Guidance for Shipboard
Data Management Coordinator

Subsurface Monitoring Unit

MC252 Deepwater Horizon Oil Spill

Prepared by:

NOAA

EPA

BP

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Version 4.03

Unified Command Approvals

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EPA Program Manager   Date

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NOAA Program Manager   Date

_____   _____
BP Program Manager   Date

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Appendix 1. Data Management Requirements and Specifications

Contact List for Shore Based Data Managers

Subsurface Monitoring Unit (SMU) Data Manager	SMU Data Manager	Data.smu@noaa.gov	
SMU Onshore/Offshore Data Manager mailbox	SMU Vessel and Onshore Data Managers	SMUdwh@gmail.com	
SMU Vessel Operations	**SMU**		
Data Auditor (EPA currently)	EPA Data Auditor	epadwh@gmail.com	
NRDA	NRDA Field Ops	dwhnrdafieldops@gmail.com	
BP			

Change Log

New Version	Author	Update Made
4.01	Ben Shorr/ MartyMcComb	Revised document
4.03	Tharyan George	Modified to incorporate additional data feeds to OnShore Data Managers

Overview

Purpose

This document provides guidance to research vessel data managers to fulfill Area Commands data management requirements and data specifications including deliverables, data flow, information management and data specifications. By ensuring consistency between vessels, cruises and samples of recorded datasets, post sampling processing and analysis can be accelerated.

Who we are

The Subsurface Monitoring Unit (SMU) is part of the Incident Command Structure in the Environmental Unit and coordinates research vessel activity in the Gulf of Mexico relating to the MC252 incident. Our goal is to provide ship coordination and data management between the research fleet and Incident Command. There is an Onshore Data Manager (rotating position, data.smu@noaa.gov) who you will work with directly.

Who YOU are (the Shipboard Data Manager)

The data manager on the ship has several very important roles that differentiate them from the sample manager (who physically takes water samples.) Your role includes:

- Generation and Reporting of the "Daily Deliverables"

- Collect, manage and upload data to NOAA SFTP site (including raw data) for archiving

- Record information in electronic sample log spreadsheets

- Generate Sample ID's and ensure that Sample ID's in the log, bottle labels and Chain of Custody (COC) match as needed

Approach

In order to accelerate the analysis and the decision making process related to the CTD and LISST data, a consistent data file format is required for both sets of data. The data specification for the consistent creation of the CTD and LISST data is in the Requirements and Specifications Appendix.

SOPs (Standard Operating Procedures) from Response and NRDA sampling guidance should be followed by the sample collection groups, however **Sample Information logs and Sample ID's should follow the Subsurface Monitoring Units Requirements and Specifications.**

MC252 Subsurface Monitoring Unit Data Flow
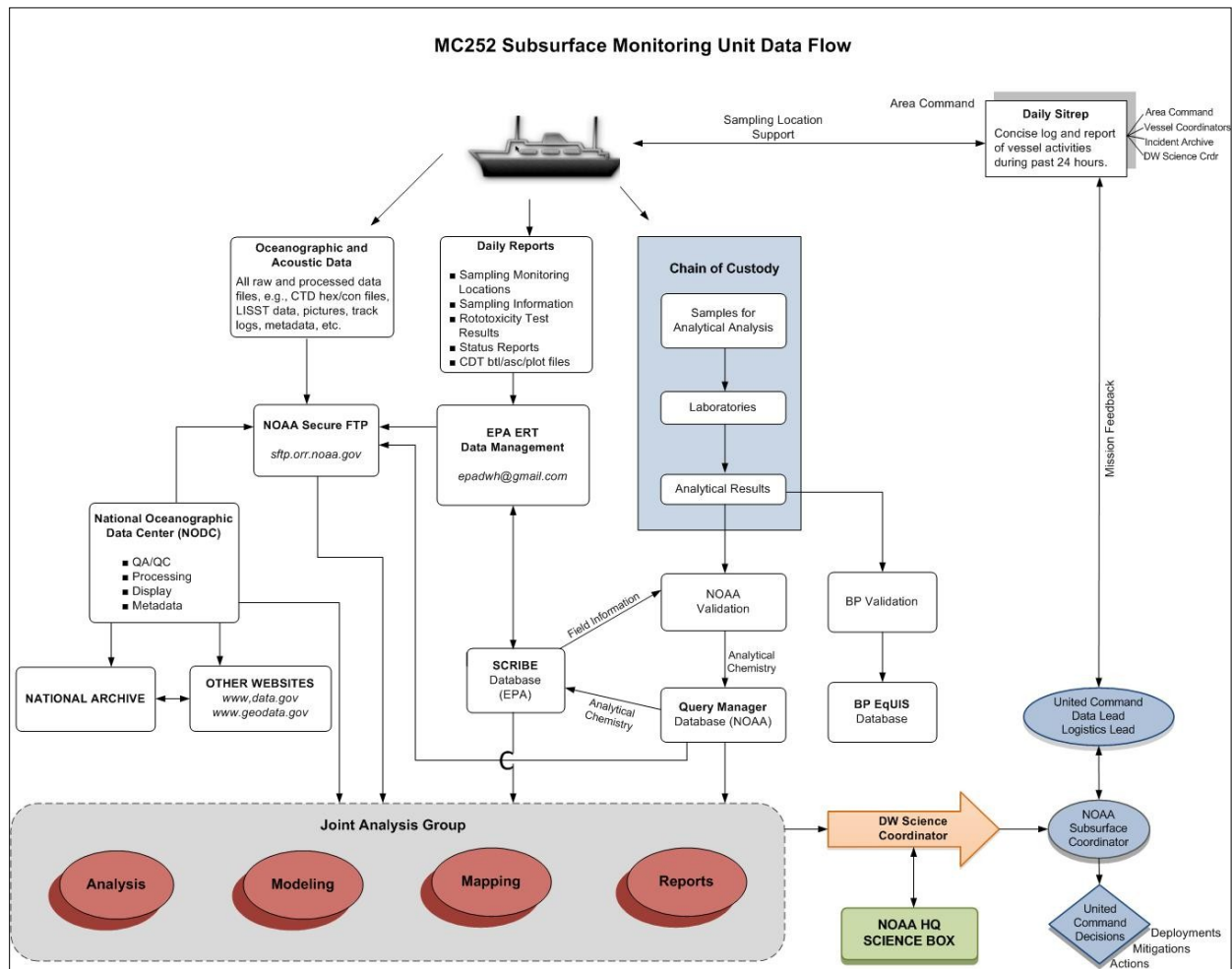
STEP 1: Before the Cruise

