

**Natural Disaster  
Facility/Vessel Oil Discharge Assessment  
United States Environmental Protection Agency (EPA) Region  
6, United States Coast Guard (USCG), Texas General Land  
Office (TGLO) & Texas Commission on Environmental  
Quality (TCEQ) Disaster Response Procedures**

## **1.0 Purpose**

**Oil Discharge Assessment Group Purpose:** To identify and document oil discharges from facilities and vessels or any other source (e.g. mystery spills, pipelines, production platforms, etc.) during a natural disaster in the coastal and inland zones. Additionally, Oil Discharge Assessment Teams (ODAT) will potentially observe releases of hazardous materials from facilities or vessels during the normal course of their response activities. While this standard operating procedure (SOP) specifically addresses disaster response to discharges of oil as defined by the Oil Pollution Act of 1990 (OPA 90), releases of hazardous materials as defined by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) may be observed. Releases of listed hazardous materials (40 CFR, Table 302.4) shall be documented in the same manner described in this SOP for discharges of oil and immediately referred to the Orphan Container Hazard Evaluation Group Supervisor for any further action.

## **2.0 Objective**

**2.1 Oil Discharge Assessment Group Objective:** Systematically and thoroughly survey USGS grid areas impacted from the natural disaster. Identify oil discharges in each grid, categorize the discharges as Minor, Medium and Major, and document the most effective means of securing the source and containment of the product. Document all discharges or releases using the Hazard Evaluation Field Data Sheet. In addition, document orphan containers incidentally encountered in accordance with the Health and Safety Plan and Hazard Evaluation Field Data Sheet and forward the information to the Orphan Container Hazard Evaluation Group Supervisor.

**Note:** Only federal government representatives may supervise federal contractor personnel and only state government representatives may supervise state contractor personnel.

## **2.2 Determining Oil Discharges Caused by Disaster**

**The following are examples of oil discharges caused by a natural disaster and SHOULD BE documented, and contained if necessary:**

**2.2.1 Minor Discharge:** Minor discharge means a discharge to inland waters of less than 1,000 gallons of oil or a discharge to coastal waters of less than 10,000 gallons of oil. Example sources include: Above Ground Storage Tanks (AST) displaced from their original location and containers which appear to have been displaced by the disaster; sunken boats in a marina or waterbody; or, the overflow of sumps or oil-water separators.

**2.2.2 Medium or Major Discharge:** Medium discharge means a discharge of 1,000 to 10,000 gallons of oil to inland waters or a discharge of 10,000 to 100,000 gallons of oil to

**coastal waters. Major discharge means a discharge of more than 10,000 gallons of oil to inland waters or more than 100,000 gallons of oil to coastal waters:** Medium and Major Discharges have the greatest potential for significant impact to the environment, disrupt commercial shipping channels and must be assessed as soon as possible. Example sources include: Oil production facilities; refineries; petro-chemical plants; tank farms; ships; barges; and, subsea pipelines.

## **3.0 Oil Discharge Assessment Group Structure**

### **3.1 Oil Discharge Assessment Group Supervisor**

The Oil Discharge Assessment Group will work under the Operations Section under the assigned Branch. The Oil Discharge Assessment Group may consist of multiple teams and will be directed by the Oil Discharge Assessment Group Supervisor (Group Supervisor). The Group Supervisor will be in charge of planning daily operations and will ensure that each Oil Discharge Assessment Team Leader (Team Leader) has the appropriate assignments and maps to complete their objectives. The Group Supervisor shall also ensure that each Team has the necessary authority and parameters within which to work to secure and contain active discharges before the team leaves the scene to assess other sites. The Group Supervisor will provide oversight of ODATs and ensure the documentation of team progress in the field. The Group Supervisor will work and report directly to the Branch Director, Operation Section Chief, or their designee.

