ISB APPROVAL IN THE U.S.
IN-SITU BURNING

Things You Should Know

- Responders need permission from a local, State and/or Federal government agency to use ISB..
- Policies vary among the Federal Regions and between the states.
- There are many pre-authorized zones for ISB in marine waters when a spill is more than three nautical miles from shore.
- Timely decision-making depends on a streamlined approval process. Advance planning will result in a response team's ability to safely and effectively conduct a burn.
- The Regional Response Teams (RRTs) are the US governmental groups designated to develop the process for approving the use of ISB, and many RRTs have Pre-Authorization procedures for offshore ISB.
- RRTs often delegate to States the authority to approve an ISB for smaller, inland oil spills.

Overview

In-situ burning (ISB) is a response technique that removes spilled oil from a land, snow, ice, or water surface by combustion of hydrocarbon vapors that yields predominantly carbon dioxide and water. ASTM International (2014) defines controlled in-situ burning as "burning when the combustion can be started and stopped by human intervention." The combustion by-products (particulates, gases, water, etc.) are released to the atmosphere, with the possibility of some unburned oil or incompletely burned oil residue remaining at the conclusion of a burn.

One of the greatest benefits from ISB is that a burn can rapidly reduce the volume of spilled oil and minimize or eliminate the need to collect, store, transport, and dispose of recovered oil and oily wastes. Decision-makers from federal, state and local agencies or other stakeholders must consider the benefits and risks of conducting a burn versus using other response options, since all options have potential environmental and human health risks. ISB also has the potential to significantly reduce the duration of cleanup operations. In certain instances, ISB might provide the only means of quickly and safely eliminating large amounts of oil.

The basic framework for this response management structure is a unified command system that brings together the functions of the federal government, the state government, and the responsible party. The Federal On Scene Coordinator (FOSC) examines if ISB is a practical option for the incident-specific conditions. The Oil Pollution Act of 1990 (OPA90) directs each Regional Response Team (RRT) and Area Committee to define their minimum requirements for the use of ISB. The states and US territories are organized into 13 RRTs.

This fact sheet summarizes in more detail the decision-making process and participants for approval of ISB use.

Fact Sheet Series

- Introduction to It-Situ Burning
- Fate of Burning Oil
- ISB Human and Environmental Effects
- Assessing ISB Benefits and Risks
- **ISB Approval in the U.S.**
- ISB Operations

Introduction

In the United States, the use of ISB as an oil spill response tool is regulated by both federal and state laws. Regional Response Teams (RRT), made up of federal and state agencies, have developed guidelines that provide a common decision-making process to evaluate the appropriateness of using ISB during a spill response. The basic framework for this response management structure is a unified command system that brings together the functions of the federal government, the state government, and the responsible party (i.e., the spiller) to achieve an effective and efficient response, where the Unified Command (UC) Federal On-Scene Coordinator (FOSC) retains authority (40 C.F.R. § 300). The FOSC examines if ISB is a practical option for the incident-specific conditions.

In many states, the decision to conduct an ISB on land does not always require concurrence by the RRT; however, it is strongly recommended that the RRT be notified.

Regulatory Facts

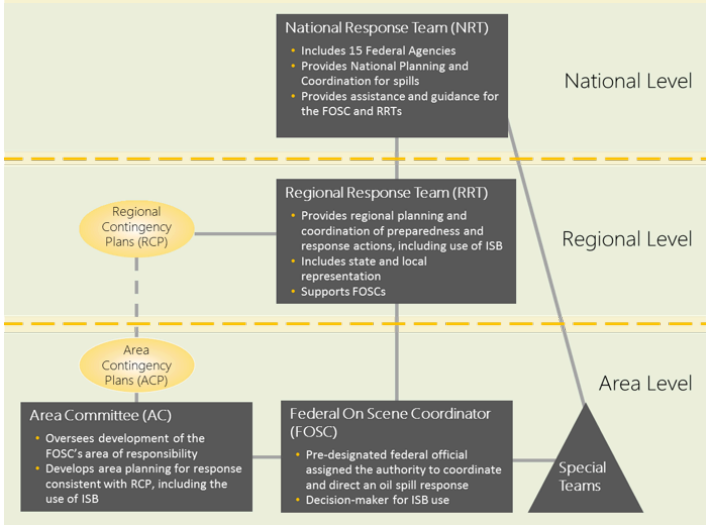
The National Oil and Hazardous Substance Pollution Contingency Plan (NCP)

The National Oil and Hazardous Substance Pollution Contingency Plan (NCP) provides the "playbook" for oil spill response in the U.S. The NCP specifies responsibilities and requirements for the development, selection, and implementation of response actions, including the ISB.

