Immediate Response Action:
Treatment and Completion Recommendations
Bouchard Tank Barge 120 Oil Spill, Buzzards Bay
May 19, 2003

Preamble:
The development of shoreline treatment and completion criteria is a consensual process between the state and federal governments and the responsible party and in consultation with the natural resource trustees. Generally it is designed to identify decision points whereby the operational aspects of the cleanup may be changed as a function of cleanup progresses based on qualified inspection. These decision points take into account the phased aspect of shoreline cleanup that include the removal of potentially mobile oil, active shoreline treatment using approved methods and eventually more passive measures or natural attenuation. These three phases represent increasing intervals of time. Mobile oil or gross oil removal is relatively rapid. Active shoreline treatment will be a matter of weeks, in this case, utilizing cleanup crews and approved methods. Passive treatment or natural attenuation can last years and will be the subject of future discussions.

At each decision point for a particular section of shoreline a team of specialists is deployed to survey and assess the progress. If the area meets the criteria, then the section of shoreline is moved to the next phase. If it does not and oil can continue to be practically removed without increased injury to the resource, treatment continues.

The cleanup of State and federally listed species habitat is recognized as a priority, and specific conditions are referenced herein. The team of specialists that make cleanup decisions should include representatives of FWS and MDFW. All cleanup decisions in piping plover or roseate tern habitat must be approved by FWS and MDFW personnel. Cleanup decisions in areas occupied by other State listed species (list attached) should be made in consultation with the MDFW.

Cleanup operations should be reinitiated if conditions change such that areas are confirmed to have been re-oiled and completion criteria are no longer met. Any areas of re-oiling identified will be jointly investigated with a SCAT team, including FWS and/or MDFW personnel. If it is determined that that the completion criteria are no longer met and trust resources or their habitats have been adversely affected, additional cleanup will be initiated until the area meets the completion criteria.

As the oil weathers due to natural processes, the shoreline conditions may change. If conditions change sufficiently to readdress the criteria outlined in this document, the Unified Command and their technical advisors will reopen discussions and consider the redraft of this document.

Section One

Traditional, non-intrusive collection and cleaning methods are approved for consideration pending a plan from the Responsible Party (RP) and their spill management team. The recovery plan should describe the method proposed and either the sediment/habitat type on which the method is

to be used and/or the geographic area on which the method is proposed. Such methods include, but are not limited to[1]:

1. Deluge flushing into collection
2. Low pressure, ambient water flushing into collection
3. Low pressure, warm water flushing into collection (temperatures not to exceed 70° C)
4. Snare staked in the intertidal zone
5. Manual removal

Note: All flushing should be conducted in such a way as to not contaminate areas of the lower intertidal zone. Flushing into a falling tide, from high-tide to mid-tide is recommended, but not necessarily required.

A. Heavily Utilized, Public Recreational Sand Beaches[*]

Completion Recommendations

1. No visible surface or subsurface oil (not detectable by sight, smell, feel), to the maximum extent possible, as rapidly as possible.

B. Less Utilized, Semi-Public and Private Sand Beaches[*]

Completion Recommendations

1. No visible surface, subsurface oil to trace[2], to the maximum extent possible.

Methods Available

1. Manual removal with minimal clean sediment removal
2. Manual or mechanical (with Unified Command (UC) approval) removal of oiled wrack
3. Removal of buried oil
    a. Sites will be surveyed by the digging of 1 foot deep pits at or near the last high tide (LHT) line and the inspection of that pit for tarballs or other oil contamination.
    b. The inspection pits will be dug at an interval of 50 yards with a minimum of four pits.
    c. If oil is found, the extent of the oil burial will be delineated by the use of successive pits and marked.
    d. Test pits will be closed immediately after inspection.
    e. Buried oil will be removed with minimal clean sediment removal.

Restrictions

1. Wrack that is NOT oiled should NOT be removed from the beach.

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[1] Methods described are not designed for roseate tern, piping plover habitat or salt marsh. Separate plans are recommended for these areas.

[*] Per USFWS and MDFW, If piping plovers (a state and federally listed threatened species) are determined to be utilizing these beaches, refer to the 'Piping Plover Habitat" section of this document below.

