JOB AID: LOGISTICS

A JOB AID FOR OIL DISCHARGE AND HAZARDOUS SUBSTANCE RELEASE RESPONSES IN ALASKA

August 2019

Please note that this is a draft document. Additional formatting and content review and revision is planned, but not yet scheduled.

Content within this Job Aid captures information from the superseded Annex E of the Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases (Unified Plan); Change 3 January 2010/ Administrative Update March 2018

ANNEX E: SUMMARY OF AREA RESOURCES

APPENDIX I – EQUIPMENT (GENERAL)

TAB A – FEDERAL

The **U.S. Environmental Protection Agency** incident response equipment is based out of the EPA Emergency Response Warehouse in Anchorage, AK. Additional equipment in Region 10 is also located in Seattle, Washington and Portland, Oregon. Equipment maintained at the Anchorage Emergency Response Warehouse consists of the following:

- Monitoring equipment for multiple hazardous materials and chemicals;
- Sampling equipment;
- Level A & B response gear and PPE;
- Personnel Decontamination equipment;
- Minor containment and clean-up equipment;
- Mobile command post trailer with satellite communication capability, including a T-1 internet connection;
- Response trucks; two equipment trailers, and an all terrain vehicle with equipment bed; and
- Gasoline and diesel generators for remote power.

The **U.S. Coast Guard** maintains twenty pre-positioned oil pollution response equipment depots in Alaska. Locations of these depots are Ketchikan, Sitka, Juneau, Petersburg, Valdez, Cordova, Anchorage, Kenai, Seward, Homer, Kodiak, Attu, King Cove, Klawock, Metlakatla, Whittier, Port Graham, St George, St Paul and Dutch Harbor. Except for Anchorage, the basic equipment package consists of harbor boom (mainly Kepner Sea Curtain), anchor/towing support, various sorbents, generators, emergency lights, and limited personnel protection equipment (see map provided in this annex). In Anchorage, one vessel of opportunity skimming system (VOSS) and 5,000 ft of offshore boom (seas to 4 ft.) are pre-positioned on four flatbed trailers for quick transport to the scene. The equipment is located at Fort Richardson. A response trailer with sorbent materials is maintained at Seward. Contact the FOSC or the Supervisor of the District Response Team (DRAT) for access to the pre-positioned equipment. For additional details regarding USCG District 17 DRAT resources, visit the following website:

http://www.uscg.mil/d17/d17response/drat/dratpage.asp

At Ft. Richardson, the Coast Guard VOSS and 5,000 feet of ocean boom are located in Building 800. The equipment is staged on flatbed trailers for quick response. This building is also the main warehouse for response equipment maintained by the Navy Supervisor of Salvage (NAVSUPSALV) ESSM Base Anchorage. In the event of an oil spill, this equipment is available for mobilization at the request of the FOSC. Under most circumstances, mobilization support will be coordinated by NAVSUPSALV ESSM Base Anchorage personnel. In the event that NAVSUPSALV cannot assist, an Interagency Support Agreement (ISA) is in place between the US Army and the US Coast Guard. The ISA provides authority for the US Army to arrange for immediate transportation requirements, and provides funding reimbursement, normally through the Oil Spill Liability Trust Fund by means of a Federal Pollution Number for a particular event.

Oil Spill Response Equipment Notification/Mobilization:

During Normal Duty Hours: During normal duty hours, notification of personnel and mobilization of equipment will be as follows:

FOSC authorizes mobilization of USCG equipment. FOSC representative or USCG D17 (DRAT) will coordinate with NAVSUPSALV (907 384-2968) to prepare the loads for transport, and arrange for commercial transport to the site or the load-out area. A Pollution Fund Authorization form will be required for NAVSUPSALV support.

In the event NAVSUPSALV is unavailable, USCG will notify DOD (ALCOM) and the Ft Richardson Command Operations Center (COC) of an oil spill, specify the support required, and pass along the name and telephone number of the USCG point of contact. The Ft Richardson COC has procedures in place to alert the Director of Logistics, Plans and Operations Division (907 384-2212), and to make arrangements for 24-hour vehicular support (907 384-6666).

During Other-Than Normal Duty Hours: The USCG will notify the 24- hour NAVSUPSALV duty officer (907 229-8859) and request support. If NAVSUPSALV is unavailable, USCG will notify ALCOM and request assistance to mobilize the VOSS and other pre-staged response equipment from Bldg 800, Ft. Richardson. ALCOM will coordinate with the Ft. Richardson Command Operations Center to provide necessary support.

Designated individuals within the framework of this agreement will be given emergency contact procedures to use in contacting the USCG personnel involved in this process. Upon notification that emergency support is requested, NAVSUPSALV or US Army personnel should contact the USCG to determine the equipment destinations and specific time schedules.

Questions concerning these procedures or the USCG's emergency response equipment should be directed to USCG D17 (DRAT) at (907) 463-2807/2806/2804.

The Coast Guard operates vessels and aircraft that may be available for use in pollution response. The type and location of these assets are as follows:

1. Air Station Kodiak:

(a) Five HH-C-130H Hercules fixed wing aircraft. A long range workhorse with 14 hours endurance and cruise speed of 290 knots. Cargo space is limited to 2,870 cubic feet with no passengers. Cargo space dimensions are 10 ft (width) x 26 ft (length) or 41 feet from ramp with Search and Rescue (SAR) bin removed x 9 ft (height). Size of loading hatch is 7'-6" high x 9'-11" wide. Under normal operation conditions with a standard fuel load, the maximum allowable loading including passengers is 50,000 lbs.

(b) Four HH-60J Jayhawk helicopters. A medium range recovery helicopter with 6 hours endurance and cruise speed of 135 knots. The cargo space is approximately 300 cubic feet. Under normal operating conditions with a standard fuel load, the maximum allowable loading, including passengers is about 2000 lbs. This aircraft is equipped with a hoist having a 600 lb. capacity and an

external sling whose capacity is rated at 6,000 lbs; however, the total weight of fuel and other cargo may limit the lifting capacity of the helicopter.

USCG D17 District Response Advisory Team Pre-Positioned Equipment Locations

Attu: 1,000 ft Harbor Boom, Sorbent Boom/Pads, Sweep, SkimPac 4200 System, 2 Portable 3,500 Gallon Tanks, Portable 2,500 Gallon Tank, 2" Diesel Pump

Unalaska: 1,000 ft. Harbor Boom, 300 ft. of 42" Offshore Boom, Sorbent Boom/Pads, SkimPac 4200 System, 3 Portable 1,000 Gallon Tanks, 1–2" Diesel Pump, 1–2" Gasoline Pump, 1 Gasoline Generator

Saint Paul: 150 ft. Harbor Boom, Sorbent Boom/Pads/Sweep, SkimPac 4200 System, 1 Portable 1,140 Gallon Tank, 1–2" Diesel Pump, 1–3" Diesel Pump

Saint George: Sorbent Boom/Pads/Sweep, 25 Person PPE Tote

King Cove: 200 ft. Harbor Boom, Sorbent Boom/Sweep

Kodiak: 1,400 ft. Harbor Boom, 300 ft. of 42" Offshore Boom, Sorbent Boom/Pads/Sweep, SkimPac 4200 System, 1 Portable 1,000 Gallon Tank, 1–2" Diesel Pump

Port Graham: 350 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Homer: 1,000 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Seward: 500 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Kenai: 250 ft Harbor Boom, Sorbent Boom/Pads/Sweep, 1 Gasoline Generator

Whittier: 1,500 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Anchorage: 5,000 ft. 42" Offshore Boom, 1 Vessel of Opportunity Skimming System (VOSS), 2 Inflatable Barges (26,000 Gallons), Sorbent Boom/Pads/Sweep

Valdez: 1,000 ft. Harbor Boom, Sorbent Pads/Sweep, 1 gasoline Generator

Cordova: 1,300 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Juneau: 3,050 ft. Harbor Boom, Sorbent Boom/Pads/Sweep, SkimPac 4200 System, 2 Gasoline Generators, 1 Portable 1,000 Gallon Tank, 1 Portable 1,100 Gallon Tank, 1 Portable 1,800 Gallon Tank, 1-3" Diesel Pump, 1–2" Gasoline Pump

Sitka: 3,100 ft. Harbor Boom, Sorbent Boom/Pads/Sweep, SkimPac 4200 System, 1 Gasoline Generator, 1 Portable 1,800 Gallon Tank, 1–2" Diesel Pump, 3–3"Diesel Pumps, 1–2" Gasoline Pump

Petersburg: 1,000 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Ketchikan: 2,300 ft. Harbor Boom, Sorbent Boom/Pads/Sweep, SkimPac 4200 System, 1 Gasoline Generator, 2 Portable 1,000 Gallon Tanks, 1 Portable 1,100 Gallon Tank, 1 Portable 1,800 Gallon Tank, 1–2" Diesel Pump, 1–2" Gasoline Pump

Metlakatla: 400 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

Klawock: 200 ft. Harbor Boom, Sorbent Boom/Pads/Sweep

(c) Four HH-65A Dolphin helicopters. A short range recovery helicopter with 3.5 hours endurance and 125 knot cruise speed.

(d) Coast Guard Aviation Support Facility Cordova (AVSUPFAC Cordova). This facility may be reached at (907) 424-7346.

2. Air Station Sitka: Three HH60J Jayhawk helicopters. A medium range recovery helicopter with 6 hours duration and 135 knot cruise speed.

3. Seagoing Buoy Tenders (WLB/WLM): WLBs are 225 ft. in length, with a maximum speed of 15 knots, and a maximum range of 6000 nautical miles. WLM is 175 ft. in length with a maximum speed of 13 knots. Four WLBs and one WLM are home ported in Alaska.

(a) CGC SPAR (WLB 206): Kodiak, Alaska
(b) CGC HICKORY (WLB 212): Homer, Alaska
(c) CGC SYCAMORE (WLB 209): Cordova, Alaska
(d) CGC MAPLE (WLB 207): Sitka, Alaska
(e) CGC ATHONY PETIT (WLM 558): Ketchikan, Alaska

In addition, all four of the WLB's carry two SORS (Spilled Oil Recovery System) on board. Each system consists of an outrigger assembly, a fast sweep boom, a Desmi Terminator Weir Skimmer, a control stand, and two Canflex Sea Slug floating storage bladders (12,500 gal capacity and 26,400 gal capacity).

4. High Endurance Cutters (WHEC): WHECs are 378 feet in length, with a maximum speed of 29.0 knots and a maximum range of 14,000 miles. Although no WHECs are home ported in Alaska, a WHEC is usually on patrol in Alaskan waters.

5. Medium Endurance Cutters (WMEC): WMECs are 213 to 283 feet in length. The CGC ALEX HALEY is the largest WMEC in the CG fleet. Their maximum speed ranges from 14 to 19.5 knots and maximum range can approach 22,000 miles. The Register of Cutters of U.S. Coast Guard contains vessel specific information on an individual cutter's performance. Two WMECs are home ported in Alaska:

CGC MUNRO(WHEC 724): Kodiak, Alaska
CGC ALEX HALEY (WMEC 39): Kodiak, Alaska

6. Patrol Boats (WPB): WPBs are 110 feet in length with a maximum speed of 30 knots, and a maximum range of 1,800 miles. Six WPBs are home ported in the following locations:

(a) CGC MUSTANG (WPB 1310): Seward, Alaska
(b) CGC LIBERTY (WPB 1334): Juneau, Alaska
(c) CGC ANACAPA (WPB 1335): Petersburg, Alaska
(d) CGC NASHON (WPB 1311): Ketchikan, Alaska
(e) CGC ROANOKE ISLAND (WPB 1346): Homer, Alaska
(f) CGC LONG ISLAND (WPB 1342): Valdez, Alaska

7. Inland Buoy Tenders (WLI): The only WLI in Alaska, CGC ELDERBERRY, is home ported in Petersburg. It is 65 ft. in length, has a maximum speed of 10 knots, and a maximum range of 2,000 miles.

The **Department of Defense (DOD)** has various military facilities, vehicles, equipment, and in some cases aircraft which can be made available in the event of critical incidents. In addition, construction related equipment may be locally available. Requests for DOD support shall be made through the RRT.

The **U.S. Navy, Supervisor of Salvage (NAVSUPSALV)** is the Federal agency most knowledgeable and experienced in ship salvage, shipboard damage control and diving. They also have extensive knowledge in oil spill response. They have equipment depots in Williamsburg, Virginia, Port Hueneme, California, Anchorage, Alaska, and Pearl Harbor, Hawaii. These depots have an extensive array of specialized equipment and personnel for use in oil spill response and ship salvage operations. Equipment is available to FOSC's, with operators and maintenance support, on a cost reimbursable basis. Requests for NAVSUPSALV support shall be made through the RRT. Contact (907) 384-2968 (Anchorage) or (703) 602-7527 (24-hour) for current inventories and equipment availability. Early alert "heads-up" calls are encouraged, appreciated, and invaluable even if the extent of the response has not been determined.

TAB B – STATE

Although emergency spill response equipment depots have not been established as required by law, the Alaska Department of Environmental Conservation (ADEC) has established nearshore response packages and pre-positioned spill response equipment caches as directed by the State legislature.

1. Term Contractors: ADEC maintains Term Contracts for emergency response to both oil and hazardous material spills. These contracts can be activated by the issuance of a *Notice to Proceed* by the Contract Manager or State On-Scene Coordinator. See this annex, Appendix III, Tab X for information on State term contractors.

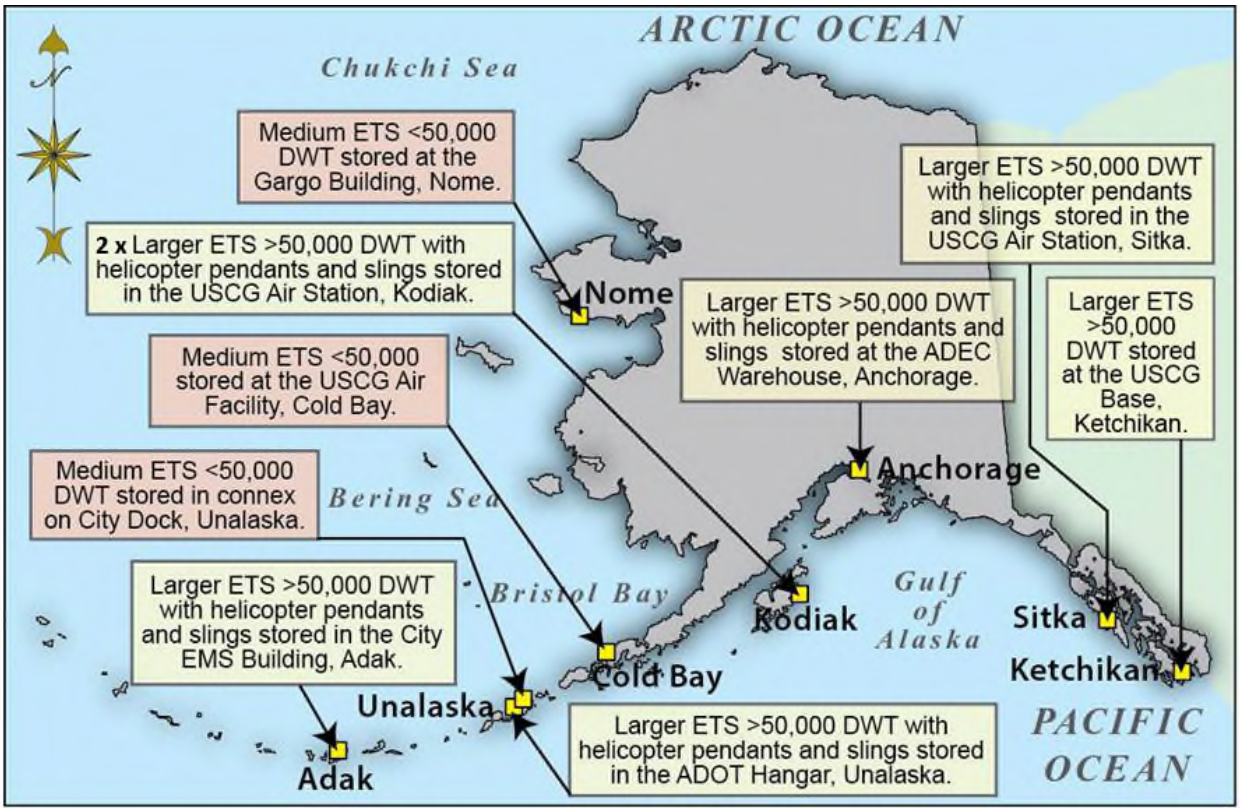
2. Community Spill Response Agreements: ADEC has entered into formal response agreements with several local communities for the purposes of oil and/or hazardous materials response. See the map and supporting information on the next page which identify these communities. Also, refer to the ADEC Call-out Directory (current edition) for the contact persons and telephone numbers for activating these response agreements.

