CHIEF OF NAVAL OPERATIONS – N45

Watershed Contaminated Source Document (WCSD)

FACT SHEET **MARCH 2003**

In accordance with the CNO *Policy on Sediment Site Investigations and Response Actions*, 8 February 2002, all sediment investigations and response actions performed under the Installation Restoration Program (IRP) must be directly linked to Navy CERCLA/RCRA contaminated releases (ER,N and/or BRAC funding eligible). Directly linked means that the sediment contamination is scientifically connected to a Navy IRP/BRAC site. The CNO policy also states that a Watershed Contaminated Source Document (WCSD) is required if there is the potential for non-Navy sources to contribute to sediment contamination in a water body adjacent to Navy property. The WCSD is intended to be a brief summary report, not a watershed investigation. The WCSD should be prepared at the earliest point in the RI/FS process where sufficient information is available to support a conceptual site model (CSM).

Using available information such as contaminant data and public records, the WCSD documents possible sources of contamination in a water body. This information can be used in the Navy's decision-making process to determine what course of action it should take. The WCSD should be provided to the appropriate regulator(s).

This factsheet explains:

- **What is a WCSD;**
- **When a WCSD is necessary;**
- **What are the contents of a WCSD;**
- **How the WCSD can be used to determine the Navy's cleanup responsibility in a water body; and**
- **How the WCSD can be used to evaluate the potential for Navy-remediated sediments to become re-contaminated from other sources.**

What is a WCSD?

The WCSD is a 2-10 page summary report that documents the existence of both Navy and non-Navy sources whose activities may have or could continue to have an impact on sediments in a water body adjacent to Navy property. The WCSD contains a graphical representation of the water body and identifies potential contaminant sources, releases, and transport mechanisms.

When is a WCSD required?

The Navy requires a WCSD when potential non-Navy sources are contributing, or have contributed, to the contamination in a water body. The Navy is only

responsible for remediating areas contaminated by a Navy release. Additionally, the Navy needs to assess the benefit of performing a response action in an area that could be recontaminated by other sources.

A WCSD is not required where the Navy is the only potential source. The WCSD is only required by the Navy within the IR program; it is not a regulatory-mandated document. The decision to develop a WCSD is at the discretion of a Navy RPM and their management.

What are the steps for developing a WCSD?

The following steps determine the need for and describe the development of the WCSD. The Navy shall work with stakeholders as appropriate throughout WCSD development. A WCSD is based on pre-existing data and information that is publicly available.

Step 1: Determine the need and scope of a WCSD

Conduct an internal discussion:
The Navy decides whether or not a WCSD necessary. The Navy RPM/RTM may involve contractors and the partnering team in discussions, but the Navy makes the ultimate decision on whether or not the document is needed. The following factors need to be carefully considered:

- ***Is the Navy the only source of contamination to the water body?*** If so, the Navy is solely responsible for any necessary cleanup of contamination. Therefore, a WCSD is not necessary.
- ***Are there other potential sources of contamination to the water body?*** Identify if other non-Navy sources could potentially contribute or have historically contributed to contamination at the site.
- ***What is the amount of contamination that may have been contributed to the water body from other sources?*** This is a preliminary, qualitative assessment. Determine if potential contamination from non-Navy sources could contribute to the overall risks posed by the sediment and could affect issues regarding long-term remedial strategies for the site.

Define Scope:
Before proceeding to Step 2, define the scope of the area that a WCSD will cover. The scope should be limited to the area and activities that may have the most impact on a Navy sediment site. Begin with delineating the watershed boundaries, then set the scope on that portion of the watershed that could reasonably be expected to potentially affect the Navy area of concern. The scope of a WCSD may be different depending on the water body type (e.g., river, pond, bay, etc.).