[2] "Trace (discontinuous film or spots of oil, an odor, or tackiness)" Shoreline Assessment Manual, HAZMAT Report No. 2000-1, August 2000

C. Mixed Sand & Gravel, Gravel (pebble to boulder) and Rip Rap Groins (jetties)[*#]

Completion Recommendations

1. No sheen
2. Surface: Oil does not come off on the finger when touched
3. Subsurface: Trace[3]

Methods Available

1. Manual removal of oil with minimal clean sediment removal
2. Manual or mechanical (with UC approval) removal of oiled wrack
3. Manual removal of visible oil to coat[4] and thicker.
    a. Mechanical (with UC approval)
    b. High Pressure/Hot Water (with UC approval)
4. Removal of buried oil
    a. Sites will be surveyed by the digging of 1 foot deep pits at or near the last high tide (LHT) line and the inspection of that pit for tarballs or other oil contamination
    b. The inspection pits will be dug at an interval of 50 yards with a minimum of four pits.
    c. If oil is found, the extent of the oil burial will be delineated by the use of successive pits and marked.
    d. Test pits will be closed immediately after inspection.
    e. Buried oil will be removed with minimal clean sediment removal

Restrictions

1. Wrack that is NOT oiled should NOT be removed from the beach

D. Rip Rap Seawalls, Bulkheads, Piers, Docks and Pilings[#]

Completion Recommendations

1. No sheen
2. Oil does not come off on the finger when touched

Methods Available

1. Manual removal of all visible oil, coat and thicker.
    f. Mechanical (with UC approval)
    g. High Pressure/Hot Water (with UC approval)
2. Manual removal of oiled wrack.

Restrictions

1. Wrack that is NOT oiled should NOT be removed.
2. Chemicals (AKA: shoreline cleaners) may not be used without UC approval.
3. Efforts must be taken to minimize recontamination of unoiled intertidal areas.
4. Capture of released oil.

E. Rocky Shorelines[#]

Completion Recommendations

1. No sheen
2. Oil does not come off on the finger touched

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[3] ibid.

[4] "Coat: (visible oil <0.1 cm [and >0.01 cm] which can be scratched off with fingernail" Shoreline Assessment Manual," NOAA HAZMAT Report No. 2000-1. August 2000.

Methods Available

1. Manual removal of all visible oil, coat and thicker.
    a. Manual
    b. High Pressure/Hot Water (with UC approval)
2. Manual removal of oiled wrack

Restrictions

1. Wrack that is NOT oiled should NOT be removed.
2. Chemicals (AKA: shoreline cleaners) may not be used without UC approval
3. Efforts must be taken to minimize recontamination of unoiled intertidal areas.
4. Capture of released oil

F. Salt Marshes

Completion Recommendations

1. No sheen

Methods Available

1. Remove patches of pooled oil or mousse only under the direct supervision of on-site Environmental Unit personnel and with consultation with the Unified Command.
2. Manual removal of oiled wrack.

Restrictions

1. All removal activity and any activity within a salt marsh (oiled or not) will be under the direct, on-site supervision of Environmental Personnel.
2. Efforts must be taken to minimized disturbance of oiled and unoiled sediments and vegetation
3. As practical and possible floating oil and sheens should be recovered
4. No sediment will be removed without Unified Command approval.
5. No attached vegetation will be removed without Unified Command approval.
6. No vegetation will be cut without Unified Command approval.

Section Two

Treatment Procedures for Roseate Tern Habitat

(In particular: Ram Island, Bird Island, Penikese Island)

Objective: To eliminate oil contact risk to endangered roseate terns using the above islands and other suitable habitats, to the maximum extent possible, as rapidly as possible.

Completion Recommendations

1. No sheen.
2. Residual surface oil on rocky surfaces exposed at low tide does not come off on the finger when touched.
3. Intertidal vegetation and associated sediments are free of mobile oil
4. Intertidal vegetation and associated sediments do not provide a ready source of oil contamination to birds. Measurement methods to include hand wiping with sorbent pad, and other surrogates.

Expanded list of Approved Cleanup Techniques
(select most effective/most rapid/least intrusive method)

Oiled vegetation:

• Raking (with garden rakes) to remove oiled vegetation and oil on sand surface (taking care to minimize removal of grass roots)

• Cutting to remove attached oiled vegetation (taking care to minimize removal of roots)

• Application of peat or cellulose-type sorbent material to pooled oil and oiled vegetation mats to facilitate oil removal and to serve as contact barrier to birds. As practical, peat (or other organic distributed sorbent materials) placed within the intertidal zone should be removed prior to the next high tide to avoid potential re-distribution of oil.

Oiled Rocks

• Manual cleaning with sorbent materials, including peat or cellulose sorbents, to remove oil and to form a contact barrier to birds. (Suggest considering use of wire brushes or other scouring tools in conjunction with particulate sorbents to enhance oil removal). Oiled natural sorbent material should be collected to the extent practical.

• Flushing with ambient seawater to help mobilize oil for recovery with sorbents

• After gross oil removal, treatment of rocks with torch burners to accelerate oil weathering and reduce stickiness

• After gross removal, application of high-pressure and/or hot-water washing to remove remaining sticky oil. Mobilized oil to be collected with sorbent (snare etc.)

