous waste management facility permit and DNS. See page 1 for information on submitting comments and reviewing documents.

### Public Hearing

Ecology will conduct a public hearing on January 8, 2008, at the Naval Undersea Museum, 610 Dowell Street, Keyport, Washington. For directions, contact Martin Werner, at the address or phone number above.

At the hearing, Ecology will have an open house from 7 p.m. to 8 p.m. Members of the public can talk with staff

from Ecology and the Navy to learn more about the facility and requirements in the draft permit. The formal hearing will begin at 8 p.m.

### How to participate

You may request, review and comment on the draft permit and supporting documents. Information Ecology used to make their decisions is available to you. See page 1 for locations and hours of availability. You must deliver or mail your comments by January 15, 2008, for Ecology to consider them.

The most effective comments are those where the commenter:

- ✓ Provides specific information describing what condition he or she believes inappropriate.
- ✓ Provides factual and regulatory support for the comment.
- ✓ Suggests changes to fix the problem.
- ✓ Includes supporting material, unless Ecology already has the material. (For example, if the comment references a regulation on managing dangerous waste, Ecology already has it. If the comment references a report or letter that is not part of the application or the agency files on NUWC Division, Keyport, or is not a commonly available reference, then Ecology likely does not have it. In such cases, the person commenting should provide a copy of the reference.)

WAC 173-303-840(6) provides details on raising issues and providing information during the public comment period.

### Decision-making process

#### Public comments and testimony

Ecology will consider and respond to written comments the public submits. Ecology will also consider and respond to public testimony from the public hearing.

#### Final decisions

After considering public comments and testimony, Ecology will make a final permit decision or a new tentative decision. In addition, Ecology will allow the Determination of Nonsignificance (DNS) to stand, or amend or withdraw it based on public comments.

If Ecology issues a final permit to NUWC Division, Keyport, it will be valid for ten years from its effective date. However, the Navy or Ecology permit can modify the permit at any time during that period. Permit modifications are subject to public review. WAC 173-303-830 has procedures for modifying a permit and presents the types of permit changes that are subject to public review and comment.

Ecology will inform the facility and all people who comment during the public comment period of the final permit decision.

#### Effective date of decisions

Normally, a permit is effective 30 days after Ecology gives notice of their final decision. However, if there are no comments on the draft permit, Ecology may specify an earlier effective date for the final permit.

If Ecology makes a new tentative decision on this permit, there will be a new comment period. If the DNS is withdrawn due to public comment, Ecology will begin an Environmental Impact Statement (EIS) or mitigated DNS.

#### Appealing the Final Permit Decisions

Ecology will make a final decision after considering and responding to comments from the public and the facility on the draft permit. People can challenge that final decision or any individual permit condition by appealing to the Pollution Control Hearings Board. Appeal procedures are in WAC 173-303-845 and Chapter 43.21B Revised Code of Washington (RCW).

### Ecology's Authorities and Responsibilities

Ecology regulates dangerous waste in Washington State. The Washington State Hazardous Waste Management Act, Chapter 70.105 Revised Code of Washington (RCW), and the Dangerous Waste Rules, Chapter 173-303 WAC, regulate the management of dangerous waste. WAC 173-303-800 specifies that facilities such as NUWC Division, Keyport, which store and treats dangerous waste, must obtain a permit.

EPA also has regulations for facilities that manage hazardous waste. The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), and the regulations in Title 40 of the Code of Federal Regulations (CFR), regulate hazardous waste nationwide. EPA authorizes Ecology to implement these federal regulations in Washington.

The State of Washington's dangerous waste management program received authorization to implement the state dangerous waste regulations in lieu of the federal hazardous waste regulations on January 31, 1986. The State's program also received approval for revisions to the federal program. The last approval became effective on December 29, 2006. Currently, Ecology's program is authorized for all aspects of the

federal hazardous waste regulatory program that apply to the NUWC Division, Keyport dangerous waste management permit.

### C. State Environmental Policy Act (SEPA)

Ecology determined issuing a permit does not have probable significant adverse impacts on the environment. Therefore, the proposal does not require an EIS under SEPA. The permit allows the Navy to continue storing and treating dangerous waste in a building specifically designed and constructed for that purpose.