### **3.2 Oil Discharge Assessment Team Composition**

A typical ODAT may consist of the following: (1-2) USCG/EPA personnel; and, (1-2) State (TGLO) personnel. The USCG personnel should be qualified and familiar with Federal On-Scene Coordinator Representative (FOSCR) requirements to facilitate an effective response to the disaster. It is beneficial to have USCG and TGLO personnel that are familiar with the geography and facilities in the area in which the disaster occurred to staff ODAT positions. It is understood that both USCG and TGLO personnel from other sectors or regions will likely respond due to personnel resource limitations caused by the disaster.

### **3.3 Core Resources Required**

#### **3.3.1 Oil Discharge Assessment Group Supervisor**

The Group Supervisor is responsible for the safety and oversight of the operations. Group Supervisors are in charge of planning and implementing oil discharge assessment operations on a daily basis. The Group Supervisor should ensure that their ODATs have appropriate personnel and vehicle resources (e.g. 4WD Trucks, boats, ATVs, etc.) for the type of assessment activities performed on a daily basis. The Group Supervisor should ensure that each ODAT Leader has appropriate assignments and maps for the area of operations. It is critical for the Group Supervisor to work directly with the Team Leaders to maintain situational awareness of the daily progress for operational planning purposes. The Group Supervisor is responsible for implementation of tasks listed in the ICS 204 forms so that all group operations are current and consistent with the Incident Objectives.

#### **3.3.2 Oil Discharge Assessment Team Leaders**

Team Leaders are responsible for the safety and oversight of assessment operations for their respective teams. Team Leaders are to assist the Group Supervisor in planning the daily oil discharge assessment operations. Team Leaders are to make sure that their team has the appropriate assignments and maps for each daily operation. These assignments and maps are obtained from the ICS-204 forms before operations commence each day. If additional maps are needed, Team Leaders are to request maps through the Group Supervisor via a GIS Map Request

Form. Team Leaders are responsible for making the determination if an oil discharge qualifies as an open or closed item based on the closure requirements established in the Hazard Evaluation Field Data Sheet (attached). Team Leaders are responsible for ensuring that all required documents (e.g. ICS 214B NDOW form and Hazard Evaluation Field Data Sheets) are turned into the Group Supervisor daily. Team Leaders are to ensure that their team has the following field tools at a minimum: radios; cell phones; logbook; handheld global positioning system (GPS) unit; digital camera; blank Hazard Evaluation Field Data Sheets; blank ICS 214B NDOW form; permanent markers; paint pen; grease markers; clipboard; batteries; large and small scale maps (grid maps) of assigned area; tire fix-a-flat; bottled water; and, a general first aid kit.

### **3.3.3 Oil Spill Abatement, Containment and Removal Funding Sources and Resources**

The Group Supervisor is required to determine the available sources of funding for immediate response if an ODAT observes a discharge that requires immediate abatement, containment or removal and no responsible party is identified or associated with the discharge. The Group Supervisor will consult with the Branch Director or Operations Section Chief to determine what funding strategies to utilize during a disaster response. The primary potential funding source includes the funding associated with a Federal Emergency Management Agency (FEMA) Mission Assignment for Emergency Support Function 10 for a Stafford Act declared disaster. The secondary funding source available to the TGLO is the Coastal Protection Fund, administered by the TGLO which may be utilized by TGLO prior to funding through a FEMA Mission Assignment. In the event a disaster is not a declared Stafford Act disaster, a tertiary source of funding for response to discharges may be available to both the USCG and TGLO through the Oil Spill Liability Trust Fund administered by the USCG. Identification of available funding sources is important for efficient activation of response resources when necessary. Various response resources are available to both USCG and TGLO prior to and during response to a disaster. Both USCG and TGLO can mobilize contracted response resources which include: Oil Spill Response Organizations (OSRO); and, Discharge Cleanup Organizations (DCO). The Group Supervisor will provide Team Leaders with information to assist with acquisition of available OSRO/DCO contracted response resources to be utilized as necessary while assessing potential discharges at facilities, vessels or other sources.

