

APPENDIX A

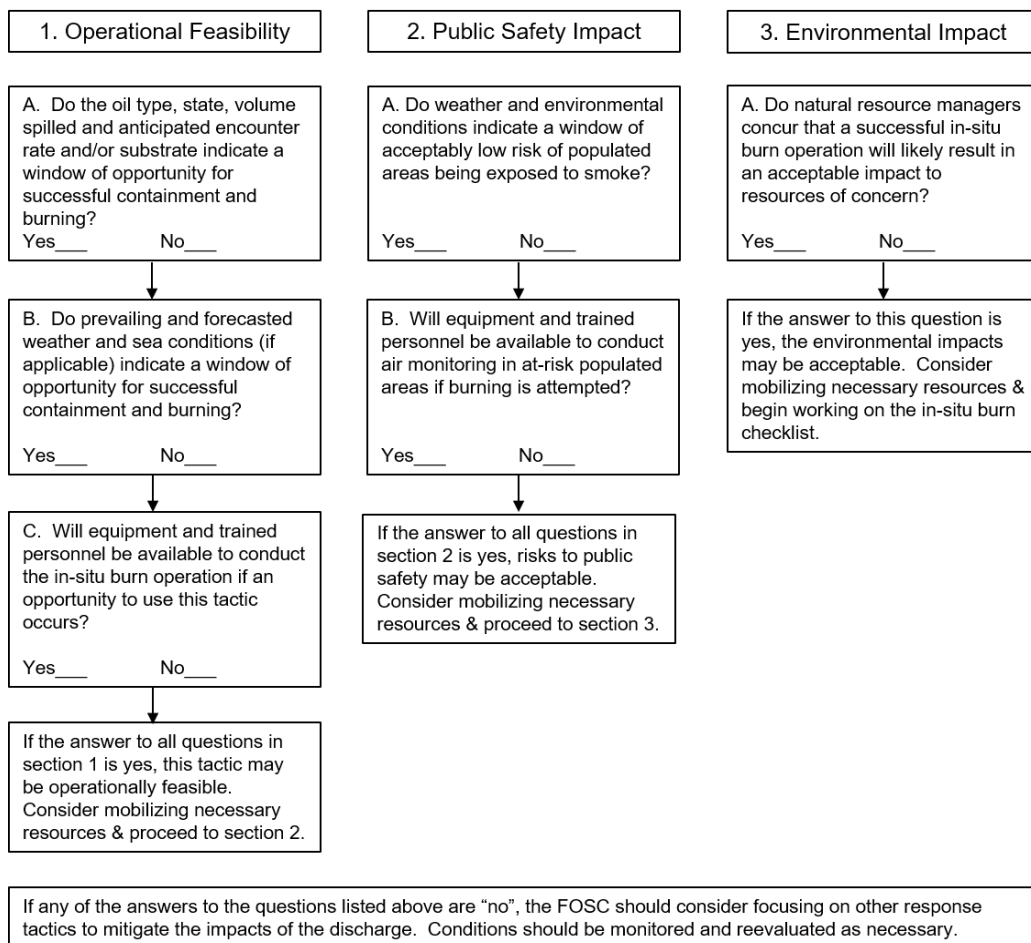
In-Situ Burn in the Coastal Zone

Decision Making Tools

The decision making process begins with a simple preliminary feasibility analysis. If that analysis concludes that an ISB may be feasible, the ISB Checklist for Non-Preauthorized Areas **shall** be completed. The ISB checklist is divided into several sections of information about the spill, operational considerations, and resources at risk. When completed, these tools will help identify when a burn may safely occur based on environmental, public health, and operational constraints. It is important to note that even if these tools show that a burn is not a good option, changes in environmental conditions or other factors may make it a feasible option at a later time.

Initial Feasibility Analysis

A feasibility analysis and ISB checklist are provided to help the FOSC organize and analyze information when considering burning agent and ISB use. The Responsible Party, or their designated representative, will work in conjunction with the Unified Command staff to complete these tools.



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In-Situ Burn Checklist for Non-Preauthorized Areas

The Responsible Party (RP), or their designated representative, shall work closely with the Unified Command staff to fill in checklist items 1 through 4; once completed, forward to the FOSC for review.

1. Incident Data:

- a. Incident name: _____
- b. Responsible Party: _____
- c. Incident type (grounding, collision, pipeline rupture, well blowout, etc.):

- d. Date/time of the incident: _____
- e. Location of proposed burn area (lat/long & distance in miles) to nearest land if applicable; and distance in miles to nearest population center:

- f. Estimated volume (in gallons) of actual discharge: _____
- g. Type of product discharged: _____
- h. Estimated amount (in gallons) of potential discharge: _____
- i. Status of discharge; continuous (rate in gallons/hour), intermittent (rate in gallons/hour), one time discharge, discharge secured: _____
- j. Has a test burn been conducted? (Y/N) If yes, was the test successful? (Y/N)
- k. Develop oil fate model (attach to checklist)

*If the proposed burn is **water-based**, fill out items (l-s) below*

- l. Is the discharge easily emulsified? (Y/N/uncertain)
- m. Has the discharge emulsified? (Y/N) If yes, characterize to what degree: (light (0-20%), moderate (21-50%), heavy (> 51%) or unknown)

- n. Estimated area (yards/acres/square miles/etc.) of the discharge and description of it in the proposed burn area (e.g., continuous slick, streamers, patches, etc.). Include a date/time for this estimate:

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- o. Do the concentrations of oil appear thick enough to burn ($\geq 2-3$ mm)? (Y/N)
- p. Describe the subsurface conditions of the proposed burn area (e.g., oyster beds, submerged aquatic vegetation, sediments): _____
- q. Develop oil trajectories (attach to checklist)
- r. Forecasted distance from land to the oil at the proposed burn site (reference oil trajectories): _____
- s. Expected areas and times at which the discharge will impact the shoreline:

*If the proposed burn is **land-based**, fill out items (t-v) below*

- t. Estimated area (yards/acres/square miles/etc.) of the discharge and description of the discharge in the proposed burn area (e.g., fresh, pooled, etc.). Include a date/time for this estimate): _____
- u. Describe type of substrate (sediment, organic soils, flotant, roseau cane, spartina, etc.): _____
- v. Provide the length of time (in hours) oil has been in contact with vegetation: _____

2. Forecasted Conditions at the Proposed Burn Site²:

- a. Air and water temperature (in Fahrenheit): _____
- b. Weather (clear, overcast, rain, etc.): _____
- c. Wind speed/direction (mph/blowing from): _____
- d. Expected transition time between onshore and offshore breeze: _____
- e. Water Depth (use mm, cm, inches, feet or meters). Indicate if water depth reflects depth over vegetation: _____

² Weather should be continuously monitored to ensure that conditions allow for the safe conduct of ISB operations. The National Weather Service (NWS) can provide incident specific, local spot weather forecasts upon request. To contact your local or regional NWS office, see [hyperlink](#).

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- f. Forecasted tidal information (height in feet):

Date _____ High (time/height) _____ / _____
Low
Date _____ High (time/height) _____ / _____
Low
Date _____ High (time/height) _____ / _____
Low
Date _____ High (time/height) _____ / _____
Low

If the proposed burn is **water-based**, fill out items (g-h) below:

- g. Surface current (drift): speed _____ (knots), direction _____ (degrees true)
- h. Sea conditions (calm, light wind chop, confused, etc.): _____
Wave height (in feet): _____
Swell height (in feet): _____

3. Resources at risk:

- a. What are the specific aquatic resources at risk from the spilled product? Describe what the species are and the current strategies being implemented to protect them:

- b. What are the specific terrestrial resources at risk from the spilled product? Describe what the species are and the current strategies being implemented to protect them:

- c. What is the estimated time of impact to the resources listed in 3a & 3b? (if resources are already impacted, list the time impact occurred):

- d. Does it appear that an in-situ burn operation will likely achieve the desired environmental benefit for these identified resources? (Y/N)
- e. Are there any specifically known resources in the proposed burn area that would be negatively impacted by an in-situ burn operation? (Y/N) If yes, describe what they are and whether the impact to them is anticipated to be great enough to offset the benefit to the resources listed in 3a & 3b:

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4. Window of opportunity:

Fill in the top of the sheet based on the period of time an ISB operation is being considered (e.g., if considering commencing a burn at 0800, fill in hour 1 time block with 0800, 0900 for the hour 2 time block, etc.). For each worksheet item, mark either Yes (Y), No (N), or N/A under each time segment. The likely window of opportunity exists for those time segments where none of the items have an "N".

Feasibility Factors	Hour 1 (time)	Hour 2 (time)	Hour 3 (time)	Hour 4 (time)
Operational Outlook				
1. Oil thickness \geq 2-3 mm				
2. Oil emulsion \leq 25-50%				
3. Wind Speed \leq 25 mph (water based)				
4. Wind Speed \leq 12 mph (land based)				
5. Water Depth over roots of plants \geq 2 cm				
6. Wave height \leq 3 feet				
7. Visibility \geq 500 ft. vertically & \geq 0.5 mile horizontally				
8. Trained personnel on-scene & ready				
9. Equipment on-scene & ready				
Planning Concerns				
10. Operation poses acceptably low risk to populated areas				
11. Burn poses acceptable risks to those resources likely impacted				
Public Safety Concerns				
12. Air monitoring equipment and personnel are deployed and standing by (see Appendix D for more details)				
Amplifying Feasibility Factor Information (provide as needed):				

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The FOSC shall review items 1 through 4, complete items 5 and 6, then sign and date the checklist in the signature block below. If the FOSC makes the decision to conduct an In-Situ Burn operation (with or without the use of burning agents), the Initial Feasibility Analysis worksheet and this completed, signed checklist shall be forwarded to RRT-6.

5. FOSC evaluation of response options:

- a. Will the ISB technique, with or without the use of burning agents, likely mitigate the negative impacts created by this discharge? (Y/N)
- b. Will the use of the ISB technique interfere with (or in any way reduce the effectiveness of) mechanical recovery efforts and/or other potential chemical countermeasure applications? (Y/N)

If yes, do the potential benefits of burning outweigh the potential reductions in effectiveness of mechanical/other countermeasure applications? (Y/N)

- c. Can the ISB technique, with or without the use of burning agents, be used safely and with an anticipated overall reduction to the negative impacts created by this discharge (when compared with a decision not to burn)? (Y/N)

6. FOSC's decision to pursue the use of burning agents and the ISB technique:

- a. _____ Neither burning agents nor the ISB technique will be used.
- b. _____ The ISB technique may be used but no request will be made to authorize the use of burning agents.
- c. _____ A request to use burning agents in conjunction with ISB technique will be made, but with the following conditions:

- d. _____ A request to use burning agents in conjunction with the ISB technique will be made.

Signature of FOSC: _____

Printed name of FOSC: _____

Date/time: _____

A fillable PDF of this template can be found at: [Appendix A – In-Situ Burn in the Coastal Zone \(Checklist\)](#)