Under the permit, the Navy will not increase their waste management capacity, manage different waste, or use different waste management processes. They will continue using existing structures and the same basic operations for waste management. The final permit is more specific about how they must meet regulatory requirements.

When the Navy moved their facility in 1994, Ecology completed an environmental assessment of that proposal and issued a DNS.

Issuing a final permit does increase the likelihood that dangerous waste management operations will continue indefinitely at NUWC Division, Keyport. If the Navy proposes to increase or change these operations in the future, that proposal will require a permit modification subject to public review. At that time, Ecology will consider whether that potential proposal would be subject to an environmental assessment under SEPA.

### D. Permit and Permit Conditions

Ecology's permit regulates activities to receive, store, and treat dangerous waste at the facility.

The dangerous waste management facility permit does not apply to other operations at the base. For example, the permit does not address activities such as torpedo depot operations, machine shops, or painting shops. The Navy accumulates dangerous waste at numerous locations across the base. This is regulated by the Dangerous Waste Rules, but is not subject to this draft permit.

### Facility Description and Operation

The NUWC Division, Keyport dangerous waste management facility (facility) is located on property owned by Naval Base Kitsap, Keyport (NBK) near the town of Keyport, Washington. The facility is in a single building (often called building 1051 or the TSDF). The area of the building is approximately 68,500 square feet.

Operating requirements in the draft permit apply only to the facility.

The entire base occupies 343 acres, and that area is subject to dangerous waste "corrective action." Corrective action means environmental remediation, or clean up, of contamination that has occurred in the past. There is existing environmental contamination on the base. EPA designated the NUWC Division, Keyport Base a superfund site in 1989. The federal Superfund Program and Washington State Model Toxics Control Act (MTCA) Cleanup Program have been working with to the Navy since that time to clean up the base. Coordination between those programs and this permit is described later in this fact sheet under the subtitle "Corrective Action."

Dangerous wastes produced on the base may be accumulated where first generated without a permit. However, dangerous wastes may not be staged at these locations for more than 90 days. Therefore, the Navy transports wastes from accumulation sites to the facility (i.e., building 1051 or the TSDF) before the generator time limit elapses. Subject to requirements in the permit, the Navy can then store the wastes at the facility for as long as one year. The facility can also accept waste from other military bases.

The facility accepts and manages a wide range of wastes. Categories include: 1) flammable and combustible wastes, 2) corrosive wastes, 3) reactive wastes, 4) toxic wastes, 5) oxidizers, 6) oily wastes; 7) industrial waste waters, and 8) solids and sludges. The permit authorizes a maximum storage capacity of 113,145 gallons. Storage includes 68,145 gallon in containers and 45,000 gallons in tanks.

The facility accepts all wastes at a single receiving area. That area has low permeable coated concrete secondary containment. The facility segregates wastes according to their chemical compatibility class. Facility personnel move the waste containers to separate long term storage areas within two working days.

The facility does limited consolidation of wastes in containers. However, the major purpose of the facility is to accumulate sufficient numbers of containers to allow economic shipment to other (off-base) waste management facilities for treatment and recycling or disposal. The facility has a shipping area used to prepare for off-base shipment of containerized waste.

The facility also receives bulk shipments of wastes in the receiving area. There are nine dangerous waste tanks used to store these wastes. The facility must verify that

waste to be placed in a tank is compatible with other waste in that tank. This is to avoid unexpected and dangerous reactions in the tank.

In addition to waste storage, NUWC Division, Keyport can use their tanks to treat waste water that designates as dangerous waste. They must ensure the treated waste water meets standards in their waste water permit before sending it for additional treatment and discharge at the Central Kitsap Wastewater Treatment Plant in Brownsville. However, the Navy sends most waste from the facility to other permitted hazardous waste management facilities for additional treatment and recycling or disposal.

Other U.S. military bases can also send their wastes to the facility. However, the Navy does not expect this to be a large part of the operations at the NUWC Division, Keyport facility.