The National Response System (NRS), as defined in the NCP, is the mechanism for coordinating response actions by all levels of government in support of the FOSC. As shown in Figure 1, the NRS is composed of the National Response Team (NRT), RRTs, FOSC, Area Committees, Special Teams, and related support entities.

Not every level of the NRS is activated for each spill; response is scaled to the size of the spill. Small spills can be handled by local responders with little oversight or coordination with State or Federal authorities. Similarly, state agencies can respond without Federal agency participation to spills within their jurisdiction. Regional offices of Federal agencies can participate in a response with little or no interaction with headquarters personnel in Washington, D.C. When ISB is being considered, more participation by state and Federal authorities might occur; level of participation will depend on the size and location of a spill and the proposed burn. However, a responsible party always needs to obtain permission to burn from a government official, whether local, state, or federal.

FIGURE 1. The National Response System (NRS) organization as dictated by the NCP (API 2016)



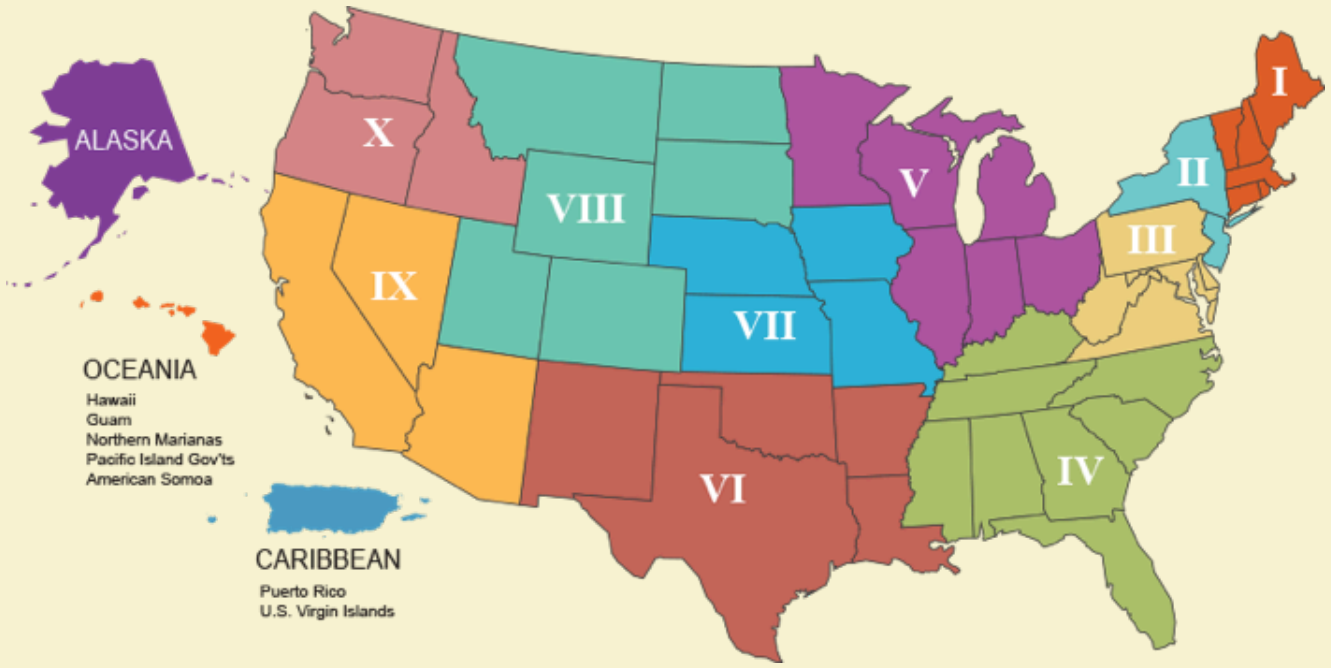
ISB Authorization and Approval

The Oil Pollution Act of 1990 (OPA90) directs each RRT and Area Committee to define their minimum requirements for the use of ISB. The states and US territories are organized into 13 RRTs. The United States Coast Guard (USCG) and the United States Environmental Protection Agency (USEPA) co-chair RRTs, whose members include regional Federal representatives as well as representatives from appropriate state agencies. The RRTs establish response polices for their region through development of Regional Contingency Plans. **Figure 2** shows the boundaries of the RRTs.

