

## Naval Surface Warfare Center Dahlgren Division

### Subpart X Operating Permit for Open Burning and Open Detonation

A **Subpart X Operating Permit for Open Burning and Open Detonation** is required for owners and operators who perform open burning and open detonation of waste explosive and propellant. Subpart X of the RCRA regulations under 40 CFR Part 264 covers miscellaneous units not regulated under the standards for specific types of treatment, storage, and disposal units in Part 264. The Naval Surface Warfare Center Dahlgren Division (Dahlgren) facility currently operates a permitted Open Burning and Open Detonation (OB/OD) operation at the facility. The Subpart X permit for Dahlgren, which was issued in 2005, is active. A renewal permit application is currently under review.

#### US Navy Dahlgren OB/OD Operations

Dahlgren generates waste ordnance and other energetic materials which have no further military use or have been stressed to a point where they are no longer safe for transport. Dahlgren treats these explosive hazardous wastes using OB and OD in units located on Churchill Range, a physically secured area located in the northeast quadrant of the Explosives Experimental Area.

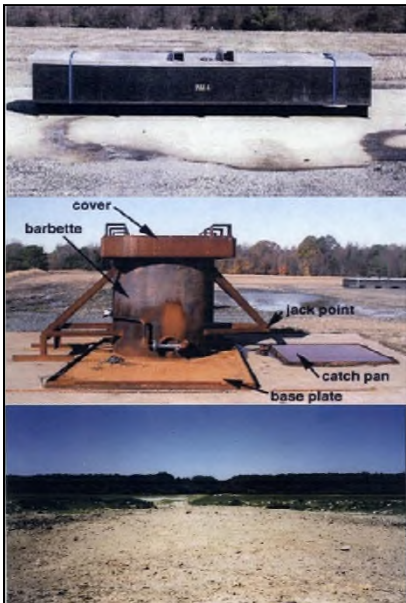
The OB area is a 300- by 300-ft graveled area with four steel burn pans used for treatment of smokeless powder and ballistic grains and one steel burn unit fired by propane used to treat primers, fuses, small arms ammunition, waste explosive, and high explosives.

Burn pan operations typically involve the pouring of bulk propellants or other powdered energetic material to a depth of a few inches into the metal burn pans. The material to be treated is wired with an ignition source and remotely triggered. Explosive items treated in the propane-fired burn unit are placed on a removable rebar grate that sits

on a steel base. After the unit is loaded, gas from a portable tank is turned on from a remote location and the flame ignited.

The OD area is a 450- by 150-ft non-vegetated area contained within one large semi-continuous earthen berm. All materials treated by OD are placed on the surface; for quantities in excess of 200 lb net explosive weight (NEW) the waste is covered with soil to mitigate noise from the detonation. The munitions are detonated by either electrical or non-electrical methods and treatment is nearly instantaneous. Ejecta from the blast are naturally segregated by size, with the larger dirt fraction settling very near the blast zone and the smaller gaseous and aerosolized treated material either captured within the dirt or propelled into the atmosphere.

Following visual inspection to verify the absence of reactive compounds, the ash/residue from the burn units is collected and stored in a hazardous waste container at the accumulation area. The residue is managed as a hazardous waste based on knowledge of the waste stream constituents and characteristics



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or pending analytical sampling results for reactivity and toxicity. The only residues generated from OD operations are metallic materials such as shell fragments (shrapnel) and, on occasion, pieces of energetic material or unexploded ordnance (UXO) that were not completely treated. Any remaining energetic material or UXO is detonated in place (if unstable), returned to the OD mound for detonation or containerized, handled and stored as explosive hazardous waste to be treated at a later date. Detonation in place follows the same general operating and safety procedures as detonation in the mound. However, rather than placing the donor material on top of the item to be detonated, the donor material is placed near the item to avoid disturbing the item. Shrapnel that does not visibly contain unexploded materials is collected for recycling as scrap metal

Dahlgren is limited by the operating conditions in the RCRA Subpart X permit to thermally treat a maximum of 62 tons/year by open detonation and 625 tons/year by open burning.

Groundwater monitoring is performed semi-annually under the corrective action monitoring program in Module VI of the current permit to ensure that hazardous waste does not impact groundwater at the units. The permit specifies the monitoring well network to be constructed and maintained at the unit and specifies the constituents to be monitored for.

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## Steps in the Hazardous Waste Permit Reissuance Process

### Step 1: Starting the Process

About one year before a permit expires, DEQ sends a letter to the facility (“call-in” letter) as a reminder that the permit will expire and that the renewal application is due six months before the permit expiration date. As long as the facility submits the application and fee by the due date, the current permit remains in effect. The call-in letter also suggests a pre-application meeting to provide the necessary information to help ensure that a complete and thorough application is submitted.

### Step 2: Receipt and Review of the Application

Depending on the type of application, once DEQ receives the permit application, notice of the receipt is provided to the facility mailing list. The application is then reviewed to make sure it contains all the information required by the regulations. This phase is termed the completeness review. The goal is to conduct the initial completeness review within 30 days of receipt of the application. Once the application is determined to be administratively complete, DEQ will conduct a technical review of the application. During the technical review, the design and operation of the facility are evaluated to determine if the facility meets the technical requirements of the regulations and can be operated in a manner that protects human health and the environment. Sometimes the completeness and technical reviews may be combined.