3. State Ferries: An important response asset is the State “response” ferry, which provides an expanded communications capability as well as an excellent platform to manage a significant spill response. Other State ferries may also be called upon in a major spill response to provide berthing and forward staging platforms for work crews. (See Table 2, for specific information on State ferries.) Other State vessels may be available from the Alaska Department of Fish and Game and the Alaska Department of Public Safety.

4. Emergency Towing System (ETS): Following several incidents in the Unalaska Island vicinity, the mayor of Unalaska, in cooperation with ADEC, the Coast Guard, the marine pilots association, and other organizations, launched an initiative in 2007 to pre-position an ETS at Dutch Harbor. The ETS consists of a towline capable of towing a distressed vessel, a messenger line to assist in deploying the towline, a line-launcher, a buoy, and chaffing gear. The ETS may be deployed to a disabled ship from the stern of a tugboat or airdropped to the deck of the ship via helicopter. Two ETS have been purchased to cover most vessels found in the Aleutian Islands. The City of Unalaska has purchased a system suitable

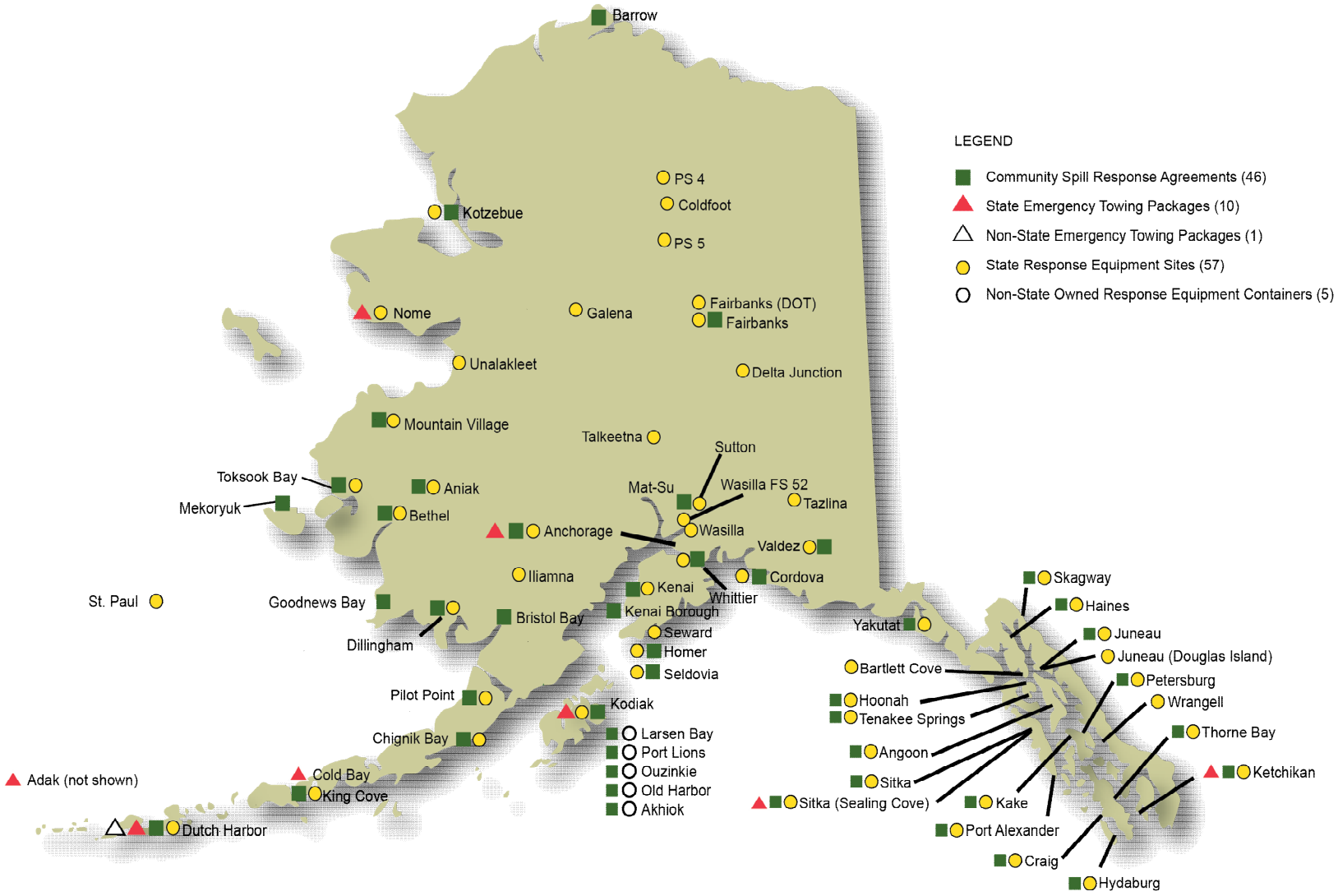
for vessels up to 50,000 DWT and the Alaska Department of Environmental Conservation has purchased a system capable of towing vessels greater than 50,000 DWT. An air deployable ETS has also been pre-staged at USCG Air Station Kodiak.

Since the program's origin, it has expanded statewide. The Alaska Department of Environmental Conservation has purchased and stored 10-inch Emergency Towing Systems at the USCG Air Station in Kodiak and Sitka, the Navy Supervisor of Salvage warehouse at Fort Richardson, and the Emergency Response warehouse in Adak, Alaska.



Map of Community Spill Response Agreements, Response Equipment Containers, and Emergency Towing Packages in Alaska

as of July 28, 2015



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5. **Spill Response Containers:** ADEC, as the State of Alaska's lead agency for responses to oil and hazardous substance spills, has developed a network of response equipment packages positioned in at-risk areas throughout the state. Many Alaskan communities are isolated from the larger population centers and the spill response equipment that is likely to be available there. To enhance the State's response capability and to assist these remote communities, ADEC has pre-staged across the state packages of spill response materials and equipment stored in steel containers of the "conex" type, which are air transportable. These local equipment response packages provide an immediate on-site response capability that can be accessed by trained personnel in a timely manner. Most of the packages are designed to assist in the initial response and cleanup of non-persistent oil spills in harbor areas. The map on the previous page) illustrates the locations of the equipment containers, and Table 1 provides a list of materials and gear typically stored within a conex.

Table 1: ADEC RESPONSE CONEX INVENTORY (in each ADEC Response Area)

NORTHERN ALASKA – Conexes available at: **Coldfoot** **Delta Junction**
Fairbanks **Galena**
Kotzebue **Nome**
TAPS PS 4, 5, and 9 **Unalakleet**

Inventory:	
Boom (with towing bridle assembly)	1 25-ft / 2-50ft sections
Boom Support Equipment (anchors, chains, rope, snap hooks)	assorted
85-gallon overpack drums	2
85 gallon drum liners	30
Standard drum plug wrench (min. 15" in length)	1
100' x 100' 20 mil plastic liner	1
Personal Protective Equipment (PPE)	assorted
Static resistant sorbent pads	2 bundles
Oil sorbent sheets (bundles)	10 bundles
Oil sorbent boom (bundles)	4 bundles
Loose absorbent material	2 bags
sorbent pad hand wringer, rustproof, steel frame	1
500 gallon storage tank, polyethylene, skid mounted	1
Tools (shovels, sledge hammer, rebar)	assorted

ADEC conex at DOTPF yard (Fairbanks):

100' x 100' 20 mil plastic liners	7
22 mil liners (60' x 60')	2
500-gallon storage tanks, polyethylene, skid-mounted	5

2 conexes at ADEC Fairbanks Response Warehouse:

5" boom	10 bundles
Sorbent pads	20 bundles
85-gallon overpack containers	
Assorted response equipment	

CENTRAL ALASKA – Conexes available at:

Anchorage (DEC Response Warehouse) **Aniak**
Bethel **Cordova**
Dillingham **Dutch Harbor**
Glennallen **Homer**

Table 1: ADEC RESPONSE CONEX INVENTORY (in each ADEC Response Area)

Iliamna
King Cove
Kodiak Island (Karluk, Larsen Bay, Port Lions, Ouzinkie, Old Harbor, Akhiok)
Talkeetna
Valdez
Kenai
Mountain Village
Palmer
Seldovia
Tazlina
Toksook Bay

Inventory:

Oil Snares without rope (Pom-Poms)	10 bales
Sorbent Pads, 17' X 19" 100 pads per bale	65 bales
Sorbent Boom, 5" X 10' 4 per bale	10 bales
Personal Protective Equipment (PPE)	assorted
Overpack Drum, Steel 85-gallon	1
JABSCO Rotary Vane Pump	1
40' X 40' Plastic 20 mil Liner	2
Drum Liner - 8 mil, 85-gallon, 50 bags per roll	2 rolls
Sorbent Materials Hand Wringer	1
MW41 rope mop skimmer w/return pulley(w/ 55 gallon open top drum)	1
4" oil-absorbing endless loop poly-mop	100-ft
1,800-gallon portable storage tank system	1
500-watt halogen light single head, light stand	2
Smart Ash Incinerator w/55 gallon open top drum	1
5,000 watt portable generator	1
Ice auger w/8" steel auger bit & 18” extension, 2 hp, gas mix	1
Portable water cleaning system w/absorbent material	1
85 gallon response drums loaded w/sorbents, bags, ppe	3
Knaak 30 steel locking tool box (w/ assorted tools, eqpt)	1

SOUTHEAST ALASKA – Conexes available at:

Angoon
Craig
Hoonah
Juneau
Ketchikan
Port Alexander
Skagway
Thorne Bay
Bartlett Cove (Glacier Bay)
Haines
Hyder
Kake
Petersburg
Sitka
Tenakee Springs
Wrangell
Yakutat

Inventory:

85-gallon Overpack Drums, (steel), removable top, mdl 1a2 dot	6
Overpack drum liners, 4mil., 50 bags/box	1 box
Kepner, 8" x 12" sea curtain boom	1000 feet
Tow bridles (for above boom), w/2 s.s. snap hooks	2
Boom Support Equipment (connector adapters, snap hooks, anchors, chain, ropes, buoys, tow lines)	assorted
Oil snare on a rope-50' length (pom-poms on a rope)	10 boxes
Sorbent pad hand wringer	1
Sorbent pads (bundles), 18" x 18"	40 bundles
Sorbent boom (bundles), 5" x 10'	25 bundles
Sorbent sweeps (bundles), 18" x 20'	15 bundles

Table 1: ADEC RESPONSE CONEX INVENTORY (in each ADEC Response Area)

Lift bags, 35" x 35" x 35", w/ 2 galv. snap hooks	2
Lift bag poly liners, 4 mil. (72" x 132")	4
Tool box (with assorted tools)	1

Table 2: ALASKA MARINE HIGHWAY SYSTEM
VESSEL INFORMATION TABLE

	Chenega	Columbia	Fairweather	Matanuska	Malaspina	Taku	Aurora	Leconte	Tustumena	Lituya	Kennicott
DATE COMPLETED	2005	1974	2004	1963	1963	1963	1977	1974	1964	2003	1998
LENGTH (feet)	235	418	235	408	408	352	235	235	296	180	382
BEAM (feet)	60	85	60	74	74	74	57	57	59	50	85
LOADED DRAFT	8′ 6″	17'-6 3/4"	8′ 6″	16'-11 5/8"	16'-11 3/8"	16'-11"	13'-10 7/8"	13'-10 7/8	14'-4 ½"	10′-6″	17'-6"
INT'L TONNAGE: Gross	3,442	13,009	3,442	9,214	9,121	7,302	3,124	3,124	4,529		12,904
Net	1,032	4,932	1,032	3,824	3,667	2,496	987	987	1,451		3,872
DOMESTIC Gross	tbd	3,946	tbd	3,029	2,928	2,624	1,280	1,328	4,593		Not
TONNAGE: Net	tbd	2,683	tbd	1,235	1,253	1,494	453	566	1,377		Available
HORSEPOWER	15.360	12,350	15.360	7,400	8,000	8,122	4,300	4,300	5,100	2,000	13,380
SERVICE SPEED (knots)	32	17.3	32	16.5	16.5	16.5	14.5	14.5	13.3	12	16.75
FUEL CONSUMPTION (gph)*	600	450	600	240	270	270	180	180	140		290
CREW CAPACITY	10	66	10	50	50	42	24	24	37		61
PASSENGER CAPACITY** (USCG authorized)	250	522 (winter) 971 (sum)	250	498 (winter) 745 (sum)	516 (winter) 701 (sum)	500	300	300	220		748 - SE 500 - SW
PASSENGER CAPACITY** AMHS Booking Limits	250	500 (winter) 625 (sum)	250	500	500	450	250	250	210	150	748 - SE 500 - SW
Staterooms - 4 berth		61		4	54	9	n/a	n/a	8		48
Staterooms - 3 berth		9		23	0	0	n/a	n/a	0		0
Staterooms - 2 berth	none	20	none	80	28	33	n/a	n/a	17		56
Staterooms - Handicap (4b)		0		0	0	0	0	n/a	0		3
Staterooms - Handicap (2b)		1		1	1	2	n/a	n/a	1		2
TOTAL STATEROOMS	0	91	0	108	83	44	0	0	26		109
TOTAL BERTHS	0	313	0	247	275	106	0	0	68		320
VEH CAPACITY** (linear ft)	720	2,680	720	1,760	1,760	1,380	680	680	720		120 - SE
(approx. number of vehicles)	36	134	36	88	88	69	34	34	36	18	103 - SW
RATE PER DAY For Spill Response	$20,000 (plus fuel)	$65,000	$20,000 (plus fuel)	$50,000	$25,000	$45,000	$25,000	$25,000	$25,000		$65,000

*Gallons per hour fuel consumption figures are averages based on calendar year 1996 weekly engineering reports, and include fuel usage to generate heat and electricity.

**These capacity figures represent functional booking limits, not Coast Guard authorized capacity

6. Alaska Department of Fish and Game (ADF&G) Vessels: The following information is provided for ADF&G vessels that may be available to support an oil spill response operation. Two other vessels, the R/V Kittiwake and the R/V Solstice are also part of the ADF&G vessel inventory.

NOTE: These are ADF&G research vessels and may be out at sea on research missions most of the time, so their availability for spill response is limited.

