

**Appendix F**  
**Project Document Assessment**

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## **1.0 General Information**

### **1.1 Introduction**

Independent project document assessments should be performed on every project, where environmental data is collected or evaluated in the decision making process. Assessments of project planning documents should be performed when the documents are in draft form. This is necessary to ensure that there is sufficient time to revise the document(s) and to resolve any problems identified during the assessment process.

In addition to addressing problems that would impact the planned project, the results of project document assessments should be used to identify and address Installation Restoration (IR) Program activities, systems, and practices that need process improvement. The organizations that prepare project planning documents should use the results of project document assessments as the basis for corrective actions to their internal quality systems. It is considered a serious and avoidable deficiency if an organization's project plans contain recurring deficiencies identified in previous project document assessments.

The Engineering Field Division/Engineering Field Activity (EFD/EFA) as the project manager decides who will conduct project document assessments. In this regard, the EFD/EFA may elect to perform project document assessments in-house or arrange for the Naval Facilities Engineering Service Center (NFESC) or a contractor to perform the assessment. It should be noted that the direction given in this section is typically presented using the term "should." The EFD/EFA shall determine if the information and guidance presented in this section shall be applied more stringently (i.e., "should" implemented as "shall").

### **1.2 Objectives**

This document provides guidance for conducting technical assessments of project documents pertaining to the collection and handling of samples, evaluation of environmental data, and for proposed environmental field operations in support of the Navy Installation Restoration (IR) Program.

### **1.3 Scope**

This document describes the scope, content, and approach for technical assessments of project planning documents (i.e., analytical plans and field operation plans) in support of IR and BRAC environmental programs (excluding compliance). This document is not intended to serve as a standard operating procedure (SOP) for project document assessments. It is applicable to assessments of all IR Program projects that include the collection or evaluation of environmental data.

Although the technical assessment process is generally applicable to environmental programs, the user is cautioned that the technical details in this document are not universally applicable. It

is necessary to select and consider only those assessment elements that are relevant to the planned project.

## **1.4 Qualifications of Project Document Assessors**

Assessors must possess technically appropriate educational credentials and environmental project experience that are commensurate with their responsibilities for assessing project documents. The EFD/EFA will determine the appropriate assessor qualifications. Qualifications must be forwarded to the EFD/EFA prior to beginning the project document review.

Personnel who perform project document assessments must be independent of the organizations that prepared or will implement the subject project plans.

### **1.4.1 Standards of Ethical Conduct**

As detailed in Appendix A, Standards of Ethical Conduct, each assessor must be familiar with standards of ethical conduct and submit a signed statement declaring freedom from conflict of interest prior to conducting any project document assessments.

## 2.0 Conducting Project Document Assessments

The scope of the assessment should be commensurate with the scope of the planned field project. A single assessor with appropriate disciplinary expertise may complete project assessments of relatively small-scale projects (e.g., those with routine, limited, or infrequent sampling activities). Project document assessments of relatively large scale or long term projects will typically require comprehensive assessment by an interdisciplinary team of personnel.

Environmental data collection projects are subject to routine assessments to assess the effectiveness of the planning process (quality system). The planning process should include:

- Identification of technical and quality objectives for the project
- Development of a sampling and analysis strategy to meet project objectives
- Establishment of performance specifications or acceptance criteria for the data resulting from project implementation

Project documents are assessed to determine if they are:

- Effective at generating data which will satisfy project objectives
- Technically defensible
- Compliant with applicable quality standards and regulations<sup>1</sup>

### 2.1 Assessment Elements

Project document assessments include an assessment of four major elements:

- Project plans
- Proposed field operations
- Analytical plans
- Laboratory capability for the proposed work

Details regarding the assessment of each element are provided in the following sections.