All RRTs develop guidance documents and policies; Figure 3 provides links to RRT websites to view documents currently in effect for ISB. The status of any pre-authorizations or changes in regional procedures can also be checked at: https://www.nrt.org/. To assist response decision makers, ISB guidance often includes operational checklists that have been incorporated into Regional Contingency Plans and their associated Area Contingency Plans. These checklists provide a framework for an On-Scene Coordinator (OSC) to consult with appropriate federal, state, and local agencies on whether the use of ISB would be effective and appropriate. They incorporate spill-specific data, weather considerations, resources at risk, and a health and human hazard analysis.

The key to using ISB is to have suitable spill and burn conditions as well as established ISB response resources consisting of trained responders and maintained equipment. Timely decision-making depends on advance planning and an approval process that is well understood and which functions well. For example, wind and waves can rapidly

FIGURE 2. ISB conducted on the water by containment within a fire boom. (Mabile 2012)



emulsify spilled oil on water, making it difficult to ignite. Rapid decision-making is important to provide responders the ability to initiate ISB within its window of opportunity timeframe. To satisfy this rapid response, many coastal RRTs have created pre-authorized zones for ISB in marine waters when a spill is more than three nautical miles from shore. With pre-authorization, an FOSC can authorize ISB use within a specified zone as soon as it is evident that ISB will result in greater benefit than if it is not used. The appropriate RRT must be notified of the decision.

FIGURE 3. ISB Guidance within each U.S. RRT (National Response Team).

Regional Response Team	Policy and guidance currently in place for ISB use
• Region I (ME, NH, VT, MA, RI, CT)	• http://www.rrt1.nrt.org/
• Region II (NY, NJ)	• http://www.rrt2.nrt.org/
• Region III (PA, DE, MD, VA, WV)	• http://www.rrt3.nrt.org/
• Region IV (KY, TN, NC, SC, GA, FL, AL, MS)	• http://www.rrt4.nrt.org/
• Region V (MN, WI, IL, IN, MI, OH)	• http://www.rrt5.org/
• Region VI (NM, TX, OK, AR, LA	• http://www.rrt6.org/
• Region VII (NE, KS, IA, MO)	• http://www.rrt7.nrt.org/
• Region VIII (MT, ND, SD, WY, UT, CO)	• http://www.rrt8.nrt.org/
• Region IX (CA, NV, AZ)	• http://www.rrt9.org/go/site/2763/
• Region X (WA, OR, ID)	• http://www.rrt10nwac.com/
• Alaska RRT	• http://alaskarrt.org/
• Oceania RRT	• http://www.oceaniarrt.org
• Caribbean RRT	• http://www.crrt.nrt.org/

Federal On-scene Coordinator (FOSC)

The FOSC is charged with directing response efforts and coordinating other efforts at the scene of a discharge or release in accordance with Area Contingency or other pertinent plans for lands and waters under their specific jurisdictions (**Figure 3**). FOSCs are authorized to take response measures deemed necessary to protect public health, welfare, and the environment (see 40 CFR 300.120 and 40 CFR 300.150).

This responsibility cannot be delegated; however, the federal regulations do not to preempt the states from regulating the protection of resources in their jurisdiction from oil pollution, including those areas also subject to regulation by EPA or USCG.