Table 3: ALASKA DEPARTMENT OF FISH AND GAME
VESSEL INFORMATION TABLE

Home Port	R/V Medeia	R/V Kestrel	R/V Pandalus	R/V Resolution
	Juneau	Petersburg	Homer	Kodiak
Vessel Specs				
Length (feet)	110	106	65	81
Beam (feet)	25	26	20	25
Service Speed (SS) (knots)	9.5-10	10	9.5	10
Fuel Consumption (GPH at SS)	50	N/A	19	17
Fuel Storage Capacity	26,500	12,600	7,000	14,000
Tankage aboard for servicing skiffs	None	None	Drums	1 Tank
Clear Deck Space	40	24X30	20X35	20X40
Crew	4	3	2-3	3
Berthing (incl. crew)	16	13	7	10
Galley and Food Service	Yes	Yes	Yes	Yes
Compressed Air	Yes	Yes	Yes	Yes
Satellite Communications	Yes	N/A	No	Yes
SSB Radio	Yes		Yes	Yes
Sonar	Side Scan	Side Scan	Side Scan	180 degree
D-GPS	Yes	Yes	Yes	Yes
Days at Sea (w/ full complement)	30+ days	20	30	30-40 days
Onboard shop	Yes	Yes	Yes	Yes
Daily Cost	$3,800	$3,600	$2,500	$3,100

TAB C – INDUSTRY:

Five industry response cooperatives currently exist in the State to provide oil spill response capability for certain facilities located together in a specific region. Alaska Clean Seas serves the North Slope region; Cook Inlet Spill Prevention and Response Inc. (CISPRI) serves the Cook Inlet region; Alyeska serves the Prince William Sound region; Southeast Alaska Petroleum Resources Organization, Inc. (SEAPRO) serves Southeast Alaska; and Alaska Chadux Corp serves the non-crude industry. (See this annex, Appendix III, Tab W for information on the Alaska spill cooperatives). Pertinent websites:

Alaska Clean Seas: http://www.alaskacleanseas.org/
Alaska Chadux Corporation: http://www.chadux.com/
Southeast Alaska Petroleum Resource Organization: http://www.seapro.org/

Alyeska Pipeline Service Company Ship Escort Response Vessel System: http://www.alaskagold.com/servs/servs.html

APPENDIX II – LOGISTICS

Alaska is the largest state, with isolated communities and villages, extreme weather, vast uninhabited areas, and limited transportation options. The majority of communities in the State are accessible only by air or water and have limited accommodations to house and support a large influx of response personnel. Accordingly, self contained support facilities for equipment and personnel will be required for a sustained response in the remote regions. Due mainly to these extreme logistic requirements, it can be far costlier to mount a response in Alaska General comments on equipment and personnel needs appear below; specific details can be found in the applicable subarea contingency plans.

TAB A – EQUIPMENT

Staging areas for spill response are those locations where equipment from all sources is assembled and held pending deployment to the spill site. Ideally, staging areas should be large enough for interim storage of all equipment, and in close proximity to the spill site to minimize transit time for equipment to the scene. During prolonged spill control operations, equipment maintenance may be accomplished in the staging areas, and staging areas may likely have to be away from the water.

1. Air Transportation: Consult with the Alaska Supplement to the NOAA Flight Information Publication, or the FAA on airport and runway specifics. In general, runways are paved in locations serviced by the major commercial airlines including Alaska, United, and Delta. Commuter airlines service the smaller communities, and charter flights aboard light aircraft and helicopters are available. During summer months when tourist traffic is heavy, charter flights may be limited. Weather may close the airports for days at a time. High winds and low visibility often ground small planes. Airplane crashes are common. For a major response, local air traffic will dramatically increase. FAA can be requested to impose flight restrictions, and FAA controllers can be deployed and operate from a Coast Guard WHEC or WMEC.

(b) Ground Transportation:

The Alaska Railroad provides rail service to Anchorage, Fairbanks, Seward, and Whittier. Additionally, private truck companies and rental car/truck agencies are available for transporting response personnel and equipment. See the Resources Section of each subarea contingency plan for specific listings of local ground transportation resources.

(c) Fueling Facilities

Fueling facilities for land, marine and air equipment will be limited in remote regions. For an extended response, remote fueling sites will need to be established to assure maximum operating and flight time on scene. Land based fueling sites will require approval from State and resource trustees and will need to provide provisions for spill prevention.

(d) Maintenance Facilities

Maintenance facilities will need to be provided by the equipment owner/operators. In general, self-contained maintenance facilities are required in all areas outside the major population centers.

2. Personnel: See the appropriate subarea contingency plan for specific information on lodging, transportation, clothing, food, and safety equipment. In general, shoreside lodging will be severely limited. Mobile homes, RV's or trailers may need to be brought in to meet the demand for response. One alternative is to provide "hotel barges" that are often used at remote logging camps, or utilize U.S. Naval vessels for berthing. All vessels used for lodging will need to meet appropriate Coast Guard standards or regulations.

3. Communications: See Appendix V in this annex.

4. Command Centers: Regardless of the spill volume, the designated FOSC, SOSC and LOSC will initially operate from their normal offices. Likewise, the resource agency representatives will operate from their normal work areas until adequate space is arranged, if necessary. For significant spills, these offices will prove inadequate in a very short time and a joint use command center will be required. Spills extending over a large area may require the establishment of auxiliary locations. Refer to the subarea contingency plans for area-specific recommendations for location of command centers.

5. Waste Management and Disposal: See Appendix VI in this annex.

APPENDIX III – PERSONNEL AND INFORMATION RESOURCES

The following tabs are included in this appendix. Generally, specific information regarding each resource is provided in the appropriate subarea contingency plan for that specific location. Where appropriate, information has been provided in this appendix regarding statewide resources.

*Tab A – Coast Guard Resources
*Tab B – Police and Fire Departments
*Tab C – Federally-Recognized Tribes in Alaska
Tab D – Hospitals *(see appropriate subarea plan)*
Tab E – Port Authority/Harbormasters *(see appropriate subarea plan)*
*Tab F – Marine Pilots Association
Tab G – Salvage Companies/Divers *(see appropriate subarea plan)*
Tab H – Marine Towing Companies *(see appropriate subarea plan)*
*Tab I – Alaska Native Organizations
Tab J – Local Scientists
*Tab K – Laboratories
Tab L – Water Intake Facilities *(see appropriate subarea plan)*
*Tab M – Environmental Interest Groups
Tab N – Airports and Aircraft Rental *(see appropriate subarea plan)*
Tab O – Trucking Companies/Car Rental *(see appropriate subarea plan)*
*Tab P – NOAA Weather Service
Tab Q – Media *(see appropriate subarea plan)*
*Tab R – Volunteer Organizations
*Tab S – Natural Resource Trustees
*Tab T – Local Emergency Managers
Tab U – Fishing Fleets *(see appropriate subarea plan)*
*Tab V – RRT and OSC Access to Emergency Communications
*Tab W – Oil Spill Cooperatives
*Tab X –State Term Contracts

*Note: These tabs include relevant statewide resources or provide additional information within this appendix. See the *Resources Section* of pertinent subarea contingency plans for a listing of regional assets within the subarea.

TAB A – COAST GUARD RESOURCES

Over 1200 personnel are permanently assigned to 42 Coast Guard units throughout Alaska. These personnel operate resources and perform many duties related to maritime safety and security as well as internal administration. As outlined in COMDTINST 16165.41, the resources of districts are available to the FOSC during a pollution response as the District Response Group (DRG).

Airports Accessible by C-130: There are approximately 100 or more airports in the State of Alaska that are accessible by Coast Guard and other military C-130 aircraft. Since airport information is updated on a frequent basis, rather than list the airports and specific information on each airport, the following website is provided for specific information regarding airports that may be used to support an oil or hazardous substance spill response.

http://www.dot.state.ak.us/stwdav/AirportList.shtml#central

TAB B – POLICE AND FIRE DEPARTMENTS

Normally fighting a shipboard fire is the responsibility of the ship crew and owner. Local government resources may be used to fight the fire. Federal government resources are not normally used to fight shipboard fires unless there is a threat to human life or safety or the fire threat creates a release of oil or hazardous substance. OPA funds may be used to fight a shipboard fire to alleviate the threat of pollution.

Navy SUPSALV has a contract with Crowley to obtain firefighting expertise. Contact numbers are (703) 607-2758 (D) or (703) 602-7527/7528 (24 hour).

Also refer to Marine Firefighting Plans developed for appropriate subareas.

TAB C – FEDERALLY-RECOGNIZED TRIBES IN ALASKA

The Federal On-Scene Coordinator or their representative notifies the tribe following an oil spill or hazardous substance release that has the potential to affect tribal interests. Visit the following website for contact information for Alaska-based federally-recognized tribes:

http://www.akrrt.org/plans.shtml

TAB F – MARINE PILOTS ASSOCIATION (STATEWIDE)

The following provides a statewide listing of marine pilots associations for possible use in spill response incidents.

Organization/Company	*Location*	*Phone Number*
Alaska Marine Pilots Association	Anchorage	248-2436
Alaska Marine Pilots	Unalaska	581-1240
Jack Johnson Inc.	Anchorage	563-5907
Parker Marine	Soldotna	262-1627
Southeast Alaska Pilots Association	Ketchikan	225-9696
Southwest Alaska	Homer	235- 8783

Pilots Association

Stone Marine Ventures Inc. Anchorage 338-6075

TAB I – ALASKA NATIVE ORGANIZATIONS

The following table lists information regarding the twelve Native Regional Corporations formed under the Alaska Native Claims Settlement Act. The Department of Commerce, Community and Economic Development (located in Juneau, 465-4750) also maintains a list of village and village corporation contacts.

ALASKA NATIVE REGIONAL CORPORATIONS		
NAME OF CORPORATION & GENERAL LOCATION	*ADDRESS*	*TELEPHONE*
Ahtna Incorporated (Copper River Basin)	406 W. Fireweed Lane Anchorage, AK	274-7662
Aleut Corporation (Aleutian Islands)	4000 Old Seward Hwy Anchorage, AK	563-4328
Arctic Slope Regional Corp. (North Slope, Northern Alaska)	Box 129 Barrow, AK 99723	852-8633
Bering Straits Native Corp (Norton Sound/Seward Peninsula)	PO Box 1008 110 Front Street, Suite 300 Nome, Alaska 99762	443-5252
Bristol Bay Native Corp (Bristol Bay/Dillingham)	800 Cordova Anchorage, AK	278-3602
Calista Corporation (Western Alaska)	601 W 5th Ave Anchorage, AK	279-5516
Chugach Alaska Corporation (Prince William Sound, Seward)	560 E 34th Ave Anchorage, AK	563-8866
Cook Inlet Regional Corp (Mat-Su, Anchorage, Kenai)	P.O. Box 93330 Anchorage, AK	274-8638 (fax) 279-8836
Doyon Limited (Interior, Central Alaska)	201 1st St Fairbanks, AK	452-4755
Koniag Incorporated (Kodiak Area)	4300 B St Anchorage, AK	561-2668
Nana Regional Corporation (Northwest Arctic Borough)	1001 E Benson Blvd Anchorage, AK	265-4100
Sealaska Corporation (Southeast Alaska)	One Sealaska Plaza Juneau, AK	586-1512

TAB K – LABORATORIES (STATEWIDE)

Disclaimer: ADEC in providing this list does not guarantee the accuracy or validity of the data generated by these laboratories. A laboratory that is ***certified*** or ***approved*** has established that they have the ability to implement a quality control program in accordance with the appropriate federal or State regulations or statutes. This list is updated every Tuesday by the ADEC Contaminated Sites Lab Approval Officer (907 465-5390). For the most up-to-date listing, visit the following website:

http://dec.alaska.gov/spar/csp/LabApproval/ListOfAprovedLabs.htm

When choosing a lab from the list, request the lab supply a copy of their current ADEC approval letter. These letters detail the methods *and matrices* for which the lab has approval. "Approved methods" does not imply approval for both water and soil samples. Labs must renew their approval and pass performance evaluation samples annually. Failure to do so results in the revocation of a lab's approval.

TAB M – ENVIRONMENTAL INTEREST GROUPS (STATEWIDE)

The following website provides a listing of environmental interest groups in the State of Alaska:

http://www.alaska.net/~jrc/alaska.html

TAB P – NOAA WEATHER SERVICE

The National Oceanic and Atmospheric Administration can provide current and forecast weather for the marine environment as well as the normal inland/coastal zones. In addition, ice reports and forecasts are available upon request.

Lead Forecaster	**271-5105/5088**
Ice Forecaster	**271-5107**
Transcribed Aviation Weather	**276-8199**

The following information was extracted from the **Alaska Marine Radio Directory.**

NOAA WEATHER RADIO: NOAA Weather Radio (NWR) offers continuous voice broadcasts on 162.40 and 162.55 MHZ that can usually be received 20-40 miles from the transmitting antenna site, depending on terrain and the quality of the receiver used. Where transmitting antennas are on high ground, the range is somewhat greater, reaching 60 miles or more. The VHF-FM frequencies used for these broadcasts require narrow-band FM receivers. The National Weather Service recommends receivers having a sensitivity of one microvolt or less and a quieting factor of 20 decibels. Some receivers are

equipped with a warning alert device that can be turned on by means of a tone signal controlled by the National Weather Service office concerned. This signal is transmitted for 13 seconds preceding an announcement of a severe weather warning.

VHF CONTINUOUS COMMERCE WEATHER BROADCASTS (NWR)

Location	*Station*	*Frequency (MHZ)*
Anchorage	KEC-43	162.55
Cordova	WXJ-79	162.55
Craig	WXJ-26A	162.40
Fairbanks	WXJ-81	162.55
Haines/Skagway	WXM-97	162.40
Homer	WXJ-24	162.40
Juneau	WXJ-25	162.55
Ketchikan/Annette	WXJ-26	162.55
Kodiak	WXJ-78	162.55
Nome	WXJ-62	162.55
Petersburg	WXJ-82	162.55
Seward	KEC-81	162.55
Sitka	WXJ-80	162.55
Valdez	WXJ-63	162.55
Wrangell	WXJ-83	162.40
Yakutat	WXJ-69	162.40

The National Weather Service manages these VHF-FM radio stations. Forecasts are issued at scheduled times; broadcast tapes are updated and amended as required. Generally, the broadcasts contain forecasts and warnings for the local area and nearby coastal waters, special severe weather bulletins, tsunami warnings, descriptions of weather patterns as they affect Alaska, and weather reports from selected weather stations.

NATIONAL WEATHER SERVICE HF VOICE WEATHER BROADCASTS

The following VOICE BROADCASTS are on the Upper Sideband (USB) 4125 KHz:

Location	*Station*	*Time of Broadcasts*
Annette	KDG58	7:00 am and 3:40 pm
Barrow*	KCB53	6:30 am and 12:00 pm
Kodiak	WHB29	8:00 am and 6:00 pm
Yakutat	KDG91	5:15 am and 7:30 pm
Cold Bay	KC195	10:30 am and 8:30 pm
King Salmon**	KC198	11:00 am and 5:15 pm
Nome	KC194	11:30 am and 9:30 pm

* Barrow broadcasts April 1 thru September 15 only.

** King Salmon broadcasts from April 1 thru October 15 only.

INTERNET ACCESS TO NOAA WEATHER REPORTS

The following types of weather reports for the State of Alaska are provided at this website:

http://pafc.arh.noaa.gov/

Public Forecasts	Observations	Aviation Forecasts
Marine Forecasts	Satellite/Radar	Hydrology
Climate	Ice Desk	Weather Links

COMMERCIAL BROADCAST AM & FM RADIO STATIONS
THAT BROADCAST NWS FORECASTS & WARNINGS

Location	*Station*	*Frequency (KHz)*
Anchorage	KFQD	750
Anchorage	KHAR	590
Anchorage	KSKA	91.1 FM
Anchorage	KYAK	650
Barrow	KBRW	680
Bethel	KYUK	580
Cordova	KLAM	1450
Dillingham	KDLG	670
Glennallen	KCAM	790
Homer	KBBI	1250
Homer	KGTL	103.5 FM
Homer	KGTL	620
Juneau	KINY	800
Juneau	KJNO	630
Kenai	KQOK	100.1 FM
Ketchikan	KTKN	930
Kodiak	KVOK	560
Kodiak	KMXT	101 FM
Kotzebue	KOTZ	720
Nome	KICY	850
Nome	KNOM	780
Saint Paul	KDLG	91.9 FM
Sand Point	KDLG	840
Seward	KRXA	950
Sitka	KIFW	1230
Soldotna	KSRM	920
Talkeetna	KSKA	rebroadcast
Unalaska	KDLG	1450
Wasilla	KMBQ	99.7 FM

NATIONAL WEATHER SERVICE – OFFICE TELEPHONE NUMBERS

Marine weather forecasts and warnings, when issued, can be obtained by telephone as follows:

24 Hours Daily

(Recorded Telephone Marine Forecasts)

Anchorage	936-2727
Cordova	424-3333
Juneau	586-3997
Kodiak	487-4949
Petersburg	772-3311
Sitka	747-6011
Wrangell	874-3232

Other Office Numbers

Location	*Telephone No.*	*Office Hours*
Annette	886-3241	12 am - 5 pm daily
Anchorage	271-5106	24 hours daily
Cold Bay	532-2448	24 hours daily
Fairbanks	456-0373	24 hours daily
Homer	235-8588	10 pm - 6 am daily
Juneau	586-7491	24 hours daily
King Salmon	246-3303	10 am - 6 pm daily
Kodiak	487-4313	6 am - 6 pm daily
Kotzebue	442-3231	12 am - 4 pm daily
Nome	443-2321	24 hours daily
Saint Paul	546-2215	12 am - 5 pm daily
Valdez	835-4505	24 hours daily
Yakutat	784-3322	24 hours daily

MAPS AND CHARTS: Each subarea contingency plan contains an index of U.S. Geological Survey topographic maps for that specific region. Also included are NOAA nautical charts for the area, a chart

number listing, and a listing of authorized nautical map dealers. See the following website for a list of available maps by subarea:

http://www.asgdc.state.ak.us/maps/cplans/subareas.html

TAB R – VOLUNTEER ORGANIZATIONS

Volunteer Organizations		
Agency	***Point of Contact***	***Telephone Number***
American Red Cross		
Anchorage – Disaster Services, State Coordinating Chapter		277-1538 (WK) 552-1110 (After Hours)
Fairbanks – Lead Chapter, Disaster		456-5937 (WK) 451-8267 (After Hours)
Bird Treatment & Learning Center	Dr. Jim Scott	562-4852 562-1852
Civil Air Patrol		
*Rescue Coordination Center	National Guard Armory Camp Denali	428-7230
Anchorage	Birchwood Composite Squadron	688-4995
Anchorage	Polaris Composite Squadron	272-7227
Fairbanks		474-0378
Homer		235-8062
Juneau		789-0245
Kenai		283-7801
Seward		224-3000
Coast Guard Auxiliary	17th Dist (Coast Guard)	463-2000
Juneau Raptor Center		586-8393

* Normal Process: The Alaska State Troopers will initiate a request for Civil Air Patrol assistance through the Rescue Coordination Center (RCC). The RCC will activate the Civil Air Patrol in the appropriate region, assign a mission number, and provide approval authority for the mission.