General good practices:
Minimize worker traffic over and through oiled areas (grass mats) to avoid spreading oil into unoiled areas. Use boards as walking surface (and/or sorbent runners), as necessary.

Section Three

Piping Plover Habitat

Piping Plover Beach Cleanup Procedures[5]

Cleanup procedures for beaches used by piping plovers, a federally listed threatened species, are not prescriptive. Each case will be dealt with on a case-by-case basis based on the specifics of the shoreline oiling, plover location, nesting status, and tolerance for disturbance. Generally, lower levels of activity in the vicinity of nesting plovers is preferable. Balancing rapid cleanup operations with need for limited disturbance of birds is a situation best handled by a single shorebird monitor with knowledge of the site and site cleanup supervisor.

Procedures for cleanup coordination on Plover beaches

1. Shorebird monitors may contact cleanup division supervisors for their associated monitoring areas each morning at approximately 6:30 am (see attached sheet for contacts and areas).
2. Monitors will check in with cleanup division supervisors at division tents when reporting to an area.
3. Cleanup division supervisors and shorebird monitors should discuss planned operations on the site and determine specific areas where operations may affect plovers, and possible actions to reduce this.
4. Minor adjustments to operations based on this observer input to cleanup division supervisor should be made based on this field contact.
5. Any input from observers that would require major adjustments to field operations should be raised to the Wildlife Branch Director {Tom O'Shea, Mass Div. Of Fisheries and Wildlife, 617-875-5376 or Susan Lingenfelser} for resolution with Unified Command.

Immediate Response Action Decision Points[6]

Given the sensitive nature of the piping plover, (a state and federally listed threatened species) treatment and assessment criteria may differ from beaches of similar sediment type, but different use (e.g.: recreational, bathing). The following are Immediate Response Action decision points for piping plover beaches:

1. All surface oil will be removed under the surveillance of shorebird monitors identified by the Wildlife Unit and in this document.
2. Division supervisors will consult with shorebird monitors in the manner described above.
3. Shoreline Cleanup Assessment Teams (SCAT) will survey piping plover beaches (contiguous intertidal zone only) for subsurface oil, prioritizing their surveys in the following manner, using attached USFWS/MDFW charts:

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[5] Procedures developed with cooperation and consultation of Tom O'Shea Mass Div. Fisheries and Wildlife and Wildlife Recovery Group Leader, Scott Melvin, Mass Div. Fisheries and Wildlife Susan Lingenfelser/USFWS, Scott Lundgren/USCG, Don Jensen/R.P.

[6] These decision points were developed with the cooperation of Tom O'Shea (MDFW), Susan Lingenfelser (USFWS), Susi von Oettingen (USFWS), Varela Veronica (USFWS) –May 08, 2003

a. Beaches known to have the highest concentration of piping plovers (USFWS)
b. Beaches having fewer piping plovers, but known to have plovers (USFWS)
c. Recognized (by USFWS or MDFW) piping plover habitat within the oil spill impact region, regardless of known occupation by birds at this time.

4. Identification of buried oil
    a. Sites will be surveyed by the digging of 1 foot deep pits at or near the last high tide line and the pit will be inspected for tarballs or other oil contamination
    b. The inspection pits will be dug at an interval of 50 yards with a minimum of four pits per beach section.
    c. If oil is found, the extent of the oil burial will be delineated by the use of successive pits, marked and recorded.
    d. Test pits will be closed immediately after inspection.
5. Removal of buried oil (requires monitoring procedures as outlined above)
    a. Buried oil in concentrations of "Oil Residue"[7] or greater will be removed manually with the consultation of the shorebird monitor. Every attempt should be made by the R.P. to provide advance notice to monitors in order to arrange for a site visit and monitoring activities. In as much as practical, un-oiled sediments will not be removed from the site. All holes will be filled in.
    b. If, in the opinion of the shorebird monitor, the existing piping plovers appear to be stressed or disturbed by this cleanup activity, the division supervisor will cease the operation, fill any open holes, record the location and proceed to other scheduled activities. At this time, the buried oil will be deemed unrecoverable while the piping plovers are present.
    c. Sections of beach deemed to have "unrecoverable" buried oil will continue to meet the highest standard (no visible oil) for surface oiling (or re-oiling), but will not be excavated, mechanically or manually, throughout the piping plovers residence period. Following the out migration of the piping plover in the autumn of 2003, the beaches will be re-surveyed for buried oil in the manner described above. If buried oil is found to exist, a plan will be developed by the Unified Command, based on the degree of oiling and the physical state of the buried oil to address the issue. If "unrecoverable" buried oil rests on Horseneck Beach, cleanup activities must be closely coordinated with FWS and MDFW personnel, in order to ensure the protection of the federally endangered northeastern beech tiger beetle and other State listed invertebrate species.