Let us know you are heading out!

 Before the cruise begins, the Shipboard Data Manager (you) should email the following information about themselves to data.smu@noaa.gov:

- Name
- Name of Vessel
- Email Address
- Satellite Phone Number on Board the Vessel (can be delivered upon arrival to vessel)
- Cell Phone Number
- Start Date of Cruise
- Projected End Date of Cruise

Obtain Guidance and Training Materials

When we are able to contact you, we can build a log book with you, and give you a 1TB hard drive with a pre-made file structure to organize your data (detailed in "Data Management Requirements and Specifications Appendix"). It will be important to receive the correct sampling sheets, COCs, paperwork and contacts that will help facilitate the processing, integration, and analysis of the cruise data. The set of forms you will need in your log book are:

- This document (Guidance for Shipboard Data Management Coordinator and Data Management Requirements and Specifications Appendix)
- Spreadsheet with tabs for Locations, Sample, Results & Observations and Rototox
- Blank COC forms/labels for sample bottles

STEP 2: During the Cruise

Ship to Shore Data Management Links

Daily Deliverables (Ships → Shore)
Email data auditor (epadwh@gmail.com) and your Onshore Data Manager (smudwh@gmail.com) your daily updates (see Requirements and Specifications Appendix)

Daily Ship Calls (Ships ←→ Shore)
SMU calls each ship in the mornings (between 0830 and 1000 CDT)

SMU Wiki (Ships ←→ Shore)
Information on daily reporting requests, sampling tracking sheet formats, cruise logistics, contacts, products and reports. (Email data.smu@noaa.gov for log in credentials.)

Subsurface Monitoring Unit Wiki: https://www.st.nmfs.noaa.gov/confluence/display/OOP

OR&R SFTP (Ships ←→ Shore)
The Data archive for all research ships. If you have connectivity, you can find all other ships data here & upload your data in near real time. Email the SMU for login information.

Daily Deliverables

Daily data packages should be submitted to the Data Auditor (epadwh@gmail.com) and your Onshore Data Manager (smudwh@gmail.com) by **midnight central time**. See Requirements and Specifications Appendix for details on the daily deliverables.

Daily uploads to SFTP site: CTD Sampling

If you have internet connectivity please upload the processed CTD data in the specified format and post to the SFTP site. The data should be provided in a text format e.g. csv or asc. If you have really good internet connectivity, please upload the raw (.hex and .con) files in addition to the processed files.

STEP 3: After your cruise

Uploading Complete Data Set (must include raw data)

After each cruise, load the entire "Cruise_##" folder on to the ftp site:
sftp.orr.noaa.gov/Deepwater_Horizon_Ext/Subsurface_Monitoring/Your_Ships_Name
This folder structure and a single hard drive can be used during the cruise so that data distribution between all parties can receive copies easily after the cruise. Please release your log book to the Subsurface Monitoring Unit. Remember that the physical log book will have a Chain of Custody!

Again, if you have a good internet connection on your ship please upload data directly to the sftp OR&R site in the folder structure as you receive it. This is the preferred method, since we will be able to see more data closer to real time.

Pass the Baton

Find out who is the next data manager for your ship, and get in contact with them! Ensure that they are in contact with the SMU (data.smu@noaa.gov) and have been trained and please exchange any information that you found important during your cruise.

…And from the Subsurface Monitoring Unit (down in Houma Louisiana), to all the data managers, scientific crew, ships crews, and everyone helping with this effort:

Thank You!

