Oil and Hazardous Materials Response Reports

October 1990-September 1991

HAZARDOUS MATERIALS RESPONSE & ASSESSMENT DIVISION
OFFICE OF OCEAN RESOURCES CONSERVATION & ASSESSMENT
NATIONAL OCEAN SERVICE
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION

Oil and Hazardous Materials Response Reports

October 1990-September 1991

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National Oceanic and Atmospheric Administration
Office of Resources Conservation and Assessment
Hazardous Materials Response Division
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Contents

Between October 1, 1990 and September 30, 1991, NOAA Hazardous Materials Response and Assessment Division Scientific Support Coordinators and scientific staff provided the U.S. Coast Guard with technical and operational assistance to 117 spill incidents in the Nation's coastal zone. These responses included 87 oil spills, 13 chemical spills, 5 spills of unknown material, 2 search and rescue operations, and 12 U.S. Coast Guard simulation exercises.

Each report in this volume addresses the nature of the incident, the level of NOAA involvement, and the conclusion of the incident. Each report title reflects the locations of the Division office that responded to the incident, and includes the incident name, location, and date that NOAA's response began. Although the master list on the following pages includes all of the incidents for which the Division provided support, only those incidents where the pollutant actually entered the environment are reported on in this volume. These reports are abbreviated and are meant to serve only as a summary of the Division's response to requests from Federal On-Scene Coordinators for each of the events.

Additional details on any of the responses may be obtained from the appropriate Scientific Support Coordinator or U.S. Coast Guard office.

FY 91 Spills and Drills
October 1, 1990 - September 30, 1991

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
1 Oct 90	1	T/B BOUCHARD 125 Long Island Sound New York	1,000 gallons #2 oil	1	phone (4)◊
2 Oct 90	2	T/V WORLD BRAZILIA 60 miles south of Mobile Alabama	potential 75,600,000 Arabian medium crude	8	phone (3)
4 Oct 90	3	Tank Truck* Hood River, Oregon	1,000 gallons diesel	13	phone (1)
5 Oct 90	4	T/V CONTESSA* Off Mobile, Alabama	unknown	8	phone (1)
6 Oct 90	5	T/V STAR CONNECTICUT Honolulu, Hawaii	potential 10.5 million gallons naphtha #6 fuel oil	14	on-scene (4)
8 Oct 90	6	Abhe and Svobada St. Joseph, Michigan	sandblasting residue and paint	9	phone (1)
10 Oct 90	7	M/V MEI GAI HAI French Frigate Shoals, Hawaii	potential 266,000 gallons Bunker C and diesel	14	on-scene (1)
10 Oct 90	8	Workover Boat MALLARD 41 Mississippi River Outflow Gulf of Mexico	explosion and fire	8	phone (3)
12 Oct 90	9	USFWS Plane Arctic Ocean Alaska	search and rescue	17	phone (1)
15 Oct 90	10	T/B ART REIDEL, SR* San Francisco, California	500 gallons diesel 300 gallons lube oil	11	phone (3)
18 Oct 90	11	Coastal Freighter* Miami, Florida	potential 5,600 gallons diesel	7	phone (1)
19 Oct 90	12	Two barges* Turkey Point, Florida	potential 14,000 barrels Bunker C	7	phone (1)
19 Oct 90	13	T/V PROBO GULL Delaware River	potential 250,000 barrels #2 oil	5	phone (1)
26 Oct 90	14	Barge NORTHERLY ISLANDER Oregon Inlet, North Carolina	potential 41,000 gallons diesel, 1,600 gallons lube oil	5	phone (4)

◊ The number in parentheses refers to the number of staff involved in the response.

* No report is included for this incident

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
26 Oct 90	15	T/B HYGRADE 42 New Hamburg, New York	potential 1.3 million gallons kerosene	1	phone (4)
26 Oct 90	16	Diamond Shoals Cape Hatteras, North Carolina	fertilizer or diesel	5	phone (1)
2 Nov 90	17	C/V COLUMBINE Tolchester Beach, Maryland	potential 11,590 barrels Bunker C	5	phone (4)
4 Nov 90	18	T/B COASTAL 2509 Houma, Louisiana	84,504 gallons crude oil	8	on-scene (4)
17 Nov 90	19	Steuart Petroleum St. Marys, Maryland	100,000 barrels asphalt	5	phone (2)
19 Nov 90	20	M/V KIKU PACIFIC* Central California coast	potential 8,8000 metric tons Mayan crude	11	phone (3)
19 Nov 90	21	Fuel Tanks Little Diomede Island Alaska	30,000 gallons #1 heating oil	17	phone (1)
25 Nov 90	22	Kinsman Independent Isle Royale, Michigan	potential 67,000 gallons #6	9	phone (3)
29 Nov 90	23	Seguam Island Aleutian Chain, Alaska	search and rescue	17	phone (1)
30 Nov 90	24	F/V COLLIPSO Nantucket Island, Massachusetts	potential 4,000 gallons diesel	1	phone (4)
3 Dec 90	25	General Chemical Claymont, Delaware	boron trifluoride	5	phone (1)
4 Dec 90	26	T/V KEYSTONE CANYON Crescent City, California	potential 859,000 barrels Alaskan crude	11	phone (3)
9 Dec 90	27	Coast Guard/Yorktown Drill* Juneau, Alaska	oil and chlorine	17	on-scene (2)
13 Dec 90	28	Alyeska/British Petroleum Drill* Valdez, Alaska	oil	17	on-scene (1)
15 Dec 90	29	M/V SHELDON LYKES Norfolk, Virginia	potential dimethylanimo-ethyl acrylate, allyl alcohol	5	on-scene (2)
15 Dec 90	30	Drilling Rig ZUES Gloucester, Massachusetts	fire involving 13,000 gallons diesel, waste oil	1	on-scene (1)
18 Dec 90	31	T/V COAST RANGE Cook Inlet, Alaska	2,310 gallons crude oil	17	phone (1)

* No report is included for this incident.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
19 Dec 90	32	AMOCO collection line Hackberry, Louisiana	Louisiana medium sweet crude 14,700 gallons	8	on-scene (1)
20 Dec 90	33	Miscellaneous oil spill* Lake Charles, Louisiana	unknown	8	phone (1)
24 Dec 90	34	Rollins Terminal Bayonne, New Jersey	potential 80,000 gallons zirconium oxychloride	5	phone (2)
28 Dec 90	35	Vinton Canal Vinton, Texas	unknown	8	phone (3)
30 Dec 90	36	T/B LEMON CREEK New York Harbor, New York	leaking 1,000 gallons per minute sewage sludge	5	phone (1)
31 Dec 90	37	T/B STAR #6 Dauphin Island, Alabama	potential 32,000 gallons sodium hydroxide	8	phone (5)
2 Jan 91	38	M/V SEPTEMBER Key Largo, Florida	800 gallons diesel fuel	7	phone (4)
3 Jan 91	39	F/V JESSICA B Unalaska Island, Aleutian Chain Alaska	1200 gallons diesel, 200-300 gallons lube and hydraulic oils	17	phone (1)
6 Jan 91	40	U.S. Oil Pipeline* Commencement Bay Tacoma, Washington	425,000 gallons North Slope Crude	13	phone (1)
8 Jan 91	41	M/V SAMMI SUPERSTARS Los Angeles, California	308 barrels heavy IFO	11	on-scene (1)
9 Jan 91	42	T/B DC 353 Baton Rouge, Louisiana	4,400 gallons 1,1,1-trichloroethane	8	phone (1)
27 Jan 91 *ongoing*	43	Persian Gulf Response Dhahran, Saudi Arabia and Washington, D.C.	oil well fires and oil spill		on-scene (19)◊
31 Jan 91	44	Hayman Properties Stamford, Connecticut	10,000 gallons #4 heating oil	1	on-scene (1)
Jan 91	45	Mystery Spill* Central California coast	oiled birds	11	phone (3)

* No report is included for this incident.

◊ Nineteen HAZMAT staff were loaned to the Persian Gulf spill response effort: six SSCs on-scene for six-week stints in Saudi Arabia; two trajectory modelers for shorter stints in Saudi Arabia, with four modelers rotating on-scene in Washington, D.C.; and two logistics coordinators, three information managers, and two illustrators rotating on-scene in Washington, D.C.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
4 Feb 91	46	Allied Terminals Norfolk, Virginia	chemical tanks, liquid fertilizer, caustic soda, methanol	5	phone (2)
8 Feb 91	47	F/V SKAGIT EAGLE Unalaska Island, Alaska	10,000 gallons diesel	17	phone (1)
15 Feb 91	48	T/B OCEAN 255 Sarasota, Florida	gasoline and diesel fuel	7	phone (3)
21 Feb 91	49	Baltimore Training Drill* Point Lookout, Maryland		5	on-scene (2)
22 Feb 91	50	Texaco Refinery Fidalgo Bay, Anacortes, Washington	210,000 gallons North Slope crude	13	on-scene (3)
28 Feb 91	51	Pier 46* Elliott Bay Seattle, Washington	210 gallons marine diesel	13	phone (3)
6 Mar 91	52	M/B VISTA BELLA Barbuda, Trinidad	potential 560,000 gallons #6	7	on-scene (2)
14 Mar 91	53	SHINNECOCK I Long Island Sound, New York	potential 10,000 gallons #2	1	phone (2)
16 Mar 91	54	Chevron Offshore Terminal El Segundo, California	50 barrels of gas oil	11	on-scene (1)
20 Mar 91	55	T/V STAVANGER PRINCE Plaquemine, Mississippi	potential 500,000 barrels Arabian crude	8	phone (3)
21 Mar 91	56	Delaware Bay slicks Delaware Bay entrance	unknown	5	phone (1)
27 Mar 91	57	TRIUMPH REEF off Florida Keys	potential 7,000 gallons diesel	7	phone (1)
28 Mar 91	58	JESULA II Miami, Florida	potential 7,000 gallons diesel fuel 110 gallons lube oil	7	on-scene (2)
3 Apr 91	59	F/V NANCY JANE South of Vermillion Bay	diesel/engine oil	8	phone (3)
4 Apr 91	60	T/V HAVEN* Genoa, Italy	potential 500 metric tons acrylonitrile 3,000 metric tons dichloroethane		phone (4)

* No report is included for this incident.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
12 Apr 91	61	Sunken Barge* Pt. Lookout, Maryland	1,600 tons ammonium sulfate	5	phone (4)
16 Apr 91	62	Alyeska Drill* Valdez, Alaska	oil	17	on-scene (1)
17 Apr 91	63	M/V CENTAURUS MAR* Miami, Florida	potential 14,000,000 gallons diesel	7	phone (2)
18 Apr 91	64	Mystery Slick* Key Largo, Florida	dark oil	7	phone (2)
18 Apr 91	65	T/V ADVANCE Massachusetts Bay	potential hydrogen sulfide	1	phone (2)
18 Apr 91	66	Mystery Slick* Crystal Bay, Florida	lube oil	7	phone (2)
22 Apr 91	67	M/V PRINCE WILLIAM SOUND Dutch Harbor, Alaska	potential 135,000 gallons diesel	17	phone (2)
24 Apr 91	68	M/T ROSARIO Spill Drill* Bellingham, Washington	8,000,000 gallons North Slope Crude	13	on-scene (3)
24 Apr 91	69	USCG Drill* Long Island Sound New York		1	on-scene (2)
25 Apr 91	70	F/V PTARMIGAN* Portland, Oregon	3,000 gallons marine diesel	13	phone (3)
28 Apr 91	71	CG Radar Station Potato Point, Alaska	3,000 to 3,500 gallons diesel	17	phone (1)
29 Apr 91	72	Unknown ship MSO Hampton Roads	200 - 1,000 gallons #6	1	phone (1)
1 May 91	73	Unknown slick near R/V GECO APOLLO Cameron, Louisiana	brown oil	8	phone (3)
3 May 91	74	Hindcast for oil on beach* Old Plantation Creek Chesapeake Bay, Virginia	1,000 gallons #6	5	phone (4)
3 May 91	75	T/V DELPHINA Braintree, Massachusetts	16,5400 gallons diesel	1	on-scene (1)
10 May 91	76	Unocal Platform GINA Port Hueneme, California	50 barrels California crude	11	on-scene (1)

* No report is included for this incident.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
13 May 91	77	T/V BORSEC Marcus Hook, Pennsylvania	30 barrels #4 oil	5	phone (3)
15 May 91	78	F/V MAX Prince William Sound, Alaska	potential 10,000 gallons diesel, 100 gallons lube oil	17	phone (1)
18 May 91	79	Mystery Slick Strait of Juan de Fuca, Washington	black oil	13	phone (3)
20 May 91	80	M/V LA MINERA Off Galveston, Texas	potential 10,000 gallons catalytic feed stock oil	8	phone (3)
21 May 91	81	Ship Adrift* Key Biscayne, Florida	potential 6,000 gallons diesel	7	phone (2)
22 May 91	82	Texaco Refinery Spill Drill* Anacortes, Washington	225,000 gallons North Slope Crude	13	on-scene (1)
29 May 91	83	Garbage Slick* Sandy Hook, New Jersey	garbage	1	phone (2)
29 May 91	84	Mystery Spill* Situit Harbor Boston, Massachusetts	leaking drum	1	phone (1)
29 May 91	85	F/V ALMIGHTY Bristol Bay, Alaska	potential 7,000 gallons diesel, 400 gallons lube. oils, 80,000 lbs. yellowfin sole	17	phone (1)
4 Jun 91	86	Alliance Oil Rig Cameron, Louisiana	5,000 barrels Louisiana crude	8	on-scene (1)
11 Jun 91	87	Arco Refinery Spill Drill* Rosario Strait Puget Sound, Washington	8,000,000 gallons crude	13	on-scene (1)
12 Jun 91	88	Coast Guard RRT/OSC Drill* San Francisco Bay, California	fire 1,000,000 gallons crude	11	on-scene (1)
17 Jun 91	89	T/B MAGNACHEM Kill Van Kull Bayonne, New Jersey	21,000 gallons acetone	1	phone (3)
19 Jun 91	90	M/V GOLDEN HILL Port Everglades, Florida	600 gallons #6	7	on-scene (1)
19 Jun 91	91	F/V HUI FENG No. 1 Palmyra Atoll	1,400 gallons diesel	14	phone (4)

* No report is included for this incident.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
24 Jun 91	92	T/V ARCO TEXAS* Port Angeles, Washington	potential 27,000,000 gallons North Slope Crude	13	phone (1)
25 Jun 91	93	EXXON WILMINGTON* off Molasses Reef, Florida	potential 32,000 barrels jet fuel and 400 barrels paraffin	7	phone (3)
25 Jun 91	94	Sanjacinto River* Houston, Texas	unknown	8	phone
8 Jul 91	95	Mystery Spill Arthur Kill, New Jersey	sheen	1	phone (3)
12 Jul 91	96	CISPRI/UNOCAL Drill* Kenai, Alaska	oil	17	on-scene (1)
22 Jul 91	97	F/V TENYO MARU Cape Flattery Washington	1,350 metric tons intermediate oil and 450 metric tons diesel	13	on-scene
26 Jul 91	98	T/B COASTAL 32 Key Largo, Florida	potential 12,000 barrels #6	7	phone
03 Aug 91	99	T/V W.M. Vacy Ash* Grassy Island, Michigan	potential 46,000 barrels stove oil; 20,000 barrels diesel	9	phone
06 Aug 91	100	Diamond Head Drill* Honolulu, Hawaii	Potential 900 barrels Bunker C	13	fax
09 Aug 91	101	Tank rupture Hopewell, Virginia	Potential 150,000 gallons sulfuric acid	5	
10 Aug 91	102	Barge B&R5* Shishmaref, Alaska	potential 86,000 gallons #1 heating oil	17	phone (1)
13 Aug 91	103	Barge Z-62 Empire, Louisiana	300 barrels unknown oil	8	on-scene (4)
13 Aug 91	104	F/V GREENHOPE* Atka Island, Alaska	potential 3,000 gallons diesel	17	phone (1)
14 Aug 91	105	M/V ATLANTIC SEAHORSE* Cook Inlet, Alaska	potential 4,000 gallons diesel	17	phone (1)
23 Aug 91	106	M/V SEA JADE* Dutch Harbor, Alaska	potential 276,500 gallons IFO, 45,435 gallons diesel	17	phone (1)
23 Aug 91	107	Endicott Oil Spill Drill* Endicott Island, Alaska	Alaskan North Slope Crude 5,000 -8.000 barrels	17	on-scene

* No report is included for this incident.

Date of Incident	No.	Report Name	Commodity Involved	USCG District	NOAA Involvement
28 Aug 91	108	Atlantic Energy Inc. Chesapeake, Virginia	potential 7.3 million gallons propane	5	phone (1)
31 Aug 91	109	Craney Island Tank Farm Norfolk, Virginia	162,000 gallons fuel oil	5	phone (1)
04 Sep 91	110	F/V JUSTIN TIME Sozavarika Island, Alaska	potential 20,000 lbs. halibut, 250 gallons diesel, 5 gallons hydraulic fluid	17	phone (1)
05 Sep 91	111	AMOCO Facility High Island, Texas	500 barrels south Texas sweet crude oil	8	on-scene (1)
05 Sep 91	112	T/V Mega Sun* Big Stone Anchorage Delaware	oil leak	5	phone (1)
13 Sep 91	113	Mystery spill* Delaware Bay	tarballs	5	phone
16 Sep 91	114	F/V OMNISEA Seattle, Washington	potential 250,000 gallons diesel, 400 pounds chloride polyurethane insulation that could cause cyanide gas 10,000 pounds ammonia	13	on-scene (3)
16 Sep 91	115	EXXON Drill* Bay Ridge New York Bay		1	phone
16 Sep 71	116	T/B CHILKAT WARRIOR Prince of Wales Island, Alaska	106,000 gallons diesel 3,000 gallons gasoline	17	PHONE (1)
16 Sep 91	117	Abandoned Soviet Ice Station Point Barrow, Alaska	500 drums diesel oil 30 drums aluminum powder 10 drums lubricating oil 600 drums with residue of unknown chemicals	17	phone (2)

* No report is included for this incident.

New York

T/B BOUCHARD 125
Long Island Sound, New York
October 1, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

The tank barge BOUCHARD 125 ran aground on Execution Rocks, north-northwest of Sands Point in Long Island Sound. Approximately 1,000 gallons of #2 oil was spilled, causing a slick about 1 mile long and 1/2 mile wide.

NOAA Response

NOAA was notified of the incident on October 1, 1990, by the U.S. Coast Guard Captain of the Port (COTP) New York, who requested resources at risk information and a trajectory estimate.

NOAA told the COTP that the shorelines that were likely to be impacted by this spill were man-made structures, sand and gravel beaches, and marshes. Marshes, such as those at the mouth of Glen Cove Creek, were the most sensitive of these habitats and should be given priority protection. NOAA suggested booming these areas, but advised against cutting the marsh grasses. NOAA recommended referring all marsh remediation issues to a local marsh expert.

NOAA reported that fish and shellfish larvae living in the surface microlayer could be acutely impacted by oil contamination, but water column fisheries and benthic organisms should not be greatly affected. The New York State intertidal shellfish beds were closed along eastern Hempstead Harbor. The hard-shell clams (quahogs) and oyster populations that reside in these areas could become coated with oil. During contamination episodes, shellfish ordinarily close their shells for several days until the contamination passes, so they should not be at great risk.

T/B BOUCHARD 125
Long Island Sound, New York
October 1, 1990

New York

NOAA Response, *cont.*

Seabirds (gulls and terns) and wading birds (egrets and herons) will generally avoid impacted areas so they were not expected to come into contact with any contamination.

NOAA told MSO that the oil could be expected to move towards Hewlitt Point on Long Island, with the initial threat being near Bird Grove and to the east. The outgoing tide could carry the oil southwest towards Throgs Neck and the winds might send the oil ashore near Kings Point. NOAA advised that if the leak continued until the tide turned, the pollutant could again move towards Hewlitt Point and beyond with a potential to move into Narragansett Bay.

Conclusion

The COTP had the cleanup contractor position sorbents and boom in Hempstead Harbor. By first light on the following day the oil had dissipated.

References

Research Planning Institute. 1985. Sensitivity of coastal environments and wildlife to spilled oil: Long Island. An atlas of coastal resources. Seattle: Ocean Assessments Division, NOAA. 41 maps.

Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle: Office of Oceanography and Marine Assessment, National Oceanic and Atmospheric Administration.

Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, October 1, 1990.

New York

T/B HYGRADE 42
New Hamburg, New York
October 26, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

At approximately 2230 on October 26, 1990, the 300-foot tank barge HYGRADE 42, carrying approximately 1.3 million gallons of kerosene, grounded on Diamond Reef in the Hudson River, near New Hamburg, New York. The barge, in tow of tug PORT JEFFERSON, sustained damage to her number 1, 2, and 3 port and number 2 starboard tanks and spilled 164,000 gallons of product into the river. The discharge stopped when a water bottom developed in the damaged tanks. The barge's owner, Red Star Company of New York City, accepted responsibility for the spill and initiated cleanup.

NOAA Response

NOAA was notified of the incident and requested on-scene at 2345 on October 26, 1990, by the U.S. Coast Guard On-Scene Coordinator (OSC).

NOAA identified the freshwater creeks leading into the Hudson River as needing priority protection. NOAA reported that there were a few migratory birds in the area, but that they should not be in danger. Towns and industries that had water intakes for water sources in the Hudson were notified so they could take steps to keep their water supplies from become contaminated.

The NOAA Scientific Support Coordinator (SSC) staff created overflight maps and established an electronic communications hotline. Morning and evening overflight observers reported that the slick was approximately 2 miles long, hugging the eastern shore of the riverbank. The weather, with winds blowing from the west, aided the cleanup efforts by isolating the oil against the eastern shore of the Hudson, therefore minimizing impacts. No localized fish kills were noted. The SSC briefed Public Affairs officers and Congressman Robert Kennedy, Jr. concerning aspects of the spill.

T/B HYGRADE 42
New Hamburg, New York
October 26, 1990

New York

Conclusion

The HYGRADE 42 was refloated on October 27 after lightering product to a second barge. The vessel proceeded to a Hess facility to complete offloading and was then towed to Weehawken, New Jersey for repairs. An estimated 30,000 gallons of product was recovered.

References

Dahlin, Jeff, Research Planning Inc., personal communications, October 27, 1990.

Hudson River Keeper, personal communications, October 27, 1990.

Michel, Jacqueline, Research Planning Inc., personal communications, October 27, 1990.