[7] "Oil Residue: sediments are visibly oiled with black/brown coat or cover on the clasts, but little or no accumulation of oil within the pore spaces." NOAA HAZMAT Report No. 2000-1. August 2000.

Division	***Geographic Location***	***Division Supervisor & phone number (omitted)***	***Shorebird Monitor***
WEST DIVISIONS	Rhode Island to Stony Dike	Bill Neubrand, Supervisor of West Divisions	
W3E	Rhode Island to Stony Dike	Walter Janicek	Marie Winston RI TNC
W3D	South Shore Point to Horseneck Point (Bar Rock)	Gary Johnson 7	Marie Winton, RI TNC,
W3C	Horseneck Beach to Demerest Lloyd State Park, EXCLUDING Barney's Joy and Little Beach.	Ken Irving	Gina Purtell, MA Audubon and Jamie Bogart Lloyd Center,
W3C	Barney's Joy and Little Beach	Ken Irving	Gina Purtell, MA Audubon,
W3B	Slocum's River to Mishaum Point	Walter Janicek	[no plovers reported]
W3A	Mishaum Point to Round Hill	Walter Janicek	Jamie Bogart, Lloyd Center,
W2B	Round Hill to New Bedford	Lionel Johnson	Jamie Bogart, Lloyd Center,
W2A	Fairhaven (Sconticut Neck / West Island)	Lionel Johnson,	Jamie Bogart, Lloyd Center,
W1F	Pine Island Pond	John Sweeney	[no plovers reported]
W1E	Mattapoisett Harbor to Point Connett	Randy Henry	Matt Bailey, MA Audubon,
W1B	Sippican Neck to Stony Point Dike	Jack Coyle	Matt Bailey, MA Audubon,
E1	Stony Point Dike to Herring Brook/Falmouth	Greg Yaroch	Matt Bailey, MA Audubon,
E2	Herring Brook/Falmouth to Woods Hole	Greg Yaroch	Matt Bailey, MA Audubon,
E3	Elizabethan Islands	Greg Yaroch	Trustees of Reservations, Martha's Vineyard

Beaches with Piping Plovers in Buzzards Bay

Bourne

Bassetts Island, Bourne
Mashnee Island/Rocky Pt Dike, Bourne, MA

Dartmouth

Little Beach/Barney's Joy, Buzzards Bay, Dartmouth, MA
Round Hill Pt, Dartmouth, MA
Bayview, Dartmouth, MA
Salters Pond, Dartmouth, MA
Demarest-Llyod Memorial State Park, Dartmouth, MA

Elizabeth Islands

Tarpulin Cove, Naushon Island, E Islands, Gosnold, MA
Jobs Neck, Naushon Island, E Islands, Gosnold, MA
Pasque Island, Elizabeth Islands, Gosnold, MA
Nashawena Island, East, Elizabeth Islands, MA
Copicut Neck, Cuttyhunk Island, Elizabeth Islands, MA
Canapitsit Channel, Nashawena Island, Elizabeth Islands, MA
Quicks Hole, Nashawena Island, Elizabeth Islands, MA
Robinsons Hole, Pasque Island, Elizabeth Islands, Gosnold, MA
Cuttyhunk, Cuttyhunk Island, Elizebeth Islands, Gosnold, MA

Fairhaven

Winsegansett Heights (Sconticut Neck – west marsh area), Fairhaven, MA
West Island, Nasketucket Bay, Fairhaven, MA

Falmouth

Washburn Island, Menauhant, Falmouth, MA
Strawberry Point, Mattapoisett, MA

Wareham

Onset Bay (Long Beach Pt. Little Harbor Beach), Great Neck, Wareham, MA
Stony Point Dike, Great Neck, Wareham, MA

Westport

Richmond Pond – beaches
Cockeast Pond – beaches
Horseneck Beach

Rhode Island

South Shore Point Beach

_____ Initial as received
Mary Landry
Captain, US Coast Guard
Federal On-Scene Coordinator (FOSC)

_____ Initial as received
Robert Donovan
Massachusetts Department of Environmental Protection
State On-Scene Coordinator (SOSC)

_____ Initial as received
Dave Barry
Bouchard Transportation Co., Inc.
Responsible Party (RP)

_____ Initial as received
Tom O'Shea
Division of Fisheries & Wildlife
State of Massachusetts

_____ Initial as received
Drew Major or Susan Lingenfelser
US Fish & Wildlife Service
designated Federal Response Coordinator