TAB S –NATURAL RESOURCE TRUSTEES

The following information is current as of plan publication. However, for the most current information, visit the following websites:
https://dec.alaska.gov/spar/PPR/plans/Trustee%20Emergency%20Contacts%20(Mar%202015).pdf
or http://akrrt.org/members.shtml

TRUSTEE	EMERGENCY CONTACT	CONTACT INFORMATION
U.S. Department of the Interior	1. Phillip Johnson	Wk: 907-271-5011 Fax: 907-271-4102 Email: philip_johnson@ios.doi.gov
	2. Doug Mutter	Wk: 907-271-5011 Fax: 907-271-4102 Email: douglas_mutter@ios.doi.gov
U.S. Department of Commerce	1. Ian Zelo	Wk: 206-526-4599 Fax: 202-526-6665 Email: ian.j.zelo@noaa.gov
	2. Brad Smith	Wk: 907-271-5006 Fax: 907-271-3030 Email: brad.smith@noaa.gov
	3. Rebecca Hoff	Wk: 206-526-4563 Fax: 202-526-6665 Email: rebecca.hoff@noaa.gov
U.S. Department of Agriculture	1. Ken Vaughan	Wk: 907-586-8789 Fax: 907-586-7555 Email: kvaughan@fs.fed.us
	2. Michael Wilcox	Wk: 907-586-9379 Fax: 907-586-7555 Email: mrwilcox@fs.fed.us
U.S. Department of Defense	Alaskan Command (Command Post)	Wk: 907-552-3000 Fax: 907-552-5102
	Elmendorf Air Force Base (Command Post)	Wk: 907-552-3000 Fax: 907-552-5102 Email: james.spell@elmendorf.af.mil
	Eielson Air Force Base (Command Post)	Wk: 907-377-1500 Fax: 907-377-2724 Email: max.johnson@eielson.af.mil
	King Salmon, Galena, and Long Range Radar Stations (Command Post)	Wk: 907-552-3000 Fax: 907-552-5102 Email: scott.hansen@elmendorf.af.mil
	U.S. Army (Fort Wainwright, Fort Greely, Fort Richardson) (Command Post)	Wk: 907-384-3000 Fax: 907-384-1141 Email: kevin.gardner@us.army.mil
Alaska Department of Environmental Conservation	1. Bob Mattson	Wk: 907-465-5349 Fax: 907-465-2237 Email: bob.mattson@alaska.gov
	2. Dale Gardner	Wk: 907-269-7682

TRUSTEE	EMERGENCY CONTACT	CONTACT INFORMATION
		Fax: 907-269-7648 Email: dale.gardner@alaska.gov
Alaska Department of Fish and Game	1. TBD	
	2. Will Frost	Wk: 907-267-2813 Fax: 907-267-2449 Email: William.frost@alaska.gov
	3. Megan Marie	Wk: 907-267-2446 Fax: 907-267-2449 Email: megan.marie@alaska.gov
	2. Adam Smith	Wk: 907-269-8557 Fax: 907-269-8913 Email: adam.smith@alaska.gov
Alaska Department of Law	1. Jennifer Schorr	Wk: 907-269-5274 Fax: 907-278-7022 Email: jennifer.schorr@alaska.gov
	2. Jennifer Currie	Wk: 907-269-5274 Fax: 907-278-7022 Email: jennifer.currie@alaska.gov
	3. Steve Mulder	Wk: 907-269-5274 Fax: 907-278-7022 Email: steve.mulder@alaska.gov

1 = Primary Contact

2 = lst Alternate Contact

3 = 2nd Alternate Contact

TAB T – LOCAL EMERGENCY MANAGERS

(Source: DMVA/DHSEM)

Emergency Management Assistance and Other Assistance		
Location/Borough	*Point of Contact*	*Phone Number*
Anchorage	Office of Emergency Mgt	343-1401/1400
Bethel	Bethel Fire Department	543-3121
Bristol Bay Borough	Borough Fire Department	246-4224
Cordova	Fire Department	424-6117
Dillingham	Fire Department	842-2288
Fairbanks North Star Borough	Office of Emergency Mgt	459-1481
Fort Yukon	Police Department	662-2311
Haines	Police Department	766-2121
Juneau	Emerg Mgt Coordinator	586-0221
Kenai Peninsula Borough	Office of Emergency Mgt	262-4910
Ketchikan Gateway Borough	Planning Department	228-6618
City of Kodiak	Fire Department	486-8040
Kotzebue	Fire Department	442-3351
Mat-Su Borough	Dept of Public Safety	373-8800
Nome	Office of Public Safety	443-7824
North Slope Borough	NSB Search and Rescue	852-0284
Northwest Arctic Borough	Public Services Director	442-2500
Petersburg	Fire Department	772-3355
Sand Point	Director of Public Safety	383-3700
Sitka	Fire Department	747-3233
Unalaska	Dept of Public Safety	581-1233
Valdez	Police Department	835-4560
Whittier	Police Department	472-2340
Wrangell	Police Department	874-3304

For a complete listing of Local Emergency Planning Committee (LEPC) chairpersons, refer to the State of Alaska, Dept of Military and Veterans Affairs Internet home page at:

http://ready.alaska.gov/SERC/documents/Nov%202017%20LEPC%20Contact%20List_public.pdf

TAB V – ALASKA RRT AND OSC ACCESS TO EMERGENCY COMMUNICATIONS

Three separate systems for broadcast of emergency messages are available to the Alaska Regional Response Team (RRT) and the Federal or State On-Scene Coordinator (OSC). These include the NOAA Weather Radio System, the State of Alaska Emergency Alert System, and the National Warning System.

a. NOAA Weather Radio System: The Alaskan NOAA Weather Radio System is handled through the National Weather Service (NWS) and is constantly updated. The NOAA Weather Radio System operates in two modes, i.e. normal and alarm. In the normal mode the system provides regionally specific updated weather information. In an emergency, NWS can activate the alarm mode. In the alarm mode, NWS can remotely activate any one of 15 remote radio weather transmitters. The OSC or the RRT can activate the alarm mode of the Alaskan NOAA Weather Radio System by contacting the NWS and stating that they wish to activate the NOAA Weather Radio System to service certain geographical areas. All messages should be short and concise. As a minimum, provide the following information:

(1) The nature of the emergency
(2) Actions underway by local, State and federal agencies and the Responsible Party
(3) Special instructions to the public

Standard NOAA weather radio transmitters (with a nominal 45-mile broadcast radius) are situated at strategic locations throughout the state. In addition, when NOAA makes a broadcast on its weather radio affecting a specific geographical region, it can also notify the local primary Common Program Control Station (CPCS-1), a component of the Emergency Alert System, covering the affected area and ask the CPCS-1 station to rebroadcast the emergency message.

b. State of Alaska Emergency Broadcasting System: The Alaska Division of Homeland Security and Emergency Management (ADHSEM) is responsible for activation of the State Emergency Alert System (EAS). The State EAS can be activated statewide or regionally. To use the EAS, contact ADHSEM and request system activation.

c. National Warning System: The ADHSEM also operates the Alaska component of the National Warning System (NAWAS). The NAWAS alerting system is designed to provide immediate notification to 28 communities and agencies located in Alaska. This system uses dedicated commercially-leased land lines. To use this alerting system, contact ADHSEM and request activation of the NAWAS.

To activate either the EAS or the NAWAS contact ADHSEM at **1-800-478-2337 or 907-428-7000** and provide information as noted above in paragraph a: NOAA Weather Radio System.

TAB W – OIL SPILL RESPONSE COOPERATIVES

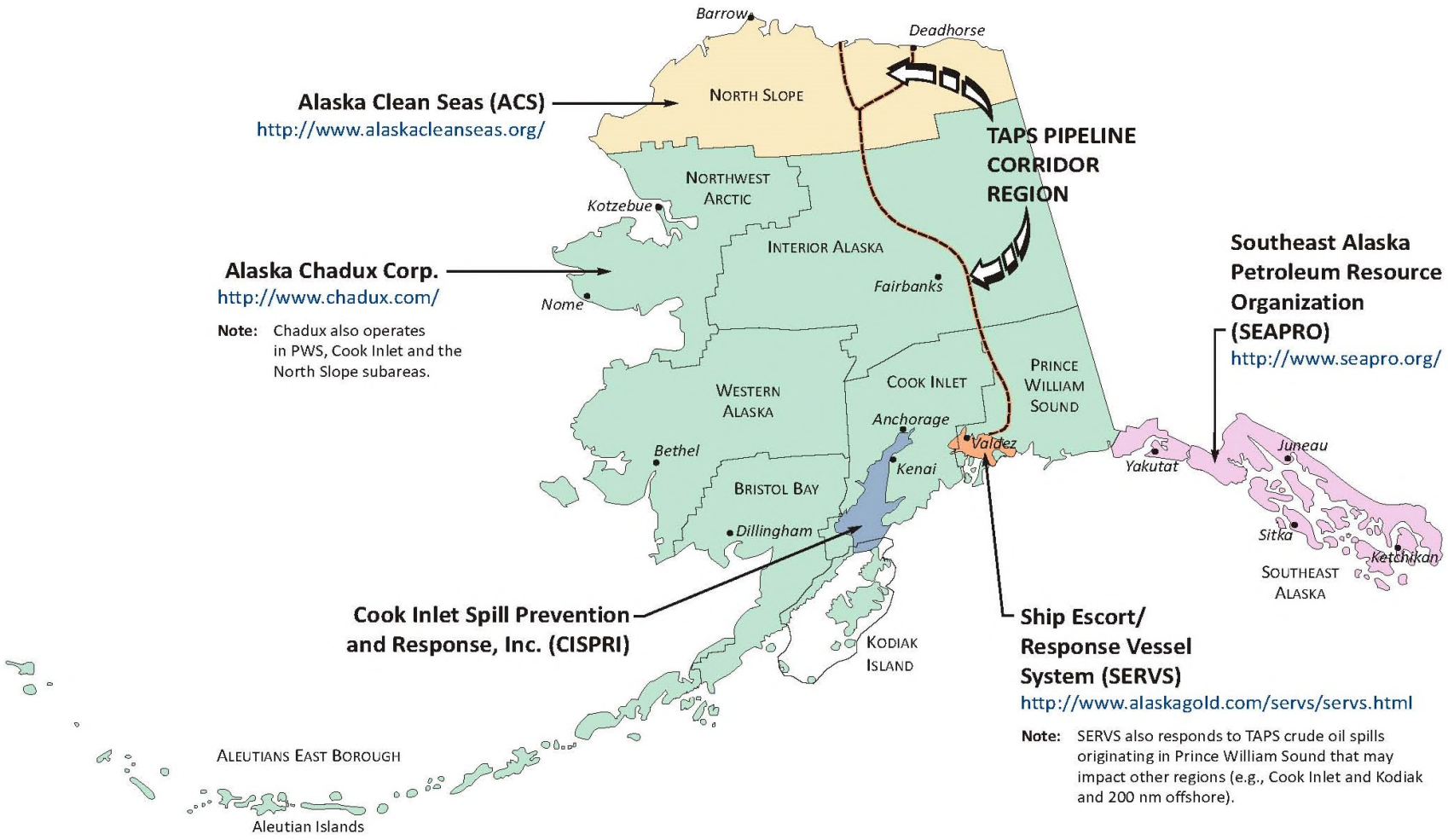
Organization	*Contact Name*	*Telephone Number*		*Address*	*Fax Number*
		Office	*24-Hour*		
Alaska Clean Seas (ACS)	Operations Manager	659-3202	659-2405	Pouch 340022 Prudhoe Bay, AK 99734-0022	659-2616
Cook Inlet Spill Prevention & Response (CISPRI)	Todd Paxton	776-5129	776-5129	P.O. Box 7314 Mile 26.5 N. Spur Nikiski, AK 99635	776-2190
Alyeska Ship Escort Response Vessel System (SERVS)	Duty Officer	835-6973	835-6901	P.O. Box 109 Mail Stop 730 Valdez, AK 99686	265-8983 835-6962
Alaska Chadux Corp.	Bob Heavilin	348-2365	348-2365	2347 Azurite Court Anchorage, AK 99507	348-2330
Southeast Alaska Petroleum Resource Organization (SEAPRO)	Dave Owings	225-7002	228-2700	540 Water St, Suite 202 Ketchikan, AK 99901	247-1117

Pertinent websites for Alaska OSROs/response cooperatives:

Alaska Clean Seas: http://www.alaskacleanseas.org/
Alaska Chadux Corporation: http://www.chadux.com/
Southeast Alaska Petroleum Resource Organization: http://www.seapro.org/
Alyeska Pipeline Service Company Ship Escort Response Vessel System: http://www.alaskagold.com/servs/servs.html

See map on the following page for the areas of responsibility for OSROs/response cooperatives.

