



# Oil Spill Clean-Up

Before you begin any new project or undertake any new task it is critical that all of the associated hazards, exposures and risks are thoroughly identified and evaluated. For oil spill clean-up, this is a monumental task due to the wide variation of potential activities and challenges to control the work sites. You must ask yourself several questions:

- Where will the work be performed — in marshes, on the beach, inland waters, offshore, at docks or in work staging areas.
- Will the work be accomplished from vessels (small or large) or barges?
- What part of the clean-up will your workers be performing?
- Will they be monitoring the activities of others or will they be involved in actual clean-up activities.
- What can go wrong?
- What are the consequences?
- What types of protective clothing, personal protective equipment (PPE), and equipment will be required? How likely and what hazards could occur?

To accomplish the monumental task of identification and evaluation you need to use two very important tools, Pre-Job Planning and Hazard Analysis. Planning for Safety on any job must begin prior to signing the contract and continue through the last day on the job.

## Identifying Hazards or Exposures

The first step in identification of the hazards and exposures is to identify the specific task or tasks you will be performing. The exposures for each task will be different in most cases. If your workers are to complete multiple task types, then multiple evaluations will be needed. This should be determined through pre-job planning and followed with the completion of a Job Hazard Analysis (JHA) or Job Safety Analysis (JSA).

### Task Description

Sample task descriptions could be:

- Workers will walk the beaches to locate and collect tar balls.
- Workers will collect the tar balls by picking them up with a shovel and placing them into a plastic trash bag.
- Workers will walk the beach picking up and bagging contaminated vegetation.
- Workers will work at staging areas as mechanics, welders or laborers.
- Workers will travel by boat into marshes, inland waters or offshore.
- Workers will deploy containment booms or collect oil saturated containment booms.
- Workers will manually or mechanically pull containment booms from the water and place them on the vessel deck.
- Workers will be part of a vessel crew involved in collection of oil from the water by use of skimmer systems.

- Workers will be using vacuum collection systems/trucks on shorelines to pick up contaminated water.
- Workers will be using high pressure water and hot water to clean items at shorelines, docks and vessels.

These tasks and many more involve cleaning up spilled oil, but they present a variety of exposures that requires a thorough analysis to determine exactly what controls must be utilized and implemented to protect your workers.

## Tasks

- Placing or recovering booms.
- Pressure washing boats.
- Skimming and pumping oil.
- Picking up oil covered debris.
- Loading and unloading booms or supplies.
- Conducting other shoreline cleanup operations.
- Launching and/or landing boats.

## Hazards or Exposures

- Heat stress – can range from heat exhaustion to heat stroke
- Being struck by mobile equipment or other types of equipment
- Traffic hazards and car accidents
- Vessel, boat and barge hazards and collisions
- Bites from snakes, fire ants, mosquitoes, rodents and alligators
- Lightning and severe weather
- Sunburn and sun poisoning
- Back injury from lifting and carrying
- Skin and eye irritation or rashes (dermatitis) from contact with “weathered” oil and other chemicals
- Noise
- Slip/Trip/Falls while working on the boats, barges, or on land
- Exhaustion and fatigue from long hours
- Cuts, sprains and other injuries from demanding work
- Drowning
- Respiratory distress from dispersants, oil and other chemicals or gases

Exposure to any of these hazards depends on what the worker is actually doing and where the worker is located on land or over water. For example, heat stress is a real concern for all outdoor activities because of the hot and humid weather coupled with Tyvek suits and other protective gear. If the worker is pulling in oil-covered booms, then contact with weathered oil, drowning and back injuries are also concerns.

Just being exposed to the oil in the air may cause headaches, difficulty breathing, dizziness, nausea and confusion. Direct contact with a contaminated surface can cause skin damage.

While collecting tar balls the worker could receive a strain injury due to excessive weight of the collected tar balls. Workers could inadvertently touch the tar balls and become contaminated by dispersant chemicals or by virtue of the hydrocarbons.

## Controls and Safe Work Practices

Provide or require workers to have needed protective clothing and PPE. This can include appropriate protective gloves, long sleeve shirt, long pants, Tyvex suit, rubber boots, safety glasses, hard hats and appropriate shoes.

