MISSION
NAVFAC Environmental Restoration delivers sustainable, innovative, cost effective remediation solutions with stakeholder engagement, to protect human health and the environment, maintain regulatory compliance, and maximize reuse of DON assets to support the warfighter.

VISION
NAVFAC Environmental Restoration is the recognized Federal leader for responsive, best value, and sustainable remediation solutions.

NAVFAC
Graded Sampling and Analysis Plan Approach

March 2012
Jon Tucker, NAVFAC LANT
**Report Documentation Page**

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

<table>
<thead>
<tr>
<th>1. REPORT DATE</th>
<th>2. REPORT TYPE</th>
<th>3. DATES COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAR 2012</td>
<td></td>
<td>00-00-2012 to 00-00-2012</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. TITLE AND SUBTITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAVFAC Graded Sampling and Analysis Plan Approach</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5a. CONTRACT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5b. GRANT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5c. PROGRAM ELEMENT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5d. PROJECT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5e. TASK NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5f. WORK UNIT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. AUTHOR(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naval Facilities Engineering Command (NAVFAC) Atlantic, 6506 Hampton Blvd, Norfolk, VA, 23508-1278</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. PERFORMING ORGANIZATION REPORT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10. SPONSOR/MONITOR’S ACRONYM(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11. SPONSOR/MONITOR’S REPORT NUMBER(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**12. DISTRIBUTION/AVAILABILITY STATEMENT**

Approved for public release; distribution unlimited

**13. SUPPLEMENTARY NOTES**

Presented at the 9th Annual DoD Environmental Monitoring and Data Quality (EDMQ) Workshop Held 26-29 March 2012 in La Jolla, CA.

**14. ABSTRACT**

**15. SUBJECT TERMS**

**16. SECURITY CLASSIFICATION OF:**

<table>
<thead>
<tr>
<th>a. REPORT</th>
<th>b. ABSTRACT</th>
<th>c. THIS PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>unclassified</td>
<td>unclassified</td>
<td>unclassified</td>
</tr>
</tbody>
</table>

**17. LIMITATION OF ABSTRACT**

Same as Report (SAR)

**18. NUMBER OF PAGES**

15

**19a. NAME OF RESPONSIBLE PERSON**

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18
NAVFAC SAP Goals

- Consistent Document Organization
- Adoption of Systematic Planning
- 37 Worksheets capture all elements
- Documenting Data Needed and How Used
Concerns

- Costly - time and money
- One size
- Too many players – technical experts
- Some worksheets don’t fit
Listened to the Users

- Contractors
- RPMs
- NAVFAC Commands
- Document Reviewers – Chemists

-One size no longer fit all
Waivers and Small Projects

• What streamlined formats had been developed so far?
  – Established waiver for UST program
  – Addendums
  – Linking to other site documents

• Had begun developing a smaller document for smaller projects
  – Consistent due to communication, needed to develop template
A few years...many QAPPs later

• Develop a new template for a streamlined document

• Document the core requirements of every SAP
• **Graded approach flexibility**
  – Site specific
  – Consider project importance or sensitivity
  – May require 37 worksheets
  – Well received

• **Tier I – Full 37 Worksheets**
  – Significant stakeholder concerns
  – Contentious or complicated
  – High visibility projects
  – Higher risk
• Tier II
  – 17 Worksheets removed
  – Projects smaller in scope
  – Meets goals of project
  – Lower risk

• Master SAP
  – Facility Specific
  – Consistent CERCLA phase
    • Amended with laboratory specific information and CSM updates
  – Considering Process Specific
Requirements

- Full agreement of all team members

- Agreement with QA reviewer.

- Tier II worksheets are the vital pages, other pages are put back in based upon needs of project.
Components of the QAPP Explored

Scoping Sessions

Assessment/Oversight

Project Management and Objectives

Data Review

Measurement/Data Acquisition

QAPP Approval

QAPP Implementation
Tier II – Project Management & Objectives

- Title and Approval Page
- Organizational Chart
- Communication Pathways
- Project Planning (Scoping)
- Conceptual Site Model
- DQOs and Systematic Planning
- Reference Limits and Evaluation Tables
Tier II – Measurement/Data Acquisition

- Field Quality Control Samples
- Sampling Design and Rationale
- Field Project Instructions
- Field SOPs and/or applicable information
- Information from Analytical SOPs
- Lab QC Samples
Tier II - Data Review

• Data Verification and Validation
• Data Usability
Where are we?

• Graded approach - Not every WS always relevant.
• Elements captured elsewhere
  – Navy processes
  – Navy documents
• Formalizing – provides starting point
• Presented to Intergovernmental Data Quality Task Force (IDQTF)

• Participating Entities
  – NAVFAC Community
  – DoD - EDQW
  – Regulatory Community
Innovation – Sky’s the Limit

U.S. Navy