## **4.0 Oil Discharge Assessment Group Procedures and Resources**

### **4.1 Oil Discharge Assessment Group Supervisor**

The Oil Discharge Assessment Group Supervisor reports directly to the Branch Director, Operations Section Chief, or their designee. The Group Supervisor provides oversight of assigned Oil Discharge Assessment Teams. The Group Supervisor works directly with the Branch Director, Operation Section Chief or their designee in the daily planning of oil discharge assessment operations to ensure that the assessment objectives are being met. When resources are requested to secure the source and contain a threat or actual discharge, the Group Supervisor should immediately inform the Operations Section Chief of the required resources and plan of action to secure the source and mitigate the threat or actual discharge of oil. The Group Supervisor plans the daily operations for their teams and delivers team assignments and maps to the Team Leaders on a daily basis. The Group Supervisor works directly with the Team Leaders to ensure that the proper operational planning and assignments are current and realistic for the Oil Discharge Assessment Teams. The Group Supervisor ensures that all ODAT personnel have proper Hazard Evaluation Field Data Sheet, laptop computer or PDA documentation training before going into the field. This training should be delivered by the Branch/ICP prior to sending personnel into the field to respond to the disaster. The Group Supervisor provides ICS 214B

NDOW forms to the Branch Director/Operations Section Chief and provides Hazard Evaluation Field Data Sheets to the person designated to input data into Response Manager, at the end of every operational day for each of their Oil Discharge Assessment Teams. The ICS 214B NDOW forms are daily summaries for field operations and document the following for operational planning: geographical area each team worked; which grids each team covered; how many potential oil discharges or releases of hazardous materials were in each grid; an overview of the classifications (minor, medium or major) of oil discharges assessed; and, special requirements for future oil recovery operations.

#### **4.1.1 Daily Task Overview:**

- Hold morning Operational/Health & Safety meeting with each team which is attended by all response personnel as a group within the operational area
- Pick up maps for ODATs from GIS
- Ensure daily assignment folders (ICS 204 and ICS 214B NDOW Forms, Hazard Evaluation Field Data Sheets, Maps, and other equipment, as necessary) are complete for each team
- Hand out assignment folders to each Team Leader and deploy teams into the field
- Plan assessment operations for the following day
- Determine what personnel and resources will be needed for the following day
- Convey resource needs to the Branch Director/Operations Section Chief
- Discuss timelines and changing needs and goals with the Branch Director/Operations Section Chief
- Order maps needed for the assessment activities the following day through the GIS Group using the Map Request Form
- Debrief ODAT Team Leaders as they return from the field and collect the daily ICS 214B NDOW form and Hazard Evaluation Field Data Sheets, laptop computer or PDA for each team
- Compile all ICS 214B NDOW forms for the daily activities of each team and deliver them to the Branch Director/Operations Section Chief
- Deliver Hazard Evaluation Field Data Sheets, laptop computers or PDAs to the person designated to input data into Response Manager
- Utilize the ICS 214B NDOW forms to assist in planning for the next operational day so that assignments and 204s will be accurate and current.

## **4.2 Oil Discharge Assessment Team Leader**

The Team Leader will be in responsible for the Teams safety and is in charge of navigation through the geographical area being assessed and documenting open/closed oil discharges. The Team Leader should immediately report back to the Group Supervisor if a potential or actual on-going discharge is observed and provide a plan of action to secure the source and contain the potential or actual discharge to minimize the impact to the environment.

#### **4.2.1 Daily Task Overview:**

- Attend morning Operational/Health & Safety meeting which is attended by all response personnel as a group within the operational area