#### 2.1.1 Project Plans

The assessor must ascertain if each of these review elements is addressed in the planning documents (e.g., work plan, field sampling plan, sampling and analysis plan, or quality assurance (QA) project plan) in a manner that ensures that quality data is produced and is appropriate to the objectives of the project. Table F-1 presents the elements that are subject to review (for completeness, clarity, and technical merit) during the assessment process. Project planning documents describing field sampling (i.e., field sampling plan,

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<sup>1</sup> The Navy has specified minimum field sampling requirements in the latest version of OPNAVINST 5090.1B, CH-1, Chapter 25. These requirements must be considered when assessing project planning documents and proposed field operations. Appendix E details field sampling requirements presented in Chapter 25.

sampling and analysis plan) should meet OPNAVINST 5090.1B, CH-1, Chapter 25 field sampling requirements as presented in Appendix E.

**Table F-1: Review Elements for Project Planning Documents**

Instructions to the field personnel responsible for sample collection
Description of project and sampling objectives
Technical basis for the proposed sampling approach and analysis activities
The intended data uses
Strategy for proposed sampling and analysis activities
Proposed controls to limit cross contamination
Chain of custody procedures
Proposed field quality control (QC) practices and samples to be collected
Data Quality Objectives
Background data and supporting information
Historical information and interpretation including validation, QC results, and support laboratory names/locations
Applicable regulatory thresholds, negotiated action limits, or project decision thresholds
Qualifications, roles, and responsibilities of all project personnel, including subcontractors and analytical laboratories participating in the project
Site maps, including sample collection locations
Number and type of samples from proposed sampling locations and depths
Technical basis for all planned sampling and analysis activities
Sample description by matrix, required analyses, quantity, preservative, storage conditions, and holding time
Sample collection techniques (sampling mechanisms, materials of construction, ability to collect desired sample)
In-situ or field measurements
Sampling and monitoring equipment, including calibration requirements
Number, criteria, and use of field QC samples
Laboratory QC sample requirements
Analytical quality criteria
Analytical methods and targeted analytes

Reporting limits, and method detection limits or quantitation limits
Accuracy and precision at specified concentration(s)
Content and format of data deliverables (hard copy and electronic)
Laboratory turnaround times for specified deliverables
Field contact for resolution of analytical problems
Scope, frequency, and conduct of data validation
Data analysis and interpretation
Conditions and procedures for suspension of or change in planned work
Procedures for handling investigation derived wastes

### **2.1.2 Proposed Field Operations**

An assessment of planned field operations is accomplished by assessing the technical content of document(s) including:

- Work plans
- Field sampling and analysis plans
- SOPs
- Contract instructions

Field documents must include complete citations to laboratory and corporate quality manuals and plans, SOPs for field activities, and any other documents containing pertinent information. The citations must include revision or version number and promulgation or publication dates for each document or SOP.

Assessment of planned field operations documents includes review of:

- The proposed use of equipment
- The procedures for establishing sampling locations in the field
- Documentation of sample locations
- Decontamination processes
- Custody control
- Sample preservation
- The appropriateness of other sampling procedures which may include, but are not limited to, drying, sieving, mixing, compositing, splitting, labeling, storing, packaging, and shipping.

Proposed field operations documents should meet OPNAVINST 5090.1B, CH-1, Chapter 25, field sampling requirements as presented in Appendix E.

Table F-2 describes the scope of technical issues that are subject to review. Criteria and specifications to be assessed during the review are provided, but are not limited to those listed.