Research Planning Institute. 1985. Sensitivity of coastal environments and wildlife to spilled oil: New York Harbor and Hudson River. An atlas of coastal resources. Seattle: Ocean Assessments Division, NOAA. 19 maps.

Simecek-Beatty, Debra, NOAA Hazardous Materials Response Branch, Seattle, personal communications, October 27, 1990.

Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle, Washington: Office of Oceanography and Marine Assessment.

Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, October 27, 1990.

Boston

F/V COLLIPSO
Nantucket Island, Massachusetts
November 30, 1990

Stephen M. Lehmann, Scientific Support Coordinator

Incident Summary

At approximately 0500 on November 30, 1990, the fishing vessel COLLIPSO ran hard aground near Great Point on Nantucket Island, Massachusetts. At the time of the grounding, the exact location of the ship was unknown. The vessel reported that she was 2 to 3 hundred yards offshore, carrying 4,000 gallons of diesel fuel. No oil had been released.

NOAA Response

NOAA was notified of the incident on November 30, 1990, by the U.S. Coast Marine Safety Office (MSO) Providence. MSO requested current and forecasted weather for the area and an oil trajectory based on tide and wind information for two locations, inside and outside the hook of Great Point.

NOAA reported that winds were from the north-northwest at 15 to 25 knots and a small-craft advisory was in effect. A trajectory showed that, if oil was released under those conditions, it could impact a sand and gravel shoreline within an hour, but should cause no long-term problems. However, the sensitive tidal marsh south-southwest of Great Point could be impacted if the winds were to shift to the west.

MSO determined that the exact location of the COLLIPSO was northeast of Great Point (the outside). With this information, NOAA prepared a new trajectory indicating that an oil release should miss the shoreline and therefore not pose an immediate threat to the tidal marsh.

F/V COLLIPSO
Nantucket Island,
Massachusetts
November 30, 1990

Boston

Conclusion

A tug boat was dispatched from Woods Hole, Massachusetts to help free the COLLIPSO. The vessel was freed December 1, 1990, with no release of oil.

References

Marine Forecaster, National Weather Service, East Boston, Massachusetts, personal communications, November 30, 1990.

Research Planning Institute. 1985. Sensitivity of coastal environments and wildlife to spilled oil: Massachusetts. An atlas of coastal resources. Seattle: Ocean Assessments Division, NOAA. 49 maps.

Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle, Washington: Office of Oceanography and Marine Assessment.

New York

Hayman Properties
Stamford, Connecticut
January 31, 1991

Ed Levine, Scientific Support Coordinator

Incident Summary

Early on January 28, 1991, oil was seen in Stamford Harbor. The oil appeared to be coming from a seawall adjacent to O&G Inc. The spill was initially federalized because the source of the spill could not be readily identified. Further investigation by U.S. Coast Guard Captain of the Port (COTP) Long Island Sound personnel identified the source as a Hayman Properties' heating oil storage tank located approximately 1/2 mile inland from the spill. An estimated 10,000 gallons of teh #4 heating oil was spread in a "bathtub ring" marking the shorelines around the harbor.

NOAA Response

NOAA was notified of the incident on January 31, 1991, by the COTP Long Island Sound and requested to report on-scene to help evaluate cleanup efforts and environmental effects of the oil.

The oil had stained rocks, boats, pilings, riprap, docks, small areas of marsh grass, and seawalls. No environmentally sensitive resources were identified, except for a small pocket of marsh grass that was lightly oiled.

At low tide, the U.S. Army Corps of Engineers closed the hurricane barricade at the mouth of the harbor to control the tide. This prevented most of the oil that had adhered to the shore from re-oiling or spreading into Long Island Sound. Once cleanup was fairly well underway, the gate was opened allowing tidal flushing to help clean the shoreline.

Hayman Properties
Stamford, Connecticut
January 31, 1991

New York

Conclusion

After several days of negotiations, Hayman Properties took over responsibility for the spill. Cleanup continued for about one week.

New York

F/V SHINNECOCK I
Long Island, New York
March 14, 1991

Ed Levine, Scientific Support Coordinator

Incident Summary

On March 14, 1991, the fishing vessel SHINNECOCK I pulled up a World War II 22-foot MK15 torpedo in its trawling nets. The torpedo, containing a 1,200-pound warhead, became wedged in the deck of the vessel. The vessel, with 100,000 gallons of diesel oil onboard, anchored about 2 miles off Long Island and evacuated all personnel. The U.S. Coast Guard established a 3-1/2 mile security zone around the SHINNECOCK I and contacted the U.S. Navy Explosive Ordnance Disposal (EOD) Team.

NOAA Response

NOAA was notified of the incident on March 14, 1991, by U.S. Coast Guard Captain of the Port (COTP) Long Island Sound personnel. NOAA was to provide trajectory information on a release of the diesel oil from 60 feet below the ocean's surface.

NOAA reported that, with the wind from the north, no shoreline impacts should occur. NOAA suggested moving the vessel farther offshore and removing as much product as possible from it to ensure no shoreline impact, before detonating the torpedo. The only anticipated impact on living resources would probably be localized to bottom fish in the immediate area of the explosion.

Conclusion

No attempt was made to remove the oil before sinking because of the sensitivity of the torpedo. The vessel was sunk in 60 feet of water by a time-delayed fuse at 1805 on March 15, 1991. On March 17 at 0730, the EOD divers placed charges on the torpedo and safely exploded it at 1317 causing no more than a bubble at the surface. No oil impact on the shoreline was observed.

F/V SHINNECOCK I
Long Island, New York
March 14, 1991

New York

References

Galt, J.A., NOAA Hazardous Materials Response Branch, Seattle, personal communications, March 14, 1991.

Boston

T/V DELPHINA
Braintree, Massachusetts
May 3, 1991

Stephen M. Lehmann, Scientific Support Coordinator

Incident Summary

On the afternoon of May 3, 1991, the 600-foot, Liberian-flagged tank vessel DELPHINA allegedly struck a submerged object while coming into the CITGO terminal in Braintree, Massachusetts. The grounding occurred in the Fore River Waterway, approximately 200 yards from the terminal releasing an estimated 4,000 gallons of #2 fuel oil into the waterway (48 hours later this figure was increased to 16,500 gallons). The U.S. Coast Guard (USCG) Marine Safety Office (MSO) Boston was notified of the incident at 1650, May 3, 1991.

Terminal personnel responded immediately by booming the vessel and contacting Clean Harbors, Inc. as the cleanup contractor. The spiller took full responsibility for cleanup activities.

NOAA Response

NOAA was notified of the incident on May 3, 1991, by MSO Boston who requested that the Scientific Support Coordinator (SSC) report on-scene. The SSC was asked to provide a spill trajectory and natural resources at risk.

NOAA told MSO that the oil should continue to move with the wind onshore and evaporate as much as 50 percent of its volume within 24 hours. The environmental resources at risk in the area were identified as shellfish (clam beds, which were closed to harvest because of pollution) and marsh areas.

USCG overflights reported light sheen in the area the next morning. The SSC recommended that cleanup personnel be restricted from working directly in the intertidal mud flats or the marsh grass to reduce impacts to the identified sensitive resources. Entry and exit points were established and maintained where necessary.

T/V DELPHINA
Braintree, Massachusetts
May 3, 1991

Boston

NOAA Response, *cont.*

The afternoon of May 4, 1991, the USCG On-Scene Coordinator (OSC) representative and the SSC met with representatives of the effected communities and State agencies. The spill site was surveyed by small boat and foot. The actions that had been taken and the expected impacts were explained.

Conclusion

Because of the slight current and predominant northwest winds throughout the night and following day, the oil concentrated on shore in only a few locations.

Cleanup activities, using vacuum trucks, harbor booms, and sorbant boom and pads continued under the direction of the OSC and spiller. Soil and clam samples were analyzed by the State of Massachusetts (hydrocarbons were found only on the surface sediments, but not in the tissues of the shellfish). No other damage to the environment has been reported.

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New York

T/B SEA BULK MAGNACHEM
Bayonne, New Jersey
June 17, 1991

Ed Levine, Scientific Support Coordinator

Incident Summary

At 2246 on June 17, 1991, the Pollution Response Office of the U..S. Coast Guard Captain of the Port New York (COTP NY) was notified by the vessel SEA BULK MAGNACHEM that she had been struck on her port side by the tug MORTON BOUCHARD. When the collision took place, the tug had the Barge B-115 in tow, westbound near the Platty Kill Creek in the Kill Van Kull. The SEA BULK MAGNACHEM was moored, offloading caustic soda. The SEA BULK MAGNACHEM lost an estimated 500 barrels of acetone. The barge B-115 lost none of its # 6 oil. The U.S. Coast Guard established a 1/4-mile safety zone around the vessel.

NOAA Response

NOAA was notified of the incident at 0043 on June 18, 1991, by the COTP NY who requested information about the properties and potential environmental effects of acetone.

NOAA advised COTP NY that the major concern was the flammability of the acetone. It is water-soluble, lighter than water, and heavier than air and could form a vapor path back to the source. NOAA advised that the 1/4-mile safety zone established should be sufficient.

NOAA told COTP NY that the natural resources most at risk from the spill were fish, which could have been susceptible to a localized fish kill. Birds were not considered at risk, because they were probably inactive and not feeding at the time of the spill.

SEA BULK MAGNACHEM
Bayonne, New Jersey
June 17, 1991

New York

Conclusion

On a first-light overflight, a sheen was visible near the spill that was attributed to diluted acetone still on the surface. The acetone evaporated or dissolved in the water with no explosive reaction, and by later in the day, the sheen was gone.

The barge was offloaded and sent to a shipyard for inspection and repair. The barge then continued to its destination for offloading and inspection.

There were no personnel injured during the spill response and no fish kill was reported.

References

NOAA. 1988. The CAMEO™ 3.0 Manual, Seattle: Office of Oceanography and Marine Assessment, NOAA. 300 pp.

Overton, Ed, Louisiana State University Institute for Environmental Studies, Baton Rouge, personal communications, June 18, 1991.

New York

T/V PROBO GULL
Delaware River
October 19, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

On October 19, 1990, the tank vessel PROBO GULL grounded in the Delaware River near Mantua Creek with 250,000 barrels of #2 oil onboard. The starboard stern section was stuck in the mud bottom.

NOAA Response

NOAA was notified of the potential for a major spill on October 19, 1990, by the U.S. Coast Guard Marine Safety Office Philadelphia.

Conclusion

The vessel was moved by tugs to deeper water at the following high tide. No further NOAA assistance was requested.

References

Watabayashi, Glen, NOAA, Hazardous Materials Response Branch, Seattle, personal communications, October 19, 1990.

Portsmouth

NORTHERLY ISLANDER
Cape Hatteras, North Carolina
October 26, 1990

Gary L. Ott, Scientific Support Coordinator

Incident Summary

During severe weather on October 26,1990, the dredge barge NORTHERLY ISLANDER, dragged anchor and collided with the bridge at Oregon Inlet, North Carolina The bridge spans Oregon Inlet that connects Pamlico Sound to the Atlantic Ocean. The collision removed the bridge and the barge was aground and grinding on the bottom at the site. The barge carried approximately 41,000 gallons of diesel and an unknown quantity of lubrication oil. No oil was released.

NOAA Response

NOAA was notified on October 26, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Hampton Roads. MSO requested tide and resources at risk information, and a trajectory analysis for a potential release.

NOAA told MSO that gale force winds would continue from the northeast at 35 to 40 knots with 6-foot surf on the Atlantic and smaller seas on the sound. NOAA advised that since the amount of diesel was relatively small and the possibility of vessel breakup was low, the primary concern would be the safety of response personnel and the impact on traffic to Cape Hatteras Island because the bridge was gone.

NOAA advised that any spilled oil should move in a southerly direction guided by the wind. If a spill occurs and persists over a tidal cycle, it is possible that the inside and outside of northern Pea Island could be threatened. NOAA told MSO that a diesel release could be a toxic shock to bivalves in the area. The lubricating

Portsmouth

oil, however, could coat the eel grass beds on the inside of Pea Island. A minimal amount of lubricating oil could impact the sandy beaches on the outer islands and could impact migratory fish in the Atlantic surf zone. Pea Island Wildlife Refuge is in the area and could potentially be impacted. Very few birds had been seen, possibly the high winds forced them to seek shelter, indicating that an impact, if any, should be minor.

Conclusion

On October 27, 1990, the winds changed to the west and the wind speed moderated. No oil was spilled and the NORTHERLY ISLANDER was removed from the area on October 28.

References

Michel, Jacqueline, Research Planning Inc., Columbia, South Carolina, personal communications, October 26, 1990

NOAA. 1990. Tide Tables 1990, East Coast of North and South America. Riverdale, Maryland: National Ocean Service, National Oceanic and Atmospheric Administration.

Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle: Office of Oceanography and Marine Assessment, National Oceanic and Atmospheric Administration.

Virginia Institute of Marine Science. 1980. Sensitivity of Coastal Environments and Wildlife to Spilled Oil, State of Virginia, Boulder, Colorado, Hazardous Materials Response Project, National Oceanic and Atmospheric Administration. 104 maps

Portsmouth

M/V COLUMBINE
Tolchester Beach, Maryland
November 1, 1990

Jay Rodstein and Gary L. Ott, Scientific Support Coordinators

Incident Summary

At approximately 1430 on November 1, 1990, the 582-foot Liberian-flagged container ship COLUMBINE grounded 1.8 miles north-northeast of Tolchester Beach, Maryland. The vessel was east of the channel very near the shoreline of Chesapeake Bay, across from Baltimore. Fuels onboard the vessel included 11,592 barrels of Bunker C and 1,739 barrels of diesel. The vessel was double-hulled and had no apparent damage.

NOAA Response

NOAA was notified of the incident on November 1, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Baltimore. MSO requested tide and natural resources at risk information, as well as a trajectory analysis for a potential oil release.

The NOAA Scientific Support Coordinator (SSC) detected no discharge of oil products near the vessel or in the surrounding environmental areas during an overflight on November 2.

NOAA advised that, because the vessel was so close to shore, any released oil could impact shorelines very quickly. The tidal excursion for spilled oil should be about 6 miles and, with the forecasted southwest winds, the oil could move as far as Howell Point. The initial shoreline impacts from the oil were expected to be along the eastern shoreline. The oil would then continue to move south along the eastern shoreline over each tidal cycle.

NOAA further advised that the Bunker C was too viscous to penetrate the sand beaches nearest the

Portsmouth

NOAA Response, *cont.*

grounded vessel by more than a few inches. It should accumulate on the surface and at the high tide line. Diesel fuels, however would readily penetrate into the sand. High spring tides and onshore winds might also push oils into areas above the normal wave wash line.

NOAA advised that the shorelines of greatest concern were those along the creek valleys, Fairlee, Worton, and Still Pond creeks. The lower half of these creek valleys have developed shorelines (seawalls, riprap, etc.), while the heads of the valleys are freshwater marshes. Both shoreline types (seawalls and marshes) tend to become heavily coated by bunker oils and are difficult to clean. The sheltered marshes could have long-term impacts if the oil moved up the creeks.

NOAA recommended booming these creek valleys to divert slicks away from the narrow creek entrances so the oil could not enter the sensitive environments. NOAA also advised similar treatment for the marsh 1.5 miles north of Tolchester Beach, the Tolchester Beach marina, and a marsh just south of Tolchester Beach, three breaks in the otherwise continuous stretch of sand beach from the grounding site to Swant Point.

NOAA advised that animals of concern fell into two categories: wintering waterfowl in the area, potentially in large flocks, and shellfish beds, south of the grounding site. The impact of oils on these populations could be considerable and would vary with the amount of oil and time of exposure.

Conclusion

The COLUMBINE was refloated without incident on the highest of the next high tides on November 3, 1990.

Portsmouth

References

Dahlin, Jeff, Research Planning Inc., Columbia, South Carolina, personal communications, November 2, 1990.

NOAA. 1991. Tide Tables 1991, East Coast of North and South America. Riverdale, Maryland: National Ocean Service, National Oceanic and Atmospheric Administration.

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Portsmouth

Steuart Petroleum Pipeline
Piney Point Creek, Maryland
November 18, 1990

Gary L. Ott, Scientific Support Coordinator

Incident Summary

On November 17, 1990, a 1,000- to 2,000- barrel release from a pipeline of what was originally thought to be an ethyl-based cutter stock occurred at the Steuart Petroleum barge-loading facility. This facility is located at the mouth of Piney Point Creek, on the Potomac River near St. Marys, Maryland. The product spilled was later confirmed to be an asphalt slux, a product that looks, smells, and acts like asphalt.

NOAA Response

NOAA was notified of the incident on November 18, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Baltimore. The MSO requested a trajectory analysis for the release.

The NOAA Scientific Support Coordinator (SSC) flew over the scene at 1000 hours on November 18 and saw no product entering the Potomac River. Booming kept the spilled material confined to Piney Point Creek. The SSC arrived on-scene at 1530 and observed an asphalt mat measuring 40 yards wide by 200 yards long held by the wind against the southeast side of Piney Point Creek. The wind, in turn, held the boom against the asphalt. Boom was also placed at the pipeline break and at the mouth of Piney Point Creek blocking all water paths to the Potomac River.

NOAA advised the U.S. Coast Guard Federal On-Scene Coordinator's representative that the major environmental concern was possible sediment contamination. Procedures were established to avoid, where possible, the contamination of sediments by the asphalt material during removal operations.

Steuart Petroleum Pipeline
Piney Point Creek,
Maryland
November 18, 1990

Portsmouth

Conclusion

The asphalt was removed from Piney Point Creek using vacuum and mechanical means. The cleanup was completed within 7 days by Steuart Petroleum personnel.

References

Carny, Ken, Louisiana State University, Institute for Environmental Studies, Baton Rouge, personal communications, November 18, 1990.

Dahlin, Jeff, Research Planning Inc., Columbia, South Carolina, personal communications, November 18, 1990.

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New York

General Chemical
Claymont, Delaware
December 3, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

On December 3, 1990, approximately 5 pounds of boron trifluoride was released on the ground from a drum at the General Chemical facility in Claymont, Delaware

NOAA Response

NOAA was notified of the incident by the U.S. Coast Guard Marine Safety Office (MSO) Philadelphia who requested information on the chemical and an ALOHA™ air plume model.

NOAA helped MSO use CAMEO ™ II Response Information Data Sheets and provided the requested ALOHA™ air model. The air model showed that within 100 yards of the drum the chemical reached the immediately dangerous to life and health threshold of 100 parts per million.

Conclusion

The boron trifluoride was removed from the ground without incident.

References

Galt, J.A. NOAA Hazardous Materials Response Branch, Seattle, personal communications, December 3, 1990.

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Portsmouth

M/V SHELDON LYKES
Norfolk, Virginia
December 15, 1990

Gary L. Ott, Scientific Support Coordinator

Incident Summary

The National Response Center was notified on Saturday December 15, 1990, that the container vessel SHELDON LYKES had an uncontrolled leak of potentially poisonous chemicals coming from her #4 hold. The vessel was underway to the Port of Hampton Roads, Norfolk, Virginia with 34 crewmembers onboard. No casualties were reported.

NOAA Response

NOAA was notified of the incident on December 15, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Hampton Roads who requested help in identifying the vessel's cargo and its toxicity threat. Concerns focused on the potential for contamination of foodstuffs onboard the vessel, crew exposure, and the risk to the public after the vessel arrived in port.

The Coast Guard Captain of the Port (COTP) directed the vessel to anchor outside the Port of Hampton Roads, approximately 3 miles north of Cape Henry, where a team of marine chemists, hired by the owners, would investigate the chemical leak.

On December 18, 1990, the marine chemist team, using appropriate protective equipment, saw no visible damage to the vessel and detected no unusual readings. Based on this preliminary investigation, the COTP authorized the vessel to proceed to the pier at Norfolk International Terminal.

The ship's owner and chemical response team presented plans to ensure the safety of the public and workers during offloading and for investigating the chemical threat. Particular details were outlined concerning air and chemical monitoring; a stop-work mechanism in the

Portsmouth

NOAA Response, *cont.*

event of an emergency; finding the suspect containers, which contained dimethylaminoethyl acrylate; and decontaminating the containers. The plans were approved by the COTP

Conclusion

By the end of the day, SHELDON LYKES had offloaded all containers except the suspect tank containing dimethylaminoethyl acrylate. Above this container was another 20-foot tank that contained alyl alcohol residue. This tank had chemical vapors in and around it, including its cover and fiberglass insulation. Both suspect tanks were placed on the pier for inspection and/or further shipment. The SHELDON LYKES departed Norfolk en route to Galveston at 2000 December 19, 1990. Final disposition of the leaking tanks is unknown.

References

Athayde, Bill, USCG Fifth Coast Guard District personal communications, Portsmouth, Virginia, December 18, 1990.

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Overton, Ed, Louisiana State University Institute for Environmental Studies, Baton Rouge, personal communications, December 18, 1990.

Phillips, Robert, Virginia Department of Emergency Services, Portsmouth, Virginia, personal communications, December 18, 1990.

Portsmouth

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Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle Office of Oceanography and Marine Assessment, National Oceanic and Atmospheric Administration

Van Den Berg, Gary, NOAA Hazardous Materials Response Branch, Miami, personal communications, December 18, 1990.

Virginia Institute of Marine Science, 1980, Sensitivity of Coastal Environments and Wildlife to Spilled Oil, State of Virginia, Boulder, Colorado, Hazardous Materials Response Project, National Oceanic and Atmospheric Administration. 104 maps

Walters, Buckey, Agency for Toxic Substances Disease Registry, Atlanta, personal communications, December 18, 1990.

New York

Rollins Terminal
Bayonne, New Jersey
December 24, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

The Rollins Terminal facility in Bayonne, New Jersey reported a spill of zirconium oxychloride from an 80,000-gallon storage tank at 1330 on December 24, 1990. After sounding the tank, it was determined that approximately 48,000 gallons were missing.

NOAA Response

NOAA was notified of the incident at 1450 on December 24, 1990, by the U.S. Coast Guard Captain of the Port (COTP) New York who requested advice on appropriate cleanup techniques.

NOAA advised the COTP that the addition of lime would neutralize the contaminant.

Conclusion

Officials believe a slow but continuous seepage through the bottom of the storage tank ultimately led to tank fracture. Due to significant ground saturation, the quantity that entered the water could not be determined. The New Jersey Department of Environmental Protection will empty the tank and investigate soil saturation. The U.S. Coast Guard will monitor for leaching into the waterway. There were no premanent environmental impacts.