During their review of the permit application, Ecology ensured the design of all areas used for waste management meets dangerous waste facility standards. The permit includes detailed conditions on how the areas are used, inspected, and maintained.

### **General Waste Management Requirements**

The permit requires the facility to properly operate and maintain all systems of waste management to achieve compliance with the dangerous waste regulations and specific conditions of the permit. The Navy must ensure adequate funding, staffing, personnel training, and process controls to maintain compliance. The Navy must tell Ecology if they are out of compliance with any of the permit requirements.

The permit is specific about how the Navy must maintain compliance. If they need to change equipment or procedures for their waste management operation, the Navy will need to modify the permit. The permit and regulations prescribe the process for permit modifications. It includes notification to the public about permit changes.

### **Waste Analysis Requirements**

Requirements for waste analysis are complex, and they are critical for the safe operation of the facility.

WAC 173-303-300 requires facilities to have comprehensive and accurate information about the composition of all wastes they manage. NUWC Division, Keyport has proposed detailed procedures for waste analysis. These include characterizing wastes before shipment to the facility, and verifying the identity

of wastes when they enter the facility.

The number and variety of waste streams the facility manages is limited. Most are generated by other operations at NUWC Division, Keyport. The permit application provides specific information on the composition of waste streams the facility routinely manages.

The facility is also authorized to accept waste from other military bases. Basic performance requirements for waste analysis are the same whether the waste stream is from NUWC Division, Keyport or another base. However, specific procedures when the waste enters the facility differ slightly. This is discussed under the subsection entitled "waste verification."

### Waste Characterization

The permit requires reliable information on the composition of every waste stream the facility plans to accept. NUWC Division, Keyport must conduct sufficient analyses of wastes they manage to ensure:

- Safe and effective operation of waste storage and treatment.
- Compliance with the dangerous waste permit.
- Compliance with land disposal restrictions.

The permit supports use of both "acceptable knowledge" and "laboratory analyses" to characterize a waste stream. NUWC Division, Keyport is required to have a current waste profile on each waste stream they manage. The profile has information on the waste stream's physical and chemical properties. It also outlines the regulatory information, such as its designation number and status regarding land disposal restrictions of the waste stream.

At a minimum, each waste profile must be reviewed for accuracy every other year. The profile also has to be reviewed:

- Before a new waste stream is to be accepted.
- If NUWC Division, Keyport has been notified or has reason to believe the process generating a waste stream has changed.
- If there is a discrepancy between the profile and the waste verification conducted when the waste stream enters the facility.

Each waste stream NUWC Division, Keyport manages is tracked by a unique number called the Waste Identification Tracking number. This helps ensure information is readily available at any time for any waste in any container and tank at the facility.

In an emergency situation, the facility may receive an

unknown or unidentified waste stream. In that case, the waste must be isolated from other wastes until the facility fully characterizes it and develops an acceptable profile.

Ecology's permit stresses that NUWC Division; Keyport is responsible for obtaining accurate and complete information for every waste stream it plans to manage. Deficient or defective information provided by a generator is not an acceptable defense for mismanaging the waste at the facility.

#### Waste Verification

The permit specifies procedures and analyses the facility must do to verify the identity of each waste stream in every waste shipment that arrives at the facility. These are called "mandatory analyses" in the permit. There are two major purposes:

- To verify that the waste stream the facility receives is the waste stream represented by the shipping papers and waste profile.
- To verify information about the waste stream the facility needs to safely and effectively manage the waste in compliance with the permit.

The following summarizes the facility's procedures for verifying the identity of each waste stream in every waste shipment from a generator on the NUWC Division, Keyport Base:

- Check the Waste Identification Tracking number to identify the waste stream and ensure reliable tracking records.
- Check that the profile has been reviewed for accuracy within the last two years.
- Check that the mandatory set of verification analysis (e.g., pH, flash point, etc) has been completed within the last two years.
- Using a standardized method (i.e., Physical Description/ASTM D4979), visibly examine every separate waste stream in every waste shipment, either at the time it arrives at the facility or right before it leaves the generator site. (Note, if a waste stream in a waste shipment is in more than one container, then at least 10% of the containers are subject to this procedure.)
- If the waste stream is to be placed in a tank, ensure it is compatible with wastes already in that tank.