**Table 2: Scope of Technical Issues Subject to Review**

<b>Element</b>	<b>Criteria and specifications to be assessed during review.</b>
Water Sampling	<ul style="list-style-type: none"> <li>– calibration, operation, and maintenance of water monitoring equipment</li> <li>– representativeness of each sampled media</li> <li>– appropriateness of sample collection operations to the intended analyses</li> <li>– unique sampling challenges posed by               <ul style="list-style-type: none"> <li>– dense non-aqueous phase liquid (DNAPL)</li> <li>– trace levels of volatile organics</li> <li>– suspended particulates</li> </ul> </li> </ul>
Groundwater	<ul style="list-style-type: none"> <li>– monitoring well installation</li> <li>– well development and purging</li> <li>– screen intervals</li> <li>– materials of construction</li> <li>– low-flow sampling techniques</li> <li>– use of bailers</li> <li>– use of peristaltic pumps</li> <li>– collection of samples for dissolved metals</li> </ul>
Surface Water	<ul style="list-style-type: none"> <li>– measurement of flow rates</li> <li>– collection from discrete depths</li> <li>– collection of surface films or discrete layers</li> <li>– collection from weirs</li> <li>– collection from static or turbulent sources</li> </ul>



Element	Criteria and specifications to be assessed during review.
	<ul style="list-style-type: none"> <li>– screening soil vapor streams</li> <li>– soil vapor</li> <li>– selection, use, handling, and storage of canisters, Tedlar® bags, and syringes</li> </ul>
Other Matrices	<ul style="list-style-type: none"> <li>– containerized wastes drums</li> <li>– tanks</li> <li>– waste piles</li> <li>– liquids from surface impoundments</li> <li>– sludges</li> <li>– landfills</li> <li>– biota</li> <li>– radioactive materials</li> <li>– in-situ measurement techniques</li> </ul>
Field Practices	<ul style="list-style-type: none"> <li>– training and qualification of field operations personnel</li> <li>– record keeping and documentation               <ul style="list-style-type: none"> <li>– field logbooks</li> <li>– well development records</li> <li>– equipment calibration checks</li> <li>– sample management records</li> </ul> </li> <li>– contamination control</li> <li>– decontamination procedures</li> <li>– change control</li> <li>– sample compositing</li> <li>– sample preparation, preservation, storage, and management</li> <li>– field organizations’ QA program</li> <li>– housekeeping               <ul style="list-style-type: none"> <li>– safety</li> </ul> </li> </ul>

Element	Criteria and specifications to be assessed during review.
	<ul style="list-style-type: none"> <li>– accident documentation</li> <li>– security</li> <li>– cleaning and storage of sampling equipment</li> </ul>

### 2.1.3 Analytical Plans

Assessment of analytical plans includes assessing the appropriateness of planned analyses and methods to achieve the objectives presented in project documents. The assessor must determine:

- If the proposed analytical methods (preparation, clean-up, and determinative) are appropriate for determination of target analytes in the anticipated project matrices.
- If the laboratory appears capable of performing the methods as stated<sup>1</sup>.
- If the proposed reference methods are theoretically capable of generating data of acceptable qualitative and quantitative confidence for the project.
- As appropriate to the project, whether the proposed analytical plans have effectively addressed matrix-specific analytical problems that may impact the ability of conventional off-the-shelf methods to meet project requirements. Examples include the known or suspected presence of ash, high salinity, elevated levels of non-target analytes, tars, or other analytical interferents.

### 2.1.4 Laboratory Capability

The laboratory should be assessed to determine their ability to comply with project requirements as well as Navy quality requirements. It should be noted that this element of the project review can not be performed in instances where the laboratory that will be supporting the project has not been selected. The laboratory capability assessment reports to the Navy whether the procedures performed by the laboratory are:

- Acceptably performed as specified in project data quality objectives
- Compliant with laboratory SOPs and reference method requirements
- Technically valid
- Completely and appropriately documented

A laboratory capability assessment is based on the analytical requirements specified in the project documents or supplied by the requesting EFD/EFA personnel. Information is requested of and supplied by the laboratory, is used to assess the laboratory’s adequacy in relation to the project objectives. Information requested for review may include, but is not limited to:

- Previous audit reports

- A current list of instrumentation and method capabilities
- SOPs for specified methods
- Method performance data (e.g., MDL studies, proficiency test results, etc.).