Oil Spill Response Organization (OSRO) – Areas of Responsibility



Note:
1. *SERVS also responds to TAPS releases.*
2. *Website not available for CISPRI.*
3. *SERVS is a division of Alyeska Pipeline Service Company.*

TAB X – STATE TERM CONTRACTS

ADEC CONTAMINATED SITES TERM CONTRACTORS

Contractor	*Contact Name*	*Phone Numbers*		*Address*
		Office	*Fax*	
AMEC Earth & Environmental	Keri DePalma	479-7586	479-0193	431 Old Steese Hwy, Suite 200, Fairbanks, AK 99701
BGES	Robert Braunstein Keith Guyer	696-2447	696-2439	P.O. Box 110126 Anchorage, AK 99511-0126
Bristol Environmental & Engineering Services Corp.	Joe Terrell Mike Torpy	563-0013	563-6713	2000 W International Airport Rd, C-1 Anchorage, AK 99502-1116
Carson Dorn	Tom Carson	586-4447	586-5917	712 West 12th Street, Juneau, AK 99801
ChemTrack	Chuck Ronan	349-2511	522-3150	11711 S. Gambell St, Anchorage, AK 99515-3444
CH2Mhill	Don Turner	278-2551	257-2000	301 W. Northern Lights Blvd, Ste 601 Anchorage, AK 99503-2648
Ecology and Environment	Vivian Melde	257-5000	257-5007	3301 C Street, Suite 209, Anchorage, AK 99503
Emerald Alaska	Blake Hillis	258-1558	258-3049	2020 Viking Drive, Anchorage, AK 99501
Hart Crowser	James D. Gill	276-7475	276-2104	2550 Denali St, Suite 705, Anchorage, AK 99503
ICRC	William E. Humphries	694-4272	694-4271	11901 Business Blvd, Suite 202, Eagle River, AK 99577
Michael L. Foster & Associates	Michael L. Foster	696-6200	696-6202	13135 Old Glenn Hwy, Suite 210, Eagle River, AK 99577
Nortech	John Hargesheimer	222-2445	222-0915	206 E Fireweed Lane, Suite 200, Anchorage, AK 99503
		452-5688	452-5694	2400 College Road, Fairbanks, AK 99709
Northwind Environmental	Kim Kearney	277-5488	277-5422	235 E 8th Avenue, Suite 210, Anchorage, AK 99501
Oasis Environmental	Max Schwenne	258-4880	258-4033	807 G Street, Suite 250, Anchorage, AK 99501
Shannon & Wilson	Rohn Abbott	479-0600	479-5691	2055 Hill Road, Fairbanks, AK 99709
		561-2120	561-4483	5430 Fairbanks St, Anchorage, AK 99518
SLR	Andrew Dimitriou	222-1112	222-1113	2525 Blueberry Road, Suite 206, Anchorage, AK 99503
URS	Paul Dworian	562-3366	562-9688	2700 Gambell St, Anchorage, AK 99503
R.F. Weston	Mark Goodwin	276-6610	276-6694	425 G Street, Suite 300, Anchorage, AK 99501

ADEC OIL SPILL RESPONSE TERM CONTRACTORS

Contractor	*Address*	*Phone/ Fax*	*Contact name & after-hours number*
Carson Dorn	712 West 12th Street Juneau AK 99801	586-4447 586-5917	Tom Carson Hm: 789-0034; Cell: 723-9769
Phillip Services	1813 E. 1st Ave, # 101 Anchorage AK 99501	272-9007 272-6805	Tom Poliquin 227-1928 Cell
Pacific Environmental Corp. (PENCO)	6000 A Street Anchorage AK 99518	562-5420 562-5426	Rick Wilson 244-6069 Matt Melton 242-2186
Shannon & Wilson	5430 Fairbanks St. # 3 Anchorage AK 99518 2055 Hill Road Fairbanks, AK 99709	561-2120 561-4483 479-0600 479-5691	Stafford Glashon 441-6672 Matt Hemry 229-1064
Alaska Chadux Corporation	2347 Azurite Court Anchorage, AK 99507	346-2365 348-2330	24 Hr # 348-2365 Bob Heavilin 529-2530
Ecology & Environment	3301 C Street, Suite 209 Anchorage AK 99503	257-5000 257-5007	Vivian Melde
BGES, Inc	750 West 2nd Ave. Anchorage, AK 99501	644-2900 644-2901 696-2437 696-2439	24 Hr # 644-2900 Robert Braunstein Cell: 830-9560
Environmental Compliance Consultants	1500 Post Rd. Anchorage, AK 99501	644-0428 677-9328	24 Hr. # 751-4493 Ask for Mike Anderson
Nuka Research and Planning Group	P.O. Box 175 Seldovia, AK 99663	234-7821 399-3598	Tim Robertson 234-7821 Elise DeCola 508-454-4009
Emerald Alaska, Inc	425 Outer Springer Loop Palmer, AK 99645	258-1558 746-3651	24 Hr. # 258-1558
Oasis Environmental	807 G. Street, Suite 250 Anchorage, AK 99501	258-4880 258-4033	Max Schwenne 694-7070

Contractor	*Address*	*Phone/ Fax*	*Contact name & after-hours number*
Aware Consulting	P.O. Box 526 Soldotna, AK 99669	260-2030 260-2035	Denise Newbould 262-8320 John Coston 283-8139 Rick Warren 262-4740
North Wind	235 East 8th Ave. Suite 210 Anchorage, AK 99811	John Costello 277-5488 (W) 277-5422(F)	John Costello 360-5383 (C) 929-1071 (H)
Trident Services, Inc.	7926 Old Seward Highway Suite B-2 Anchorage, AK 99518	Mark Sienkiewicz President 929-9414 (W) 770-2986 (F)	Mark Sienkiewicz 929-9414
AHTNA Construction	240 East Tudor Rd. Suite 200 Anchorage, AK 99503	John Wiese Operations Manager 771-5311(W)	John Wiese 746-5383 (H) 832-3371 (C) Sharon Sadlon 745-4194 (H) 227-4022 (C)
TC Enterprise Inc.	P.O. Box 2338 Kodiak, AK 99615	Ryan Sharratt Project Manager 486-3755 (W) 486-5573 (F)	Ryan Sharratt 486-3755

APPENDIX IV – SPECIAL FORCES

TAB A – U.S. COAST GUARD NATIONAL STRIKE FORCE COORDINATION CENTER

The National Strike Force (NSF) was created in 1973 as a Coast Guard staffed "special force." This special force assists Federal On-Scene Coordinators (FOSC) responding to potential and actual oil and hazardous material spills, as directed by the National Contingency Plan. The NSF is composed of four units, including three 35-member Strike Teams. These teams are:

(1) Atlantic Strike Team located in Fort Dix, New Jersey, (609) 724-0008/0009;

(2) Gulf Strike Team located in Mobile, Alabama, (205) 639-6601; and

(3) Pacific Strike Team located in Novato, California (415) 883-3311.

The Strike Teams are managed by the fourth unit, the National Strike Force Coordination Center (NSFCC), which is located in Elizabeth City, North Carolina (252) 331-6000.

The NSF is a unique, highly trained cadre of Coast Guard professionals who maintain and rapidly deploy with specialized equipment in support of FOSCs preparing for and responding to oil and hazardous substance incidents in order to prevent adverse impacts to the public and reduce environmental damage. NSF capabilities include:

(1) responding with trained personnel and specialized equipment to prevent, contain and/or remove spills of oil and releases of hazardous substances;

(2) providing spill management expertise;

(3) assisting with response planning and consultation;

(4) conducting operational training in oil and chemical spill response techniques and equipment usage

(5) coordinating, conducting, and evaluating the National Preparedness for Response Exercise Program;

(6) identifying, locating, and assisting in the transportation of specialized equipment needed for spill response; and

(7) providing support from the Public Information Assist Team to FOSCs during pollution responses.

Upon receiving a request, personnel and equipment will be deployed to the scene in the most expeditious manner possible. This may involve over-the-road transport: all three Strike Teams have tractor-trailer rigs which give them rapid deployment capabilities. In the event air transportation of equipment is required, aircraft support will be coordinated by the appropriate Area Commander.

By requesting assistance from any one Strike Team, an FOSC immediately gains access to the entire National Strike Force personnel roster and equipment inventory. Each team maintains a state of readiness that enables them to dispatch two members immediately, four members within two hours, and up to twelve members within six hours as the circumstances of the incident dictate. Equipment would be dispatched within four hours of a request for assistance.

Since response support is time critical, early notification of Strike Team assistance or potential assistance will allow the teams to begin logistics planning even before a formal request is made.

Logistical Considerations: Strike Teams make every effort to be logistically independent; however, assistance may be required from the FOSC in arranging the following support:

(1) Heavy lifting equipment, such as cranes and forklifts capable of handling a 16,000 lb. containment barrier box;

(2) Fork extensions for forklift;

(3) Small boats, vessels of opportunity;

(4) Tractor-trailer rigs;

(5) Electrical power, land lines for telephones and computers, potable water supply and fuel supply for command posts.

Specific logistic needs will be clarified during the initial request for assistance, and these needs vary, dependent upon the incident and location. Strike Teams attempt to minimize the effort required by the FOSC's staff to arrange support, but the Strike Teams will rely upon the local knowledge of the FOSC's staff when making decisions regarding logistics.

TAB B – PUBLIC INFORMATION ASSIST TEAM

The Public Information Assist Team (PIAT) is an element of the National Strike Force Coordination Center staff that is available to assist FOSCs in meeting the demands for public information during a response or exercise. Its use is encouraged any time the FOSC requires outside public affairs support. Requests for PIAT assistance may be made through the NSFCC (919) 331-6000.

TAB C – U.S. COAST GUARD DISTRICT RESPONSE GROUP
U.S. COAST GUARD DISTRICT RESPONSE ADVISORY TEAM

The USCG District Response Group (DRG) is a framework within each Coast Guard District to organize district resources and assets to support USCG FOSCs during a response to a pollution incident. DRGs assist the FOSC by providing technical assistance, personnel, and equipment, including the Coast Guard's pre-positioned equipment. Each DRG consists of all Coast Guard personnel and equipment within the district, including the District Response Advisory Team (DRAT), which is available to provide support to the FOSC in the event a spill exceeds local response capabilities. The DRAT has personnel specifically trained in pollution fund management, equipment, and environmental assessment.

TAB D – U.S. NAVY

The US Navy is the federal agency most knowledgeable and experienced in ship salvage, shipboard damage control, and diving. The US Navy has an extensive array of specialized equipment and personnel available for use in these areas as well as in specialized oil containment, collection, and removal equipment.

The Supervisor of Salvage (SUPSALV) can provide salvage expertise and maintains a warehouse on each US coast stockpiled with salvage and response gear. A request for US Navy assistance is made through the FOSC or the RRT.

TAB E – SCIENTIFIC SUPPORT COORDINATOR

NOAA Scientific Support Coordinators (SSC) are the principal advisors to the U.S. Coast Guard FOSC for scientific issues, communication with the scientific community, and coordination of requests for assistance from State and federal agencies regarding scientific studies. The SSC strives for a consensus on scientific issues affecting the response, but ensures that differing opinions are communicated to the FOSC. At the request of the FOSC, the SSC leads the scientific team during a response and is responsible for providing scientific support for operational decisions and for coordinating on-scene scientific activity. The SSC leads the synthesis and integration of environmental information required for spill response decisions in support of the FOSC, while coordinating with State representatives, appropriate trustees and other knowledgeable local representatives. The SSC is supported by a scientific support team that includes expertise in environmental chemistry, oil slick tracking, pollutant transport modeling, natural resources at risk, environmental tradeoffs of countermeasures and cleanup, and information management. At the request of the FOSC, the NOAA SSC may facilitate the FOSC's work with the lead administrative trustee for natural resources to ensure coordination between damage assessment data collection efforts and data collected in support of response operations.

TAB F – ENVIRONMENTAL PROTECTION AGENCY

The EPA's **Environmental Response Team (ERT)** has expertise in treatment, biology, chemistry, hydrology, geology, and engineering. The ERT can provide the FOSC access to special equipment to deal with chemical releases. The ERT can also provide the FOSC with advice concerning the following:

- hazard evaluation,
- multimedia sampling and analysis,
- risk assessment,
- on site safety,
- cleanup techniques,
- water supply decontamination and protection,
- use of dispersants,
- environmental assessment,
- degree of cleanup required, and
- disposal of contaminated materials.

The ERT offers various training courses to prepare response personnel. The EPA ERT teams are located in Edison, NJ; Cincinnati, OH; and Las Vegas, NV.

The **Radiological Emergency Response Team (RERT)** coordinates or assists federal, State, tribal, and local response efforts before, during, and following a radiological incident. There are RERT personnel at the two EPA National Radiation Laboratories in Montgomery, Alabama and Las Vegas, Nevada, as well as at the EPA's regional offices and national headquarters. RERT can provide the support in the following areas:

- technical advice and assistance to prevent or minimize threats to public health and the environment; advice on protective measures to ensure public health and safety;
- assessments of any release for dose and impact to public health and the environment;
- monitoring, sampling, laboratory analyses and data assessments to assess and characterize environmental impact (Staff from EPA's National Air and Radiation Environmental Laboratory

and its Radiation and Indoor Environments National Laboratory provide monitoring and assessment services both at the labs and at the response site, if needed.); and

- technical advice and assistance for containment, cleanup, restoration, and recovery following a radiological incident.

The **National Decontamination Team (NDT)**, located in Cincinnati, Ohio, provides expertise and support to On-Scene Coordinators regarding the decontamination of buildings or other structures in the event of an incident involving releases of radiological, biological, or chemical contaminants.

TAB G – AGENCY FOR TOXIC SUBSTANCE AND DISEASE REGISTRY

The Agency for Toxic Substance and Disease Registry (ATSDR):

- maintains appropriate disease/exposure registries;
- provides medical care and testing of individuals during public health emergencies;
- develops, maintains, and informs the public concerning the effects of toxic substances;
- maintains a list of restricted or closed areas due to contamination;
- conducts research examining the relationship between exposure and illness; and
- conducts health assessments at contaminated sites.

Additionally, the ATSDR assists the EPA in identifying most hazardous substances at CERCLA sites, develops guidelines for toxicological profiles of hazardous substances, and develops educational materials related to the health effects of toxic substances. ATSDR resources are an important tool for the FOSC to use in assessing the possible effects of an environmental emergency on the public's health.

The Agency's 24-hour telephone number is: **(404) 639-0615.**

APPENDIX V – COMMUNICATIONS

Adequate communications equipment along with a well thought out communications plan are imperative to a coordinated response. For responses involving numerous vessels or operations distant from the command center, the communications center will have to be placed as close to the response location as feasible. The communication center will require telephones, facsimile machines, single side band, and VHF-FM base station with additional portable radios. The distances involved may necessitate the installation of VHF repeater stations to allow communications at greater distances. Contingency planners must seriously address their communications requirements prior to a spill. Failure to properly command and control response resources will prove devastating to the response.

a. Radios: Marine communications at the command center and aboard vessels will generally require 25 watt VHF marine radios with high gain antennas. Vessels usually monitor channel 16 and switch to other working frequencies. When aircraft are used in conjunction with on-water activities such as directing vessel movements, VHF marine frequency radios will be required for use by the aircraft. Due to aircraft noise, these radios should be equipped with headsets and boom mikes. Communications with aircraft from the command center will require standard VHF frequency capability. ALASCOM's Marine Radio Service provides vessel to vessel, vessel to shore, and shore to vessel communications through the marine VHF single side band service. In large spills where the responsible party is unknown or is not responsive, the contracted response organization will be required to provide the necessary communications "package".

Alaska Land Mobile Radio (ALMR) – The State of Alaska, the Department of Defense, other federal agencies in Alaska, and local municipalities have joined together in a consortium effort to design, build, and operate and maintain a fully interoperable wireless communications system in Alaska, the Alaska Land Mobile Radio Project (ALMR). The primary objective of ALMR is to provide a reliable and secure emergency communications system for all emergency responders in Alaska, especially for multi-agency responses to emergencies and critical situations.

ALMR is a two-way radio system used by first responders and public safety officials for instant, effective, and private communications during everyday operation. It also provides the efficiency, security and flexibility required during emergencies for communications on demand and in real time.

The ALMR coverage in the State of Alaska is primarily in the Interior, Southcentral and Southeast areas of the state. For those areas of Alaska not currently within the ALMR coverage, the State of Alaska Department of Military and Veterans Affairs (ADMVA) has coordinated with state and local agencies to develop a Statewide Communications Interoperability Plan (SCIP) to address the interoperability needs of those areas. The plan envisions local entities applying for federal grants to purchase communications equipment appropriate to those communities to allow them to communicate with regional response communities through portable, tactical, interoperable IP gateway devices. For specific details of the SCIP, contact ADMVA. For additional information on the ALMR, see the following website: http://www.alaskalandmobileradio.org/pdf/20110927_ALMR%20SATS%20FAQsV3.pdf

b. Telephones: Telephone support will have to be coordinated through the local telephone utility. The requirements for telephone support may overload the capability of some of the remote

locations resulting in delays in acquiring a suitable number of lines. Long distance service may also be severely limited during initial operations.

c. Telefax: Dedicate at least two facsimile machines to the command center. Fax machines may be purchased or rented on the local economy in the larger cities within the region. For remote responses, plan to deploy to the spill location with adequate fax capability since availability will be limited. Use one machine for incoming and one for outgoing traffic. Establish procedures very early in the response for sending, receiving, and distributing faxes. Publish the fax numbers within the Command Center so that these numbers can be referenced to agencies and organizations outside the command structure.

d. Portable Telephones: Cellular telephone coverage is rather limited in Alaska and can't be relied upon as a primary means of communication throughout the state. Yet, cellular phones often can provide an additional means of maintaining communications with individuals outside the command center. The USCG's Pacific Strike Team has an International Maritime Satellite Organization (INMARSAT) Telesystem capable of transmitting and receiving calls from anywhere in the world. The system can also send and receive faxes. ADEC also has several of these systems on hand. ADMVA/DHSEM has five Personal Satellite Terminals (PST) on the American Mobile Satellite Corporation (AMSC) system and three on the INMARSAT system. ADMVA/DHSEM has 15 Iridium portable satellite phones and three Globalstar portable satellite phones available for deployment.

e. Portable Communications Trailers: Portable communications trailers are rare in Alaska. The major industry response co-ops have the capability to establish portable communications centers, either in flyaway kits or road transportable units. The DOD has extensive communications that could conceivably be brought to bear in the event of a significant spill. ADEC, DMVA, and EPA maintain a command van trailer in Anchorage for deployment during spill responses. The Alaska State Troopers have a communications trailer available. The 103rd Civil Support Team (CST, Alaska National Guard) has a communications van available for use in special situations.

f. Copiers: Dependable, high volume copiers will be required in the command center. The size of the response will dictate the number of copiers required. Having more than one copier is advisable in the event that one machine breaks down from overuse.