References

Overton, Ed, Louisiana State University Institute for Environmental Studies, Baton Rouge, personal communication, December 24, 1990

New York

T/B LEMON CREEK
New York, New York
December 30, 1990

Ed Levine, Scientific Support Coordinator

Incident Summary

At about 1000 on December 30, 1990, the barge LEMON CREEK, while at her moorage in Gravesend Bay, was struck by the motor vessel LODESTAR KING. Damage to the barge caused a leak of about 1,000 gallons per minute of sewage sludge of a potential 100,000 barrels. The barge was towed to a point a few miles north of the Varrazano Narrows Bridge, then taken south through the Narrows to the vicinity of Ambrose Light.

NOAA Response

NOAA was notified of the incident on December 30, 1990, by the U.S. Coast Guard Captain of the Port (COTP) New York. NOAA was asked to evaluate the plan to move the barge out into the New York Bight while letting the sewage sludge leak out, thus allowing the barge to achieve stability. The COTP also requested trajectory analysis information on the projected path of the sludge.

This sludge had a density approximating seawater with no significant floatable particles. NOAA reported that if the sludge was distributed through the water column, it should not impact local shorelines. The outflow of fresh water going into the Hudson River and local drainage systems, increased by recent rain and snow melt, should speed the flushing of New York Harbor, particularly north of the narrows. Based on these factors, the leak from the barge should result in a turbid plume that would appear in a boat's wake and disperse within a few hours. NOAA also advised that the sludge should not accumulate in large enough quantities along the route of the barge to cause a surface slick; thus no significant shoreline impacts were anticipated.

T/B LEMON CREEK
New York, New York
December 30, 1990

New York

NOAA Response, *cont.*

NOAA advised that the effects to human health were considered to be minimal because there was no recreational beach use or swimming at this time of year.

Conclusion

CONCLUSION
According to New York City Department of Environmental Protection (NYC DEP) personnel, approximately 650,805 gallons of sludge were lost in the upper harbor due to the collision. In addition, 2,244,155 gallons were lost in the Ambrose Channel, while 77,000 gallons remained onboard for offloading. The NYC DEP sampled the sludge for fecal and total coliforms on December 31 and detected no significant contamination.

The barge was towed out into the New York Bight to discharge the leaking compartments, then towed back into the port for further offloading. No shoreline impacts occurred.

References

Galt, J.A., NOAA Hazardous Materials Response Branch, Seattle, personal communications, December 30, 1990.

Portsmouth

Allied Terminals, Inc.
Norfolk, Virginia
February 4, 1991

Gary L. Ott, Scientific Support Coordinator

Incident Summary

On February 4, 1991, six pipe bombs were discovered attached to chemical storage tanks at Allied Terminals, Inc., on the eastern branch of the Elizabeth River in Norfolk, Virginia. It is the only bulk chemical terminal in the port and has 11 storage tanks, including two 2.1-million gallon tanks reserved for storing methanol. Two of the pipe bombs were planted on the largest of these methanol tanks. Other chemicals stored at the site included liquid fertilizer, 50% caustic soda, and AC-20.

NOAA Response

NOAA was notified of the incident on February 4, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Hampton Roads. MSO was particularly interested in knowing the potential reaction of methanol if it combined with the other chemicals in the event of an explosion.

NOAA told MSO that the immediate threat would be a large fire involving methanol if the pipe bomb could not be defused. NOAA also advised that oxide gases could be produced from the liquid fertilizer if the bombs detonated. NOAA suggested evacuating people from the area to at least a half mile away.

NOAA established an information center at the USCG Reserve Training Center, Yorktown where a meeting of federal and state agencies involving emergency spill planning was in progress. Representatives of the Agency for Toxic Substance and Disease Registry (ATSDR), the Commonwealth of Virginia Department of Public Health, and the Virginia Department of Emergency Services provided immediate response information on-scene and agreed that the response should be handled by local fire officials.

Allied Terminals, Inc.
Norfolk, Virginia
February 4, 1991

Portsmouth

Conclusion

Local fire officials established an evacuation zone of one mile from the facility. All the pipe bombs were removed and defused from the tanks without further incident.

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Allied Terminals, Inc.
Norfolk, Virginia
February 4, 1991

Portsmouth

References, *cont.*

Walters, Buckey, ATSDR, Atlanta, personal communications, February 4, 1991.

New York

T/V BORSEC
Marcus Hook, Pennsylvania
May 13, 1991

Ed Levine, Scientific Support Coordinator

Incident Summary

At approximately 0800 on May 13, 1991, the tank vessel BORSEC spilled #4 oil into the Delaware River. The BORSEC was loading fuel from a barge, and, the tank overfilled, causing the oil to run out a vent, onto the deck, and into the water.

NOAA Response

NOAA was notified at 1015 on May 13, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Philadelphia. First reports were of a dark sheen mixed with floating oil measuring 2,500 meters by 1,000 meters on the water. The original estimated spill size of 30 to 40 barrels was downgraded to 3 barrels by 1330. MSO Philadelphia requested a spill trajectory of the slick's probable path.

The NOAA Scientific Support Coordinator (SSC) told MSO that, with winds from the southwest at 5 to 8 knots, the oil should move 3 to 4 miles up river from the source by early afternoon, then down river 2 to 4 miles below the source by evening. The oil could continue this back and forth movement for a day or so, depending on wind speed and direction.

The SSC provided MSO Philadelphia with tide data, oil properties for #4 fuel oil, and an oil spill calculation to determine the amount of oil spilled. The SSC also recommended protecting creeks near the spill by deploying diversionary boom.

Conclusion

Hudson Maritime was contracted by the insurers, Protection and Indemnity Club, to manage the spill response. Oldmans, Raccoon, and Darby creeks were boomed as NOAA had recommended. Afternoon overflight observers reported that the sheen had broken up into two patches and no recoverable oil remained on the river.

T/V BORSEC
Marcus Hook, Pennsylvania
May 13, 1991

New York

References

Koops, Wierd. 1985. The "oil spill slide rule" to predict the fate of an oil spill. Proceedings of the 1985 Oil Spill Conference. (Prevention, Behavior, Control, Cleanup). February 25-28, 1985 Los Angeles, California. Washington, DC API Publication No. 4385. p. 647.

Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, May 13, 1991.

Portsmouth

Regional Enterprises, Inc.
Hopewell, Virginia
August 9, 1991

Gary L. Ott, Scientific Support Coordinator

Incident Summary

On the afternoon of, August 9, 1991, an estimated 30,000 gallons of 88% sulfuric acid spilled into approximately 100,000 gallons of water in a containment pond at Regional Enterprises, Inc. Tank #40, containing 900,000 gallons of waste oil, was immersed in this sulfuric acid and water solution up to 7 inches from its base. Another tank containing an unknown amount of sodium hydroxide was also within the containment area.

NOAA Response

NOAA was notified of the incident on August 9, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Hampton Roads. MSO requested an assessment of the damage to the waste-oil tank from the chemical reaction of athe sulfuric acid and water mixture. MSO noted that a failure of the waste-oil tank could cause a catastrophic release of waste oil into the waterways leading to the James River, a navigable waterway.

NOAA told MSO that the increasing corrosiveness of sulfuric acid as it was diluted with water could significantly damage the tank over time. The rate of corrosion to the tank could not be calculated based on available information, but an immediate catastrophic tank failure was not anticipated. Tank failure would probably occur along seams and the tank's bottom. NOAA advised removing the oil from the threatened tank as soon as possible. Future use of the tank for storage of product would require fit-for-use certification.

NOAA also advised MSO that a mixture of sodium hydroxide and sulfuric acid could cause a release of heat and might result in a splash threat to anyone on-scene. There should be no threat to anyone outside the area.

Regional Enterprises, Inc.
Hopewell, Virginia
August 9, 1991

Portsmouth

NOAA Response, *cont.*

After neutralizing the acid, employees of Regional Enterprises began pumping the sulfuric acid layer, located at the bottom of the containment pool, into tanks on the facility in an attempt to salvage the sulfuric acid product.

Finally, NOAA concurred in the on-scene activity to increase the capacity of the immediate containment area if a tank failure did occur and to augment the containment system with another layer of containment structures. The augmentation of the immediate containment area was completed the evening of August 9. The augmentation of another layer of containment area was completed by August 11.

On, August 12, 1991, the United States Environmental Protection Agency opened the Federal Pollution Fund and brought in more pumping equipment to transfer waste oil out of tank #40. Under this Federal Fund, the Coast Guard Strike Team began removing of waste oil from tank #40.

Conclusion

On August 14, 1991, the threat of a catastrophic oil release was considered negligible and the federal response was terminated. No oil or sulfuric acid was reported released outside the containment area or from the facility property.

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Portsmouth

Atlantic Energy, Inc.
Chesapeake, Virginia
August 28, 1991

Gary L. Ott, Scientific Support Coordinator

Incident Summary

On August 28, 1991, an employee of Atlantic Energy, Inc. reported a small leak of propane from a 10-million gallon capacity propane tank. The leak was reported to be 2 to 3 gallons per day. Atlantic Energy reported the incident to the U.S. Coast Guard Marine Safety Office (MSO) Hampton Roads and began transferring the product.

NOAA Response

NOAA was notified of the incident on August 28, 1991, by the U.S. Coast Guard Office of Marine Environmental Protection (MEP), Portsmouth. MEP requested that NOAA estimate the potential spread and extent of the propane plume. MEP advised NOAA that flammable vapors were not detected within 3 inches of the tank using appropriate gas detection equipment.

NOAA suggested different plume trajectories, but noted that the capacity to model the event was difficult because the leak rate could not be determined. A total catastrophic release was not considered probable.

Conclusion

Atlantic Energy personnel repaired the propane tank on September 4, 1991, after removing many layers of insulation to locate the leak. The repair was completed without having to transfer the estimated 7.3 million gallons of propane from the tank.

Portsmouth

References

NOAA. 1990. The ALOHA™ 5.0 Manual, Washington D.C.: National Safety Council. 130 pp.

NOAA. 1990. The CAMEO™ 3.0 Manual, Washington D.C.: National Safety Council. 236 pp.

Research Planning, Inc. 1990, Oil and Hazardous Substances Pollution Incidents - Planning and Response Considerations, Hampton Roads, Virginia. Seattle: National Oceanic and Atmospheric Administration. 79 pp.

Portsmouth

Craney Island Tank Farm
Norfolk, Virginia
August 31, 1991

Gary L. Ott, Scientific Support Coordinator

Incident Summary

On August 31, 1991, a valve failed during a fuel transfer at the U.S. Navy's Craney Island Tank Farm. Approximately 162,000 gallons of fuel oil was released, but was held within the containment area surrounding the tanks.

NOAA Response

NOAA was notified of the incident on August 31, 1991, by the U.S. Coast Guard, Office of Marine Environmental Protection (MEP) Portsmouth, Virginia MEP requested tide information and a preliminary trajectory analysis for the potential release.

NOAA advised that any fuel oil released would move with the harbor currents known to the area. The probability of oil escaping the containment area was considered very low.

Conclusion

On September 1, 1991, nearly all the spilled oil in the containment area had been recovered by Craney Island employees. The U.S. Coast Guard Marine Safety Office Hampton Roads monitored the cleanup effort over the next several days. No oil travelled outside the containment area.

References

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Miami

M/V SEPTEMBER
Key Largo, Florida
January 2, 1991

Gary Van Den Berg - Scientific Support Coordinator

Incident Summary

On January 2, 1991, at approximately 1700, the 80-foot yacht SEPTEMBER caught fire and burned to the water line in John Pennekamp Coral Reef State Park, Florida. The fire was brought under control by 1930, but the vessel sank in about 15 feet of water with approximately 800 gallons of diesel fuel onboard.

NOAA Response

NOAA was notified of the incident at 2230 on January 2, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Miami. The MSO asked NOAA to furnish a trajectory to the John Pennekamp Coral Reef State Park manager.

NOAA advised the park manager that diesel is very light and probably would not hold together as a slick for more than 1/4 to 1/2 mile from its source and should evaporate and disperse rapidly. A slight shoreline impact might be expected directly downwind of the sunken vessel with the tide.

NOAA also advised that the main resource at risk were the mangroves in the area. White and black mangroves are very sensitive and could be affected by very little diesel, whereas red mangroves, the primary type in the area, are not as sensitive. NOAA advised deploying sorbent boom to protect the mangroves.

NOAA contacted the park manager on January 3 and was told that there were some small patches of diesel on the water and some minor beach impacts. A survey team identified three places between El Radabob Key and Point Willie where the oil had come ashore. NOAA

M/V SEPTEMBER
Key Largo, Florida
January 2, 1991

Miami

NOAA Response, *cont.*

cautioned against allowing too many cleanup personnel on the beaches because concentrated foot traffic could cause more damage than the oil.

A visual inspection by NOAA confirmed a few small patches of sheen on the water thought to have come ashore with debris from the vessel. All three areas had charcoaled pieces of the SEPTEMBER. There was no bathtub ring on the mangroves or seaweed and no garbage on the shore.

Conclusion

NOAA monitored the salvage operation and supplied the park manager with updated weather daily until the salvage operation was completed. The vessel was raised at approximately 1900 on January 7. The Coast Guard is investigating the cause of the fire.

References

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Miami

T/B OCEAN 255
Sarasota, Florida
February 15, 1991

Gary Van Den Berg - Scientific Support Coordinator

Incident Summary

At 0800 on February 15, 1991, the tank barge OCEAN 255 broke free of its tug the SEA-FARER, and began drifting in the Gulf of Mexico off the west coast of Florida. The 546-foot barge was carrying 250,000 barrels of gasoline and diesel fuel. There were clear skies, 35-knot winds from the west-northwest, and 10- to 12-foot seas at the time of the incident.

NOAA Response

NOAA was notified of the incident at 0830 on February 15, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Tampa. MSO wanted to know where the barge would go aground based on current weather conditions.

The NOAA Scientific Support Coordinator (SSC) told MSO that the barge would probably go aground near the entrance to Port Charlotte (Gasparilla Island) if the winds continued out of the west-northwest. The grounding was expected about 1200 on February 16.

The barge subsequently changed positions and was awash. There were fears that the OCEAN 255 could not be secured under the existing conditions. Accordingly, the, MSO requested the SSC and the Coast Guard Strike Team report on-scene because of the potential for a major spill.

By 1730, the OCEAN 255's owner, Maritrans, put personnel aboard the barge, dropped anchor, and secured the vessel about 24 miles offshore between Sarasota and Venice, Florida.

T/B OCEAN 255
Sarasota, Florida
February 15, 1991

Miami

Conclusion

After the winds subsided and the barge was reconnected to the tug, she continued the trip to Tampa. The U.S. Coast Guard is investigating the cause of the disconnection.

References

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Miami

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Gary Van Den Berg, Scientific Support Coordinator

Incident Summary

On March 6, 1991, the motor barge VESTA BELLA, containing 560,000 gallons of #6 fuel oil, sank about 30 miles southeast of Barbuda, Trinidad. Oil was seen bubbling up from the sunken barge; U.S. Coast Guard (USCG) overflight observers reported a slick containing patches of sheen with some brown areas extending 15 by 5 nautical miles.

NOAA Response

NOAA was notified of the incident on March 6, 1991, by the USCG Marine Safety Office (MSO) San Juan, Puerto Rico. The Coast Guard requested a spill trajectory, updated weather forecasts, and environmental natural resources at risk information. Additional NOAA personnel reported to St. John at the request of the Federal On-Scene Coordinator on March 23.

Oil Trajectory

Based on forecasted weather conditions and the reported location of the sunken vessel, NOAA told MSO that the islands downwind of the slick (St. Kitts, St. Eustatius, and Saba) could be impacted within 20 hours. However, since the actual amount of oil released was not known, it was difficult to estimate the severity of beach impacts. Based on previous experience with the behavior of #6 oil in the marine environment, NOAA advised that beach impacts could range from scattered tarballs to heavy coatings. Moreover, if the full 560,000 gallons spilled, there could be beach impacts more than 100 miles downstream from the vessel. This area of impact would include Puerto Rico and U.S. Virgin Islands beaches.

The barge continued to leak oil, supplying the southeast end of a slick that stretched northwest towards the strait between Saba and St. Martin islands.

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Miami

Oil Trajectory, cont.

NOAA conducted overflight observations of Puerto Rico, U.S. Virgin islands, and Trinidad shorelines. NOAA correlated these observations with computed trajectory estimates and side-looking airborne radar imagery to track the oil's movement. This information was then distributed on annotated maps to spill response agencies.

Resources at Risk

Biota. NOAA emphasized that the greatest concern was the protection of the 15 species of seabirds in the area, who were breeding at the time of the spill. These birds spend a great deal of time either on the water or diving for food and they are particularly sensitive to the effects of oil contamination. Nesting and nearshore seabirds were particularly at risk. There were an additional 55 bird species in the area that could be threatened.

NOAA reported that May and June are the peak times for turtle nesting, but pointed out that there is a population of green turtles resident year-round on the northern shore of St. John. The turtles could be at risk unless the slick passed to the south of the island. The endangered hawksbill, threatened green, and leatherback turtles were nesting on the beaches at the time of the spill. Consequently, the hawksbill and green turtles were of great concern if their nesting beaches should become contaminated. Special action would need to be taken then because turtles are indiscriminate feeders and have been known to ingest tarballs.

Although living organisms were not expected to suffer acute health effects, there was a possibility of chronic effects because of the high concentration of polyaromatic hydrocarbons in the oil. The St. John Humane Society prepared to establish a wildlife cleaning and rehabilitation center.

Probable beach impacts. Steady wave energy would tend to strand oil high up on the rocky shorelines and pocket beaches on the windward sides of the islands of St. Kitts,

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Miami

Resources at Risk, cont.

St. Eustatius, and Saba. Thus, even a light splatter of tarballs could accumulate into a band or "bathtub ring" of black oil at the high tide line. In addition, steady tradewinds would probably cause northeast-facing embayments to catch any oil passing close to shore. Consequently, the NOAA Scientific Support Coordinator (SSC) recommended careful shoreline surveys to identify all sites with stranded oil.

The mixed-sand and gravel beaches along the southern coasts of Virgin Gorda, Norman Island, Peter Island, Cooper Island, and St. John were expected to accumulate light concentrations of stranded oil.

Probable subtidal impacts. NOAA advised that coral reefs and seagrass beds would probably not be impacted because #6 fuel oil was too heavy to mix in the water column and affect subtidal regions.

Cleanup Countermeasures

Although the oil would be difficult to remove from rocky areas, it would be relatively easier to retrieve manually from sand beaches. NOAA cautioned that care should be taken not to remove the sediment or mix the oil into the subsurface layer. Cleanup crews were on standby notice to remove beached oil.

NOAA worked with other agencies to develop a bilingual Shoreline Survey Form to evaluate the degree of oiling. These forms contained definitions of shoreline types, shoreline oil description terminology, and descriptions of cleanup methods. The forms were used to help the Federal On-Scene Coordinator (FOSC) decide cleanup locations and methods.

Cleanup criteria were set for each shoreline type and based on the degree of oiling. High-recreational use sand beaches had the highest priority and were first to be cleaned. Crews were instructed to remove only the

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Miami

Cleanup Countermeasures, cont.

seawardmost deposits of seagrass wrack; wrack was left as a natural sorbent for later removal on low-recreational use beaches. On gravel beaches, cleanup was to be conducted only if tarmats were present and the shoreline was accessible by road. Snares were to be used to soak up liquid oil and tarmats were to be manually removed. For mangroves, snare booms were to be placed along oiled shorelines and across creek mouths at risk from the oil.

After initial inspection of each shoreline type, the interagency shoreline cleanup committee reached a consensus on what they would consider sufficiently cleaned. Members of this group included the USCG, the NOAA SSC, the National Park Service Resource Manager, and the U.S. Virgin Islands Department of Parks and Natural Resources. The SSC helped establish priorities to protect presently unoiled habitats should they become at risk. An effective long-term monitoring program was designed and implemented.

On March 27, cleanup began on U.S. Virgin Islands beaches. Cleanup consisted of removing oily debris and manually reworking the oiled swash zone. Pompoms were effective in removing the loosened oil from the surf below the reworked swash line. Pompoms were also used as a passive cleanup technique on some mangroves. In some instances, they were used to scrub some of the more heavily affected large rocks and to remove much of the oil from mangrove roots and larger rocks.

Dispersants and bioremediation. Early in the spill, the use of chemical dispersants and bioremediation agents were considered as potential cleanup countermeasures. The Caribbean Regional Response Team (CRRT) convened a meeting of international resource agencies to consider the use of these methods.

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Miami

Chemical dispersants, including FINASO OSR-7 and Corexit 9527, were applied to fresh and weathered oil. However, none of the agents proved effective in dispersing the oil after it had weathered for a few days. On the basis that bioremediation was not yet proven as effective in removing oil from open waters, the CRRT refused the French Navy's proposal to use of Alpha BioSea microbes in areas where the dispersant had proved ineffective.

Human Health Protection

The priority issue was protection of Culebra Island's desalinization plant, a reverse-osmosis facility. Hurricane Hugo had destroyed the protective screens on the intakes, which are only one meter below the surface. When the oil moved nearshore, it picked up sediment and either became neutrally buoyant or sank. NOAA suggested deploying boom equipped with a fine hanging net to prevent tarballs fouling the intake. However, the oil did not reach this area and there were no subsequent reports of water problems.

Scattered concentrations of tarmats were found on the mangrove islands and reef flats offshore of Puerto Rico's southern coast. Although mangrove roots along the eastern shore on Cayo Berberia were coated with an approximately 50 percent accumulation of oil, it was concluded that wave energy would do the least harmful job of removing the oil. The shorelines with the heaviest concentrations of oil were located on Culebra and Culibrita, a small island to the northeast, where heavy accumulations of tarballs covered the sand beaches, and tarmats could be seen on rocky headlands and gravel beaches. These islands were a cleanup priority because of their heavy recreational use. Accordingly, a field command post was established at the Department of Natural Resources headquarters on Culebra and cleanup crews began work immediately.

M/B VESTA BELLA
Barbuda, Trinidad
March 6, 1991

Miami

Conclusion

Cleanup operations were terminated on St. John on April 7. Before this final inspection, all bagged oily debris was removed from the beach to a temporary storage area. The debris was determined to be non-toxic by independent laboratory testing, and thus suitable for disposable in the Ponce, Puerto Rico municipal landfill. On April 13, the FOSC announced the cleanup effort was complete.