Step 2: Literature search
For a WCSD, the literature search should try to find the following types of information (this is only a partial list):

- Locations and nature of potentially contaminated sites (CERCLA sites, RCRA sites, and state-listed hazardous waste sites),
- Locations and nature of past response actions,
- Locations of petroleum-oil-lubricant sites,
- Data on water/sediment quality,
- Airborne release sources and associated air quality data,
- Dredging locations,
- Locations of storm water and wastewater outfalls,
- Location and nature of industrial plants (e.g., chemical plants, metal plating facilities),
- Locations of power plants (including water outfall and air emission data),
- Locations of wastewater treatment plants (including outfall quantity and quality),
- Locations of boat facilities such as marinas and maintenance shops,
- Ship activity,
- Aerial photographs and
- Other possible sources including new construction activities and discharges.

Steps to WCSD Development

1 - Determine the need and scope of a WCSD
2 - Literature search
3 - Preliminary watershed conceptual map
4 - Watershed Visit
5 - Research record to fill data gaps
6 - Conceptual Site Model
7 - Write Document

This information can be found in online databases and public records from a variety of sources including Navy, Army Corps of Engineers, state and city regulators, U. S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. Geological Survey, National Oceanic and Atmospheric Administration, universities, etc.

Step 3: Preliminary watershed conceptual map
Identify and plot on a map all of the potential sources found in the literature search. Sources should be listed in generic terms (e.g., industrial outfall, power plant, storm water discharge, NPL site, etc.) and color-coded by type (providing a legend). Actual company and municipality names shall not be used.

Step 4: Watershed Visit
A site visit should be conducted to verify the accuracy of the spatial map and confirm information obtained during the literature search (within the scope identified in Step 1). For some potential historical sources of contamination, visual verification may not be possible. Document new potential sources discovered during the site visit.

Step 5: Research record to fill data gaps
Updated the literature search and the preliminary watershed conceptual map using information based on the watershed visit and any necessary follow-on record searches.

This map does not depict actual conditions at a site.

Step 6: Conceptual Site Model
Utilizing the updated map produced in Step 5, develop a graphic CSM that has supporting text and identifies potential sources and releases (both Navy and non-Navy), and possible transport mechanisms. Again, sources should be identified in generic terms and should be color-coded by the type.

The CSM should also contain information about general hydrodynamic conditions, navigational channels, depositional areas, ship activity, boats and piers, dredging activities, air quality and water/sediment quality. Again, this should not be a elaborate study.

Step 7: Write Document
The document should contain the following sections: Introduction, General Setting, Results, Conclusions and Recommendations, and References.

Introduction: The introduction should include:

- An overview of why the WCSD is required (reference the CNO *Sediments* policy),
- The purpose and intended use of a WCSD,
- A description of the document scope,

- A description of the Installation Restoration sites included, and
- A discussion of the types and sources of information acquired for the document.

The purpose of the document should include discussion about the fact that the WCSD is intended to be a brief summary report, not a watershed investigation or a document intended to identify potentially responsible parties, degree of responsibilities, or any other legal determinations.

General Setting: This section should contain information on the base: size, operations, etc. It should also provide general information on the surrounding areas: local industries, towns, agriculture, etc.

Results: The results section should contain the CSM as well as summarize and qualitatively evaluate all of the acquired information.

Conclusions and Recommendations: This section will briefly summarize the results of the data compilation and evaluation, and conclude with a list of potential Navy and non-Navy sources. Recommendations should be made as to how the results should be taken into account when considering investigation, remediation or long-term monitoring of a sediment site.

References: This section will provide a list of references used to compile the information provided in the document.

Glossary and Acronyms

Conceptual Site Model (CSM) – a written or pictorial description of the elements of a site including assumptions about exposure and effect. The CSM identifies known or suspected contaminant sources, release and transport mechanisms, exposure routes, and receptors. The CSM functions as a dynamic planning tool, helping in the identification of data gaps, site knowledge, and assessment methods.

Literature search - the process of systematically identifying published material or information, which is relevant to a particular topic or area of interest.

For Further Information

For more information about the contents of this factsheet, contact:

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