TAB A – FEDERAL COMMUNICATIONS RESOURCES

1. General: The following is a description of U.S. Coast Guard VHF and HF radio coverage in Alaska. The U.S. Coast Guard provides VHF-FM throughout the Southeast and South Central coastal areas and two sites in the Bering Sea. This coverage is not continuous along the coast. High Frequency (HF) coverage provides additional coverage for off-shore Alaskan waters. VHF-FM Communications are monitored continuously at Juneau, Valdez and Kodiak operated by Coast Guard Sectors in Juneau and Anchorage. Each Communication Center has listening watches on VHF Channel 16 and 2182 KHz. Communication Station Kodiak (CommSta) provides 24 hour HF coverage on 2182 KHz and 4125 KHz. Coast Guard cutters and aircraft have HF, VHF, and UHF capabilities during underway or air borne operations. All Coast Guard ships (while in port) and shore stations in Alaska are interconnected with a wide area network. All data and recorded message traffic is carried on this network. Telephone service is available at all Coast Guard units. Cellular phone capabilities are available throughout large areas of the

state's coastal areas and along the road system. The Juneau Coast Guard District Office maintains a sole satellite capability with other DOD entities.

Each Communication Center can be contacted via VHF-FM channel 16. For communications in Southeast Alaska, Upper Cook Inlet (Site Summit High Site) and the Bering Sea (Cold Bay and St. Paul Island) contact the Sector Juneau Commcen, for Prince William Sound communications are Sector Anchorage Commcen Valdez and Kenai Peninsula, Cook Inlet and Kodiak Island communications are Sector Anchorage Commcen Kodiak.

Sector Juneau Command Center:
Commercial Phone: (907) 463-2980
Fax: (907) 463-2023
Email: d17-pf-SectorJuneauCommandCenter@uscg.mil

Sector Anchorage Command Center
Commercial Phone: (907) 271-6700
Toll Free: (866) 396-1361
Fax: (907) 271-6765
Email: sector.anchorage@uscg.mil

Communication Station Kodiak:
Commercial Phone: (907) 487-5778

Seventeenth District Command Center:
Commercial Phone: (907) 463-2000
Toll Free: (800) 478-5555
Cell Phone: *CG (*24)
Telex: 49615066 Easylink: 62907427
Fax: (907) 463-2023
Email: jrccjuneau@uscg.mil

2. Response Scenarios: The following recommendations apply to response scenarios that are likely to occur and communications strategies for use during those type incidents.

a. Situation 1: ability to receive initial report of grounding, collision, spill, etc.
This is essentially the same basic information requirements for Search and Rescue (SAR) missions. Primary communications strategy would initially be by VHF marine radio and on telephone as the primary means of passing the initial report. Secondary communications would employ cell phone/ SAT phone or HF radio depending upon the capabilities available in the surrounding area. Under normal circumstances a call would be made to the USCG Communications Center, which would, in turn, pass the information to responsible Command Center personnel for further prosecution.

b. Situation 2: voice communications with on-scene USCG investigation personnel.
The investigator typically will not have a cutter on scene and may arrive via charter aircraft or vessel. The investigator must be able to pass and receive information in a timely manner (2-6

hours after the initial report) to the cognizant Sector Command Center. The investigator may not be able to use the assets of the damaged vessel due to safety or location issues.

Primary communications strategy would be by VHF marine radio either directly to the USCG Communications Center or cell phone to the Sector Command Center. If telephone service is available in the general area, subsequent reports would use that means. Secondary communications strategy would be via HF, VHF-FM, and/or telephone.

c. Situation 3: command and control for a small number of on-scene units.
In a small response, there typically will be one CG cutter, one helicopter, and two vessels from other organizations. They will need to talk to each other as well as to Sector personnel. The designated Federal On-Scene Coordinator (FOSC) will assign frequencies to all assisting units. The FOSC will be assigned by the Sector Command Center.

Primary communications strategy will be VHF-FM for close-in operations. HF communications guard with aircraft will be maintained by Communications Station (CommSta) Kodiak. Air-to-surface communications will be a combination of VHF-FM/HF or VHF, depending upon the surface vessel capabilities.

d. Situation 4: command and control for large number of on-scene units (estimated occurrence is once every 5-10 years).
During an incident near the scale of the Exxon Valdez, communications requirements (voice and data) with numerous units (air and surface) from multiple organizations should be anticipated.

Primary Communications Strategy – VHF-FM and/or HF.

Secondary Communications Strategy – HF and/or VHF-FM, and UHF depending on unit capabilities and civilian capabilities. Normally the on-scene coordinator will have capabilities meeting both U.S. Coast Guard/DHS and civilian sector capabilities. If not, a transportable telecommunications center can be airlifted in to provide the capability. This asset is situated in Sacramento, CA. and requires FORCECOM coordination to mobilize for air shipment. It also requires radio operators from the requesting district.

3. Coast Guard Communications Capabilities: The following are Coast Guard Aircraft, Ship, and Shore Station communications capabilities.

a. C-130 (Fixed wing), H60, and HH65 (Helicopter) Communications Capabilities:

HF 2-30 MHZ
VHF 30-87.975 MHZ, Guard 40.5
VHF 108-117.975 MHZ, AM, RX only
VHF 118-155.975 MHZ, AM TX/RX, Guard 121.5
VHF 156-173.95 MHZ, FM, Guard 156.8 (Channel 16)
UHF 225-399.975 MHZ, AM, Guard 243.0
ADF FULL DF CAPABILITIES EXCEPT FOR HF

b. Patrol Boats (WPB), and Buoy Tenders (WLB):

HF 2-30 MHZ
VHF-FM 146-174 MHZ, Preprogrammed channels only, State Trooper
155.2500, and State Disaster 155.2950 are preprogrammed.
VHF-FM 156-162 MHZ marine band

UHF 225-399.975 MHZ

c. Coast Guard Shore VHF-FM Fixed Sites:

Southeast Alaska Sector Juneau Area:

LENA POINT HF	582318N1344543W
POINT HIGGINS HF	552741N1314847W
SITKA HF	570312N1352144W
YAKUTAT HF	593036N1394021W
VHF Maritime (NDS & Local)	
ALTHORP PEAK	580523N1362455W
CAPE FANSHAW	571217N1332758W
DUKE ISLAND	545256N1312155W
GRAVINA ISLAND	552137N1314747W
JUNEAU	581805N1342515W
MANLEY	570653N1344844W
MOUNT MCARTHUR	560409N1341131W
MOUNT RIPINSKI	591503N1352744W
MUD BAY	570910N1353837W
ROBERT BARRON	581336W1345025W
SUKKWAN	550550N1324559W
YAKUTAT	593313N1394338W
ZAREMBO ISLAND	562043N1325142W

Prince William Sound Sector Anchorage Area:

CAPE HINCHINBROOK HF	601416N1463852W
CAPE YAKATAGA HF	600456N1422917W
VHF Maritime (NDS & Local)	
CAPE HINCHINBROOK	601416N1463852W
CORDOVA (AVSUPFAC)	602941N1452821W
CORDOVA (TRIPOD HILL)	603312N1454402W
NAKED ISLAND	603846N1472043W
POINT PIGOT	604904N1482249W
POTATO POINT	610324N1464151W
VALDEZ	610735N1462113W
VALDEZ SPIT	610726N1462108W
UHF Air/Ground	
CORDOVA (AVSUPFAC)	602941N1452821W

Kodiak Sector Anchorage Gulf of Alaska, Bering Sea Area:

KODIAK	574413N1523013W
VHF Maritime (NDS & Local)	
BALLYHOO	535508N1663031W
BEDE MOUNTAIN	591836N1515644W
CAPE GULL	581156N1541222W

COLD BAY	551504N1624540W
KODIAK	574413N1523013W
MARMOT ISLAND	581414N1514920W
PILLAR MOUNTAIN	574718N1522620W
RASPBERRY ISLAND	580406N1532257W
RUGGED ISLAND	595138N1492323W
SAINT PAUL ISLAND	570714N1701653W
SITE SUMMIT	611531N1493141W
SITKINAK DOME	563334N1541106W
TUKLUNG MOUNTAIN	585128N1592758W
UHF Air/Ground	
KODIAK	
PILLAR MOUNTAIN	574718N1522620W

The above National Distress System (NDS) high sites are monitored 24 hours a day, 365 days a year from Sector Juneau, Airsta Kodiak and MSU Valdez. Those locations listed beneath are remoted to the respective control station by landline, microwave, UHF, or VHF or a combination thereof.

All sites (except those under Valdez) have the following channels: 6, 12, 16, 21A, 22A, 81A

Valdez (except for Cordova) have channels: 6, 13, 16, 21A, 22A, 81A

Cordova has channels: 13, 16, 21A, 22A

Those locations marked (HF) Guard 2182 KHz International Distress and calling frequency are capable of operation in the 2-30 MHZ range, but on preprogrammed frequencies only. They DO NOT contain any State or Local emergency frequencies. Changes require a technician to physically go to the remote site and reprogram the frequency; they are not remotely changeable/programmable.

Communications Station (CommSta) Kodiak maintains a full long range HF capability 2-30 MHZ.

d. Portable Communications Capabilities:

(1) USCG Juneau Communications Capabilities:

- Honda Generators (2 each), .4KVA 3.5 Amps (400 Watts)
- HF Transceiver (1 each), 2-30 MHZ
- Motorola XTS-5000 DES capable hand held VHF-FM radios (10 each), 146-174 MHZ, preprogrammed channels only; contains State Trooper 155.2500 and 155.2950. One six-station charger.
- Harris R5800 VHF/UHF AM/FM. VHF: 90.00 – 224.9999 MHz; UHF: 225.000 – 419.99999 MHz
- Iridium hand held telephones (5 each)

(2) Ketchikan Capabilities: Hand held VHF-FM radios 156-162 MHZ.

(3) Valdez Capabilities:

- Cellular Telephone (6 each)
- Hand held VHF-FM radios (6 each), 156-162 MHZ
- Hand held VHF-FM radios (4 each), 146-174 MHZ

(4) Kodiak Air Station (AirSta) Capabilities:

- Hand held VHF-FM radios, 156-162 MHZ

(5) Kodiak Communications Station (CommSta) Capabilities:

- URC 94 (1 each), HF/VHF AM/FM/CW/SSB Upper/Lower Sideband, Transceiver, HF 1.5-29.999 MHZ, 100 Watts, 12,000 mile range. VHF 30.0-79.999 MHZ, 50 Watts, 5-mile range.
- ARC 94, 2-30 MHZ, 1k increments, 125 Watts
- ARC 190, 2-30 MHZ, 100 Hz increments, 400 Watts
- ARC 618, 118-135.9 MHZ, 1k increments
- RC 513, 150-173.995 MHZ, 25k increments
- ARC 159, 225-399.975 MHZ, 25k increments
- ARC 182 V/U, 1 VHF 30-87.975 MHZ, Guard 40.5
  2 VHF 108-117.975 MHZ, AM, RX only
  VHF 118-155.975 MHZ, AM TX/RX, Guard 121.5
  3 VHF 156-173.95 MHZ, FM, Guard 156.8 (Channel 16)
  4 UHF 225-399.975 MHZ, AM, Guard 243.0

TAB B – STATE COMMUNICATIONS RESOURCES

The ADEC currently operates an assortment of communications equipment, including a variety of VHF hand-held and base station radios, portable repeaters, repeater extenders, and portable satellite phones. Additionally, sixteen wide-area mountaintop VHF repeater sites in Juneau, Prince William Sound, the Kenai Peninsula, the Anchorage area, Fairbanks, Kodiak and the North Slope are available to enhance area communications.

ADEC is also part of the **Alaska Land Mobile Radio (ALMR**) system. The ALMR system is the two-way VHF radio system in use today by first responders and public safety officials for instant, effective, and private communications during everyday operation. The system provides the efficiency, security and flexibility required during emergencies for communications on demand and in real time. The ALMR transportable capability provides coverage in areas outside the range of the fixed infrastructure to increase capacity during an emergency or event, or to provide temporary communications for a site where communications are down.

The transportable capability includes four skids. The communications skid houses a five-channel, P25 trunk site and provides connectivity to support voice, data, internet, telephone and video. The dispatch skid provides for two dispatch locations along with control of the gateway and foreign radio equipment, acquisition and control of the satellite skid, systems monitoring and mesh network control. The tower/ generator skid provides power and a crank-up microwave tower. The C and K-U band satellite skid provides reach back capability, as well as robust bandwidth to support National Incident Management System implementation at remote sites. Each skid is military air transportable and complies with requirements for both military and commercial sling lift operations, and is ground-transportable on flatbeds, meeting standards and regulations for transport along state and interstate highways.

Additional ALMR information and a listing of some communications assets occur above in the introduction to this appendix. Further communications details are presented in the applicable subarea contingency plan.

ADEC communications equipment is maintained by the logistics staff, which can be reached at 465-5234 in Juneau or 344-7380 in Anchorage. The Alaska Department of Administration Enterprise Technology Services (ETS) branch provides communications support and can be reached at 269-5781 in Anchorage.

The State DMVA Division of Homeland Security and Emergency Management also acquired a Mobile Emergency Operations Center (MEOC). General facts and information on the MEOC are provided below. The MEOC can be deployed anywhere along Alaska's road system to support a major response operation.

Vehicle Specifications:

- Make/Model — Freightliner Columbia
- Length: — 45 feet
- Licensed Gross Weight — 56,000 pounds
- Dispatch Weight (full fuel) — 41,000 pounds approximately
- Fuel Capacity — 140 gallons (3 days supply at full electrical load)
- Emergency Vehicle Equip. — Lights, siren, public address
- Internal & External lighting — White/Red internal with external floods
- Electrical — Separate Chassis and Coach battery systems for DC
- Two 12.5 KW generators to support AC load

Command Center Capabilities:

- Configured to support a Unified Command level incident.
- Command center will support 10 workstations with laptops.
- Spare dispatch position in Command Center
- High Speed satellite system; supports video conferencing, VOIP phones, Wi-Fi and internet.
- Self erecting and self orienting satellite system.
- Supports up to 16 Voice Over Internet Protocol (VOIP) telephones via satellite.
- Receive and record both analog and digital broadcast television.
- External tower mounted (pneumatic extension/retraction) high resolution color video camera with full optical and digital zoom via remote control.
- Multiple video screens with video management panel and external video capability.

Dispatch Center Capabilities:

- Four computer aided dispatch positions utilizing Telex C-Soft software with full patch capability.
- Headsets, boom microphones and foot switches available to dispatchers
- Hard mounted ergonomic dispatcher seating.
- Four ALMR mobile radios, panel mounted
- Two Conventional VHF radios, panel mounted
- High and Low UHF radios, panel mounted
- 700/800 MHz (AWARN) radio, panel mounted
- Marine Radio, panel mounted
- VHF AM aircraft radio, panel mounted for Air-Ground comm.
- ARES capable amateur radio
- Citizens Band radio
- On board ALMR capable portable radio cache with gang charger

Support Equipment:

- 24 inch plotter for maps, drawings, etc…
- Fax/copier
- Document printer
- Fridge, microwave and coffee pot for extended deployment (comfort items)
- Support trailer with storage space to house up to 5 personnel for extended deployments.