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Miami

M/V JESULA II
Miami, Florida
March 28, 1991

Gary Van Den Berg and Stephen Lehmann, Scientific Support Coordinators

Incident Summary

On March 28, 1991, the 177-foot, 498-ton motor vessel, JESULA II, carrying general cargo, caught fire east of Miami, Florida. The vessel was reported to have approximately 7,000 gallons of Bunker C and 110 gallons of lube oil onboard. First reports said that the vessel was 80 percent engulfed in fire, but no oil had been seen in the water.

NOAA Response

NOAA was notified of the incident at 0830 on March 28, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Miami. The MSO requested a spill trajectory and natural resources at risk information.

The NOAA Scientific Support Coordinator (SSC) told MSO that sensitive resources were at Ajax and Pacific reefs and Elliot Key, part of Biscayne National Park, a National Marine Sanctuary.

The SSC provided on-scene weather forecasts and a spill trajectory.

The MSO planned to sink the vessel and NOAA recommended that if it was to be sunk, it should be towed 25 miles east of Pacific Reef and sunk in 400 fathoms of water. This is outside the Exclusive Economic Zone and past the core of the Gulf Stream. Sinking the vessel there would minimize the chance of impacts to the Florida and Bimini coasts.

M/V JESULA II
Miami, Florida
March 28, 1991

Miami

Conclusion

NOAA's recommendation for sinking the JESULA II was based on initial reports that she was carrying Bunker C oil. This was not the case. The Coast Guard did not feel the vessel was secure enough to pass through the Gulf Stream under the sea conditions. On march 29, 1991, at approximately 1030, the U.S. Coast Guard towed the vessel 3 miles east of Miami Beach and sank it in 650 feet of water. Following the sinking, Coast Guard personnel conducted overflights of the area and observed a narrow band of light sheen extending approximately 1 mile north of the sunken vessel. The sheen was consistent with diesel fuel rather than the Bunker C that had been reported.

The MSO conducted follow-up overflights through April 1, 1991, and observed very light sheen. Routine overflights continued to monitor the area until no more oil was seen. No shoreline impacts were observed or reported.

References

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Miami

M/V GOLDEN HILL
Port Everglades, Florida
June 19, 1991

Gary Van Den Berg, Scientific Support Coordinator

Incident Summary

At 0130 on June 19, 1991, the motor vessel GOLDEN HILL spilled approximately 600 gallons of #6 fuel oil (IFO-180) during refueling operations at Port Everglades Pier 29. The U.S. Coast Guard (USCG) Marine Safety Office (MSO) Miami was dissatisfied with the responsible party's handling of the cleanup and federalized the spill at 0600 by opening the Oil Pollution Fund.

A local contractor reported on scene and began putting boom around the ship to contain as much of the spilled product as possible. By first light it was evident that much of the product was moving into the Intracoastal Waterway towards John Lloyd State Park, which is located directly across the channel from Pier 29. The park had recently completed a mangrove restoration project. The contractor boomed the channel adjacent to the mangroves, but some of the recently transplanted mangrove seedlings were affected in an area approximately 200 yards long by 5 to 25 yards deep. In the most severely impacted areas, the mangroves were completely coated from the surface up to 30 centimeters. The remaining impacts varied from a spot on a leaf to 90 percent coverage of the seedling The oil reached the mangroves on an outgoing tide or the impacts probably would have been more severe.

NOAA Response

NOAA was notified of the incident on June 19, 1991, by the USCG MSO Miami. MSO requested that the NOAA Scientific Support Coordinator (SSC) report on-scene to assist with planning the response and cleanup activities. The SSC arrived on-scene on June 20, 1991, when the response was well underway.

M/V GOLDEN HILL
Port Everglades, Florida
June 19, 1991

Miami

NOAA Response, *cont.*

In the initial stages of the spill, the Port Everglades Port Authority asked for permission to use dispersants on the oil. By unanimous decision of interested parties, the use of dispersants was not allowed.

The SSC worked with the USCG On-Scene Coordinator, the contractor, the Florida Department of Natural Resources, the Florida Marine Patrol, John Lloyd State Park rangers and biologists, and the Region 4 Regional Response Team.

NOAA worked with park personnel to establish a way to clean the impacted mangrove seedlings without damaging them further. The consensus was that not much could be done given the existing circumstances, but the spill presented an excellent research opportunity to monitor the impact on mangrove seedlings. The SSC photographed the impacted areas and will periodically visit the areas to further record any damage done. In addition, NOAA's Damage Assessment Center is going to conduct a formal damage assessment. The SSC accompanied the assessment representatives on their initial survey and will continue to provide them support when needed.

Conclusion

The response effort was terminated on June 21, 1991. The USCG is still investigating the incident. NOAA is continuing to photo document the area to learn more about the effects of #6 oil on mangrove seedlings.

References

Michel, Jacqui, Research Planning Institute, Columbia, South Carolina. personal communications, June 20, 1991.

Miami

Tank Barge COASTAL 32
Key Largo, Florida
July 26, 1991

Gary Van Den Berg, Scientific Support Coordinator

Incident Summary

Tank barge COASTAL 32 with 12,000 barrels of #6 oil onboard developed a leak while transiting through Hawk Channel off Key Largo, Florida. Even though Coastal personnel deployed containment boom around the barge shortly after discovering the leak, a U.S. Coast Guard overflight crew reported that the slick extended from Rodriguez Key to Soldier Key (approximately 60 miles) with intermittent sheen of mixed light and dark oil measuring about 1/4 mile wide.

NOAA Response

NOAA was notified of the incident on July 26, 1991, by the John Pennekamp State Park manager who requested a trajectory for spilled oil and updated weather. NOAA supplied this information to the U.S. Coast Guard Marine Safety Office (MSO) Miami as well as to the Pennekamp State Park manager.

NOAA reported that beach impacts could occur as early as mid-afternoon on the outer islands, and that the Keys could expect oil to come ashore during the late afternoon or early evening. Beach impacts would depend upon the amount of oil spilled. The evening floodtide could cause the oil to be sucked through channels exposed to the flood. NOAA reported that #6 is a persistent oil that could last for weeks if a large amount was released. NOAA also suggested cleanup techniques

NOAA supplied the on-scene personnel tide information and weather updates.

After surveying the area by boat, most of the reported oil was identified as brown algae.

Tank Barge COASTAL 32
Key Largo, Florida
July 26, 1991

Miami

Conclusion

The Coast Guard determined that the source of the leak was a broken 2-inch containment drain line. They estimated that less than 100 gallons of oil was released.

Impacts from the oil were minimal. A Pennecamp State Park biologist completed a survey and found three small areas affected along the shoreline for approximately one mile from Point Willie to the south. No damage was expected from these impacts. All cleanup operations were completed by 1800 July 26, 1991. Coastal accepted full responsibility for the release and furnished all labor and supplies for cleanup.

References

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New Orleans

T/V WORLD BRAZILIA
Mobile, Alabama
October 2, 1990

Chris J. Nelson - Scientific Support Coordinator

Incident Summary

On September 30, 1990, the Liberian tank vessel WORLD BRAZILIA, loaded with approximately 1.8 million barrels of Arabian medium crude oil (API 30) anchored in about 21 fathoms of water about 57 nautical miles south of Mobile, Alabama. She had begun lightering operations to a Chevron transfer vessel when small amounts of oil were noticed coming from near the BRAZILIA's mid-ship hull. After some cargo was removed, lightering operations were suspended by Chevron officials and divers were called to discover the cause of the oil leak. The BRAZILIA, a single-skinned hull, 1,125-foot vessel had undergone hull work before this cruise, but reported she had sailed without incident in heavy seas crossing the Atlantic.

Divers found a 6- to 8-inch fatigue crack in the BRAZILIA's bottom, mid-ship hull, 93 feet down her port side, about 5 feet inboard of the turn of her bilge. The crack was athwart ship, paralleling her 174-foot beam, and immediately below her #4 port cargo tank. Estimates of BRAZILIA's structural condition were guarded, but indicated it probably would not worsen.

NOAA Response

NOAA was notified of the incident on October 2, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Mobile. MSO requested a trajectory analysis in the event of a catastrophic failure of the BRAZILIA's hull. MSO reported that the probability of additional hull failure was not likely if the weather remained calm and lightering operations did not become difficult. Lightering was scheduled to resume later in the day.

T/V WORLD BRAZILIA
Mobile, Alabama
October 2, 1990

New Orleans

NOAA Response, *cont.*

NOAA told MSO that any oil lost from the BRAZILIA should move very slowly to the northeast, but could remain near the ship and form large, possibly multiple, slicks. Ample opportunity for the slicks to dissipate or be recovered was expected.

Weather remained generally mild; however, thunderstorm alerts were issued to MSO Mobile and the BRAZILIA regularly.

Resources at risk were deemed minimal since the BRAZILIA was well offshore and was not expected to be subjected to any major weather. Seabirds (gulls and terns) were identified as the most threatened species if oil was lost.

NOAA recommended using protective booming near the scene and alerting potential cleanup resources if the situation worsened. NOAA also recommended using dispersants, if the need arose, to decrease oil volume on the water before it could seriously threaten sensitive areas along the coasts of Florida, Alabama, and Mississippi.

Conclusion

The BRAZILIA was reevaluated for potential hull failure, found to be safe, and lightering resumed on October 2, 1990. The BRAZILIA was emptied on October 9, and departed for the Persian Gulf, dry dock, and repairs on October 11. The BRAZILIA lost only a few barrels of oil during lightering and no injuries to humans or wildlife were reported.

References

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T/V WORLD BRAZILIA
Mobile, Alabama
October 2, 1990

New Orleans

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New Orleans

MALLARD 41
Mississippi River Delta, Louisiana
October 10, 1990

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

At approximately 2300 on October 9, 1990, the ARCO workover boat MALLARD 41 was revitalizing an oil and natural gas well located in South Pass about 5-1/2 nautical miles south of South East Pass in the Mississippi Delta. A fire started in the on-board drill mud pits during well work. Oil sheen was observed by other vessels working the fire. It was not clear whether the sheen was coming from the MALLARD and fire fighting efforts or from the well below the burning vessel.

At 0045 om October 10, ARCO officials reportedly stated that the well was safely shut-in and was no longer a factor in the fire. The fire was finally extinguished at 0115 after going out once and then restarting. Vessels on-scene continued cooling the MALLARD with seawater.

NOAA Response

NOAA was notified of the incident at 0230 on October 10, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) New Orleans. MSO requested an oil spill trajectory for the possible release of 5,000 gallons and a weather forecast for the area. MSO reported that ARCO had requested permission to use dispersants on the spill.

The NOAA Scientific Support Coordinator (SSC) told MSO that the weather was expected to change markedly from its currently mild conditions within 12 hours when a front would pass over the area. Winds were expected to become gale force from the north-northwest causing 6- to 9-foot seas and could continue to increase somewhat and swing more northeasterly under the influences of Tropical Storm Marco located just off Key West, Florida. The SSC advised personnel and vessels to seek shelter.

MALLARD 41
Mississippi River Delta,
Louisiana
October 10, 1990

New Orleans

NOAA Response, *cont.*

NOAA informed MSO that the oil should move out to sea and dissipate naturally and asked for overflight verification of the extent and movement of the oil. The SSC advised against using dispersants.

Conclusion

U.S. Coast Guard overflight observers reported that the oil released from the ARCO site was only enough to create a sheen that extended a few hundred yards downwind and downcurrent from the MALLARD as NOAA had predicted. ARCO's request for the use of dispersants was withdrawn. Tropical Storm Marco made landfall in south-central Florida and was not a significant factor in the incident. The MALLARD and the reworked well were recovered without further incident.

The oil spill was presumed to be from the well and drilling mud pit. Oil reportedly was washed overboard while trying to extinguish the fire and cool the MALLARD. There were no estimates of oil loss reported and nearby wet lands apparently sustained no damage. Five crewmen were injured during the fire aboard the MALLARD, but there were no injuries to wildlife reported.

References

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New Orleans

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New Orleans

AMOCO Collection Line
Hackberry, Louisiana
December 19, 1990

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

On December 16, 1990, the Louisiana State Police reported an oil spill at the AMOCO production facilities near Hackberry, about 17 miles south-southwest of Lake Charles, Louisiana. U.S. Coast Guard (USCG) Marine Safety Detachment (MSD) personnel, Lake Charles investigated and confirmed a spill estimated at 14,700 gallons. The oil was characterized as Louisiana Medium Sweet Crude (API 31-32) and included more than 8 percent production waters. Reportedly, an unidentified service vessel struck and severed a collection pipeline on December 15, 1990, causing the spill. AMOCO officials reported that cleanup contractors had been called and that response was underway.

NOAA Response

NOAA was notified of the incident on December 19, 1990, by the USCG On-Scene Coordinator (OSC), Marine Safety Office (MSO), Port Arthur, Texas. The OSC requested that the NOAA Scientific Support Coordinator (SSC) join Louisiana officials on-scene to observe the cleanup and review plans for future response.

A natural resources at risk analysis of the area emphasized the need to protect wading birds, including the endangered roseate spoonbill; diving birds, such as the endangered white pelican and brown pelican; birds of prey, including the endangered Peregrine falcon; and wetland animals, such as river otter and raccoon.

On December 20, the SSC and MSD Lake Charles representatives went to Black Lake to observe cleanup operations and the lake environs, and to review AMOCO's future work plans. During the site visit, NOAA observed that the oil had a significant amount of water in it, and, in effect, was emulsified at the time of production.

AMOCO Collection Line
Hackberry, Louisiana
December 19, 1990

New Orleans

This "moussed" oil is less dangerous to birds, animals, and vegetation because it does not adhere to surfaces.

The SSC observed that the cleanup procedures were not protecting the environment from further damage. The SSC observed high-pressure washing of shorelines and vegetation, walking on oiled grounds, and improper booming. The SSC worked with the OSC and Louisiana Department of Environmental Quality officials to provide guidance for a more suitable cleanup plan. This plan included restricting foot traffic on oiled areas, minimizing soil and plant disturbances, and correcting boom placement to expedite cleanup and prevent trapping oil in marshes and wetlands.

Conclusion

Cleanup was generally successful. Positive aspects of the spill were that Black Lake, although open to saltwater channels and flushing, was well buffered from fresh water wetlands surrounding the area. Oil did not reach these areas because of a series of dikes and levies maintained by AMOCO around the lake. Waterfowl did not frequent the lake but were observed nearby in wetlands. NOAA's cleanup recommendations, which were well received and implemented by the OSC and AMOCO, aided in a more successful response and less damage to Black Lake.

On January 2, 1991, cleanup of the area was considered complete. Approximately 12,600 gallons of oil were recovered and an estimated 5,000 gallons had dissolved. The damaged collection line was repaired and placed back in service.

Federal and state water pollution cases are pending investigation of the circumstances of the spill and AMOCO's activities during the beginning phases of the incident.

There were no casualties observed or reported.

AMOCO Collection Line
Hackberry, Louisiana
December 19, 1990

New Orleans

References

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New Orleans

Vinton Drainage Canal
Vinton, Louisiana
December 28, 1990

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

During the evening news of December 28, 1990, a Vinton-area television station ran a story about an oil spill in the Vinton Canal approximately 5 miles south of Vinton, Louisiana. The program did not identify the source of the spill, but showed birds, including a blue heron, fishing the area. The news report indicated that the spill was large, possibly major. U.S. Coast Guard (USCG) personnel tried to verify the story, without success, beyond identifying the general area of the spill as the Vinton Canal near where it enters the Intracoastal Waterway. Public interest in the spill was intense. The USCG Marine Safety Office (MSO) Port Arthur, Texas continued to receive telephone calls about a spill on the canal covering an area as large as 2 miles long and shore-to-shore in the approximately 100-foot wide cut. USCG investigators from the Marine Safety Detachment (MSD) Lake Charles, Louisiana were unable to verify the spill. A second investigative team from MSO Port Arthur arrived at the canal near midnight and discovered a yellow and green patchy substance but reported that it did not appear to be oil. Results of samples forwarded to a local oil company laboratory were confused and did not specifically identify the sample as oil. Strike team members were called out because of the interest generated by the news stories.

NOAA Response

NOAA was notified of the incident at 2330 on December 28, 1990, by the MSO, Port Arthur On-Scene Coordinator (OSC). NOAA was asked for a natural resources at risk analysis and an analysis of samples of the spilled material that were being collected. The OSC indicated that previous samples and analyses were not satisfactory.

Vinton Drainage Canal
Vinton, Louisiana
December 28, 1990

New Orleans

NOAA Response, *cont.*

Shortly after midnight, NOAA provided an initial resources at risk analysis that indicated the area was extremely sensitive. Based on descriptions provided by USCG investigators, the spill was assumed to be a weathered oil that could be detrimental to a number of bird and animal species known to frequent the area. Additional analysis provided later in the morning of December 29 identified falcons, wading birds, and a number of scavenger quadrupeds at serious risk if the spill was indeed as large as reported.

NOAA provided the OSC initial information based on descriptions of the spilled material found in the canal and cautioned MSO and MSD personnel against trampling the canal margins to avoid driving the spilled material into the soil. NOAA recommended not cutting or destroying marsh grasses in the fresh to brackish water environment of the canal. NOAA also advised overflights and a continuing survey of the area to determine the extent of the contamination. NOAA suggested staging boom and cleanup equipment to prevent any spread of the spill.

Conclusion

USCG investigators verified the spill later in the morning of December 29. The NOAA-analyzed samples showed the spill to be a heavily emulsified and weathered Louisiana crude oil. Fresher oil was discovered as the spill migrated with the southerly wind back up the Vinton Canal later in the day. The total amount of the spill was estimated at from 8 to 10 barrels extending about 3/4 mile along the canal in patches. The source of the spill could not be found either on the canal or next to the Intracoastal Waterway.

Cleanup attempts were not expected to be very productive because the oil was highly weathered.. Booms

New Orleans

Conclusion, *cont.*

that were deployed at the southern end of the canal to prevent movement of the spill into the Intracoastal Waterway were removed on December 29. Booms were deployed to seal tributary side channels of the canal and CITCO Oil Company acted as a "Good Citizen" cleanup contractor to remove what oil could be recovered.

Since a near-water source for the oil was not found, the U.S. Environmental Protection Agency (EPA) was contacted and briefed. They assumed responsibility for future remediation and investigation. EPA reports subsequent to the Vinton incident indicate that the spill was the secondary result of a spill that had occurred a week earlier in the Vinton Oil Field nearby. CITCO Oil, identified as the responsible party, was already under investigation by Louisiana State Department of Environmental Quality officials.

There were no casualties reported, either human or animal, as a result of the Vinton Canal spill.

References

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New Orleans

T/B STAR #6
Mobile, Alabama
December 31, 1990

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

At 1150, Sunday, December 30, 1990, the motor vessel RHINO reported that one of her three tows, tank barge STAR #6, was listing seriously to starboard and in danger of sinking near the mouth of Mobile Bay and the Intracoastal Waterway. STAR #6 was reported to be 195 feet long, 35 feet wide, and 10 feet deep and carrying 225,000 gallons of 50 percent solution caustic soda. RHINO later reported that the STAR #6 had sunk in approximately 32 feet of water at the mouth of the Mobile Ship Channel about 6 1/2 miles east of Dauphin Island, 30 miles south of Mobile starboard side down, and her port side above the water Reports also indicated that small amounts of cargo were being released.

The apparent cause of the mishap was a collision that had occurred while the vessels were departing Mobile and the failure of a deteriorated hull in the areas of STAR's flotation voids. Reportedly, the barge had been sent out with known leaks and portable pumps in the Intracoastal Waterway. The portable pumps reportedly ran out of fuel or failed and a safe return to Mobile was prevented by limited visibility in fog and heavy weather.

NOAA Response

NOAA was notified of the incident on December 31, 1990, by the Marine Safety Office (MSO) Mobile, Alabama. MSO requested a resources at risk analysis and information on the potential impact of a major caustic soda spill.

NOAA provided a resources analysis that indicated that the STAR 's cargo, even if lost catastrophically, should not present a widespread threat to Mobile Bay environs.

T/B STAR #6
Mobile, Alabama
December 31, 1990

New Orleans

NOAA Response, *cont.*

Surface animals, including birds, should not be at risk. Fish and bottom dwellers near the barge could be significantly impacted but only for a relatively brief period because caustic soda is highly soluble in water.

NOAA told the On-Scene Coordinator (OSC) that because of caustic soda's density, any large quantity released would seek deep-water areas and could potentially remain concentrated for hours in low-current regions. NOAA suggested pH sampling for acidity as a way to gauge movement and location of leaking cargo near the barge.

NOAA informed the OSC that unexpected heat could be generated near the barge's vents and valves as a result of the reaction of seawater mixing with caustic soda. NOAA also explained that the expected low temperatures could cause the cargo to solidify and cautioned against any contact with the substance.

NOAA also recommended caution for personnel responding to the sinking. Caustic burns from contacting the cargo above or below the water near the barge were possible. NOAA advised that body and facial protective gear be worn

Conclusion

Poor weather and salvage equipment problems delayed recovery of the barge. Mobile Ship Channel was closed temporarily during the 24 hours following the sinking, and then controlled traffic (slow bell, no wake) was allowed until the STAR was recovered on January 17, 1991.

The STAR's cargo tanks remained intact. Acidity testing of the water near the barge revealed that only a small

T/B STAR #6
Mobile, Alabama
December 31, 1990

New Orleans

Conclusion, *cont.*

amount of product had leaked through tank vents. Bans on fishing in the area, established by Alabama State Health authorities, were lifted.

STAR #6 was returned to Mobile for repairs, and it is assumed that she is operable because she was removed from her berth without U.S. Coast Guard Captain-of-the Port permission on May 3, 1991. Her whereabouts are unknown.

One minor caustic burn to a salvage diver was reported during the incident. No other casualties, human or animal, were reported.

References

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New Orleans

T/B DC 353
Baton Rouge, Louisiana
January 9, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

At approximately 1615 on January 9,1991, motor vessels BELGUIM and BILL, each pushing barges, were passing in heavy rain, poor visibility, and high waters when their barges collided. BELGUIM's tank barge DC 353, loaded with 10,500 barrels of 1,1,1-trichloroethane, was damaged and grounded on an island at mile marker 210 about 8 miles south of Baton Rouge, Louisiana. The barge was lying on her port side with cargo leaking from one of the wing tanks at an unknown rate.