Verification procedures for waste received from off the NUWC Division, Keyport Base are the same as in the above paragraph, except the mandatory set of verification analyses are all completed every time a waste shipment arrives.

#### Procedures for Waste Discrepancies

The permit requires a set of established procedures when waste verification identifies a problem or inconsistency with waste analysis information or shipping documentation. The facility contacts the generator to begin resolving the problem. If the facility establishes an accurate identity of the waste, labeling and records are corrected. The facility documents resolution of the problem between the generator and facility personnel in the operating record. The facility informs Ecology by letter if the correct identity of the waste can not be established within 15 days.

The facility must reject a waste stream that arrives if they can not properly and legally manage it. The facility discusses the problem with the generator, and then sends the waste back or to another facility that can manage the waste.

The permit includes procedures for damaged waste shipments that pose a threat to human health or the environment. These include steps to make the shipment secure, clean up any released materials, and notify Ecology and other agencies of the problem.

#### Waste Analysis Methods.

The permit specifies methods for sampling and analyzing waste, including detailed quality assurance and quality control (QA/QC) measures.

#### **Security**

The facility is inside two sets of fences and gates. First, a perimeter fence surrounds the entire base. The Navy conducts a comprehensive security check of all persons entering the base's main security gate. Second, a second fence and set of gates surrounds the facility building itself. Facility personnel are responsible for locking all gates when they are not going to be in the facility.

#### **Inspections**

NUWC Division, Keyport will conduct periodic inspections of the facility. These inspections detect and prevent malfunctions, deterioration, operator error, or discharges from the unit that could cause harm to human health or the environment.

Inspections include the following:

- Daily inspections of secondary containment areas including sumps for leaks and spills, with immediate action if leaks or spills are detected.
- Weekly inspections of secondary containment for evidence of cracks or other forms of deterioration.
- Monthly inspections to ensure fire extinguishers are fully charged.
- Annual inspections of areas where ignitable and

reactive wastes are stored by a professional familiar with the International Fire Code.

- At least every five years, comprehensive tank integrity assessments by an independent qualified professional engineer.

Inspections listed above are only a few examples of the required inspections under the permit. The facility must document results of all required inspections, and document actions taken to address problems discovered.

## Emergency Planning

The permit includes a formal contingency plan the facility will follow in the case of an emergency in the waste management building. That Plan includes specific procedures for responding to different types of emergencies, such as explosions, fires, spills or releases.

The permit clearly specifies criteria for incidents that must be immediately reported to Ecology. It also specifies criteria for incidents that require use of contingency plan procedures. These criteria are in the Contingency Plan (Attachment GG of the Permit). If the facility needs to implement the Contingency Plan, they must provide a written report to Ecology within 15 days. The report describes the incident, explains its causes, discusses emergency responses, assesses environmental damage, and describes steps taken to prevent recurrence.

The facility must also notify Ecology of incidents of noncompliance with the permit. If the noncompliance could threaten human health or the environment, the facility must notify Ecology immediately. For other noncompliance, the facility must notify Ecology in their next monitoring report and no later than six months after the incident.

The permit identifies a trained emergency coordinator who directs emergency response procedures. The emergency coordinator is authorized to use Navy funds that are needed to respond to any emergency. The person assigned as an emergency coordinator must meet qualifications and have training outlined in the permit. The permit also specifies an alternate emergency coordinator in case the primary person is not available to assume the responsibility and duties.

NUWC Division, Keyport has an agreement with Navy Region Northwest, to receive assistance in an emergency, if needed. Navy Region Northwest includes the Puget Sound Federal Fire and Emergency Services. They are able to respond to emergencies, including spills of hazardous substance and fires. Navy Region Northwest also has agreements with Kitsap County Fire

and Rescue for additional assistance. Kitsap County Fire and Rescue includes the Kitsap County Fire Protection Districts and City of Bremerton. The permit requires NUWC Division, Keyport to provide Navy Region Northwest with a current copy of the contingency plan.