- QA/QC - Check master map to ensure that discharges or items documented the previous day were correctly uploaded
- If used, all laptop computers or PDAs for field use have been synched appropriately (e.g. 0100 and 0600 hours)
- Check field kit and replenish with necessary supplies
- Check batteries in GPS unit, camera, and other necessary equipment
- Obtain grid/area assignments and maps from the Group Supervisor
- Mobilize to the field to perform response assessment and documentation activities as specified in Section 5.3 of this standard operating procedure. Complete assessment information on Hazard Evaluation Field Data Sheets or in Response Manager on a laptop computer or PDA for each discharge or release observed.
- At the end of daily operations, complete ICS 214B NDOW form documenting assessment activities as outlined in Section 5.4 of this SOP.
- Meet with the Group Supervisor to debrief and discuss geographic areas covered, discharges or releases observed or assessed, and provide input and plan for activities for the following day.
- Provide a copy of the electronic 214B NDOW form to the Group Supervisor and/or the Documentation Unit Leader
- Turn in photos to the Documentation Group
- Turn in Hazard Evaluation Field Data Sheets completed, laptop computer or PDA to the designated personnel in the Documentation Unit (e.g. Data Management Team)

## **5.0 Procedures for Documenting Discharges or Releases (Federal or State Representative)**

### **5.1 Field Documentation and Terminology**

Oil discharge classification identified during assessment should meet the criteria set forth in Section 2.2 of this standard operating procedure. All oil discharge assessment data collected must be entered in to the EPA Response Manager data management system. If response personnel from any agency (e.g. USCG or TGLO) do not use laptop computers or PDAs then a Hazard Evaluation Field Data Sheet must be completed for each discharge or release assessed or observed.

**5.2 Discharge or Release Location:** Latitude/longitude point obtained with a GPS unit where a release or discharge is observed during assessment activities. The safest location upwind and proximal to the discharge or release source is the preferred target reference point.

**5.3** The Team Leader or their designee should document the location and condition of the discharge or release as follows:

**5.3.1 Obtain a latitude/longitude point with a handheld GPS unit for observed discharges or releases at facilities, vessels or other sources.** Make certain that the GPS unit is set to use “WGS84” as the horizontal datum and is set to read coordinates in “decimal degrees.” Record latitude/longitude to 5 decimal points.

**5.3.2 Assign the Facility/Vessel Discharge or Release a Target ID.** Begin to document the potential discharge or release on the Hazard Evaluation Field Data Sheet, laptop computer or PDA by assigning it unique target reference identification. The following nomenclature should be used to assign unique target reference identification: Combine agency, team group name, team number, ICP or branch identifier, date observed or assessed (YYMMDD), and sequential numerical identifier (e.g. 01, 02, 03). Example: TGLO Oil Discharge Assessment Team 1, Alpha Branch, working on August 13, 2010 observes the first discharge or release during assessment activities on this specific date. The discharge should be named: GLO-DA1-A-100813-01.

**5.3.3 Document the discharge or release with photos.** Take photos of the discharge or release by utilizing the photo placards as described in the Photo Placard Information Form in the attachments. Update the photo log in the logbook.

#### **5.4 214B NDOW Documentation**

Each ODAT will provide a 214B NDOW to the Group Supervisor. The 214B NDOW should include essential information so that the Branch Director/Operations Section Chief can have a daily report on the progress of each team. An example of a properly filled out 214B NDOW form is located in the attachments. The 214B NDOW should include:

- Team members
- Team needs/excess resources
- Out of the ordinary observations
- Health and Safety Issues
- Team accomplishments
  - The local geographical name of the area assessed. Examples: East Coastline of the Trinity Bay, 5 miles north of Smith Point or “Western Alligator Bayou”
  - Each grid number/area fully covered including County/City information
  - Discharges or Release observed or assessed in each grid/area, and any special resources needed to abate, contain or remove the discharge or release (discharge recovery phase)
  - A general overview statement summarizing daily findings and activities to report to the Branch Director, Operation Section Chief or Group supervisor

**Summary Example:** “Covered six map grids (USCG Grid 1-6) in Chambers County north and east of Lake Anahuac. Progress is slow due to dense brush and muddy conditions in the area. Opened 3 new oil discharges with target reference identifications (GLO-DA1-A-100813-01, GLO-DA1-A-100813-02, GLO-DA1-A-100813-03), including (1) 10,000-gallon AST containing diesel and (2) shrimp vessels that were sheening. The AST is located in a marsh area with limited access and will require special equipment for recovery. OSRO Oil Mop was contracted to contain oil from both shrimp vessels.”