APPENDIX VI – WASTE MANAGEMENT AND DISPOSAL

This appendix contains guidelines for the management and disposal of wastes generated during a response to an oil spill. Tab A addresses the management of the various waste streams that may be generated during a spill response incident. Tab B identifies disposal options for these various types of waste streams. These guidelines are intended to minimize the on-site accumulation of wastes that could interfere with the containment and cleanup of an oil spill. Collection, storage, transportation, treatment and disposal of the wastes from a spill cleanup shall be conducted in a manner that minimizes environmental and public health impacts.

TAB A – WASTE MANAGEMENT

1. Waste Streams

The term "waste" is used throughout this appendix. It is used for the purpose of identifying the types of materials that are generated as the result of a spill and spill clean up, and is not used to define these materials for purposes of state and federal solid waste and hazardous waste statutes and regulations. To formally confirm that these materials are not considered wastes in the regulatory use of that term and to optimize the management of these materials in a safe and environmentally responsible manner (e.g., recycling of recovered crude oil), the following definition is used for purposes of this document: "waste" means materials that are generated as a direct result (e.g., recovered crude oil) and the indirect result (e.g., refuse, sewage, and hazardous wastes) of an oil spill; "waste" for these purposes does not mean "solid waste" as defined by Alaska (AS 46.03.900(5) and 18 AAC 60.910(53) and federal (42 U.S.C. § 6903(27)) laws.

The following wastes may be generated as a result of an oil spill:

- **Oily Solid Wastes**

- Sand/gravel/tarballs
- Asphalt patches
- Sludge
- Sorbent pads/booms/rags
- Pallets and other wood
- Shoreline debris
- Logs and driftwood
- Shoreline kelp and popweed
- Oily personnel gear and clothing
- Damaged response equipment and gear
- Empty drums/containers
- Animal carcasses

- **Non-Oily Solid Wastes**

- Domestic trash and garbage
- Bagged human waste
- Discarded equipment and construction materials

- **Oily Liquid Wastes**

- Recovered or skimmed oil and mixtures of oil and water
- Used engine oils, hydraulic fluids
- Fuels, contaminated with water and solids
- Engine room bilge/ballast waters from vessels
- Rainwater runoff from waste storage areas
- Washwaters from cleaning boats, equipment, gear
- Washwaters from cleaning oiled wildlife
- Other oily waters

- **Non-Oily Liquid Wastes**

- Sewage, liquid human wastes (gray and black waters)
- Lab wastes
- Chemicals, such as solvents

Wildlife carcasses and contaminated fish may be retained as evidence. Their ultimate disposal should comply with applicable regulations and the oily waste disposal procedures described in this section.

2. Waste Stream Identification Numbers

OILY WASTE	*WASTE STREAM *NUMBER*	*OTHER WASTES*	*WASTE STREAM *NUMBER*
Fresh Oil	101	Domestic Wastes	201
Weathered Oil	102	Debris	202
Emulsion	103		
Hydraulic Fluids	104	Pallets	203
Beach Debris	105	Paperboard	204
PPE	106	Drums	206
Sand/Soil	107		
Sorbents/rags	108		
Oily Wastewaters	109	HAZARDOUS WASTES	301
Carcasses	110		

*Note: The numbering system depicted here is one of several possible methods to categorize waste materials to facilitate tracking and eventual disposal.

3. Procedures for Transportation, Storage, and Disposal

Temporary waste storage areas will be strategically selected and located as points of accumulation and temporary storage for oil spill related wastes. These temporary storage areas can be located at recovery sites, or they make take the form of longer term storage at more permanent facilities. Waste generated by response efforts will be stored at these areas pending waste characterization, final identification of disposal options, and placement of contractual arrangements with approved disposal facilities. Temporary waste storage areas must be approved by ADEC and the land resource trustee. It will be the responsibility of the responsible party (RP) to provide manpower and equipment required to transfer the wastes from the arena of operations to the storage areas and to fully operate these areas.

At the storage areas, wastes will be segregated into waste streams and stored in appropriate containers. In general, waste streams will not be mixed unless specifically directed by the Environmental Unit Leader. Later in the response effort, wastes may be forwarded under manifest directly from the point of generation to the disposal facility without the need for temporary storage.

a. **Liquid wastes** recovered through skimming or washing operations will be accumulated in barges, portable tanks, bladders, drums, or other approved means and held pending waste classification and characterization. Each container must be labeled as to contents and provided with an identification number for tracking and accounting purposes. In most cases, water will be decanted (with State approval) to reduce the volumes of liquid wastes. Different classes of liquid wastes should not be mixed in the same containers without approval of the disposal officer.

If the recovered oil has not undergone significant weathering or emulsification and is free of foreign material, it can be transported to a refinery or oil terminal as a product rather than a waste. Oil that cannot be recovered in this way will be deemed a waste oil and subject to additional testing and handling requirements.

On vessels used for decontamination purposes, all oily wash water should be segregated from other wastes and stored on board the vessel for future transport to an identified disposal facility.

Oily water collected at boat cleaning stations should be segregated into the following four categories:

- Bilge waters
- Bottom liquids from cargo compartments or holds
- Oily deck and hull wash waters
- Oily hold wash waters

Oily wash waters from the cleaning of gear, boom, and equipment should also be segregated and stored separately. Used oil from gear and maintenance operations should not be mixed with any other liquids, but collected and stored in marked containers. Other liquid wastes, like hydraulic fluids, antifreeze and contaminated fuels, also should not be mixed, but stored in 55-gallon drums and marked as to their contents.

All unidentified liquid wastes should be labeled as such, segregated, and handled according to hazardous waste management standards (40 CFR 261) pending laboratory analysis for RCRA hazardous waste characteristics.

b. **Solid wastes** should be double bagged and placed in portable dumpsters or shipping vans and transported to the temporary storage areas. Basic separation of like wastes should take place at this level. Clear, color-coded plastic bags may be used to segregate solid wastes for different disposal options. Solid waste that is too large for plastic bags will be segregated into properly marked dumpsters or shipping vans. Large spills may require a dedicated solid waste storage barge.

All dumpsters, shipping vans, or other means for storage of oily solid wastes must be lined with plastic sheeting prior to use. To control free liquid accumulation within the containers, an inner lining of oil and water absorbing fabric will be used. Additional granular sorbent material should be added as required to eliminate free liquids. For responses where oily debris is extensive and

likely to accumulate rapidly, debris may need to be piled in vacant storage yards with a drainage system to collect any runoff, or in lined earth pits.

Oily PVC waste materials should be bagged and tagged to show contents. These bags should be segregated from other waste streams and transported to a storage area

Bird and animal carcasses should be bagged, tagged, and segregated. Tags should include location of the recovery. Bird and animal carcasses will be handled as directed by the appropriate authority. Refer to Annex G, Wildlife Protection Guidelines.

c. **Non-oily waste** (scrap materials, construction materials, etc.) and domestic garbage and refuse should be collected and segregated (according to the particular requirements of municipal or private waste process and disposal facilities) to prevent oil contamination and transported to storage or final disposal site.

4. Waste Handling and Labeling

Proper waste handling, manifesting, custody transfer and labeling are important for the proper movement and documentation of all waste materials generated in an oil spill response. Wastes must be segregated according to the various types and must not be mixed. All segregated wastes will be properly labeled showing the type of waste in each container. For all unidentified wastes, they need to be labeled as such and segregated from the other wastes. All unidentified wastes/oils will be assumed to be hazardous until sample results are available. If a waste turns out to be hazardous, it will be handled and treated in accordance with current hazardous waste regulations.

5. Records

All waste oils, regardless of type, must be managed by a complete set of records. These records should show the following:

- where the waste was recovered,
- the type of waste,
- approximate volume,
- date collected,
- date transported to staging or disposal site,
- date received at temporary storage area or disposal site,
- the number of containers shipped,
- the number of containers received,
- the date, location and method of final disposal.

To aid in the implementation of the records requirements, the following procedures are recommended:

a. Waste management activities should be conducted as secure storage areas set up at strategic locations.

b. **Each load of waste departing the point of generation should be inspected and assigned to an internal waste stream matrix and inventory record.**

c. A waste tracking form should be completed for each load of waste. Information required on this form includes date and time, transporter name, vessel of truck number,

description of waste and generating process, the assigned waste stream number, and destination of the waste.

d. Waste moved to off site treatment or disposal facilities are transported under the appropriate manifest with copies retained.

e. Once each day, a "waste management summary report" will be completed documenting the following daily and cumulative totals for each waste stream:

(1) waste received

(2) waste stored on site

(3) waste stored off site

(4) waste disposed by disposal facility

TAB B – DISPOSAL OPTIONS

Options for disposal of oily waste may include open burning, incineration, landfilling, bioremediation, and oil/water separation and recycling. See Table 1 of this appendix, below, for a list of disposal options that may be appropriate for different categories of waste streams. Table 2 lists contractors that may be available for waste disposal management.

The RP will be responsible for developing a waste disposal plan that provides the necessary logistical and procedural information for the transfer of wastes to disposal facilities. The disposal plan must be in compliance with existing laws and regulations. Oversight of the waste disposal plan will normally be the responsibility of the ADEC.

State regulation 18 AAC 75.130 requires that the final disposal of a hazardous substance including oil, be approved by ADEC. Oil spill reporting regulations 18 AAC 75.100 require that disposal information be provided within the oil spill report.

1. Short Term Management and Disposal Options for Liquid Wastes

If a spill occurs, both oil and non-oily liquid wastes will be generated or collected during cleanup. This section describes short-term management and disposal options for oil and non-oily liquid wastes, including domestic wastewaters.

a. Oily Liquids: Recovered oil and oily wastewater from spill-related activities will be stored on board tank vessels, in portable tanks, tank trucks, or in approved shore-side tanks where primary oil/water separation may occur. With State approval, on-site decanting may be allowed. After primary oil/water separation, one of the following disposal options will be used:

- Tender of recovered oil to the contracting vessel for offshore treatment;
- Transportation of recovered oil to a refinery or oil terminal for re-use as a product;
- Barging oily water to the continental U.S. for additional treatment or disposal, unless the spill fluid emanated from oil production facilities and can be recycled or disposed of at the original facility; or
- Barging heavily weathered and emulsified oils to the continental U.S. for treatment, additional oil recovery, and wastewater and solids disposal in a commercial waste management facility.

Treatment facilities for these options are described below.

(1) Onshore Treatment Facilities: Crude oil recovered soon after a spill will generally be suitable for reclamation by a production facility or refinery. Because the chemical make-up of spilled oil changes as it weathers, it is less likely that oil collected during a long-term cleanup operation can be reclaimed. Oil that is emulsified, weathered and mixed with debris from the sea or from beach cleaning operations is a mixture of liquids and solids and requires special handling and treatment prior to disposal. There are currently no appropriate disposal options in Alaska for these emulsified wastes. Therefore, they must be stored on barges and shipped to appropriate waste handling facilities in the continental U.S. for treatment.

Oily wastewater, if associated with oil production or terminal facilities, can be treated and disposed of at those facilities (such as the Ballast Water Treatment Plant at the Valdez Marine Terminal) with the approval of EPA and ADEC. Laboratory analysis of these wastewaters may be necessary so that contaminants do not interfere with the treatment process. If particular oily wastewaters cannot be treated because of incompatible contaminants or inadequate plant capacity, those wastewaters will be taken to alternate treatment facilities (e.g., the tanker owner's refinery in the continental U.S. or a permitted bulk receiving facility). For certain wastewaters, physical chemical treatment methods (e.g., air stripping or granular activated carbon) may be preferred over biological treatment.

Contaminated wastewaters will require sampling, analysis, and possible pre-treatment before potential disposal in a municipal sewage treatment facility. EPA, ADEC, and municipal approval may be required. Any discharge into a municipal sewage system must meet EPA pre-treatment standards. If analysis indicates that wastewaters are hazardous, they will be shipped to a disposal facility in the continental U.S.

(2) Offshore Treatment Facilities: The objective of any onboard treatment will be to reduce the water content of the liquid wastes or recovered product collected and transported by the vessel, thereby increasing the vessel's storage capacity. It is reasonable to assume that some primary phase separation could take place in the vessels being loaded with oily wastewaters. The accumulated water could be extracted, treated and, after the appropriate permits are obtained, discharged overboard.

Treatment facilities to be considered include:

- Screw pumps (very suitable for low and highly viscous liquids)
- Centrifuges (operation not affected by vessel movement)
- Gravel filters (operation not significantly affected by vessel movement)
- Dissolved air flotation (DAF) unit (effective in removing low concentrations of oil, but its operation can be affected by vessel movement)

The performance of the onboard treatment facilities can be enhanced by the use of emulsion breakers and flocculation agents. Care should be exercised to ensure that they do not become a source of pollution. Unless the tanker or vessel is anchored in a sheltered area, treatment can be impacted by inclement weather.

(3) In-State Resources for Waste Treatment and Recycling: There are several facilities in the state that treat oily wastes or related materials. In general, however, operational or permit requirements limit the facilities' ability to handle recovered liquids.

Alaska Pollution Control is an oil recycling facility located in Palmer. The plant is currently accepting a variety of spilled and recycled refinery products, including lubricating oil, gasoline, diesel, and fuel oil. The products must be less than 1000 ppm total halogens and must not be hazardous waste by definition. Exact requirements must be verified prior to use of the facility, and the blended products must meet specifications for heating value. The products are processed and sold for use as industrial fuel. The plant does not accept crude oil for operational reasons, but does accept 10,000 to 20,000 gallons of water per week from spills and tank clean-outs. The water is processed and discharged to a Publicly Owned Treatment Works (POTW) under pre-treatment limits. Hydrocarbons recovered from the wastewater are processed in the same manner as the other products.

Various portable processes could be used to pre-treat waste before shipping to an oil recycling facility. In addition, it is possible to ship water that meets pre-treatment standards to a POTW. The acceptability of the waste will depend on its source and characteristics, as well as the volume. Each municipality has different requirements.

(4) Other Commercial Oil Recovery Methods: Other oil recovery methods are being used elsewhere in the U.S. These methods include the following:

- Oil is heated to a temperature below its flash point and injected into sludges to dissolve the waxy and gelatinous deposits to facilitate their recovery.
- Gravity separation, chemicals, heat, lighter oils and solvents, and emulsion-breaking chemicals are used to thin heavier fractions.
- Coker units are used at refineries to dispose of certain types of sludge.
- Mixing different oil types to enable their processing may make variable angle mixers more efficient.
- A rotary vacuum filter, consisting of a horizontal drum with a filter media on its outer surface, is partially submerged and rotated in a tank containing sludge. A vacuum pulls liquid inward while retaining solids on the outside, which are then scraped off.
- A scroll-type centrifuge rotating at 75-100 rpm forces solids against an inner bowl and on to discharge. High-feed rate and durability make this a popular item at refineries. The effluent still requires treatment and the solids produced might not be pumpable. Neither heat nor chemicals may be necessary to optimize the performance of two-stage centrifuges. Generally, centrifuges are operated only for 1-3 weeks at a time of 40-60% rated capacity.
- Gravity-belt filters press sludge between two moving belts and force out oil and water. These filters rely on the application of costly high molecular-weight polymers to coagulate sludge. Changes in the sludge, including pH and H_2S emissions, can result in problems. This method, however, has been used for many years on biosludges in Europe.

These technologies are not currently commercially available in Alaska, but they may be considered in the event of a spill.

b. Non-Oily Liquids: Oil spill cleanup operations produce large amounts of liquid sewage wastes that originate from domestic sources such as toilets, laundry and shower facilities, cooking, and gathering centers. The volume of such wastes is directly proportional to the number of cleanup workers involved.

Domestic wastewater may be collected and transported to a municipal sewage treatment system for disposal after approval from the municipal government. If the volume of sewage generated by cleanup workers exceeds the additional load handling capacity of the municipal sewage treatment plant, on-site land-based or barge-mounted wastewater treatment plants can be used to treat surplus waste volumes.

If additional wastewater treatment facilities (either land-based or barge-mounted) are to be used, the volume and concentration must be estimated for proper sizing of treatment systems. The RP should consult with the EPA and the ADEC for guidelines and standards for accomplishing this.