The U.S. Coast Guard (USCG) On-Scene Coordinator (OSC) from the Marine Safety Office (MSO), New Orleans closed the river temporarily between mile markers 215 and 150 until the loose barges could be brought under control. The river was also closed between mile markers 212 and 210 to prevent further damage to DC 353 by the wakes of passing vessels. On January 10, Dow Chemical Company response personnel arrived on-scene to assess DC 353's condition. River conditions and stormy weather hampered activities and threatened further damage to the barge.

NOAA Response

NOAA was notified of the incident at 2320 on January 9, 1991, by Material Division (M) personnel, USCG District Eight. At that time, NOAA's Scientific Support Coordinator (SSC) was told that the barge was fairly stable and was requested to standby. On January 10, M personnel requested information on the chemical 1,1,1-trichloroethane and NOAA's evaluation of the remediation plans offered by Dow Chemical responders.

NOAA recommended caution in dealing with the fluid on DC 353 because it is toxic, flammable, and dense. The SSC suggested body and eye protection and pressurized

T/B DC 353
Baton Rouge, Louisiana
January 9, 1991

New Orleans

breathing air for those working close to or on the barge. The only cleanup activities possible under the unfavorable river and weather conditions were to stop leakage from the barge and lighter as soon as possible. NOAA strongly recommended the use of safety lines, personal flotation devices, and recovery boats standing by. NOAA recommended making periodic advisories to downstream municipal and commercial water intakes as conditions aboard DC 353 became better known.

Conclusion

USCG personnel implemented NOAA's recommendations, but response was difficult because of severe weather, lightning, and flooding river conditions. However, by early afternoon the barge had been secured to the island, and by 1515 it was righted and stabilized so lightering could begin. Later estimates by Dow Chemical indicated that less than 4,400 gallons of cargo had been lost. Rapidly moving, mixed currents and relatively small spillage minimized the concentration of the solvent in the waters. Water monitoring within a few feet of the barge indicated that concentrations of the Trichloroethane remained below 25 parts per million. There were no casualties to humans or wildlife reported.

References

Henry, Charles, Louisiana State University Institute for Environmental Studies, Baton Rouge, personal communications, January 10, 1991

NOAA. 1990. The CAMEO™ 3.0 Manual. Washington, DC: National Safety Council. 300 pp.

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New Orleans

T/V STAVANGER PRINCE
Plaquemine, Louisiana
March 20, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

On March 20, 1991, the Norwegian tank vessel STAVANGER PRINCE, loaded with 500,000 barrels of heavy Arabian Crude, was moving up the Mississippi River to an EXXON refinery near Baton Rouge, Louisiana. The STAVANGER collided with hopper barges (in push arrangement) tended by the motor vessel JOE PAT EKSTEIN at mile marker 209, about 12 miles south of Baton Rouge, next to the village of Plaquemine, Louisiana. The 810-foot STAVANGER received a 4-foot long split in a seam 2 feet above the water line in her #5 starboard cargo tank and released an estimated 924 gallons of Arabian crude into the river.

After the collision, STAVANGER moved to an anchorage nearby and the EKSTEIN moved her barges to a position about 2 miles downstream. Reportedly, oil was covering the river bank-to-bank from mile marker 210 to 190. The Federal On-Scene Coordinator from the U.S. Coast Guard Marine Safety Office (MSO) New Orleans closed the river at 0745 for safety reasons and to allow for the unrestricted cleanup of an apparent major oil spill. Plans were made to deploy deflection booms to bring the oil near shore for recovery.

NOAA Response

NOAA was notified of the incident on March 20, 1991, by Eighth Coast Guard District operations. NOAA said that the river in the area of the spill was not particularly environmentally sensitive, but suggested placing booms at natural collection points along the river. NOAA suggested that these collection points could be found by locating the areas with the largest deposits of flotsam.

T/V STAVANGER PRINCE
Plaquemine, Louisiana
March 20, 1991

New Orleans

Conclusion

During the first day of the spill, estimates of oil on the river ranged from 1,000 to 10,000 gallons. However, soundings made by the STAVANGER verified the vessel's initial estimate of 924 gallons lost. The river was reopened to normal traffic by 1400 and the STAVANGER was released to continue to her destination where she off-loaded her cargo safely.

Shoreline cleanup continued for the next two days ending on the afternoon of the March 23. No casualties, human or animal, were reported as a result of this incident.

References

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New Orleans

F/V NANCY JANE
Vermilion Bay, Louisiana
April 3, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

At approximately 1720, April 2, 1991, the fishing vessel NANCY JANE reportedly struck something underwater while fishing near gas and oil production facilities near the Southwest Pass of Vermilion Bay in the Gulf of Mexico. NANCY JANE, a wooden-hulled vessel, sank at the scene in 10 feet of water with her decks awash and approximately 1,500 gallons of diesel fuel and about 50 gallons of lube oils onboard. The NANCY JANE was about 7 miles from land and 45 nautical miles west-southwest of Morgan City, Louisiana, presumably releasing oil. Weather at the scene was reported as winds southeasterly at 10 to 15 knots with 2- to 3-foot choppy seas Forecasts indicated that similar weather could be expected for the next 24 to 48 hours with a 60 percent chance of thunderstorms and gusty winds.

NOAA Response

NOAA was notified at 0915, April 3, 1991, by the Eighth U.S. Coast Guard (USCG) District Operations Center in New Orleans and asked to provide assistance to Marine Safety Office (MSO), Morgan City. MSO Morgan City requested an oil spill trajectory, information about the persistence of the oil, and information on the natural resources at risk.

NOAA responded with a trajectory that indicated that the spill could move slowly to the north-northwest at approximately 1/4 to 1/2 knots. The oil should not seriously threaten any coastal area because it should not persist much beyond 3 miles from the wrecked NANCY JANE.

NOAA provided MSO a resources at risk analysis that indicated that the threat to species in the nearshore should be minimal because the area-weather should

NOAA Response, *cont.*

rapidly dissipate the oil. NOAA gave MSO regular weather updates throughout the investigation and cleanup of the vessel and recommended that the location of the vessel be clearly marked as a hazard to local navigation. NOAA also recommended notifying State and Federal wildlife managers.

Conclusion

On the following day the NANCY JANE was surveyed to determine her pollution potential. Divers indicated that all her fluids except for 10 gallons of diesel were lost. MSO Morgan City reported that NANCY JANE was not considered to be a further pollution threat. Before the case was closed, the NANCY JANE was marked with a buoy. Her owner indicated that the vessel would not be recovered.

No casualties, human or animal were reported as a result of this incident.

References

Crouch, Bill, NOAA National Weather Service, Slidell, Louisiana, personal communications, April 3, 1991.

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Galt, J.A., NOAA Hazardous Materials Response Branch, Seattle, personal communications, April 3, 1991.

Research Planning Institute. 1989. Sensitivity of coastal environments and wildlife to spilled oil: Louisiana. An atlas of coastal resources. Seattle: Ocean Assessments Division, NOAA. 98 maps.

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New Orleans

Unknown Oil Slick
Cameron, Louisiana
May 1, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

On May 1, 1991, the United States Coast Guard Marine Safety Office (MSO) Port Arthur, Texas received reports of a large oil slick in the Gulf of Mexico about 120 nautical miles due south of Cameron, Louisiana. An overflight confirmed the presence an oil slick measuring approximately 20 miles long by 1 mile wide near the sunken research vessel GECO APOLLO. The GECO APOLLO had been lost earlier in the year with 144,000 gallons of diesel fuel onboard. Wind at the scene was out of the east-southeast at 15 to 25 knots, swinging more to the east as the day progressed.

NOAA Response

NOAA was notified of the incident on May 1, 1991, by U.S. Coast Guard Marine Safety Office MSO Port Arthur who requested a trajectory for what was presumed to be oil coming from the sunken APOLLO.

NOAA's Scientific Support Coordinator (SSC) told MSO that the slick should move in a westerly direction. The SSC also told MSO that the reported appearance and size of the slick ruled out the APOLLO as the source of the oil. This slick was more representative of bilge waste or a spill from a platform than a diesel oil release. MSO Port Arthur was advised to monitor the slick and expect it to break up naturally over the course of the next few days.

Conclusion

Follow-up monitoring of the slick indicated that it was dissipating as NOAA predicted. Subsequent reports indicated that the slick could no longer be found.

Conclusion, *cont.*

There were no casualties, either human or animal, from this incident.

References

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Farow, Gary, Oryx Energy Co., production crew member, East Cameron 338A Platform, Gulf of Mexico, personal communications, May 1, 1991.

Torgrimson, Gary M. 1984. The on-scene spill model: A user's guide. NOAA Technical Memorandum NOS OMA-12. Seattle, Washington: Office of Oceanography and Marine Assessment, National Oceanic and Atmospheric Administration.

Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, May 1, 1991.

New Orleans

M/V LA MINERA
Galveston, Texas
May 20, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

At approximately 0340 on May 20, 1991, the Bahamian motor vessels LA MINERA and HELIZE collided. Both vessels were on a southeasterly course about 110 nautical miles southeast of Galveston, Texas. No casualties were reported. MINERA received damage to her #8 port, double-bottom tank containing approximately 280 barrels of #6 fuel oil and was taking on water rapidly. HELIZE proceeded without incident to her destination in Florida. LA MINERA changed course for Galveston, leaking an estimated two barrels per hour of what was described as catalytic feed stock oil (API 16.0). Approximately 10 hours later, still leaking oil, LA MINERA reached the Galveston area and was instructed to anchor about 20 nautical miles east-southeast.

NOAA Response

NOAA was notified of the incident at 1428 on May 20, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Galveston. MSO requested a trajectory analysis for the oil already lost from the MINERA and a forecast trajectory for a catastrophic loss of approximately 10,000 gallons of heavy #6 fuel oil.

NOAA's trajectory estimated that seepage or a catastrophic loss of oil would move generally west toward Galveston Island. If a large amount of oil was released, impacts to western Bolivar Peninsula jetties and Galveston beaches were likely. If only the two barrels per hour loss continued, the oil would float as sheen only 2 to 3 miles from the vessel. NOAA suggested lightering the vessel and removing her to a more protected area to prevent any further contamination of the coast.

M/V LA MINERA
Galveston, Texas
May 20, 1991

New Orleans

Conclusion

On May 21, 1991, a damage survey was completed on the MINERA. She had lost all of her fuel from #8 tank. No more oil except for minor sheening was being released. Apparently, the vessel had lost the bulk of her fuel from the damaged tank while steaming to Galveston after the collision. LA MINERA was moved into Houston where she underwent repairs.

No casualties to humans or animals were reported.

References

Marine Forecaster, NOAA National Weather Service, Slidell, Louisiana, personal communications May 20, 1991.

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Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, May 20, 1991.

New Orleans

Alliance Rig Collapse
Cameron, Louisiana
June 4, 1991

Chris J. Nelson, Scientific Support Coordinator

Incident Summary

On June 4, 1991, the Alliance Operating Consolidation and Production Platform located in the Gulf of Mexico suffered structural failure. The platform, located about 7 nautical miles east-southeast of Cameron, Louisiana, supports a 5,000-barrel consolidation tank that serves as an intermediate holding reservoir for three or more wells that produce a very light (API 47) sweet oil. Pipelines (8- inch and smaller) are part of the facility leading to and from the tank and are used to collect product and transfer it to shore.

About 1020 on June 4, 1991, the fishing vessel LADY FRAN, operating east of the rig reported a large (1.5 to 2 miles) slick coming from the west. The report indicated that the rig had collapsed and dumped the large deck into about 10 feet of water. Investigation verified the incident. Steems Oil Production Company of Lafayette, Louisiana reported that the tank had been sounded the previous day and had contained 5,033 barrels. More than half had been transferred ashore before the collapse.

NOAA Response

NOAA was notified of the incident on June 4, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Port Arthur, Texas. NOAA was requested to provide a trajectory estimating the movement of the spilled oil.

The NOAA Scientific Support Coordinator (SSC) requested verification of the size of the slick to forecast its movements more accurately. The trajectory indicated that the existing slick could impact nearby beaches by late afternoon or early evening that day.

Alliance Rig Collapse
Cameron, Louisiana
June 4, 1991

New Orleans

NOAA Response, *cont.*

NOAA provided a natural resource at risk analysis that indicated relatively low sensitivity for the beach area. Wading and nearshore birds were cited as being at risk, as were oysters in the shallow waters near the rig. Cleanup activity could be a threat to beach-nesting birds, so shore cleanup planning was an integral part of NOAA's response.

NOAA provided an estimate of 1,000 to 1,200 barrels of oil floating in the slick as an aid to logistical and cleaning strategy. Due to the lightness of the crude and existing ambient conditions, NOAA estimated that up to 5 percent of the released oil would disappear through weathering and dissolution after 24 hours.

On an overflight on the morning of June 5, 1991, the SSC confirmed conditions at the scene. Beach conditions were excellent in that cleanup was not expected to cause significant disruption of the environment or burial of oil. Further, birds were not frequenting the affected areas and little skimmable oil remained off shore. Shore cleanup was proceeding very well.

A significant amount of oil (over 100 barrels) was trapped in boom surrounding the rig. The SSC strongly suggested that the oil trapped near the rig be targeted for immediate recovery because the weather was getting worse and the condition of the tank was unknown.

Conclusion

Generally cleanup went very well. The lightness of the oil was a boon because it dissipated rapidly. NOAA's recommendations were well received and acted upon. Recovery of the oil trapped in the boom around the rig, however, did not proceed well. Double-booming was not used to protect oil already in the boom or the oil being added near the rig. Attempts to inject a floating skimmer into the oil caused more oil to be released, which caused oil to soil recently cleaned beaches.

New Orleans

Conclusion, *cont.*

Of the 92,400 gallons remaining, in the damaged tank, 38,000 gallons were recovered from the tank and 12,000 gallons were recovered during shore cleanup. Only a few birds were reported by Louisiana Fish and Wildlife officials as lightly oiled.

NOAA observed a significant number (100 or more) of dolphins in the area. Checks with pilots and fishermen familiar with the area indicated that such large sightings were not uncommon. The dolphins did not appear to be bothered or stressed by the oil floating nearby. The SSC suggested that fishermen frequenting the area of the spill receive warnings about fishing in oil-fouled waters.

By June 9, 1991, no significant oil could be found beyond the tank at the rig. The response was terminated and the case closed. There are plans to salvage the tank and support assembly of the Alliance rig. Whether a similar facility will replace the damaged rig is not clear.

No human casualties were reported as a result of this incident. A few shore birds were reported as lightly oiled, but were not recovered for treatment. No other animals were affected.

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New Orleans

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New Orleans

Barge Z-62
Empire, Louisiana
August 14, 1991

Jon M. Barnhill, Scientific Support Coordinator

Incident Summary

On the morning of August 14, 1991, U.S. Coast Guard helicopter personnel observed oil coming from either the barge Z-62 or the barge INGALLS 1 south of Empire, Louisiana on the east side of Highway 23. The U.S. Coast Guard Marine Safety Office (MSO) New Orleans estimated that there were 300 gallons of oil on the water. The Coast Guard had emptied these barges of used oil and chemicals in 1989, but legal uncertainties kept them from disposing of them.

The Coast Guard determined that the oil was coming from a leak in the Z-62 barge, and that both barges had been refilled with used oil and chemicals since 1989.

The MSO New Orleans Federal On-Scene Coordinator (FOSC) began offloading the barges on the same day. Plans were made to dispose of the barges after the offloading operations were completed.

NOAA Response

NOAA was notified of the incident on August 14, 1991, by the FOSC who requested that the NOAA Scientific Support Coordinator (SSC) attend all meetings pertaining to the removal of the barges and provide scientific support throughout the operation. A NOAA technical support team reported on-scene to assist the SSC.

The NOAA support team surveyed the site and collected five water column samples and five shoreline samples for analysis.

NOAA reported that there are many species of birds, fish, snakes, and mammals in the area, as well as alligators. NOAA recommended that the *spartina* not be cut.

Barge Z-62
Empire, Louisiana
August 14, 1991

New Orleans

NOAA Response, *cont.*

The SSC told the FOSC that the pollutants should not spread rapidly because of the location of the barges, the shape of the cut, and the fact that the wind is the primary influence over the localized currents. NOAA recommended using a bubble curtain if a water-soluble product was released into the water column. NOAA suggested containing all the product within the far end of the canal in which the barges were located. In addition, four paddle-wheel aerators should be placed diagonally across from each other to generate a circular current within the containment area. NOAA also recommended damming the cut where the barges were located. If polychlorinated biphenyls or Aroclor were onboard the barges, as suspected, removing sediments could be necessary in the event of a major release.

Conclusion

There probably was a spill of around 300 gallons from barge Z-62. According to chemistry analyses from the site, there were at least three different types of oils in the sediment. The water column was clean. Samples of the barge's product are being analyzed. It will not be possible to determine the extent of the spill on the area until the analyses of these samples are completed and compared to the sediment samples.

The disposal of these barges is an ongoing effort and has been halted due to a lack of funds. Efforts are being made to acquire funding through the Comprehensive Environmental Response, Compensation, and Liability Act. To date, all requests have been rejected for the funds needed to complete this cleanup.

References

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New Orleans

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New Orleans

AMOCO Pipeline Break
High Island, Texas
September 6, 1991

Jon M. Barnhill, Scientific Support Coordinator

Incident Summary

At approximately 2300 on September 5, 1991, a 10-inch pipeline ruptured at the AMOCO Terminal on the Intracoastal Waterway off High Island, Texas. The system was shut down as soon as the pressure change was noticed, probably no more than 15 minutes after the rupture.

Approximately half of the pipeline's potential 1,000 barrels of South Texas sweet crude oil entered the Intracoastal Waterway about 1 1/2 nautical miles north-northeast of High Island. The oil flowed west to the slip where the barge that had been loading was moored. A hard boom was placed in the slip and several more were positioned across the Intracoastal Waterway to keep oil from entering East Bay. The U.S. Coast Guard (USCG) Federal On-Scene Coordinator (FOSC) ordered the Intracoastal Waterway closed to all traffic and authorized placing hard boom across it in several locations. With boom in place, the mechanical cleanup began using vacuum trucks attached to a skimmer in the marsh near the rupture.

NOAA Response

NOAA was notified of the incident at 0720 on September 6, 1991, by the USCG Marine Safety Office (MSO) Galveston who requested the NOAA Scientific Support Coordinator (SSC) report to the spill scene. The SSC arrived on-scene at 1615 after alerting the NOAA scientific support team of the incident.

NOAA predicted that the rainfall in the area would help flush out the marsh areas and lessen the impact of the

AMOCO Pipeline Break
High Island, Texas
September 6, 1991

New Orleans

NOAA Response, *cont.*

spill. NOAA told MSO that the oil should not deeply penetrate the reddish-clay banks on either side of the Intracoastal Waterway. Many species of birds, fish, and mammals live in the area of the spill but should not be at risk. NOAA reported that the light crude oil (AP I31) should evaporate within 48 to 72 hours due to the high temperature and strong winds in the area.

Conclusion

NOAA's recommendations were accepted and implemented by the MSO.

Shoreline impact was minimal. *spartina* on the north bank of the Intracoastal Waterway showed very light oiling. There was one cormorant reported to be lightly oiled on the feet and tail feathers. No other oiled animals were found at the spill site.

The cleanup was nearly completed by September 6, 1991. The amount of oil actually spilled is still in question, but the USCG estimates that about 773 barrels were spilled.

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East Lansing

Abhe and Svoboda Paint Chips
St Joseph, Michigan
October 8, 1990

Jay Rodstein, Scientific Support Coordinator

Incident Summary

A barge being used as a platform for sandblasting operations was found sunk at its moorings on the morning of October 5, 1990. The barge contained 78 55-gallon drums of sandblasting residual and paint waste. The sinking was discovered by a sandblasting contractor working for the Michigan Department of Transportation. The U.S. Coast Guard Captain of the Port (COTP) Grand Haven was notified.

NOAA Response

NOAA/OMA was notified of the incident on October 8, 1991, by the COTP Grand Haven who requested that NOAA evaluate environmental and human health implications and recommend cleanup options.

NOAA advised that the quantity and form of material did not pose a threat to water quality or human health. NOAA recommended dredging contaminated sediments to return the river be to its initial condition.

Conclusion

The barge was refloated, the drums of waste recovered, and the contaminated sediments removed. River sediments have been returned to pre-spill levels. The case was closed on November 15, 1990.

References

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East Lansing

S/S KINSMAN INDEPENDENT
Isle Royale, Michigan
November 25, 1990

Jay Rodstein, Scientific Support Coordinaotr

Incident Summary

On November 24, 1990, at approximately 1000 hours, the S/S KINSMAN INDEPENDENT ran aground in Lake Superior due west of Isle Royale Light, at Isle Royale, Michigan . The vessel was en route from Duluth, Minnesota to Thunder Bay, Ontario, with 67,000 gallons of #6 oil ONBOARD.

NOAA Response

NOAA/OMA was notified of the incident on November 25, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Duluth. Salvage tugs and MSO personnel were already en route to the scene. MSO requested a trajectory estimate and environmental resources at risk information in anticipation of a major spill.

The vessel was aground on a reef at the entrance to Siskiwit Bay on the southeast portion of Isle Royale, a National Park. NOAA advised that prevailing westerly winds were expected to carry the pollutant away from the island and into the open waters of Lake Superior, but if the wind shifted within the next 12 hours, this situation could reverse and result in impacts within the bay and along the reef.

The National Park Service Spill Coordinator for Isle Royale provided a detailed assessment of sensitive areas from environmental, cultural, and recreational standpoints. The most significant areas were in the bay, with others north and south of the grounding.

NOAA told MSO that #6 oil is a heavy product which, with water temperatures around 40°F and air tempertures around 20°F, would be difficult to remove from the water surface and shorelines. NOAA advised putting the emphasis on containing the oil and protecting the island..

S/S KINSMAN INDEPENDENT
Isle Royale, Michigan
November 25, 1990

East Lansing

Conclusion

The grounded vessel was freed by salvage tugs at approximately 2000 on November 25 and was briefly inspected by the U.S. Coast Guard before being released to its destination port. The vessel arrived at Thunder Bay, Ontario, at 0600 on November 26. The U.S. and Canadian Coast Guard offices are coordinating their investigations of the grounding.

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San Francisco

T/V KEYSTONE CANYON
Central California
December 4, 1990

Gary D. Petrae, Scientific Support Coordinator

Incident Summary

On Sunday, December 2, 1990, 100 miles off Puget Sound, Washington, the tanker vessel KEYSTONE CANYON, carrying 859,000 barrels of Alaska North Slope crude oil, discovered a 20-foot vertical hull fracture near her #3 segregated ballast tank. No oil had spilled and immediate measures were taken to reduce flooding and dewater the tank. The captain of the ship reported the fracture to the U.S. Coast Guard Marine Safety Office (MSO), San Francisco on December 3. The KEYSTONE CANYON planned to rendezvous with a salvage/diving tug and a lightering tanker 120 miles off San Francisco.