### Step 3: Revisions, Revisions, Revisions

After each review of the application, DEQ may issue a “notice of deficiency” (NOD) to the applicant. NODs request that the applicant provide any missing information. During the application review and revision process, DEQ may issue several NODs. Each time DEQ receives a response from the applicant, it reviews the information and, if necessary, issues another NOD until the application is complete. Usually the applicant is given 30 to 45 days to respond to an NOD, depending on the comments. Given the complex and technical nature of the information, the review and revision process may take one to two years or more.

### Step 4: Drafting the Permit for Public Review

When the revisions are complete, DEQ makes a preliminary decision about whether to issue or deny the permit. If DEQ decides that the application is complete and meets appropriate standards, the agency prepares a draft permit containing the conditions under which the facility can operate. DEQ announces its decision by sending a letter to everyone on the public notice mailing list, placing a notice in a local paper, and broadcasting it over the radio. It also issues a fact sheet to explain the decision. Once the notice is issued, the public has 45 days to comment on the proposed permit. Citizens also may request a public hearing by contacting DEQ, which may also hold a hearing at its own discretion. The agency must give a 30-day public notice before the hearing.

### Step 5: The Result – A Final Permit Decision

After carefully considering all public comments, DEQ determines if any changes to the draft permit are warranted. DEQ must issue a “response to public comments,” specifying any changes made to the

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draft permit. DEQ then issues a final decision. Each person who commented on the draft permit receives a copy of the response to public comments and notice of the final decision.

### **How Can the Public Participate?**

Members of the public have valid concerns about hazardous waste management. They and other interested parties can contribute valuable information and ideas that improve the quality of DEQ decisions and permit applications. DEQ believes that public participation is a vital component of the permitting process. The public comment and response period and public hearings are instances where citizens can engage applicants and regulators in a dialogue. DEQ also encourages additional public participation activities where they will be helpful.

DEQ recognizes that some of the most important public participation activities happen outside the formal permitting process. Citizens can contact environmental, public interest, civic and community groups and become involved in their activities. The permit holder or applicant may also create informal opportunities for public input and dialogue.

The permitting process gives citizens a number of opportunities to express their ideas and concerns. For the US Navy Dahlgren facility in particular, here are several steps you can take to ensure that your voice is heard:

- Know whom to call at DEQ. This person's name is on the website, fact sheets and other printed materials.
- Ask to have your name put on the facility mailing list for notices, fact sheets and other documents distributed by the agency.
- Do your own research by talking to local officials, contacting research or industry organizations, reading permitting agency materials, and interacting with interested groups in the community.
- Understand the applicable legal and regulatory authority and what issues can be addressed as part of the permitting action.
- Submit written comments that are clear, concise and well-documented. Target specific issues and cite specific provisions. DEQ must consider all significant written comments submitted during a formal comment period and respond appropriately. To be most effective, comments should be relevant to specific information in the proposed permit.
- Participate in public hearings and other meetings. Provide testimony that supports your position. All comments should be based on factual information and supported by applicable regulations, guidance documents, and technical references.
- If any material needs further explanation, or if you need to clear up some details about the facility or the permitting process, contact the permit writer. You also may want to call the facility to meet with the staff or to request a tour or other information.

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## Renewal Requirements for Application for Reissuance of Hazardous Waste Open Burning Permit

Application Deadline: October 2015

Task	Month	Review period (# of days)
DEQ Initial Completeness Review (1st CR)	May 2015	30
Dahlgren response to 1 <sup>st</sup> CR received	July 2015	60
Application deemed administratively complete	July 2015	1
1 <sup>st</sup> Technical Review (TR), NOD	October 2015	30
90 day extension request received for NOD response	October 2015	1
DEQ approves 90 day extension request received for NOD response	October 2015	1
60 day extension request received for NOD Sections 3, 4 and 5 response	February 2016	1
DEQ approves 60 day extension request received for NOD Sections 3, 4 and 5 response	February 2016	1
Dahlgren response to 1 <sup>st</sup> TR, Sections 1 and 2	February 2016	60
2 <sup>nd</sup> TR Notice of Deficiency for Sections 1 and 2	March 2016	30
60 day extension request for NOD Sections 4, Comments 66-105, response	April 2016	1
Dahlgren response to 1 <sup>st</sup> TR, Sections 3, 4 and 5	April 2016	60
2 <sup>nd</sup> TR, Sections 1 and 2	May 2016	60
<i>Dahlgren response to 1<sup>st</sup> TR, Section 4, Comments 66-105</i>	<i>June 2016</i>	<i>60</i>
<i>Revised 2<sup>nd</sup> TR Notice of Deficiency for Sections 3, 4 and 5</i>	<i>June 2016</i>	<i>30</i>
<i>3<sup>rd</sup> TR Notice of Deficiency for Sections 1 and 2</i>	<i>July 2016</i>	<i>30</i>
<i>Dahlgren response to Revised 2<sup>nd</sup> TR Notice of Deficiency for Sections 3, 4 and 5</i>	<i>July 2016</i>	<i>60</i>
<i>Dahlgren response to 3<sup>rd</sup> TR Notice of Deficiency for Sections 1 and 2</i>	<i>August 2016</i>	<i>60</i>
<i>Revised 3<sup>rd</sup> TR Notice of Deficiency for Sections 3, 4 and 5</i>	<i>September 2016</i>	<i>30</i>
<i>Dahlgren response to Revised 3<sup>rd</sup> TR Notice of Deficiency for Sections 3, 4 and 5</i>	<i>October 2016</i>	<i>60</i>