The sewage collected from remote areas may originate from non-flushing portable toilets that produce a concentrated waste stream high in BOD, suspended solids, and deodorant chemicals. Domestic wastewater treatment alternatives to municipal treatment facilities include:

- Physical-chemical package plants
- Extended aeration package plants
- Rotating biological contactor package plants

Packaged domestic wastewater treatment plants are recommended because they are portable and can be mobilized quickly, if available. These treatment facilities require plan review, an ADEC wastewater permit, and an EPA NPDES permit. A vessel with a U.S. Coast Guard-approved Type II Marine Sanitation Device (MSD) does not need an ADEC or EPA permit for discharges. (All vessels built after January 1980 are required to have a Type II or Type III MSD).

2. Short Term Management and Disposal Options for Solid Wastes

If a spill occurs, oily and non-oily solid wastes will be collected, segregated, and stored at interim temporary storage areas and, if necessary, at the sites of cleanup operations on beaches. Most solid wastes will be stored in plastic bags after collection. Hazardous wastes will be handled in accordance with RCRA regulations and transported to the continental U.S. for disposal. Non-hazardous wastes will be handled in the most economic manner. Solid waste will be incinerated, if capacity allows; a secondary option is transport to landfills in Alaska or the continental U.S.

a. Hazardous Oily Solid Wastes: RCRA hazardous solid wastes may be generated from oil spill response activities. Potential sources of RCRA hazardous wastes are:

- Spill-related materials that exhibit hazardous characteristics
- Maintenance wastes generated by vessels and vehicles used in response and clean up.
- Laboratory wastes and residues from testing and disposal of spill-related material.

A hazardous waste storage area will be established if hazardous wastes are generated. If necessary, satellite accumulation areas will also be established. Proper container storage and labeling practices will be followed. Assigned personnel will monitor operations throughout the

spill area to prevent improper waste disposal and to minimize the creation of hazardous waste through "mixing" (the disposal of small quantities of hazardous waste into solid waste containers, such as used oil tanks or boat washing slop tanks).

Hazardous waste management procedures include the following: ascertaining that response contractors are aware of regulatory requirements, including handling practices; obtaining generator I.D. numbers; proper labeling; storage; and monitoring of operational areas by personnel trained in hazardous waste management.

Hazardous wastes will be disposed of in a permitted hazardous waste facility in the continental U.S. since no permitted waste disposal site exists in Alaska at this time.

b. Non-Hazardous Oily Solid Wastes

(1) Incineration: Waste incineration can be an economical means of destroying organic compounds. Ash generated as a result of incineration will be tested for hazardous characteristics and properly transported for disposal at appropriately permitted facilities.

With approval from the North Slope Borough, up to 15 tons per day of non-hazardous oily solid waste, except sand and gravel, may be shipped to the North Slope Borough incinerator facility at Deadhorse. For spills in Prince William Sound, the Valdez Marine Terminal's incinerator can handle non-hazardous oily and non-oily solid waste, as capacity allows.

Several other state-approved facilities for incineration of response waste exist in Alaska. In Southeast Alaska, municipal incinerators are available in Juneau and Sitka, and one is proposed for Ketchikan. Use of these facilities for incineration of response wastes requires written approval from ADEC. Consult with the local ADEC Office on the status of approved landfills and incineration facilities.

(2) Disposal at Facilities in the Continental U.S.: Some solid waste is not suitable for incineration (e.g., rain suits and some kinds of boom). These wastes will be shipped to landfill disposal sites in the continental U.S.

(3) Burial: On-site burial may be used at remote locations where oily debris will otherwise have to be transported large distances for centralized disposal. The operation will consist of excavating an on-site disposal pit and burying the oily waste. The advantages of this disposal method are reduced costs for transporting, packaging, storage, and ultimate disposal fees.

Disadvantages of this method include the logistics of transporting excavation equipment and personnel to remote sites and possible future leakage from the uncontained disposal pits.

On-site burial of oily waste requires a solid waste disposal permit from ADEC. Although on-site burial may be permitted in remote locations, the likelihood of it occurring without engineering controls is minimal. On-site burial is not a preferred waste management option because of the technical difficulties involved and public and agency concerns over such disposal.

(4) Waste Sludge Disposal: The sludge resulting from certain treatment facilities will require further treatment or disposal. Sludge treatment may include:

- Fluidized bed incineration
- Steam stripping
- Digestion, dewatering, vacuum filtration, centrifugation
- Controlled land disposal

The quantity of sludge generated by the treatment process will depend on the solid content of the oily wastewaters treated. Steam-stripping can recover oil adhering to the solids and the process can produce a sludge possibly suitable for disposal at a permitted facility.

Depending on the organic content of the sludge, aerobic or anaerobic sludge digestion may be feasible. Heating the contents of the sludge digester will accelerate the rate of biological decomposition of the sludge and reduce the residence time required for sludge stabilization. The water resulting from the sludge dewatering operation may be returned to the wastewater treatment system ahead of the biological oxidation process. The stabilized sludge may be suitable for land disposal at a permitted landfill site.

c. Non-Hazardous, Non-Oily Solid Wastes: Non-oily solid wastes (refuse) are generated from a variety of sources during oil spill cleanup operations. Care must be taken to separate non-oily solids wastes from oily wastes and to maintain separation until ultimate disposal.

Separate trucks for onshore operations should be maintained for the transportation of non-oily solid wastes. The non-oily waste material may be sent to an appropriate municipal landfill or municipal incinerator with capacity to handle the wastes for disposal, if approved by local officials. Since most towns and cities have municipal landfills, disposal will likely occur at local population centers. The RP should coordinate with municipal officials.

The refuse produced by a large-scale oil spill cleanup operation may have a significant impact on the local landfill. For example, the Exxon Valdez oil spill cleanup operations in Prince William Sound increased local refuse disposal as much as 500%, with a corresponding increase in personnel and equipment at the local landfill operations to meet the higher demand. In such situations, it is important to coordinate with the community to assure that personnel and equipment requirements are met.

Disposal of wastes in solid waste sites must conform with the facilities' permit requirements.

3. Long-Term Management and Disposal Options

a. Open Burning: On-site burning is a potential disposal method for non-hazardous oil-stained rock and sand mixtures, tar balls, logs, driftwood, and miscellaneous solid wastes.

(1) Remote Stockpile Burning: Open burning may be a feasible method for large quantities of combustible oily wastes that are stockpiled in remote areas, but this method generally requires weather suited for smoke dispersal. Burn residue produced from open burning needs to be collected, tested for hazardous characteristics, and properly transported to disposal sites. Open burn pits designed to facilitate efficient removal of residues can facilitate a smoother cleanup operation.

Open burning in Alaska is regulated by ADEC, and before proceeding with an open burning operation, written approval must be obtained from ADEC. Approval is contingent upon submission of an open burning plan that addresses concerns outlined in the Alaska Air Quality Control Regulations (18 AAC 50). These concerns include the following: air

contaminants, location of sensitive population centers, weather considerations, visibility impacts, overall coordination, public information, and other project specifications. In addition, the plan for open burning must include an evaluation of feasible alternatives with a demonstration that open burning is the most feasible choice.

(2) *In Situ* Open Burning: Combustible materials, such as oiled logs, branches, and other natural materials found along beaches, can be burned in piles where they have been collected. A propane torch can be used to initiate combustion or a burn promoter, such as fuels, can be added to the oiled materials.

Open burning can also be applied to any oily wastewater collected for off-site disposal. However, this disposal method would require a site-specific ADEC Open Burning Permit and an ADEC Wastewater Disposal Permit. Burn residue will have to be contained and collected at each site and tested for hazardous characteristics, thus leading to possible logistical problems.

Sustained burns of logs and other large items can penetrate some substrates to a depth of about one foot, thus removing the underlying oil. Oil that has migrated downward into beach materials beyond that depth likely would not be burned.

Other disadvantages or constraints to *in situ* open burning can include:

- Public concerns.
- Threat of spreading (e.g., grass or forest fire)
- Burn residue might be hazardous or otherwise present a pollution problem
- Direct biological impacts from heat may be a concern where an extensive area is fired.
- Smoke plume may not meet regulatory requirements.

b. Incineration: Incineration can be used to dispose of oily waste materials at the source or at temporary collection and storage areas. The incineration process must be combined with appropriate flue gas cleaning and residue handling in order to complete the overall waste management process. A variety of wet, semi-dry, and dry acid-gas scrubbing processes are available with extensive, successful experience in application to incineration systems. The applicability of a specific process is determined through evaluation of flue gas characteristics, reagent and residue handling costs, need for plume suppression, and other factors. Sensitive instrumentation for detecting pollutant levels within the system is also vital, as is the ability of the equipment to adjust to changing conditions. Two technologies currently dominate the waste incineration industry: rotary kiln incineration and fluidized bed incineration. The advantages and disadvantages of both systems are well known and documented since both technologies are established incineration techniques with several commercial plants currently in existence.

Rotary kiln incineration appears to be the better overall option for necessary permanent incineration capacity. If on-going operations justify use of a permanent incineration system, the following system appears preferable:

- One or more medium-sized, modularized rotary kiln systems on the same site with good access by water and land.

- Necessary feed storage, feed preparation, ash-handling facilities, and other support services as needed for all units, making these common to all incineration units to the extent possible and practical.
- Operation of one unit at a time on locally-generated wastes at reduced capacity to maintain the facilities in ready condition and to maintain the skills of the operating crew.
- Delivery of spill wastes and containerized materials to the site by barge for processing. Storage of the wastes most amenable to storage will stretch the processing period and reduce the size, number, and cost of the facilities.

This rotary kiln incineration system can be developed and implemented in a reasonably short time and in compliance with regulatory requirements. Some oil spill cleanup specialists have indicated that there are portable incinerators on the market that provide good backup in an emergency because they can be quickly dispatched to remote sites.

c. Bioremediation:

(1) *In Situ* Biodegradation: Bioremediation involves adding nutrients (nitrogen and phosphorus) to enhance indigenous microbial activity. Successful bioremediation can accelerate the clean up of a spill and reduce the amount of oily wastes requiring disposal.

Bioremediation of *in situ* spilled oil is still in the research phase, but holds promise for use under favorable conditions. on oiled sand, pebbles, cobble, driftwood, and other natural beach materials. The shoreline configuration must be amenable to this method, but smaller debris does not have to be transported to a remote site for ultimate disposal. Larger items of debris must be dealt with separately and the technique might require several seasons for significant degradation to occur.

(2) Landfarming: Some oil spill specialists in other parts of the country consider landfarming a feasible alternative to oily waste disposal. In Alaska, however, due to the low temperatures, short summers, high precipitation, and the scarcity of flat soily areas, further research must be done before the plausibility of this method can be determined. In landfarming, oily sludges are spread on a selected site and then combined with soil, moisture, and nutrients in the presence of oxygen to promote bacterial degradation of the hydrocarbon components. This requires an even application of flowing oily wastes. Smaller items, such as sand, pebbles, short seaweed (less than 6 inches long), sludges, and contaminated soils can also be processed this way. The most suitable sites are large fields with deep, tillable soil and a constant supply of water. Some sites might require the placement of a liner. The soil is prepared, the nutrients and wastes are applied, and then the field is tilled periodically. The soil pH must be controlled and the field must not have a greater than 1% or 2% grade.

Necessary equipment includes backhoes, tractors, rototillers, disc harrow or plows, fencing, pumps, and sprinkler systems. This method requires a permit and monitoring. If a liner is used, it must be removed when the hydrocarbons reach approved levels.

d. Landfilling: Approximately five permitted landfills that can accept oily wastes are currently in use in Alaska. These landfills are associated with oil fields on the North Slope and are typically reserved exclusively for the company operating the landfill.

At this time, no landfill facility in Alaska will accept significant amounts of oily solid wastes. In the event of a large spill, landfill disposal will be feasible only if ADEC permits disposal of significant amounts of oily waste at existing sites and/or expedites permitting of proposed sites. The advantages of having an in-state oily waste landfill include immediate availability and accessibility, as well as reduced logistical requirements for transportation, packaging and disposal.

An ADEC solid waste permit is required to site an oily waste landfill in Alaska. Discussions with regulatory solid waste management personnel indicate that successful state approval of a permit will be contingent on site-specific engineering designs. To be effective, a facility must be fully constructed and permitted before a spill.

TABLE 1: WASTE DISPOSAL OPTIONS

WASTE STREAM	PRIMARY OPTION	FIRST ALTERNATIVE	SECOND ALTERNATIVE
Fresh Oil (101)	Refining	Fuel Blending	Ex Situ Burning
Weathered Oil (102)	Fuel Blending	Land Treatment	Solidify & Landfill
Emulsions (103)	Fuel Blending	Land Treatment	Solidify & Landfill
Hydraulic Fluids (104)	Refining		
Oil Debris (105)	Incineration	Open Burning	Landfill
Oily PPE(106)	Incineration	Landfill	
Oily Sand/Gravel (107)	Ex-Situ Burning	Land Treatment	Landfill
Oily Sorbents (108)	Fuel Blending	Incineration	Landfill
Oily Wastewater (109)	Electrocoagulation Treatment		
Animal Carcasses (110)	Offer for Research	Incineration	
Domestic Wastes (201)	Incineration	Landfill	
Non-Oily debris (202)	Incineration	Landfill	
Pallets (203)	Recycle/Reuse	Open Burn	Landfill

WASTE STREAM	PRIMARY OPTION	FIRST ALTERNATIVE	SECOND ALTERNATIVE
Paperboard (204)	Recycle/Reuse	Open Burn	Landfill
Drums (206)	Recycle/Reuse	Landfill	
Hazardous (301) Wastes	Special Handling, Storage, Treatment		

TABLE 2: WASTE DISPOSAL CONTRACTORS

Listed are some contractors who can provide disposal or waste management services. These are not the only available contractors, but represent the variety of services available.

WASTE TYPE	**DISPOSAL FACILITIES**	**COMMENTS**
Recovered Products (gas, diesel, etc.) fuels.	Alaska Pollution Control 907-344-5036 10620 Old Seward Highway Anchorage, AK 96515	Processes oily water, motor oils and recovered
	Alaska Soil Recycling 907-349-3333 1040 O'Malley Road Anchorage, AK 96515	Soil burning facility.
	Basin Oil Company 800-439-2948 8661 Dallas Ave S Seattle, WA 98108	Non-Haz used oils blended for ship bunkers.
	Petroleum Reclaiming Services 206-587-6206 3003 Taylor Way Tacoma, WA 98421	Waste oil processor. Also takes oily water.
	Philip Environmental 800-228-7872 1011 Western Ave, Ste 700 Seattle, WA 98104	Full service haz-waste disposal contractor.

TABLE 2: WASTE DISPOSAL CONTRACTORS (cont.)

WASTE TYPE	**DISPOSAL FACILITIES**	**COMMENTS**
	Chemical Waste Management 800-962-4987 17629 Cedar Springs Arlington, OR 97812	Full service haz contractor. Landfills located in Oregon and Calif.
	Clean Soils 907-258-7645 2301 Spar Avenue Anchorage, AK 99501	Soil burning facilities in Anchorage and Kenai. Mobile facility also available.
	Foss Environmental 206-281-3823 7440 W Marginal Way S Seattle, WA 98108	Full service contractor.
Contaminated Soil	Philip Environmental	Solid or haz-waste disposal.
	Chemical Waste Mgt.	Same.
Oily Contaminated Equipment/materials & PPE	DOH Environmental 800-478-1917 10012 Jensine Juneau, AK 99803	Spill cleanup contractor. Can manage waste through appropriate contractors.
	Channel Sanitation Services 907-780-4288. 5600 Tonsgard Court Juneau, AK 99801	Non-hazardous disposal only
	Chemical Waste Mgt.	Approved landfills.
Decontamination Solutions	Philip Environmental	Full service hazardous waste disposal.
	Chemical Waste Mgt.	Approved landfills.
Oily Sorbents	Channel Sanitation	Incineration of non-hazardous oily materials.
	Basin Oil	Delivers non-hazardous sorbents to facility for energy recovery.
Spent Chemicals	Philip Environmental	Full service.
	Chemical Waste Mgt	Full service.

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