NOAA Response

NOAA was notified of the incident on December 4, 1990, by the MSO San Francisco who asked for weather and trajectory forecasts for a potential spill in the rendezvous area.

NOAA told MSO that the rendezvous location that would best minimize the effects from a spill was approximately 50 miles west of San Francisco. This location would also help to reduce the effects from the weather on lightering operations NOAA kept MSO advised of weather and trajectory information through Friday, December 7.

The KEYSTONE CANYON continued south safely and met with the other vessels on the afternoon of Wednesday, December 5, 220 miles northwest of San Francisco. However, lightering operations could not begin because of weather and sea conditions, so the convoy proceeded south slowly toward better weather. The San Francisco Bay Oil Spill Cooperative vessel,

T/V KEYSTONE CANYON
Central California
December 4, 1990

San Francisco

NOAA Response, *cont.*

CLEAN BAY I, was sent to rendezvous with the vessels and on Thursday night lightering operations began approximately 180 miles southwest of San Francisco.

Conclusion

The lightering operations were conducted as the vessels steamed southeast and concluded on Friday night. The lightering tanker proceeded to Los Angeles to offload and the KEYSTONE CANYON proceeded to anchorage in San Francisco Bay to remove a small amount of remaining crude oil. The ship was made gas free and proceeded safely to a shipyard in Portland, Oregon.

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San Francisco

M/V SAMMI SUPERSTARS
Los Angeles, California
January 9, 1991

Gary D. Petrae, Scientific Support Coordinator

Incident Summary

While conducting bunkering operations January 8, 1991, at Los Angeles berth 176, the motor vessel SAMMI SUPERSTARS #1 port fuel tank overflowed. The initial report came from a stevedore onscene who estimated that approximately 100 barrels of the intermediate fuel oil (IFO 380) had spilled from the tank vent and entered the harbor. U.S. Coast Guard Marine Safety Office (MSO) Los Angeles/Long Beach investigators saw approximately 40 to 200 barrels of oil on the water and on the deck of the ship. The ship's owners assumed responsibility and hired the Harbor Oil Spill Cooperative and another contractor to respond to the spill. When sounded, tanks on the ship and barge revealed that approximately 40 barrels of oil had been spilled. Cleanup and containment activities that night captured all the visible oil and observers on an overflight the next morning observed very little oil floating in the harbor beyond the area of the ship. Believing that the oil had been contained, responders and contractors began to stand down from cleanup.

However, afternoon reports on January 9 of large amounts of oil in the harbor entrance and at berths near 176 were received. Investigation by the MSO revealed that this oil was also from the SAMMI SUPERSTARS. It had been trapped under the adjacent piers and went undetected during the first hours of the incident. Additional investigation of the amount spilled also determined that the original tank gauging was inaccurate and that 308 barrels of oil had been spilled.

M/V SAMMI SUPERSTARS
Los Angeles, California
January 9, 1991

San Francisco

NOAA Response

NOAA was notified of the incident on January 9, 1991, by the MSO. Later that night, the MSO requested the NOAA Scientific Support Coordinator (SSC) report on-scene to provide oil observation overflight and tracking support, weather information, and advice on possible cleanup techniques.

NOAA told the MSO that weather should not be a factor during the spill. The forecast was for mild, clear, and calm. Because of this, and the tendency of the oil to strand and stick to whatever it hit, most of the oil was not expected to move out of the area. Any oil that did move should be mostly sheens moving down the main channels with the winds and tides, out through the breakwaters, and should dissipate quickly. The oiling could range from light bathtub-ring type contamination to heavier coatings of black oil on some structures. NOAA suggested cleanup techniques include manual removal with sorbent materials In addition, impacted structures, such as vessels and piers should be washed. NOAA also suggested that some high-pressure warm water could be used on the pilings to remove the heavier gross contamination.

Conclusion

The initial spill and discovery of the larger amount of oil the next day, caused MSO to close a large portion of the inner harbor areas of both Los Angeles and Long Beach harbors. Most of the oil remained where it hit initially, coating a large number of pier pilings, shoreline structures, vessels, and several marinas. Some oil moved out of the inner harbor down the main channel and impacted the Los Angeles breakwater, but most of the oil coated the shorelines or stayed trapped by the structures of the inner harbors. The MSO opened part of the main channel January 12, and by January 15 the containment booms

M/V SAMMI SUPERSTARS
Los Angeles, California
January 9, 1991

San Francisco

Conclusion, *cont.*

were moved to the sides of the channels containing the remaining oil along the shore, allowing vessels to transit the area.

The harbor areas were closed completely for several days while the oil was being contained and removed. This did have some short-term effect on the commerce of the area. Operations returned to normal within 10 days.

There were 26 live and 14 dead birds recovered; some oiled by this spill and some brought in for other reasons. No other significant environmental damage was observed. Manual cleanup of the oiled areas and structures continued for several weeks.

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San Francisco

Chevron El Segundo Mooring
El Segundo, California
March 17, 1991

Gary D. Petrae, Scientific Support Coordinator

Incident Summary

On March 16, 1991, the tanker OMI DYNACHEM severed a 26-inch pipeline at mooring #3 of Chevron's El Segundo, California offshore marine terminal in Santa Monica Bay. When the DYNACHEM attempted to anchor and hook up to the #2 mooring, a hydraulic winch failed and caused the ship to abort the attempt and weigh anchor. The #3 mooring pipeline was severed when it was snagged by the starboard anchor. The ship was not damaged nor at risk and moved off and anchored at a safe distance.

At the time of the accident there was a maximum potential of 7,320 barrels of gas-oil in the pipeline (a combination of the 26-inch cargo transfer line and a 12-inch line in a looped configuration). The gas-oil, a non-marketable diesel-like product, is used to push remaining product out of the 26-inch line after tankers have finished transferring their cargo. It is left unpressurized in the looped lines after transfer operations are completed. Terminal personnel were notified about 10 minutes after the mishap and immediately began pumping the gas-oil out of the severed line.

Chevron hired Clean Coastal Waters as their primary response contractor and the U.S. Coast Guard requested four skimmers from the U.S. Navy Supervisor of Salvage and U.S. Coast Guard Pacific Strike Team personnel with an offshore skimming barrier. The Clean Seas Cooperative was requested to standby to provide any additional assistance necessary.

NOAA Response

NOAA was notified of the incident on March 17, 1991, by the U.S. Coast Guard Captain of the Port (COTP), Los Angeles/Long Beach. NOAA was requested to provide a trajectory and to take part in overflights of the area.

Chevron El Segundo Mooring
El Segundo, California
March 17, 1991

San Francisco

NOAA Response, *cont.*

NOAA told COTP that the slick could be expected to move north, then northwest toward Topango Beach, and then west toward Malibu Point if the winds remained westerly at 15 to 20 knots. Shoreline impacts might occur on the sand and cobble beaches and in the surf zone from Los Flores to Malibu Point.

By the morning of March 17, Chevron had removed 4,000 barrels of pure gas-oil from the lines and pumping continued. A first-light overflight revealed a slick of transparent to rainbow sheens with a small amount of light brown oil on the leading western edge covering a 4- to 5-square-mile area. The slick was located west of the anchored DYNACHEM and extended about 4 nautical miles offshore.

Conclusion

The slick moved as NOAA had predicted. On March 19, a small amount of sheen was seen just inside Malibu Creek, but previously deployed boom prevented it from migrating further. Silver sheen impacts were seen along the shoreline from Malibu Point for about 2 nautical miles, but overflight observers found no sheen or oil in Santa Monica Bay or on the shorelines from Point Dume to Marina del Rey.

Chevron recovered all but about 300 barrels of the gas-oil. The U.S. Navy Supervisor of Salvage and U.S. Coast Guard Strike Team skimming assets were never mobilized and returned to their respective bases. Through patching and capping operations, Chevron was able to seal the lines and eliminate the risk of any additional discharge. After a morning overflight on March 19, the spill was declared over and most response assets were demobilized by that afternoon.

Chevron El Segundo Mooring
El Segundo, California
March 17, 1991

San Francisco

Conclusion, *cont.*

A few distressed birds were recovered from the Malibu area. Some of them were oiled and some were in distress from non-oil related difficulties. No other environmental damage was reported.

References

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San Francisco

UNOCAL Platform GINA
Port Hueneme, California
May 10,1991

Gary D. Petrae, Scientific Support Coordinator

Incident Summary

On May 10, 1991, a work boat trying to locate and retrieve a mooring buoy anchor near the northwest corner of the UNOCAL platform Gina, snagged the production pipeline with a grappling hook and damaged a 10-inch riser. The pipeline was also damaged about 500 feet from the rig. Damage to the rig and pipeline caused approximately 300 gallons of a California crude oil and water mixture (10 to 20% oil) to enter the water.

Oil is produced at GINA by injecting seawater into the well and forcing the oil and water mixture out through the 5-mile long pipeline to a Mandalay Beach facility for separation and processing. The actual amount of crude oil spilled was estimated to be 50 barrels out of a pipeline capacity of 3,500 barrels of oil and water.

NOAA Response

NOAA was notified of the incident on May 10, 1991, by the U.S. Coast Guard Marine Safety Office (MSO), Los Angeles/Long Beach. MSO requested oil trajectory information and asked the NOAA Scientific Support Coordinator (SSC) to accompany the Coast Guard on overflights of the slick.

NOAA told MSO that the oil was projected to continue its southeasterly movement and, depending on the strength of the afternoon sea breezes, might move closer to shore. However, the onshore winds did not freshen significantly and the slick continued to move south–southeast parallel to shore.

UNOCAL asked to use dispersants. NOAA, the California Department of Fish and Game, the Minerals Management Service (MMS), the Regional Response

UNOCAL Platform GINA
Port Hueneme, California
May 10,1991

San Francisco

NOAA Response, cont.

Team, and UNOCAL discussed the request during the night of May 10. MMS was concerned about the effectiveness of the proposed dispersant, Corexit 9527, on spilled oil. They had recently received the results of a series of tests on the effectiveness of several dispersants on the crude oils produced off the shores of California. The results indicated very low percentage effectiveness (average 1%). The discussion was tabled until May 11 when UNOCAL submitted a formal request for a trial application of dispersants. After additional consideration by the above agencies, UNOCAL's request was approved. However, the slick had begun to dissipate and break up considerably during the morning of May 11, and by that night, none of the oil remained concentrated enough to merit a dispersant application.

The oil spread out to the south-southeast 3 miles offshore as a slick of mostly sheens with some darker sections of black oil. By the morning of May 11, no oil was seen emanating from the riser or pipeline near the platform.

Conclusion

After the spill the oil spread out under the influences of the wind and currents to the south–southeast as a slick 4 miles long and 3 miles offshore. This movement continued as the slick spread. Over the first 24–36 hours the sheens dissipated leaving several patches of heavier concentrations of oil. By late Sunday, 48 hours after the spill, very little of the slick could be seen. On May 13, 1991, the slick had broken up completely and the overflights found little oil. No shoreline impacts were observed or reported.

References

Galt, J.A., NOAA Hazardous Materials Response Branch, Seattle, Washington, personal communications, May 10, 1991.

San Francisco

References,
cont.

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San Francisco

M/V ZIM CANADA
Los Angeles, California
July 10, 1991

Gary D. Petrae, Scientific Support Coordinator

Incident Summary

On July 10, 1991, the U.S. Coast Guard Marine Safety Office (MSO) Los Angeles/ Long Beach personnel discovered a heavy fuel oil spill of approximately 25 barrels near Los Angeles berth 146. There were four vessels in the area at the time, but none were conducting bunkering operations that might account for such a spill. The MSO activated the Oil Pollution Fund and responded to the spill. During the spill response, samples of oil were drawn for analysis from the four vessels berthed in the area, including motor vessel ZIM CANADA, in an attempt to pinpoint the cause of the spill. There had been another fuel oil spill from an unidentified source in this area and a phantom pipeline was also suspected as the source.

NOAA Response

NOAA was notified of the incident on July 10, 1991, by the MSO. Since the spill had been contained immediately at the berth, NOAA support was not requested at that time. During removal and cleanup proceedings, MSO asked the NOAA Scientific Support Coordinator (SSC) for suggestions on determining the possible source of the spill and which methods might be used to determine whether there was indeed a phantom pipeline in the area. No specific recommendations were made.

On July 18 the fingerprint analysis from the Coast Guard Marine Safety Laboratory (MSL) on the suspect vessels showed a positive match between the spilled oil and the fuel tanks on the ZIM CANADA. ZIM Lines refused to accept the findings or responsibility for the spill. They questioned the accuracy of the laboratory's results and indicated that the investigation showed no path of discharge from the ZIM CANADA. MSO requested that

M/V ZIM CANADA
Los Angeles, California
July 10, 1991

San Francisco

NOAA Response, *cont.*

NOAA provide a secondary analysis of the oil samples. The test samples included oil from the fuel barge SAN PEDRO, which had delivered fuel to the ZIM CANADA. These tests confirmed the MSL analysis and showed a positive match between the spilled oil, the ZIM CANADA, and the barge SAN PEDRO.

Conclusion

The MSO completed the cleanup but continued investigating the source of the oil through surveys for phantom pipelines, drainage outfalls, and land leachate sources. The MSO has ruled out other possible sources, leaving the ZIM CANADA the primary suspect.

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Seattle

Texaco Puget Sound Refinery
Anacortes, Washington
February 23, 1991

Sharon K. Christopherson, Scientific Support Coordinator

Incident Summary

At 2200 on February 22, 1991, approximately 5,000 barrels of North Slope crude oil was lost during a cargo transfer from the tank vessel EXXON SAN FRANCISCO to the Texaco Puget Sound Refinery in Anacortes, Washington. A booster pump on the refinery grounds suffered a catastrophic structural failure causing the spill, casting a shield-shaped chunk of the pump housing measuring 18 to 14 inches nearly 75 yards from its manifold when the casing failed under pressure. Texaco estimated 3,000 barrels were contained in a catchment basin downstream from the pump. The remaining 2,000 barrels overflowed the ditch leading into the catchment basin and followed two pathways. One portion of the oil flowed south down a ditch paralleling the Burlington Northern railroad tracks, through a culvert under the tracks, and into a ditch that drained into Fidalgo Bay (south culvert). The other portion of the oil flowed across the railroad tracks, through a private house and pasture, and into a ditch that also emptied into Fidalgo Bay (north culvert). Most of the oil was retained in the ditches and topsoil of the field, but about 400 barrels entered Fidalgo Bay through the two culverts on the north side of a railroad causeway that crosses Fidalgo Bay.

NOAA Response

NOAA was notified of the incident at 0135 on February 23, 1991, by the U.S. Coast Guard (USCG) Marine Safety Office (MSO) Puget Sound. MSO investigators arrived at the scene at 0415 on February 23, 1991. By this time, Texaco personnel had blocked off the two storm culverts through which the oil had entered Fidalgo Bay. A boom was in place across Fidalgo Bay north of the discharge point to prevent oil from spreading out of the bay on the ebb tide. Representatives of the U.S. Environmental

Texaco Puget Sound Refinery
Anacortes, Washington
February 23, 1991

NOAA Response, *cont.*

Seattle

Protection Agency (EPA) were on scene monitoring Texaco's response and documenting the circumstances surrounding the spill. Because of EPA's presence on scene and the inland location of the pump failure, the USCG On-Scene Coordinator (OSC) initially deferred the investigation and the cleanup response direction to the EPA OSC. USCG personnel concentrated on monitoring the water-side recovery efforts and scheduled a helicopter overflight at first light to assess the discharge into the water. Later in the day, because of the growing response efforts on the water, the USCG became OSC. EPA continued to monitor the cleanup of the inland spill. The SSC and two information management staff stayed on-scene for 3 weeks. Initial oil spill trajectories and resources at risk information were provided by NOAA support units during the first day of the spill. NOAA participated in daily overflights; prepared overflight maps showing oil movement; and developed a site-specific system for tracking shoreline impact and cleanup activities.

Refe *cont.*

The SSC helped coordinate a multiagency work group. This work group, comprised of Texaco, USCG, and State and Federal resource agencies, identified and decided the priority of sensitive resources, conducted joint shoreline surveys, and recommended specific protection strategies. They also developed a written site-specific shoreline cleanup plan that included a map dividing the shoreline into working segments based upon the type of habitat present, detailed field notes on the degree of oiling present in each segment, and a matrix defining which cleanup methodologies were considered appropriate for each of the habitats present. The SSC also helped identify a cultural resource expert to facilitate coordination between shoreline cleanup operations and the local native American cultural concerns in the impacted area. This expert, an archeologist, assisted in preparing a plan for protecting the shell middens discovered in the impacted area and physically monitored cleanup activities near the sites.

Texaco Puget Sound Refinery
Anacortes, Washington
February 23, 1991

Seattle

Resources at Risk

Resources at risk in Fidalgo Bay included migratory waterfowl and resident shorebirds throughout the bay, harbor seal haulout areas, recreational crab and shellfish areas, and a fringing *Salicornia* marsh along the southern shore of the bay. Also, herring spawning in the eelgrass beds in the center of the bay was at its peak at the time of the spill. Impacts to gravel beaches along the east side of the bay were of concern because of seasonal use as surf smelt spawning habitat.

While the resources within Fidalgo Bay were of concern to resource agencies, the bay itself was relatively small and had already been significantly impacted by human activities associated with refinery operations and the presence of a state highway along its southern shore. The resource agencies agreed that protection of Padilla Bay National Estuarine Research Reserve, located 1 nautical mile due east of Fidalgo Bay, was the number one priority area for protection. Padilla Bay is much larger than Fidalgo Bay. It has been less directly affected by industry, has extensive eelgrass and mudflat habitat, and was being used by tens of thousands of migratory waterfowl when the spill occurred.

Cleanup Countermeasurs

With protecting Padilla Bay a priority, resource agencies recommended extensive booming for protection against free-floating oil escaping Fidalgo Bay and using aggressive shoreline cleanup technologies to prevent later re-mobilization of oil. It was recognized that by using this strategy, additional impacts resulting from the cleanup might occur, but this was outweighed by the threat to the more sensitive resources in Padilla Bay and Samish Bay to the north. Specific cleanup recommendations included removing and replacing contaminated riprap along the eastern shoreline; raking oiled vegetation, washing and vacuuming the contaminated salt marsh in the southeast corner of the bay; and warm-water, high-pressure washing gravel pocket beaches on the east side of Thumb Point.

A combination of slack water at high tide and light northwest winds helped trap most of the released oil in

Texaco Puget Sound Refinery
Anacortes, Washington
February 23, 1991

Seattle

Cleanup Countermeasures, cont.

the southern portion of Fidalgo Bay. In fact, except for the very center of the bay, the water was too shallow for conventional skimmers and booms. The entire southern portion of the bay went dry every low tide. The response strategy was to first boom off the bay with a series of harbor booms north of the railroad trestle that closes the bay near the discharge. A one-mile stretch of boom was also deployed from the center of the railroad causeway to the south shore of the bay to prevent oil re-mobilized from the eastern shoreline from reaching the relatively clean west shoreline. The oil was collected with a series of deflection booms anchored out from the east side of the bay where there was road access, which caused the shoreline along the east side of the bay to become heavily impacted with oil. The oil trapped in the deflection booms was recovered using portable skimmers, rope mops, vacuum trucks, and sorbants. Four skimmer vessels were also used for recovery in the deeper water near the railroad trestle. Small boats towing U-configured booms corralled floating oil in the shallow water and moved it out to where the skimmers could operate.

The weather cooperated for the first 5 days of the response; but, on the 6th day, February 28, the winds shifted and oil lost from the deflection booms entered the marsh at the southern end of Fidalgo Bay. Boom is not effective in a mudflat environment so this area had not been adequately protected. A combination of a spring tide and high winds stranded oil and oiled debris above the normal tidal range, with the lower intertidal remaining uncontaminated.

All cleanup activities were very closely monitored to minimize additional adverse impacts to the environment. However, by the end of the first week, the eelgrass bed located immediately north of the railroad trestle was visibly damaged by skimmers and boat propellers. Riprap replacement was accomplished in areas that could be reached by heavy equipment via an adjacent refinery road. The more heavily oiled outer boulders were removed and silt screens were erected at

Seattle

Cleanup Countermeasures, cont.

the edge of the mudflat to reduce sedimentation problems in the bay. Where the riprap extended to the edge of the mudflat, a narrow trench was excavated in the clay-like mud parallel to the edge of the mudflat. The remaining, less-contaminated rocks were washed with sea water to flush out any remaining pockets of oil. Flushing was done at low tide, so the oil would collect in the trench where it could be removed by vacuum trucks. The area was allowed to flush naturally by the tide for several dayss before clean riprap was replaced. A special surf smelt spawning "recipe" of sand and pea gravel, recommended by Washington Department of Fisheries, was placed at the toe of the new riprap in an attempt to create additional spawning habitat.

Several pocket gravel beaches on the east side of Thumb Point were high-pressure washed to remove pools of subsurface oil. The oil released was contained by booms and picked out of the water with pompoms. To remove subsurface accumulations of oil, low-pressure flushing was attempted on sections of gravel beach near the culverts where the oil first entered the water; vacuum-suctioning of oil saturated vegetation, debris, and mud from this area was also done.

The salt marsh was affected approximately 6 days into the spill. It contained large quantities of pooled oil and oiled vegetation stranded from the mid-tide level to well above the high water line. To prevent re-mobilization of that oil during the spring tides, the resource agencies recommended removal of the heavier areas of oil, even at the risk of causing additional damage as a result of the cleanup activities. Stranded oiled material was removed using rakes. The pooled oil trapped in the salt marsh above the high tide line was removed using a low-pressure, low-volume, ambient temperature saltwater wash coordinated with immediate vacuum removal of the oily runoff to prevent contamination of the lower intertidal area. This strategy also tended to remove most of the oiled dormant vegetation from the surface without disturbing the roots. Strict guidelines were developed to minimize impact on the marsh by

Seattle

Cleanup Countermeasures, cont.

cleanup operations. These guidelines included using plywood boards to distribute worker's weight; minimizing the length of any pathway into the marsh and orienting it perpendicular to the edge of the marsh; using helicopters to transport material in and out of the salt marsh to further minimize foot traffic; and requiring a State or Federal resource agency representative to work with the USCG monitor during all marsh cleanup operations. However, it was several days before the right combination of safeguards was worked out and some additional impact occurred as a result of cleanup activity.