The permit has alternate procedures to change an emergency coordinator or to update phone numbers. In general, these types of changes require a formal permit modification including public notification. Instead of a permit modification, the Navy can follow detailed alternative procedures. These procedures ensure that the agencies and organizations that need to be able to contact the emergency coordinator have the information that they need.

In summary, proposed alternative procedures to change an emergency coordinator or update phone numbers include:

- Specify the name of the new emergency coordinator or the new phone numbers in the Contingency Plan.
- Immediately inform Ecology of the change.
- Notify all parties who have agreements to assist NUWC Division, Keyport in the event of an emergency of the change within seven days.

Ecology believes the alternate procedures protect human health and the environment. They ensure that emergency response agencies receive the updated information they need. No agency approval is needed for a facility to change the name of employees or facility phone numbers. What is important is that emergency response agencies have current information on the identity of emergency coordinators and on the phone numbers to contact them. Ecology is concerned that notifying the entire dangerous waste management facility mailing list for a change in the name or phone number of an emergency coordinator may cause people to overlook more significant changes to the permit.

The Navy must respond to other explosions, fires, spills or releases of hazardous substance that may occur elsewhere on the base. However, they will not use the Contingency Plan in this permit unless the emergency threatens to affect the dangerous waste management operations at the facility. The Navy has separate plans for emergency responses in other parts of the base.

## Training

The permit requires NUWC Division, Keyport to conduct comprehensive training for employees involved with dangerous waste management. Training includes the following general topics:

- Health and safety.
- Facility operations.
- Permit and other regulatory requirements.
- Emergency procedures.
- Job-specific training.

Two examples of job-specific training are: 1) training on waste sampling and analysis methods, and 2) training on tank operations. Comparable job-specific training applies to persons with other dangerous waste management duties.

The training program includes general orientation training and job specific training for new employees and employees doing new jobs. NUWC Division, Keyport must ensure an experienced, fully trained person supervises new employees until completion of the initial training. This initial training must be completed within the first six months of a person's employment (or their transfer to new duties).

Experienced employees also take required refresher training. Most courses must be repeated every year. The training programs must be directed by a person knowledgeable in dangerous waste management procedures. At NUWC Division, Keyport, the Training Program Director is the Dangerous Waste Program Manager. That person is responsible for ensuring all dangerous waste management personnel have required training.

## Corrective Action and Closure

### Corrective Action

Ecology requires environmental cleanup at dangerous waste management facilities that have unacceptable levels of contamination in environmental media, such as soil, ground water, or surface water. This is called "corrective action." It is addressed in a dangerous waste permit.

"Corrective action" follows similar administrative procedures and has the same objectives as other Ecology and U.S. EPA cleanup programs. Ecology uses the state cleanup law, the Model Toxics Control Act (MTCA), to conduct all environmental cleanups, including "corrective action." U.S. EPA conducts environmental cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly called Superfund.

The Navy has already done a significant amount of environmental cleanup on the base under Superfund and MTCA programs. They have completed construction needed to address environmental contamination

determined by Record of Decisions (ROD) under those cleanup programs. Cleanup work currently includes operation, maintenance, and monitoring. Additional remediation will be required if new information indicates it is needed. Ecology's MTCA staff is responsible for oversight of the cleanup effort. The following subsection describes past cleanup actions at NUWC Division, Keyport in more detail.

Environmental cleanup at NUWC Division, Keyport is managed by Ecology's Toxics Cleanup Program. "Corrective action" requirements in this permit reference that ongoing effort. This is the usual approach to avoid duplication of efforts by different state and federal programs having the same objectives. This is discussed in more detail in a later subsection of the fact sheet.

### Cleanup Activities Conducted Under CERCLA and MTCA

**In September 1984**, the Navy conducted an Initial Assessment Study to identify areas of possible environmental contamination from past management practices of hazardous materials. They identified several areas of the base for additional study.