## **6.0 Aerial Oil Discharge Assessment and Procedures**

Aerial oil discharge assessment requires distinct methodology and special resources. The procedures below must be followed to accurately assess geographical areas and to properly document discharges or releases that need to be abated, contained and removed.

### **6.1 Role of Branch Director, Operations Section Chief, Air Boss**

**6.1.1** If aerial assessment operations are needed by the Branches or by individual ICPs, the Branch Director or the Operation Section Chiefs will submit a completed Air Operations Request Form to the to the Air Operations Director 24 hours prior to the needed air operations. The Air Operations Branch Director will approve/disapprove all air operation requests. The approved air operation request will be transferred to the Air Boss and the Air Boss will contact the Branch Director or Operation Section Chiefs to coordinate pickup location/time/flight plan. See attachments for a blank Air Operations Request Form and an example of completed form.

**6.1.2** Oil Discharge Assessment Teams should use the NOAA Open Water Oil Identification Job Aid while doing aerial assessments.

## **6.2 Use of Hazard Evaluation Field Data Sheet, Laptop Computer or PDA PDA/Computer**

Hazard Evaluation Field Data Sheets, laptop computers or PDAs are essential in this mission for documenting discharges or releases. They will be used to document discharge or release coordinates and observations. Delorme Maps and Microsoft Streets and Trips are also useful for navigation in the air. You can use them with a transmitter connected to your computer to navigate through the map grids and the mapping system will record your flight path for documentation purposes. Once on the ground, you can print your entire flight path for documentation purposes.

## **6.3 Helicopter Capability and Essential Elements**

**6.3.1** The Group Supervisor is responsible for all air assessment operations for their teams. The Group Supervisor will work directly with the Operations Section Chief to determine the appropriate grids to assess. The initial assessment flights will require a minimum of two personnel and as the response develops, operational overflights will be necessary which will include additional personnel. The Group Supervisor will specify if the helicopter will be required to fly over water to ensure an appropriate helicopter is used.

**6.3.2** Maps are critical for this mission. Large overview grid maps are essential for helicopter assessment flights. Two types of maps are necessary per flight for proper discharge or release assessment operations:

**6.3.2.1** Overview Multi-Grid Navigational Map: This map is a basic USGS Grid Map that is large enough for the EPA/USCG/State Representative to be able to hold the map during flight and assist the pilot in navigating through the map grids. The map should include no more than 5 map grids across and four map grids down. A total of 20 USGS map grids is sufficient for basic navigation during flight. See attachments for an example.

**6.3.2.2** Individual Grid Map: This will be a collection of letter size USGS Grid Maps for the area being flown. If the flight plan is to cover approximately 20 square miles, then the team should have 20 Individual Grid Maps. If discharges or releases have been previously identified via another agency, these discharges or releases will be on the individual grid maps and will need to be evaluated during the over flight. The individual grid maps will allow visual assessment and documentation of access points to the release or discharge. This information is critical for the Oil Discharge Recovery Teams (ODRT). When available, post-disaster aerial photography should be used to assist with air assessments. See attachment for an example.

**6.3.3** Grid Over flight: The pilot is responsible for ensuring that the correct map grids are flown and that the flight path holds in steady straight lines. Transects should be close enough to ensure that discharges or releases are located.

**6.3.4 GPS Coordinates:** Accurate GPS coordinates are critical to allow future ODATs or ODRTs locate discharges or releases efficiently. The pilot should hover over each observed discharge or release so that the ODAT member responsible for documentation during the flight can obtain the appropriate information for the release or discharge. If the handheld GPS unit malfunctions, the coordinates can be obtained from the pilot through the GPS unit in the helicopter

**6.3.5 Personnel on Board:** Helicopters have weight limits; the more weight that is on a flight less flight time will be available. Personnel on these teams should be limited as to allow for more flight time.