#### **2.1.4.1 SW-846 Methods**

Two primary issues are reviewed when determining a laboratory's capability to acceptably perform SW-846 reference methods:

- Whether the laboratory has policies and procedures that comply with the requirements of the reference method.
- Whether the laboratory's performance, as evidenced by laboratory records, complies with written policies and procedures. Staff interviews (typically conducted via telephone) may be required in some cases to ascertain if the laboratory adequately addresses these issues.

The scope of an assessment is defined on a project basis to address the overall project objectives. In general, the assessment may include a review of the following as applicable to the method:

- SOPs
- Performance data (MDLs, accuracy, precision)
- Proficiency testing results (if available)
- A fully-validatable data deliverable (if available)
- Interviews with responsible analysts

#### **2.1.4.2 Specialty Methods**

An assessment of a laboratory's capability to perform specialty methods is analogous to the guidance provided in Section 2.1.4.1. Examples of these types of specialty methods include:

- Radiochemistry
- NOAA Status & Trends
- Determination of alkyltins
- Determination of dioxins/furans
- Analysis of biota
- Determination of contaminants at ultra-low trace levels
- Determination of high explosives

#### **2.1.4.3 CLP SOW Methods**

The primary objective of an assessment of CLP methods is to determine whether a laboratory has systems and practices in place to perform the project specified version(s) of the SOW without deviation. The assessor must ascertain the

adequacy of the laboratory's systems for specification and communication of the particular SOW version(s) required for the project, and must determine whether the laboratory has written SOPs that are prescriptively compliant with the applicable SOW. Inconsistencies between the SOW and the laboratory's procedures or practices must be identified.

## **2.2 Assessment Report**

The results of project document assessments are summarized in a written report prepared by the assessor, and will identify and report issues of concern.

The assessment report must clearly indicate the title, version, date, and sections of documents assessed. As appropriate to the assessment comments, the origin of the comment should be clearly referenced (e.g., by page or section number). An example table of technical findings and a blank table are provided in Attachment 1, Table of Technical Findings. This table provides space for citation of each finding and discussion of the issues of concern.

## **2.3 Corrective Action**

Each assessment finding should be resolved, with revision of the documents as appropriate, prior to issuing final approved versions of the project planning documents. The EFD/EFA shall designate the agency which will be tasked to work with the laboratory to resolve deficiencies. The resolution should address measures taken to prevent recurrences of deficiencies.

**Appendix F**  
**Project Document Assessment**  
**Attachment 1**  
**Table of Technical Findings**

This is an example table of technical findings. There is a blank table provided on the next page.

<b>TABLE OF TECHNICAL FINDINGS</b>		
<b>Section / Page</b>	<b>Statement or Issue identified in the document</b>	<b>Comment</b>
General comment	Table of Contents.	The table of contents does not correspond to the document pages provided for review. It appears that not all pages of the document were submitted for review, but this cannot be categorically determined from the information provided.
S. 1.2, p. 1-5	Title "Data Quality Objectives (DQO) "	DQOs are not provided in this document.
Table 1-5	Control limits for Method 8260A.	The laboratory control limits for Method 8260A do not appear to be statistically derived as required by Navy QA
Table 2-1	Sample Container "Stainless steel Teflon® paper under plastic caps".	The design and function of this unusual type of container is not known.
Table 2-1 and 2-2	Storage of samples in the dark.	This is not a CLP requirement for metals.
Table 2-2	Preservation for Total Organic Carbon.	Method 9060 requires the pH of the sample to be adjusted to <2 with hydrochloric or sulfuric acid. Although there is a footnote regarding the addition of acid, the table should clearly state the method requirement for pH rather than addition of predetermined volumes of acid.
S. 4, p. 4-1	Field monitoring equipment which <u>may</u> be used.	The section must specify equipment which <u>will</u> be used.
S. 6, p. 6-1	QC for field analysis.	This section does not address QC for field analysis.