**In 1988**, the Navy began the additional investigations of these areas. In October 1989, EPA formally placed NUWC Division, Keyport on the federal National Priorities List for environmental cleanup under the federal Superfund program. Under Superfund, the Navy completed a Remedial Investigation in October, 1993 and a Feasibility Study in November, 1993.

The listing of the NUWC Division, Keyport site resulted from the discovery of contamination in the following areas:

- Area 1 – Keyport landfill
- Area 2 – Van Meter Road Spill/Drum Storage Area
- Area 3 – Otto Fuel Leak Area
- Area 5 – Sludge Disposal Area
- Area 8 – Plating Shop Waste/Oil Spill Area
- Area 9 – Liberty Bay

Ecology's files have detailed information on the types and extent of contamination in these areas. This information is available for public review.

**In September 1994**, EPA and Ecology issued a Record of Decisions (ROD) to document their decision on actions to address environmental contamination at NUWC Division, Keyport. They separated the Areas into two operable units. These are:

- Operable Unit 1 Area 1 - the Keyport landfill.

- Operable Unit 2 encompasses the remaining areas of concern (i.e., Area 2, 3, 5, 8, and 9).

The agencies made this split because of public concerns that the Keyport landfill required additional evaluation before an acceptable remedy could be selected.

Action for Operable Unit 2 were as follows:

- Area 2 – institutional controls and ground water monitoring.
- Area 3 – no further action.
- Area 5 – limited ground water monitoring to confirm no further action was needed.
- Area 8 – excavation of contaminated soil, and institutional controls and monitoring of ground water sediment, and shellfish.
- Area 9 – limited sediment sampling to confirm no further action was needed.

**In September 1998**, EPA and Ecology issued a second ROD to document their decision on actions to address environmental contamination at Operable Unit 1 (Keyport landfill). The actions consist of “phytoremediation,” contaminated sediment removal, upgrades to equipment to prevent storm water entering the landfill, repair and maintenance of the landfill cover, monitoring, and institutional controls. Phytoremediation involved planting poplar trees to remove contaminants from the ground water within their root zone. “Institutional control” are measures taken to limit or prohibit activities that could interfere with the integrity of past cleanup action or result in exposure to contamination still at the site.

Please note that the Keyport landfill is no longer being used to dispose of waste. It was closed for that use in 1973. The current activity at the landfill is limited to operation and maintenance of the phytoremediation system and parking.

**In June 2000**, the Navy conducted a “Five Year Review” of remedial actions at NUWC Division, Keyport. This is a formal process to ensure the remedial actions selected by the preceding RODs remain protective of human health and the environment and are operating as designed. Ecology and EPA found no areas of noncompliance during this Five Year Review. The agencies concurred with several recommendations made by the Navy. Primarily, these were for continued (and in some cases enhanced) monitoring and maintenance to help ensure the ongoing effectiveness of the remedies selected by the RODs.

**In May 2005**, the Navy conducted their second “Five Year Review.” This report focused on areas of the base

where contaminants are still above cleanup levels. Ecology and EPA agreed with recommendations in the review. EPA stressed the importance of collecting adequate data to assess remaining contamination and need for more cleanup. The Navy will continue to monitor and evaluate exposure in areas under institutional controls. They expect contaminant levels will decrease over time because of natural attenuation, with possible assistance from phytoremediation. The Navy will continue to monitor and assess contamination until they achieve final cleanup levels. Also, The Navy and the agencies will use current toxicology information on contaminants to evaluate whether the remedies are protecting human health and the environment.

**In 2010**, the Navy will complete its third “Five Year Review.” Again, Ecology and EPA will review the report to assess the effectiveness and adequacy of ongoing actions. These include phytoremediation, natural attenuation, maintenance, monitoring, and institutional controls.

This draft dangerous waste management permit has several conditions for ongoing remediation by the Navy, and overseen by Ecology’s Toxics Cleanup and EPA Superfund Programs. These include:

- Incorporating ongoing cleanup requirements in a Federal Facility Agreement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to meet dangerous waste requirements for corrective action.
- Stating that Ecology’s Hazardous Waste and Toxics Reduction) HWTR staff will review the 2010 and subsequent “Five Year Reviews” to ensure the remedial actions comply with the dangerous waste regulations.
- Requiring that the facility notifies HWTR staff of any newly identified contamination or new releases.
- Stating that a permit modification will be used to require additional corrective action if Ecology determines that is necessary to fulfill corrective action requirements in the dangerous waste regulations.