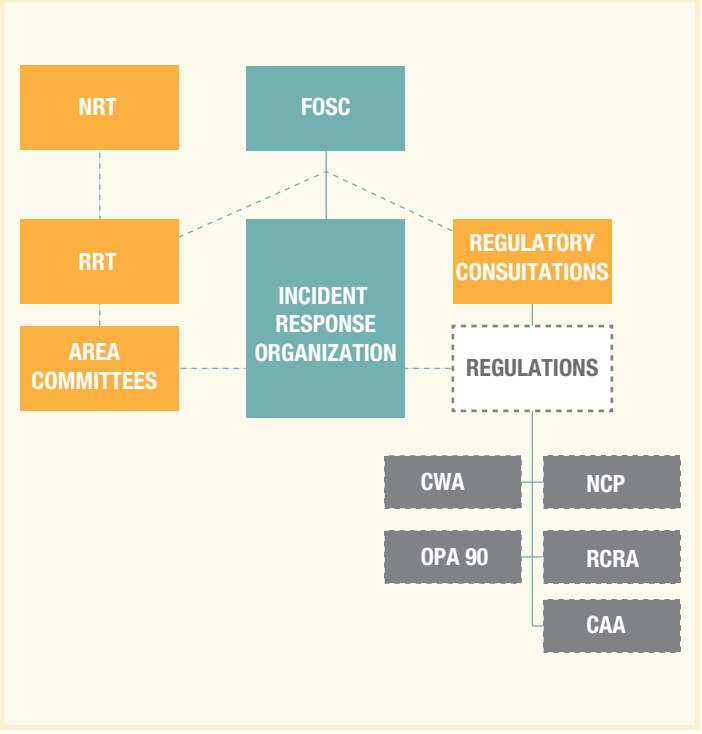
In general, the major structural components of ISB decision-making are illustrated in (**Figure 4**). The most influential federal laws and regulations include: Clean Water Act (CWA), OPA90, Resource Conservation and Recovery Act (RCRA), Clean Air Act (CAA), and the NCP. However, other federal or state laws can apply and influence decision-making or burn execution (**Figure 3**), such as the Endangered Species Act (ESA) and the National Historic Preservation Act (NHPA). For example, during RRT deliberation on a request for approval of ISB, specialty consultations can be necessary to ascertain the potential effect of a burn on either threatened or endangered species or fish habitats which are protected by the ESA, and on any special resources protected under NHPA.

Before initiating an ISB, the UC typically consults with Regional, State, and Local Air Quality Officials because the smoke from an ISB has a much greater ability to migrate than the oil slick itself. Careful consideration of potential air quality impacts on neighboring States, regions, and countries is especially important. Finally, the UC then consults with meteorologists, response contractors, and experts on burning to further determine ISB viability for the incident-specific conditions. The UC will seek approval/concurrence of the RRT members prior to initiating the burn (where feasible).

For larger spills with Federal oversight, the FOSC makes a recommendation to the RRT on whether or not ISB would be appropriate. This recommendation takes into consideration a completed RRT operational checklist that provides information on habitat type, wildlife in the vicinity, seasonal effects, mobility of the oil, etc.

The RRT then conducts a rapid Spill Impact Mitigation Analysis (SIMA) to decide if ISB is appropriate. The SIMA process considers response options and compares the risks and benefits from each response technique to identify the

FIGURE 4. Generic U.S. spill response structure showing major regulatory components (API 2016).



options with the least consequences to the environment and human health. For more information on SIMA, refer to **ISB Fact Sheet 4 – Assessing ISB Benefits and Risks**.

The decision to approve ISB must be unanimous by the agencies participating in the response. These agencies usually include the USCG, EPA, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Interior (DOI), and an appropriate agency from the state with the spill.

Pre-Authorization Planning

ISB complements other oil spill cleanup techniques and has proven to be a valuable addition to the response toolbox. ISB is most effective early in a spill when oils generate ignitable volatile hydrocarbons for combustion, which makes rapid decision-making essential to maximize the benefits of response options.

The standing RRT develops pre-authorization policies and guidance for the use of ISB in their Region (on water, on land, and in ice/snow [where applicable]) in advance of an incident. The policies and guidelines for ISB pre-authorization are designed to identify those spill circumstances where ISB is feasible and appropriate and to facilitate the decision-making process during a response. These pre-authorization

plans specify when and where ISB can and cannot be used within the Region in areas under federal response authority and what monitoring and documentation requirements are necessary. The status of the RRT pre-authorizations for ISB in the US is provided in regional documents accessible from the National Response Team (NRT) website (www.rrt.nrt.org). The information includes the status of pre-approval (i.e., pre-authorization, case-by-case approval, non-approval), the conditions and zones where pre-authorizations exist, and the status of threatened and endangered species and essential fish habitat monitoring and consultation.

Figure Sources

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Figure 2 – National Response Team. Map displaying the RRT website; Retrieved from: http://www.rrt.nrt.org/

Figure 3 – National Response Team. Table showing links to RRT websites; Retrieved from: http://www.rrt.nrt.org/

Figure 3 – American Petroleum Institute (2016). In-Situ Burning: A Decision Maker's Guide, API Technical Report 1256. Washington, DC

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