Establish safe work practices and give your workers the PPE needed to do the job safely. Work practices and protective equipment requirements depend on the hazards of each job. Examples of safe work practices that supervisors should use to protect workers include:

- Providing rest breaks throughout a work shift to help control heat stress. Providing break and rest areas in the shade. Providing the worker with water to drink throughout the shift. Training all workers on the signs of heat illness. Use a buddy system. Providing sunscreen to protect the workers from sunburn and sun poisoning.
- Training on how to lift loads safely and ensuring that the workers have the right equipment or enough people to lift heavier loads.
- Having buckets, brushes, water and soap available with instructions about how to clean oily protective equipment before removing it.

Most jobs will require some type of PPE. In general, workers need to have appropriate protective equipment and must be trained on its use. Examples of jobs and PPE include:

- For jobs that do not involve contact with oil, such as picking up clean debris along the shoreline, workers need to have **work gloves**.
- For jobs involving oil-contaminated debris and those involving contact with oil or other chemicals, workers need to have additional protective equipment such as **oil- or chemical-resistant gloves, boots and coveralls**.
- For jobs involving work on vessels, docks or other areas with potential drowning hazards, workers need to have **life jackets (personal flotation devices)**.

## Worker Selection

Will the work be completed by existing and tenured workers or will new workers be required to meet the workforce demands? Selection and placement of workers is a key element to safe completion of work tasks.

- **Medical Evaluations and Questionnaires:** Workers should have a medical evaluation to ensure that they do not have any respiratory or heart-related illness that could be affected by the heat, air contaminants or the wearing of a respirator. If previous work-related strain injuries are noted, then this should be considered during placement of the worker.
- **Experience:** It would be best to hire workers that already have oil field-related experience as these workers already know the effects of the oil exposure and how to respond

- **Background Checks** – Background and work injury history checks with appropriate agencies can be used to assist with the placement of the worker.

## Orientation and Training Requirements

A work task safety orientation is always a best practice. Additionally, special training, which may not normally be expected of your workers, can be imposed by regulators and incident commanders. Training courses are available from multiple resources and special courses can be developed specific to the oil spill depending on the spill size and impact. Specifically, with a Gulf oil spill there are required training courses ranging from two hours to eight hours. The training requirements are based on the type of work to be performed. Less hours are required for workers who will only engage in general beach cleanup, such as removing trash and clean debris. More hours are required for workers coming into contact with "weathered oil" and "tar balls" on the shoreline or in marine operations. Additional training courses can also be required for offshore marine clean-up operations. It is best to check with agencies and incident commanders for the specific requirements of the incident you are working.

A more rigorous 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) is typically required for those workers who will supervise cleanup or be engaged in efforts involving a greater exposure to oil. To meet the certifications of the 40-hour training, a combination of classroom instruction and hands-on, applicable experience will be required. The preparation needs to include instruction on the makeup and risks associated with the hazardous material(s) involved, operator experience with the equipment needed for the work, needed safety gear and local requirements. Conventional hazmat gear will likely not be needed. However, if air monitoring or agencies indicate the need for a respirator, then it is essential that workers be pulmonary medical function tested (follow requirement guidelines) and fit-tested with their personal respirator.

As a best practice, it is recommended that all personnel hired to perform oil spill clean-up, regardless of their position, be required to have the more rigorous 40-hour course.

## Summary

Like multiple other tasks, oil spill clean-up work has many unique and special requirements. Good Pre-Planning and Hazard Analysis are the keys to tackling any job or task. You must fully evaluate the task to determine the exposures and identify the controls necessary to perform that task safely and efficiently. You must also determine the employee skills and training needs required for the task and establish a plan on how you are going to meet those needs before the work begins.

## References

- National Institute of Environmental Health Sciences – Safety and Health Awareness for Oil Spill Clean-up Workers: <http://tools.niehs.nih.gov/wetp/index.cfm?id=2495>
- OSHA: <http://www.osha.gov/oilspills/index.html>