#### Closure

The Navy must “close” the current dangerous waste facility when they stop using it to manage wastes. Closure involves removing all dangerous waste from the facility and decontaminating or removing any equipment, structures, and contaminated environmental media (for example, soil) that contacted wastes. If this cannot be accomplished, the location will also be subject to corrective action.

The permit includes detailed step-by-step procedures that NUWC Division, Keyport must follow for closure. First, the facility will remove all waste from tank and container storage areas. Then they will use high pressure steam and water spray to remove wastes from the tank and equipment surfaces. They will continue cleaning until they achieve a “clean debris surface.”<sup>1</sup> If they can not achieve a “clean debris surface” for any tank or equipment, then they will have to send it to another permitted facility for disposal as dangerous waste.

The facility will use mechanical and pressure spraying methods to clean concrete secondary containment surfaces. They will analyze chip samples of the concrete to confirm successful closure. Waste water generated during this operation will be analyzed, treated, and disposed of according to all regulatory requirements.

The Navy will take soil samples from beneath the facility to confirm contamination from facility operations have not entered the soil. They will compare results to the established standards for unrestricted site use (MTCA cleanup standards). If results are below the cleanup standards, then the facility can qualify for clean closure. If results are above the clean up standards, the Navy will be required to cleanup the soils.

The permit includes general sampling and analytical procedures, minimum number of samples, criteria for selecting additional sampling locations, and minimum laboratory analyses.

NUWC Division, Keyport must submit an updated Sampling and Analysis Plan at least 60 days before closure begins. Certain information needed to develop the final detailed sampling and analysis plan, including current analytical procedures and up-to-date facility operating history, will not be available until that time.

An independent qualified professional engineer will observe some of the closure activities. The engineer will write a report of observations and certify whether the Navy followed procedures in the permit while conducting closure.

Since NUWC Division Keyport proposes to fully close the dangerous waste storage unit, the permit does not include a plan for post-closure care.

### **Financial assurance**

Because NUWC Division, Keyport is a federal agency, it

<sup>1</sup> “Clean debris surface” is defined in 40 CFR 268.48 Table 1. It is an established standard used to determine adequate contaminant removal from surfaces of various materials.

does not need to provide assurance that it has finances available to conduct a complete closure of the facility. NUWC Division, Keyport is also exempt from having liability insurance specified in Chapter 173-303 WAC. Therefore, the permit does not contain financial assurance mechanisms for closure or liability coverage.

### **Recordkeeping**

The facility must maintain detailed operating records. These records document compliance with conditions of the permit and the Dangerous Waste Rules. The facility must also maintain records of spills, releases, incidents of noncompliance, and emergency situations. These records must be kept for time periods ranging from three years to when facility closure is completed, depending on the type. The permit lists specific recordkeeping requirements.

### **Reporting**

NUWC Division, Keyport must report certain information to Ecology, for example:

- Waste shipments received that do not agree with the accompanying manifest or shipping paper if the discrepancy can not be resolved within 15 days.
- Incidents that caused facility to implement its Contingency Plan.
- Annual reports on the facility's operation, including information on waste minimization efforts.

This list does not include all reports NUWC Division, Keyport must submit to Ecology.

## **E. CHANGES TO RCRA/RCRA RULES UNDER THE HAZARDOUS AND SOLID WASTE AMENDMENTS**

In general, new or amended requirements in the Hazardous and Solid Waste Amendments of 1984 and related regulations will automatically apply to NUWC Division, Keyport dangerous waste management activities. The exception is for new requirements that are less stringent than those in effect when Ecology issues the final permit.

## **F. CONCLUSION**

In its permit application, NUWC Division, Keyport has demonstrated it is capable of safely operating its dangerous waste management facility under the conditions required for a final permit. Therefore, Ecology has made a tentative decision to issue a final status permit to the facility.