Explanation of Sampling Scheme

Example for Brooks McCall (BM): ***SW-20100608-BM008-001***

<SampleMatrix> - <SampleDate> - <StationID> - <sequential number advanced for each sample collected on a given day>

- SW: (**Matrix Code**) SW for water samples, or an oil matrix code.
- 20100608: (**Date**) The date the sample was collected in YYYYMMDD format.
- BM008: (**Station ID**) – An alphanumeric string with the Vessel Code and Station ID
- 001: (**Sequential#**) – A number that is advanced for each sample collected on the same day, of the sample matrix type, and governed by the same Sample Program (or by the same Sampling Team).

Rosette with several Niskin bottles being hoisted on a vessel

FTP Instructions

Download an FTP program (like filezilla: http://filezilla-project.org/download.php)

Email the SMU (data.smu@noaa.gov) to get login credentials for sftp.orr.noaa.gov.

Navigate to the /Deepwater_Horizon_Ext/Subsurface_Monitoring/*Your_Ship_Name* to upload data under the file structure or pull data down off the FTP.
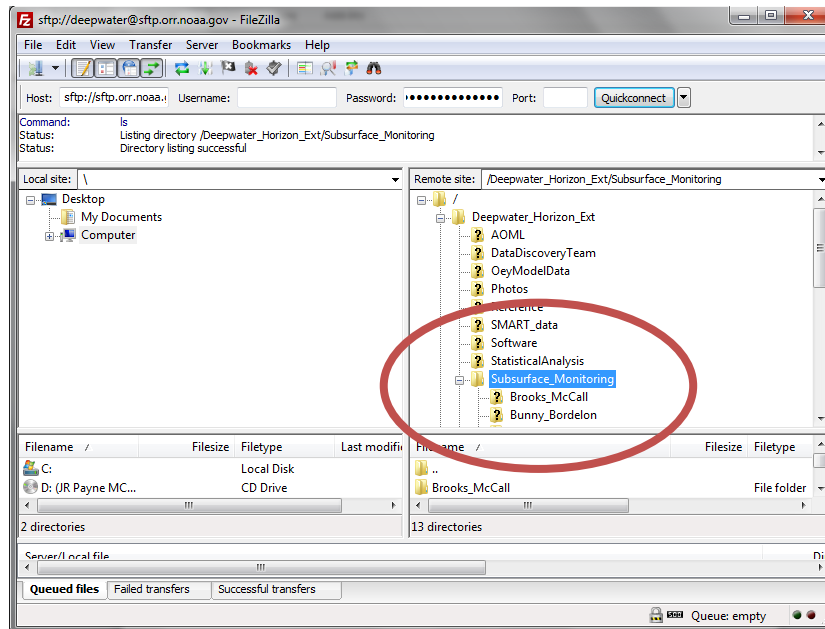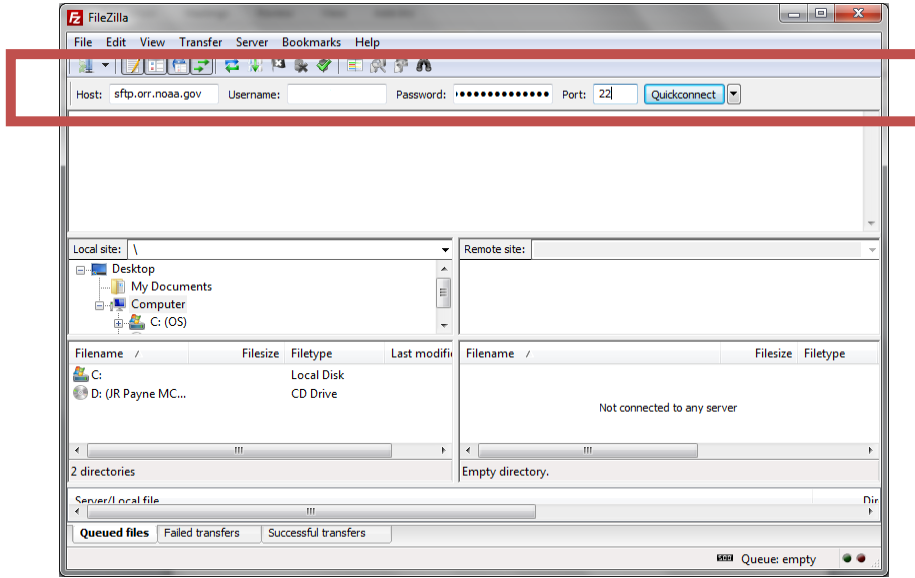
Accessing Analytical Data - The SCRIBE Database

EPA uses the daily deliverables to update a database of the samples taken for research ship analytical data (physical water/oil samples that go to a lab.) If you would like to access the SCRIBE data base, download the latest version of SCRIBE off of the website: epaosc.net/scribe

Then email the EPA Deep Water Horizon team at: *epadwh@gmail.com* for subscription information.