Oiled wildlife collection and rehabilitation were coordinated by the U. S. Fish and Wildlife Service (USFWS). A bird-cleaning station was set up on Crandall Spit on the northwest shore of March Point. A team of trained volunteers was organized by the USFWS and the Island Oil Spill Association to search the shorelines and open water for distressed and dead birds and take them to the station for cleanup. A total of 168 birds were collected, 140 dead, 28 alive; mainly grebes, brants, and shore birds. Oiled bald eagles and fur seals were reported, but none were captured for treatment.

Natural Resource Damage Assessment scientific studies by State and Federal resource trustee agencies took place during the spill response to document the impact on birds and herring spawning activity in the eelgrass. The SSC coordinated these activities for the USCG OSC to minimize any conflict with response operations and to assist the scientists with their operational logistics. One major problem for the agency scientists in conducting their studies was Washington Department of Labor and Industry's requirement for all personnel entering contaminated areas to have 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training. Later this was relaxed to 8 hours, but only one of the scientists involved in the studies had the required training.

Texaco Puget Sound Refinery
Anacortes, Washington
February 23, 1991

Seattle

Conclusion

Inland cleanup activities of the oil saturated soil in the pasture and drainage ditches were completed under EPA's direction. The contaminated soil was excavated and transported to a land farm plot on Texaco property. A 40-foot thick clay lens underlying the Texaco property limited the oil's penetration to 8 to 10 inches of top soil. Sandbag berms and overflow weirs were installed at all the culverts to contain the oil during rainstorms until excavation was completed.

Most of the free-floating oil was recovered by the end of the first week of the spill response, although skimmers and small boats continued working throughout the response to corral oil re-mobilized off the shoreline.

Shoreline cleanup continued actively until March 20. By that time, all the riprap on the east and south shores had been removed and replaced. Several areas of cobble beach had been replaced and a rock spit had been high-pressure washed. The heavy accumulations of oil and oiled debris had been removed from the marsh, although light sheening was still coming out of the marsh area. Several thousand feet of boom remained in place until weeks later when the sheening was finally reduced to a non-threatening level.

In May, NOAA established four transects in the oiled *Salicornia* marsh at the south end of Fidalgo Bay to monitor the effect of the different treatment methodologies on the recovery. Monthly photo-documentation of the vegetative recovery of the marsh along each transect is being done. Sediment samples collected before and after each growing season are being chemically analyzed to characterize the degradation of the residual oil. Washington Department of Fisheries is also planning to monitor next year's spawning activity levels of Pacific herring and surf smelt in Fidalgo Bay.

Seattle

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Seattle

Mystery Spill
Strais of Juan de Fuca, Washington
May 18, 1991

Sharon K. Christopherson, Scientific Support Coordinator

Incident Summary

On May 18, 1991, the U.S. Coast Guard (USCG) Marine Safety Office (MSO) Puget Sound received a report of a 4-mile long slick of black oil located along the international boundary between the United States and Canada, just north of Clallam Bay in the Straits of Juan de Fuca. The source and quantity of the oil were unknown, but USCG overflight observers reported that the slick consisted primarily of sheen with three discrete patches of black oil.

NOAA Response

NOAA was notified of the incident at 1630 on May 18, 1991, by MSO Puget Sound who requested a trajectory for the oil and natural resources at risk information. The USCG was particularly interested to know whether the spill threatened any U.S. resources.

The NOAA trajectory predicted that the slick should move back and forth in an east-west direction with the tide, but should remain essentially in the same location for the next 2 days. The sheen was expected to disperse naturally during this period and shoreline impacts were unlikely.

NOAA told MSO that the primary resources at risk were large numbers of seabirds that frequent the entrance to the Straits of Juan de Fuca in the spring. These include a number of different species of murre, gull, tern, duck, loon, cormorant, and grebe.

Conclusion

No cleanup equipment was dispatched because, based on the NOAA trajectory, the oil was expected to dissipate before skimmers could reach the scene.

Mystery Spill
Strait of Juan de Fuca,
Washington
May 18, 1991

Seattle

Observers on an overflight the following morning reported that the slick had broken up and was no longer visible. No impact to wildlife was reported.

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Seattle

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Sharon K. Christopherson, Edwin Levine, and Gary Petrae,
Scientific Support Coordinators

Incident Summary

At 0849 on July 22, 1991, the 610-foot Chinese freighter TUO HAI collided with the 365-foot Japanese fish processor TENYO MARU in Canadian waters, 22 miles northwest of Cape Flattery, Washington. The TUO HAI suffered only minor damage, but the TENYO MARU released approximately 100,000 gallons of petroleum products and sank in 500 feet of water. All but one of the 84 crew members on board the TENYO MARU were rescued. The TENYO MARU was carrying approximately 450,000 gallons of intermediate fuel oil (IFO) and diesel when the collision occurred. Personnel on a July 22, 1991, U.S. Coast Guard (USCG) helicopter overflight, observed a slick approximately 6 nautical miles long and 500 yards wide extending southeast from the wreck site. At this time, the leading edge of the slick was within the U.S. Economic Zone.

NOAA Response

NOAA was notified of the incident on July 22, 1991, by USCG Marine Safety Office (MSO) Puget Sound who requested the Scientific Support Coordinator (SSC) to report on-scene. Over a 6-week period, the NOAA SSC and support team provided oil spill trajectories and information on resources at risk; participated in daily overflights and shoreline assessment surveys; prepared overflight maps and set up a shoreline impact/cleanup tracking system; made specific cleanup recommendations for environmentally sensitive and culturally significant shorelines; and assisted in the coordination of State, Federal, local, and tribal agencies involved in the spill response. Under the Unified Incident Command System used in the response, the SSC was designated the Planning Section Chief for the spill response by the U.S. OSC.

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Seattle

Coordination

The Canada-United States Joint Marine Pollution Contingency Plan (CANUSPAC) was invoked. The Canadian Coast Guard was appointed the On-Scene Coordinator (OSC) and directed salvage and containment efforts at the wreck site. The USCG Captain of the Port (COTP) was designated the Deputy OSC and directed all open-water and shoreline recovery operations in U.S. waters, where most of the oil was located. Canada established a command post (CP) at Ucluelet, British Columbia and the United States established a multiagency incident CP at USCG Station Neah Bay, Washington. The USCG, Washington Department of Ecology, National Park Service (NPS), and the Makah Tribe were designated Incident Commanders by the U.S. OSC. Daily telephone conference calls coordinated the international response effort. Coordination was further enhanced by the exchange of Canadian and USCG liaison officers during specific salvage and skimming operations.

Lessons learned in an earlier spill, the tank vessel NESTUCCA that had impacted Olympic National Park shorelines in December of 1988, significantly enhanced coordination among the agencies involved in the TENYO MARU response. Many of the same cleanup strategies, staging areas, and access points could be used. Also, the USCG COTP and NOAA had just completed a series of meetings with Olympic National Park management in which coordination problems during the earlier spill were discussed and solutions to these problems identified.

Trajectories and weather

NOAA and the Canadian Office of Fisheries and Oceans coordinated daily to develop oil spill trajectories. The predominant long-shore currents, common during the summer, are to the south; however, short-term reversals do occur. Experience during the NESTUCCA spill pointed out the need for frequent overflights and some of the peculiarities of the ocean currents, especially near the submarine canyons off the entrance to the Strait of Juan de Fuca.

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Seattle

Trajectories and weather, cont

Westerly winds moved the slick toward shore until the leading edge impacted shorelines near Cape Flattery 4 days into the spill. The wind shifted and the predominant long-shore currents moved the main mass of the slick south, approximately 20 miles offshore and parallel of the coastline. The most significant oiling occurred early in the spill on shorelines in the Olympic National Park and on the Makah Indian Reservation. A period of strong westerly winds 2 weeks into the spill caused additional sporadic impacts on shorelines between Long Beach, Washington and Lincoln City, Oregon. By this time, the main slick had broken up into scattered tarballs and could no longer be tracked. Oil continued to surface from the sunken TENYO MARU. Approximately 75,000 gallons was released over a period of several weeks. The slick resulting from this slow leak consisted of narrow ribbons of black oil and sheen extending 1 to 4 miles downwind of the wreck site.

The logistical problems of working open-water skimming 25 nautical miles offshore, mounting cleanup operations on shorelines that can only be accessed by boat or helicopter, and the common occurrence of fog during this time of the year significantly hampered response operations.

Resources at risk

The resources most at risk from this spill were seabirds and sea otters that use the nearshore and offshore areas for breeding and foraging. Other resource issues of particular concern included surf smelt spawning beaches, eagle consumption of oiled prey, nearshore kelp beds, and subsistence areas.

July is a particularly sensitive time of the year for birds along this part of the coast. Hundreds of thousands of birds were potentially present in the spill impact area from breeding populations of cormorants, auklets,

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Seattle

Resources at risk, cont.

murres, and tufted puffins in the outer coastal islands; tufted puffins and rhinoceros auklets that breed in the inner portion of the Strait of Juan de Fuca but are currently migrating through to outer coastal waters; and a California population of common murres migrating to the outer coast of Washington. Over 4,000 oiled birds were recovered from the shoreline during the spill response: live birds for rehabilitation, and dead birds to protect the food web.

A pre-spill survey performed by the U.S. Fish and Wildlife Service and the Washington Department of Wildlife showed 277 sea otters with 50 dependent pups along the Washington coast. Sea otters are particularly susceptible to oil spills because they depend on their fur for insulation and buoyancy. Harbor seals and northern sea lions were present in significant numbers along the coast, but are less susceptible to oil because they rely on blubber rather than fur. A limited number of oiled harbor seals and at least one sea otter were seen; however, there were no reports of marine mammal mortality directly related to the oil.

Nearshore beds of bull kelp (*Nereocystis*) at Cape Flattery and along the Olympic National Park tended to trap floating tar patties. While the oil had very little impact on the kelp itself, the tarballs continued to sheen. Periodically, under the effect of onshore winds, significant numbers of tarballs would wash ashore from these kelp beds and re-contaminate beaches. Cutting the kelp beds was not possible because *Nereocystis* was in its reproductive stage; instead, small zodiacs were used as platforms to harvest the 6- to 8-inch tar paddies using nets and pitchforks covered in mesh.

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Seattle

Oiled bird recovey/ rehabilitation operations

The Oil Pollution Fund funded bird rescue/recovery operations as part of the spill response. A total of four primary care stations were located at Neah Bay, Quillayute, Ocean City, and Fort Canby. Live birds that required additional care were transported to a treatment center in Seattle. Under the direction of the Island Oil Spill Association, 177 trained volunteers assisted in wildlife rescue activities. The bird rescue/recovery operations handled approximately 4,468 birds; 3,687 dead, 781 alive.

Cleanup recommendations

The use of dispersants was considered the first day of the spill and rejected by the Regional Response Team because of possible adverse effects on fisheries near the spill and the expected low effectiveness of dispersants on this particular IFO.

Following experiences from the 1988 NESTUCCA spill, shoreline cleanup consisted primarily of manual removal of stranded oil and oily debris using rakes and shovels. Land access to most impacted shorelines in the Olympic National Park and on the Makah Indian Reservation was limited to a few hiking trails. Equipment, personnel, and oily debris were moved by helicopter between the coast and inland staging areas. The dependence on helicopters for transportation frequently stopped cleanup activities because of fog.

Representatives from the USCG, NOAA, NPS, and the Makah Tribe comprised a designated multiagency shoreline assessment team. This team recommended cleanup measures and prioritized specific shoreline segments along the northern Washington coast for cleanup. Shoreline impacts, cleanup recommendations, and the progress of cleanup operations were tracked for each shoreline segment. Once the recommended cleanup was completed, each shoreline segment was surveyed again

Seattle

Cleanup recommendations, cont.

by the multiagency team to determine "how clean is clean." In certain cases, cleanup activities were permitted to continue beyond the point were the oil was no longer considered a threat to the environment. These included wilderness areas of the Olympic National Park next to popular hiking trails, and areas on the Makah Reservation heavily used for subsistence or of high cultural significance. The additional cleanup was restricted to manual wiping and brushing of tar splattered rocks and was approved only in cases where the proposed cleanup activity itself could cause no additional adverse impact to the environment.

Cleanup recommendations for public lands on southern Washington and northern Oregon beaches were made jointly by USCG and State representatives.

Hazardous Waste Operations and Emergency Response (HAZWOPER) Training

The Washington State Department of Labor and Industry required a minimum 8-hour safety training class for all personnel working on contaminated shorelines, including the 177 volunteers assisting in the wildlife rescue response activities. The Makah Tribe demanded that tribal members become the primary cleanup personnel on Makah tribal lands. The Occupational Safety and Health Administration deferred jurisdiction to the State of Washington regarding the required safety training for tribal members. The absence of this training restricted or slowed down response activities of these two groups until the USCG funded and contracted an industrial hygienist to develop and teach a series of 8-hour safety courses.

Natural Resource Damage Assessment (NRDA) activities

Significant NRDA activities took place in parallel with the spill response. Transects in the Olympic National Park that had been established following the NESTUCCA spill were reoccupied. Studies were coordinated among the NPS, U.S. Department of the Interior,

F/V TENYO MARU
Cape Flattery, Washington
July 22, 1991

Seattle

Conclusion

U.S. Department of Commerce, and the Washington State Marine Resource Damage Assessment Team. These studies attempted to document shoreline impacts and injury to birds, marine mammals, shellfish, fisheries, benthic communities, and kelp beds. The SSC helped the USCG coordinate NRDA activities with response activities to optimize use of limited boat and helicopter resources.

With the exception of Cannonball Spit, cleanup of all impacted areas was completed on September 27. Cleanup operations at that site were discontinued due to weather, but the USCG agreed to re-assess it in the spring.

The Canadian Coast Guard estimates that 75,000 gallons of oil seeped to the surface from the sunken TENYO MARU over several weeks. They conducted a unique oil recovery operation using a remotely operated vehicle. More than 26,000 gallons of oil were recovered from the sunken TENYO MARU by placing a hose in a porthole and pumping oil to the surface. This operation was the first successful oil recovery effort in water greater than 500 feet.

An undetermined amount of oil remains onboard the sunken vessel. An underwater video of the wreck determined which tanks experienced catastrophic damage during the collision and subsequent sinking. As of March 1992, small amounts of unrecoverable oil causing a sheen continue to rise to the surface; however, there have been no reports of any shoreline re-oiling.

Open-water skimming operations recovered 32,000 gallons of oil between July 23 and August 18 near the main slick and in the area where oil continued to bubble up from the sunken vessel Shoreline cleanup activities were concluded September 27 and final disposal was completed on December 31, 1991. Final survey and

Seattle

Conclusion, *cont.*

clearance of impacted shorelines by the Olympic National Park and the Makah Tribe are scheduled for the spring. The status of the oil leaking from the TENYO MARU will also be reviewed then.

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Seattle

F/V OMNISEA
Seattle, Washington
September 16, 1991

Sharon K. Christopherson, Scientific Support Coordinator

Incident Summary

On September 16, 1991, the fishing vessel OMNISEA, a 324-foot fish processor undergoing repairs, was reportedly on fire and smoking heavily at the west side of Pier 91, Elliott Bay, Seattle. The fire apparently broke out in an area where welding equipment was in use. The OMNISEA was reported to have 400 pounds of chlorine, 10,000 pounds of ammonia, and 250,000 gallons of diesel onboard. The ammonia was in the vessel's refrigeration system close to where the fire started.

Under the Puget Sound Marine Firefighting Response Plan, the Seattle Fire Department became the Marine Firefighting Scene Commander (FFSC). The U.S. Coast Guard (USCG) provided technical assistance and established a 250-yard safety zone on the water side of the vessel. The response was upgraded to a five-alarm fire, and at one time included over 60 pieces of shore-based equipment, 2 Seattle fire boats, and 2 tugs.

The vessel developed an 8-degree starboard list as a result of the large volume of water continuously being sprayed on her. To reduce the list and stabilize the vessel, a barge was brought in to contain the water pumped from the OMNISEA.

NOAA Response

NOAA was notified of the incident on September 16, 1991, by USCG Marine Safety Office (MSO) Puget Sound and requested to provide trajectories for potential catastrophic releases of oil, chlorine, or ammonia.

NOAA provided CAMEO™ Response Information Data Sheets for ammonia and chlorine to the USCG and

F/V OMNISEA
Seattle, Washington
September 16, 1991

Seattle

NOAA Response, *cont.*

Seattle Fire Department. NOAA advised MSO that chlorine and ammonia, if combined, would form ammonium trichloride and an explosion could occur.

NOAA also supplied an ALOHA™ trajectory for an instantaneous catastrophic release of either the ammonia or chlorine tanks. The predicted footprints for the immediately dangerous to life and health (IDLH) concentration extended south from the vessel 0.8 miles for an ammonia release and 0.6 miles for a chlorine release. Because Pier 91 is located at the base of a 300-foot bluff that might affect local wind patterns for several hundred yards, NOAA recommended that a safety margin be incorporated and extended the IDLH footprint to one mile and widened the uncertainty zone to cover an 180-degree sector off the end of the pier. NOAA also warned the USCG that decreased winds forecasted to occur after midnight could result in an inversion layer that could potentially extend the threat zone to 2 or more miles downwind if the fire was not brought under control.

NOAA told MSO that any oil released into the water would be moved to the south by the wind. In the event of a catastrophic release, oil could be expected to spread throughout Elliott Bay from Pier 91 to as far south as Duwamish Head and Alki Point. NOAA advised MSO that the oil should not threaten resources significantly much beyond Elliott Bay because diesel evaporates quickly.

The Elliott Bay shoreline consists primarily of man-made structures with a few widely scattered small recreational sand and cobble beaches. South of Duwamish Head the shoreline is a mixture of sand/gravel and sand/cobble beaches with some nearshore eelgrass beds and exposed tidal flats. Resources at risk in this area that could be

Seattle

NOAA Response, *cont.*

acutely impacted if exposed to stranded diesel included soft shell clams and geoducks on the sand/cobble beaches and tideflats. Shorebirds, including loons, murres, auklets, gulls, and mallards could also be impacted by floating oil. It was unlikely that significant quantities of oil would reach that far south because of weather conditions at the time of the fire. Similar habitats and resources found immediately north of Pier 91 would be more at risk if the wind shifted and came out of the southeast.

While the NOAA Scientific Support Coordinator (SSC) assisted the USCG at the Coast Guard Crisis Action Center at Pier 36, other NOAA personnel provided on-scene support at Pier 91. They set up a portable weather station to monitor local wind conditions and provided technical assistance on the ALOHA™ model to the USCG and local firefighters. Additional NOAA personnel provided observations on the real-time behavior of the smoke plume. Ammonia levels were more than 70 parts per million around the vessel's main deck hatches during the first 6 hours of the fire as measured by the U.S. Environmental Protection Agency Technical Assistance Team.

Conclusion

The fire proved very difficult to extinguish. Containment boom was brought in and staged at the pier, but was not to be used unless oil was released into the water. This decision was made so there would be no interference with water-side firefighting efforts. By mid-afternoon, the hull temperature of the OMNISEA wasreportedly above 450°F. The concern over a significant ammonia release remained high because the ammonia tank was so near the fire. An explosion seemed unlikely after the vessel's agent determined that there were no chlorine tanks onboard.

F/V OMNISEA
Seattle, Washington
September 16, 1991

Seattle

Conclusion, *cont*

The OMNISEA fire was controlled by sealing all hatches and openings and pumping carbon dioxide into the interior of the vessel. The Seattle Fire Department maintained the carbon dioxide atmosphere within the vessel for 2 days before ventilating the ship. At 0900 on September 19, the Seattle Fire Department declared the fire extinguished. All vessel compartments were opened and ventilated, and a marine chemist certified that the vessel was free of toxic gases.

The USCG inspected the vessel and found a 16-foot transverse crack on the port side of the main deck near hold number 3. The crack was stabilized and the vessel dewatered into a holding barge. No oil was released into the water. The diesel, located in the double bottom of the vessel, was apparently protected by a thick cement barrier between the fuel tanks and the fire. The ammonia was off-loaded from the vessel.

As of September 30, 1991, the case remained open until the oil could be off-loaded and the final disposition of the vessel determined. The USCG is investigating the cause of the fire.

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Anchorage

USFWS Plane Search and Rescue
Beaufort Sea, Alaska
October 12, 1990

John W. Whitney, Scientific Support Coordinator

Incident Summary

On October 11, 1990, a U.S. Fish and Wildlife Service (USFWS) research plane, carrying the pilot and two USFWS personnel, left Prudhoe Bay and headed northwest out over the Arctic Ocean to look for polar bears on the ice edge. The plane never returned. A major search and rescue mission was initiated by the U.S. Coast Guard and local Barrow aviators in the early morning of October 12. The rescue plane was expected to extend its search to approximately 250 miles northwest of Barrow.

NOAA Response

NOAA was notified of the incident on October 12, 1990, by the U.S. Coast Guard Operations Center, Juneau. They asked for information on ice conditions and currents in the general area north of Barrow.

NOAA contacted the ice forecasting office of the National Weather Service in Anchorage and advised the Coast Guard that the ice edge extended from approximately 50 miles offshore of Prudhoe Bay, to location 71.8°N 150°W; then to 30 miles off Barrow. From there it extended to approximately 73°/160° and then up to 73.8°/165°. The ice forecaster reported light winds from the northeast and noted that very little movement of the ice had been observed in the past week. This ice edge location was used as the initial focus of the search effort.

Conclusion

Coast Guard and civilian search efforts continued for about 12 days. The plane was not located.

Anchorage

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Anchorage

Little Diomede Island,
Alaska
November 19, 1990

John W. Whitney, Scientific Support Coordinator

Incident Summary

On November 19, 1990, storm-induced 25-foot high waves tore open bulk fuel tanks at the village of Diomede on the north end of Little Diomede Island in the middle of the Bering Strait. Four mobile fuel oil storage tanks were damaged and began leaking oil after being swept from the rocky shore of the island. Three of the tanks contained an estimated 30,000 gallons of #1 heating oil and the fourth tank contained an estimated 4,000 gallons of marine gas.

NOAA Response

NOAA was notified of the incident on November 19, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage. MSO requested resources at risk and weather information.

NOAA and the MSO agreed that a response was not possible because of the severe weather and the remoteness of the island. The main concern was the movement of the ice edge from the Arctic Circle. If the ice closed in, vessels would be unable to re-supply the island.