## **7.0 Maps**

### **7.1 Requesting Maps:**

**7.1.1** The Group Supervisor should order maps by 1900 hours each day in order for the GIS Unit to produce the maps by 0600 hours the following day. This is especially important during large responses with a high demand for maps throughout the ICS structure. The Group Supervisor can delegate this ordering process to the Team Leaders.

**7.1.2** The GIS Unit is capable of customizing maps to meet the needs of various groups. It is important that the individual requesting the maps effectively communicates which data layers (layers) or attributes the maps should show in order to be useful. Suggestions on effective data layers follow in Section 7.2 of this SOP.

### **7.2 Map Layer Requirements:**

- EPA GIS map grid overlay – not actual lat/long lines. Grid lines should depict boundaries to the second decimal degree ie. 33.54 and -101.94 (rather than an actual discharge or release target point such as 33.546172, -101.945739).
- County boundaries
- Waterbodies
- ODATs should have 2 sets of maps: small scale overview maps and large scale grid maps.
- Small scale overview maps provide a location frame-of-reference for driving directions, while larger scale grid maps are used to perform thorough discharge or release assessments.
- Large scale quadrant maps should show open locations with associated unique identifying nomenclature (e.g. target reference identification) written beside each black dot. This prevents ODATs from producing double entries on already open discharges or releases and allows ODRTs to close out the correct discharge or release.

### **7.3 Aerial Recon Over-Flight Maps**

Layers on maps utilized in aerial recon should include landmarks such as highways, football fields, treatment plants, and towns – anything that can serve as a useful reference point visible from the air. Two types of maps are necessary for aerial oil discharge assessment, multi-grid navigational maps and individual grid maps. See attachments for examples.

### **7.4 Ground Maps**

Layers for maps utilized in ground assessment and acquisition should include highways, city streets, county boundaries, city names, water bodies and wetland areas. It is important to have

layers which show areas not accessible by car and foot such as lakes, canyons, large landfills, and large sections of restricted private property (e.g. gated and guarded industrial facilities).

## **7.5 Waterway Maps**

**7.5.1** Layers on maps utilized in water assessment should show layers which allow boat captains to navigate watercraft safely. Layers showing oyster beds, sandbars, water depth, and boat launches are useful. Waterway maps should have environmental sensitivity layers so that ODRTs can determine what discharges or releases are located in wetlands, etc. The maps should show roadways which provide access to docking and launching locations.

**7.5.2** The local Coast Guard Sector or Marine Safety Unit will have a contingency plan with many helpful navigational reference points.

## **8.0 Safety in the Field**

All ICPs, Branches/Divisions will have a Safety Officer (SOFR). All health and safety is managed by this officer. The SOFR will be able to provide a Health and Safety Plan (HASP) to ensure safe response work conditions. The SOFR will also have job aids, job safety analyses and hazard analyses documents contained in the HASP and available for all teams. The SOFR may have on-site Assistant Safety Officers (ASOF) from other agencies or contractors that will work together as a team. The SOFR reports directly to the Unified Command. The SOFR can stop operations at any time they deem necessary due to unsafe work conditions or practices.

## **9.0 Information Sharing**

EPA/TGLO/TCEQ will staff agency specific positions within the USCG Incident Command Post before and during a disaster (e.g. Merrell Center ICP during Hurricane Ike). All information, data, maps, reports, photographs or any other information shall be shared with the responding agencies (USEPA, USCG, TCEQ and TGLO). All discharges or releases of oil or hazardous materials will be documented in accordance with these procedures and maintained in the EPA Response Manager Data Management system and shared by all four agencies while responding to a disaster.

### **ATTACHMENTS:**

ICS 214B NDOW EXAMPLE

ICS 204 FORM EXAMPLE

GIS MAP REQUEST FORM

AIR OPERATIONS REQUEST FORM

MULTI-GRID NAVIGATIONAL MAP EXAMPLE

INDIVIDUAL GRID/QUADRANT MAP EXAMPLE

HAZARD EVALUATION FIELD DATA SHEET