NOAA advised the MSO that the severe weather would probably continue for a few days, but the ice edge would not hamper vessel traffic for at least a month.

NOAA reported that any overwintering seabirds in the area should not be at risk because the severe weather should clear away the pollutants.

Little Diomede Island,
Alaska
November 19, 1990

Anchorage

Conclusion

No response was attempted. An estimated 10,100 gallons of #1 fuel oil and 4,600 gallons of marine gas were lost. In addition, four drums of 10W30 lube oil, six drums of hydraulic oil, and two drums of propylene glycol were lost, but, twenty-nine drums of "blazo" white gas that were swept into the water were recovered. The pollution incident abated and the Alaska Division of Emergency Services took over to resupply the village with necessary staples to make it through the winter.

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Anchorage

Small Raft Search and Rescue Mission
Seguam Island, Alaska
November 29, 1990

John W. Whitney, Scientific Support Coordinator

Incident Summary

On the evening of November 28, 1990, the tugboat RED JACKET sent two men ashore in a 12-foot Zodiac to find potable water at Seguam Island, Aleutian Island Chain. The RED JACKET anchored a few hundred yards offshore. The party made it ashore, built a fire, and appeared to be spending the night. However, in the morning the raft failed to return to the tugboat. The U.S. Coast Guard was notified. They sent out a C-130 to search during the remaining daylight of November 29.

NOAA Response

NOAA was notified of the incident on the evening of November 29, 1990, by the U.S. Coast Guard Search and Rescue (SAR) Center, Juneau. The SAR Center requested a trajectory for the movement of the raft in order to formulate a search plan for the next day.

NOAA suggested that any movements of the raft would be largely controlled by the wind. As the winds were from the west, NOAA suggested searching in an eastward direction from the island.

Conclusion

The Coast Guard continued aerial searches for 3 days and a Coast Guard cutter moved to Seguam Island to continue the search, particularly onshore. No evidence of the raft or its occupants was found.

References

Marine Forecaster, NOAA National Weather Service, Anchorage, personal communications, November 29 and December 3, 1990.

Anchorage

T/V COAST RANGE
Cook Inlet, Alaska
December 18, 1990

John W. Whitney, Scientific Support Coordinator

Incident Summary

During the early morning of December 17, 1990, the 635-foot tank vessel COAST RANGE broke loose from the Drift River Storage facility, spilling approximately 2,310 gallons of crude oil onto the deck and about 630 gallons into ice-covered Redoubt Bay. Cook Inlet Spill Prevention and Response, Inc. (CISPRI), the Cook Inlet industry oil spill cooperative, responded at first light.

NOAA Response

NOAA was notified of the incident on December 18, 1990, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage. MSO did not request assistance.

NOAA, in turn, notified the appropriate resource agencies of the incident.

Conclusion

Normal cleanup procedures could not be carried out because of the thick ice. Heavy fog and snow also hampered the cleanup and grounded attempted overflights. Skimmers, deployed by CISPRI, picked up mostly water, therefore the response effort shifted to sorbents. A total of 13 drums of soiled sorbent material and approximately 3 barrels of oil were recovered. On the afternoon of December 20, overflight failed to sight oil and the case was closed.

References

Becker, Paul, Regional Response Team representative, Anchorage, personal communications, December 18, 1990.

Anchorage

References,
cont.

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, December 18, 1990.

Slater, Claudia, Alaska Department of Fish and Game, Anchorage, personal communications, December 18, 1990.

Anchorage

F/V JESSICA B
Kashega Bay,
Unalaska Island, Alaska
January 3, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On January 2, 1991, heavy weather in the Aleutian Islands drove the fishing vessel JESSICA B aground at Kashega Bay on Unalaska Island, Alaska with approximately 1,200 gallons of diesel and 200 to 300 gallons of lube and hydraulic oils onboard. The fuel tanks remained intact but a light sheen formed around the vessel that was thought to be residue from the engine room. A barge and an accompanying vessel were sent to the scene to pump off the petroleum products.

NOAA Response

NOAA was notified of the incident on January 3, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage who requested information on environmental resources at risk.

NOAA informed MSO that in that location and at that time of year, there were no significant numbers of wildlife or marine mammals endangered by the grounded vessel or the potential oil spill.

Conclusion

All diesel fuel, lube oil, and hydraulic oil were removed from the vessel. Attempts by the salvor, Magone Marine, to pull the vessel from the rocks stopped when it was determined that the vessel would roll over and sink after it was off the rocks. The JESSICA B was left were she went aground.

Anchorage

F/V SKAGIT EAGLE
Unalaska Island,
Alaska
February 8, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On February 8, 1991, the U.S. fishing vessel SKAGIT EAGLE ran aground in stormy seas in Reese Bay on Unalaska Island, Alaska. Three of her five fuel tanks ruptured, releasing 10,000 gallons of diesel fuel. The vessel, owned by Quest Marine of Sedro Wooley, Washington, carried approximately 18,000 gallons of diesel, 400 gallons of hydraulic oil, and 200 gallons of lube oil. The vessel's five crew members waded ashore where the U.S. Coast Guard rescued them with an H-3 helicopter.

NOAA Response

NOAA was notified of the incident on February 8, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage. The rescue of the vessel's crew was MSO's first consideration, but they were also concerned about the natural resources that could be at risk.

NOAA informed MSO that there could be more than 100 sea ducks, scoters, harlequins, auklets, and emperor geese in the area, as well as 10 to 20 sea otters and more than 10 eagles. If beach work was required, NOAA recommended that ground disturbance be kept to a minimum due to the possible existence of cultural resources.

Conclusion

By March 8, Magone Marine of Dutch Harbor salvaged the vessel and lightered the approximately 8,400 gallons of diesel fuel, hydraulic oil, and lubricating oil that remained on the vessel . On-scene observers reported very few birds and only a couple of sea lions. None of the animals showed any evidence of oiling. Bad weather hampered the cleanup operation and caused rapid and thorough dispersion of the 10,000 gallons of diesel.

F/V SKAGIT EAGLE
Unalaska Island,
Alaska
February 8, 1991

Anchorage

References

Becker, Paul, Department of Commerce Regional Response Team representative, Anchorage, personal communications, February 9, 1991.

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, February 10, 1991.

National Weather Service, Anchorage, personal communications, February 8, 9, and 10, 1991.

Swenson, Chris, Alaska Department of Fish and Game, Anchorage, personal communications, February 8 and 12, 1991.

Robinson-Wilson, Everett, U.S. Fish and Wildlife Service, Anchorage, personal communications, February 11, 1991.

Anchorage

M/V PRINCE WILLIAM SOUND
Dutch Harbor, Alaska
April 22, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On the afternoon of April 22, 1991, the PRINCE WILLIAM SOUND, a 180-foot fish processing vessel, caught fire while moored at Captain's Bay at Unalaska Island. The vessel carried an estimated 135,000 gallons of diesel fuel. There were also limited quantities of oxygen, acetylene, and ammonia bottles; ten barrels of lube oil; and seven barrels of gasoline stored on deck. The fire was started by a welding operation in the tool room, which caused a fire in adjacent packing boxes. The local fire department attempted unsuccessfully to put out the fire. A decision was made to tow the burning vessel out to sea a safe distance northwest of Unalaska Island.

NOAA Response

NOAA was notified of the incident April 22, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Valdez. MSO wanted to know how far offshore the vessel should be towed so that a possible full release of the 135,000 gallons of diesel would not impact any coastal resources. NOAA advised MSO that a distance of 10 miles northwest of Unalaska Island should provide an adequate buffer zone.

Conclusion

The PRINCE WILLIAM SOUND had been towed approximately 15 miles offshore when the tow line parted. The vessel was still afire. By April 24, the tow was regained and the fire had nearly burned out. No black smoke had been seen coming from the burning vessel so it was assumed that her diesel fuel tanks were still intact. This was confirmed when the vessel was boarded on the following weekend. The owner, Trident Seafoods, towed

Anchorage

Conclusion, *cont.*

the vessel to its facilities at Akutan Harbor after her structural integrity had been confirmed. The fuel was safely pumped off and plans were made to tow the vessel to Seattle for repairs.

References

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, April 23, 1991.

Marine Forecaster, NOAA National Weather Service, Anchorage, personal communications, April 22 through April 24, 1991.

Slater, Claudia, Alaska Department of Fish and Game, Anchorage, personal communications, April 23, 1991.

Watabayashi, Glen, NOAA, Hazardous Materials Response Branch, Seattle, personal communications, April 22, 1991

Anchorage

Coast Guard Radar Station
Potato Point,
Prince William Sound, Alaska
April 28, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On April 26, 1991, the U.S. Coast Guard (USCG) Marine Safety Office (MSO) Valdez received reports from Alyeska Pipeline personnel of sheen measuring approximately 20 yards wide by 1 mile long near Potato Point in Valdez Arm. There were no vessels in the immediate vicinity. Further investigation revealed that fuel was leaching from the rocks below the generator shack of the USCG Radar Station, which is perched on a natural platform approximately 40 feet above the water. Soundings of the diesel fuel tanks indicated that 3,000 to 3,500 gallons of diesel had been lost. The USCG deployed barrier boom, sorbent boom, and sorbent sweeps to contain and collect as much oil as possible. Further plans included bringing in a backhoe and bulldozer to excavate around the tank and the fuel lines to find the exact source of the leak and to dig a trench on the beach to collect the oil.

NOAA Response

NOAA was notified of the incident on April 28, 1991, by MSO Valdez who requested information on environmental resources and archeological sites at risk.

NOAA advised MSO that there should not be any environmental resources at risk in the area at this time of year and that there were no known historical cultural sites at Potato Point. With this information, the USCG was able to put its cleanup plan into operation.

Conclusion

A 22-foot trench dug parallel to the generator hut collected a great deal of diesel. A flow-through coffer dam was constructed immediately shoreward of the beach cliff from which the diesel was leaching. Farther down

Coast Guard Radar Station
Potato Point,
Prince William Sound, Alaska
April 28, 1991

Anchorage

Conclusion, *cont.*

the beach a 20-foot long by 3-foot wide by 2-inch deep trench was dug on the beach side and lined with plastic. Oil was collected from all the trenches with sorbent material. Trenches were judged to be 80 percent effective in stopping fuel from reaching the shoreline. Sorbent pads were collected and changed twice a day for 2 weeks before it was judged that most of the oil had been captured.

References

Alaska Department of Fish and Game representative, Valdez, contact through MSO Valdez, April 28, 1991.

Pam Bergmann, U.S.Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, April 28, 1991

State Historical Preservation Office representative, Juneau, personal communications, April 28, 1991.

Anchorage

F/V MAX
Hinchinbrook Entrance,
Prince William Sound, Alaska
May 15, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On Tuesday evening, May 14, 1991, the 91-foot fishing vessel MAX capsized and sank in approximately 600 feet of water as a result of stability problems while fishing in Hinchinbrook Entrance of Prince William Sound. The vessel had just provisioned for a long journey and carried 10,000 gallons of diesel and 100 gallons of lube oil onboard. The four crewmen were rescued, but all the fuel and stores were presumed lost into the water.

NOAA Response

NOAA was notified of the incident during the early morning hours of May 15, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Valdez.

NOAA consulted with the National Weather Service and advised MSO that no action was possible because forecasted choppy seas and rough weather would rapidly disperse the diesel.

Conclusion

A morning report from the Alyeska tanker escort tug in the vicinity indicated that only a light sheen and the smell of diesel persisted in the area. The actual cause of the capsizing is being investigated by MSO Valdez.

References

Marine Forecaster, NOAA National Weather Service, personal communications, May 15, 1991.

Anchorage

F/V ALMIGHTY
Bristol Bay, Bering Sea, Alaska
May 29, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On May 28, 1991, the 75-foot fishing vessel ALMIGHTY sank in 13 fathoms of water in North Bristol Bay with five crewmembers onboard. All crewmembers were rescued by a nearby boat. The ALMIGHTY, owned by Pennisi Brothers of Monterey, California, carried approximately 7,000 gallons of diesel, 100 gallons of lubricating oil, and over 80,000 pounds of yellowfin sole. The vessel was approximately 2 miles offshore of Righthand Point and 7 miles north of Round Island, a state walrus sanctuary. A U.S. Coast Guard overflight aircraft crew reported a moderate sheen about 1/2 mile wide that extended 3 miles to the east.

NOAA Response

NOAA was notified of the incident on May 29, 1991, by the U.S. Coast Guard and asked for a trajectory estimate, information on the weather, and environmental resources at risk.

NOAA notified the resource agencies in Dillingham and was informed that there were approximately 600 walrus and 300 sea lions on Round Island who might forage in the area of the sinking. Of greater concern was the herring hatch in progress along the coastline from Kulakak Bay to Togiak Bay. NOAA reported that the oil plume was travelling to the east moving away from the herring hatching grounds and the walrus sanctuary.

Conclusion

The U.S. Coast Guard hired marine salvors and divers to inspect the sunken ship, plug the fuel tank vents, and pump off any remaining fuel. The vessel continued to leak for a week. When pumping began, the tanks had

Anchorage

Conclusion, *cont.*

nearly emptied; 7,000 gallons of diesel had been lost. The USCG and U.S. Army Corps of Engineers decided to leave the vessel where she was but to cut off her mast and outrigger booms to avoid a navigational hazard.

The cause of the sinking of the ALMIGHTY is unknown. No damage has been reported to the walrus sanctuary or the herring hatch.

References

Becker, Paul, Regional Response Team representative, Anchorage, personal communications, May 29, 1991.

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, May 29, 1991.

Marine Forecaster, NOAA, National Weather Service, Anchorage, personal communications, May 29-June 5, 1991.

Payton, Debbie, NOAA, Hazardous Materials Response Branch, Seattle, personal communications, May 29, 1991.

Robinson-Wilson, Everett, U.S. Fish and Wildlife Service, Anchorage, personal communications, May 29 and 30, 1991.

Scrade, Jeff, Alaska Department of Fish and Game, Dillingham, personal communications, May 29-31, 1991.

Swenson, Chris, Alaska Department of Fish and Game, Anchorage, personal communications, May 29, 1991.

Vandale, Larry, Alaska Department of Fish and Game, Dillingham, personal communications, May 29-30, 1991.

Anchorage

Barge B&R #5
Shishmaref, Alaska
August 10, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On August 9, 1991, the Crowley Barge B&R #5 was delivering winter heating fuel to the community of Shishmaref on the north coast of the Seward Peninsula. The barge was battling 60-knot winds and 10- to 12-foot seas. Sheening was discovered after the barge took shelter in Port Clarence. Evidently, the heavy weather caused several leaks in two tanks, which resulted in the loss of a significant portion of the barge's cargo of 86,000 gallons of #1 heating oil. The remaining fuel in the damaged tanks was pumped to other tanks. No estimate of the amount of fuel lost was available then.

NOAA Response

NOAA was notified of the incident on August 10, 1991, by the U.S. Coast Guard Marine Safety Office, Anchorage. No response was possible because of the weather.

Conclusion

The remaining cargo was off-loaded to another barge after the B&R #5 reached Shishmaref. After the tanks were sounded, it was estimated that approximately 13,375 gallons of #1 heating oil was lost before the leak was discovered. No further action was taken.

Anchorage

F/V GREENHOPE
Atka Island, Aleutian Island Chain, Alaska
August 13, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On the morning of August 13, 1991, while fishing the waters around the western Aleutians, the fishing vessel GREENHOPE became unstable due to its heavy catch. To compensate for this lack of stability, the skipper decided to dump fuel and proceeded to pump about 3,000 gallons of diesel over the side into the ocean. At the time the vessel was approximately 20 miles north of Atka Island.

NOAA Response

NOAA was notified of the incident on August 13, 1991, by the U.S. Coast Guard. They did not request information or assistance. However, NOAA told them that the diesel would dissipate rapidly in the high seas and winds.

Conclusion

As NOAA predicted, the oil was dissipated by weather and sea conditions.

References

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, August 13, 1991.

Marine Forecaster, NOAA, National Weather Service, Anchorage, personal communications, August 13, 1991.

Anchorage

M/V ATLANTIC SEAHORSE
Cook Inlet, Alaska
August 14, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On August 13, 1991, a work boat, 210-foot motor vessel ATLANTIC SEAHORSE under contract to ARCO Alaska Inc. crashed the Glomar Adriatic 8 drilling rig, ruptured a fuel tank, and spilled approximately 4,000 gallons of diesel fuel into the water. The collision occurred approximately 4 miles offshore of the North Forelands in Upper Cook Inlet. With fuel leaking from her ruptured fuel tank, the ATLANTIC SEAHORSE was pinned against the drilling rig by heavy tidal currents for about 90 minutes. Cook Inlet Spill Prevention and Response, Inc. (CISPRI), the area cleanup cooperative, arrived and began skimming the surface and laying down containment boom and absorbent materials. The spill at this point was described as a light sheen on the surface measuring about 2 miles long and 250 yards wide.

NOAA Response

NOAA was notified on August 14, 1991, by the U.S. Coast Guard Marine Safety Office, (MSO) Anchorage. No requests for assistance were made because at the time of NOAA's notification, the spilled diesel had dissipated.

Conclusion

The fuel was broken up and dispersed by 5- to 6-foot seas. Cleanup efforts by ARCO and CISPRI ended the afternoon of August 13, 1991. No environmental damaged resulted from the spill as it dissipated well offshore.

Anchorage

M/V SEA JADE
Dutch Harbor. Alaska
August 23, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On the morning of August 23, 1991, approximately 39 miles north of Dutch Harbor, Alaska, two large fish processing vessels collided during calm seas and clear weather. The motor vessel OCEAN AYA ripped a 5-meter long fracture from the waterline to the deck of the motor vessel SEA JADE. The estimated fuel on board included 276,500 gallons of IFO and 45,435 gallons of diesel. Initial reports were that no fuel had leaked and there were no personnel casualties.

NOAA Response

NOAA was notified of the incident on August 23, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage They indicated that the probability of spilling oil was low because the crack appeared not to have penetrated any fuel tanks and the weather was very good. MSO did not request NOAA assistance; nevertheless, NOAA notified all the resource agencies.

Conclusion

Both vessels proceeded to a position 4 miles outside Dutch Harbor for a full evaluation of their condition. After the evaluation, the OCEAN AYA, which sustained only minor damage, was released; however, the SEA JADE was ordered to stay in Dutch Harbor until repairs are made to her hull. No fuel was released during the incident.

References

Becker, Paul, Regional Response Team representative, Anchorage, personal communications, August 23, 1991.

Anchorage

References, *cont.*

Bergmann, Pam, U.S. Department of the Interior, Office of Environmental Protection, Anchorage, personal communications, August 23, 1991.

Griffin, Ken, Alaska Department of Fish and Game, Dutch Harbor, personal communications, August 23, 1991.

Anchorage

F/V JUSTIN TIME
Sozavarika Island, Alaska
September 4, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

On the morning of September 4, 1991, the fishing vessel JUSTIN TIME, owned by Peter Pan Seafoods, accidentally ran aground on the west side of Sozavarika Island with 20,000 pounds of halibut, 250 gallons of diesel, and 4 to 5 gallons of hydraulic fluid onboard. The engine room was breached by a large rock. The weather was southwest winds to 10 knots increasing to 25 knots in the afternoon with 4- to 6-foot morning seas increasing to 12-foot by evening. The crew abandoned ship and was rescued by a nearby fishing vessel.

NOAA Response

NOAA was notified of the incident on September 4, 1991, by the U.S. Coast Guard Marine Safety Office (MSO) Anchorage. MSO and NOAA agreed that, with the impending weather, the JUSTIN TIME would probably break up and release its fuel and cargo to the open sea. It was judged that the consequences of such a spill would be fairly insignificant with the small amount of fuel onboard.

Conclusion

The Coast Guard air station in Kodiak responded to an Emergency Position Indicating Radio Beacon signal from the JUSTIN TIME. During the overflight, the crew reported a light diesel sheen coming from the vessel approximately 50 yards wide by 100 yards long. Sheen was reported as broken and dissipating in the rough seas.

Anchorage

Soviet Ice Station NP-31
Beaufort Sea, Alaska
September 16, 1991

John W. Whitney, Scientific Support Coordinator

Incident Summary

The Soviet Research and Development Institute of the Arctic and Antarctic research Ice Station NP-31 was abandoned after it broke away from pack ice in July 1991, 150 miles northwest of Point Barrow, Alaska. When the island was abandoned, the Soviet researchers left behind 500 drums of diesel oil, 30 drums of aluminum powder, 10 drums of lubricating oil, 4 bags of caustic soda, 600 empty drums with residue from unknown chemicals, and 5 or 6 buildings.

Normally, an ice floe would be caught in the Arctic Ocean clockwise gyre and carried back to Russia; however, this station was reported approximately 50 miles from Barrow.

NOAA Response

NOAA was notified of the incident on September 16, 1991, by the U.S. Coast Guard (USCG) Marine Safety Office (MSO). MSO requested a trajectory for the missing research station.

NOAA told MSO that the ice should drift in a westerly direction at this time of year. The search began at the ice station's last known position, 300° true north, and continued for a week with no success. On September 27, the MSO again contacted NOAA in an attempt to locate a long-term radio transmission source that could be dropped on the abandoned camp when it was located. NOAA told MSO that an Argus buoy would be necessary and that one might be available from the USCG Research and Development Center, Alaska Clean Seas, or the Joint Ice Center. Tracking services could be provided by the University of Washington Applied Physics Laboratory.

Soviet Ice Station NP-31
Beaufort Sea, Alaska
September 16, 1991

Anchorage

Conclusion

The NP-31 Ice Station was located on September 29 by the USCG approximately 180 miles west of Point Barrow. There were no barrels visible on the ice floe and only three structures were seen, all in various stages of sinking through the ice. Without knowing when or where the barrels were lost, NOAA could not provide an accurate trajectory of any possible pollutant released. It was determined that no action could be taken, but the USCG requested overflights of the ice station and vicinity in 3- and 6-month intervals.

References

Colony, Roger, University of Washington Applied Physics Laboratory, Seattle,
personal communications, September 28, 1991.

Reynolds, Michael, NOAA Hazardous Materials Response Branch, Seattle, personal communications, September 17, 1991.

Simecek-Beatty, Debra, NOAA Hazardous Materials Response Branch, Seattle, personal communications, September 17, 1991.

Watabayashi, Glen, NOAA Hazardous Materials Response Branch, Seattle, personal communications, September 17, 1991.