9100

NOTIFICATIONS AND INITIATION OF RESPONSE

The purpose of this Appendix is to provide guidance on initial actions in response to an incident and centralize information about agencies, groups, trustees, organizations, and points of contact that may require immediate notification.

The Emergency Notifications Appendix is exercised quarterly through the National Preparedness for Response Program (PREP) Notification Exercises.

This Appendix is organized as follows:

9110 – INITIAL ACTIONS CHECKLIST

The following checklist should be used to guide initial actions.

SECTOR KEY WEST

- ☐ Upon notification, verify initial information with the reporting source utilizing the ***OIL SPILL REPORTING FORM (9120).***
- ☐ Notify the National Response Center, (800) 424-8802.
- ☐ Notify U.S. Coast Guard commands by utilizing the ***USCG COMMANDS NOTIFICATION LIST (9130.2)***
- ☐ Notify Executive Members of the Florida Keys Area Committee by utilizing the ***FOSC'S INITIAL NOTIFICATION LIST (9130.1)***.
- ☐ Activate the ***SECTOR KEY WEST TYPE 3 INCIDENT MANAGEMENT TEAM (9130.3)***.
- ☐ Recall and deploy Pollution Responders to perform on-scene assessment.
- ☐ Request air assets for overflights of incident to assess damage, conduct search and rescue, and monitor for pollution.
- ☐ Develop initial objectives and response strategies.
- ☐ Make additional notifications utilizing the ***FLORIDA KEYS AREA COMMITTEE NOTIFICATIONS LIST (9130.4 – 9130.8)***

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

- ☐ Upon notification, verify initial information with the reporting source utilizing the ***OIL SPILL REPORTING FORM (9120)***.
- ☐ Make initial assessment to determine level of state involvement required.
- ☐ Notify National Response Center, (800) 424-8802.
- ☐ Notify Sector Key West, (305) 292-8727.
- ☐ Contact Responsible Party, if known.
- ☐ Respond to site and/or check-in at Incident Command Post.
- ☐ Update State Watch Office or State EOC.
- ☐ Notify DEP chain of command of significant event.
- ☐ Consider requesting additional Bureau of Emergency Response personnel.
- ☐ Consider requesting state scientific and GIS support.
- ☐ Document all actions.

FLORIDA KEYS
NATIONAL MARINE SANCTUARY

- ☐ Upon notification, verify initial information with the reporting source utilizing the ***OIL SPILL REPORTING FORM (9120).***
- ☐ Notify the National Response Center, (800) 424-8802.
- ☐ Notify Sector Key West, (305) 292-8727.
- ☐ Notify the Florida Keys National Marine Sanctuary (FKNMS) Management Team (Superintendent, Deputy Superintendent, Florida Department of Environmental Protection (FDEP) Administrator, Florida Fish and Wildlife Conservation Commission (FWC) Division of Law Enforcement Major and Regional Captain).
- ☐ Notify Florida Keys National Marine Sanctuary Science Team.
- ☐ Notify Office of National Marine Sanctuaries (ONMS) Damage Assessment and Resource Protection Coordinator.
- ☐ Notify NOAA General Counsel for Natural Resources, NOAA General Counsel for Enforcement and Litigation, FDEP General Counsel.
- ☐ Notify FDEP Bureau of Emergency Response and Monroe County Marine Resources.
- ☐ Notify ONMS senior leadership, as appropriate.
- ☐ Request FWC Law Enforcement and FKNMS Science Team to assist with damage assessment , search and rescue, and monitoring for pollution, as appropriate.
- ☐ Assist Incident Commander/Unified Command with the development of initial objectives and response strategies.

9110.1 – SECTOR KEY WEST INITIAL ACTIONS CHECKLIST (EXPANDED)

- ❑ CONFIRM THE SPILL.
- ❑ REQUEST USCG SEARCH AND RESCUE MISSION COORDINATOR (SMC) RESPOND AS NECESSARY.
- ❑ DETERMINE IF POLLUTION SOURCE CAN BE SECURED AND DIRECT OPERATIONS TO SECURE.
- ❑ DEPLOY CONTAINMENT BOOM AS CLOSE TO THE SOURCE AS REASONABLY POSSIBLE.
- ❑ IDENTIFY HIGH-PRIORITY AREAS FOR EARLY PROTECTION AND SELECT APPROPRIATE RESPONSE STRATEGIES (SEE SECTION 3200).
- ❑ EVALUATE THE SEVERITY OF THE INCIDENT AND ESTIMATE WINDOWS OF OPPORTUNITY FOR ACTION.
- ❑ ASSESS THE SITUATION, INCLUDING AND GROUNDING, FIREFIGHTING, OR SALVAGE PROBLEMS.
- ❑ IF SALVAGE, LIGHTERING, OR DEWATERING OPERATIONS WILL BE REQUIRED, REQUEST AND ACTIVATE NECESSARY RESOURCES.
- ❑ ACTIVATE SPECIAL TEAMS AS NECESSARY.
- ❑ COORDINATE WITH THE QUALIFIED INDIVIDUAL/ RESPONSIBLE PARTY RESPONSE TEAM.
- ❑ DEPLOY AIR ASSETS TO ASSESS THE INCIDENT.
- ❑ ESTABLISH A RESTRICTED AIRSPACE, AS NEEDED (SEE SECTION 3430).
- ❑ DEPLOY A MARINE INSPECTOR/SURVEYOR FOR VESSEL INCIDENTS.
- ❑ ESTIMATE CURRENT, TIDE, AND WEATHER EFFECTS ON THE SITUATION AND PRODUCT MOVEMENT.
- ❑ CONTINUOUSLY ORDER PERSONNEL AND EQUIPMENT REQUIRED FOR INITIAL RESPONSE AS THE NEED BECOMES APPARENT; DO NOT WAIT TO SUBMIT AN ORGANIZED OR FORWARD-PROJECTED ESTIMATE FOR THE NEXT OPERATIONAL PERIOD.
- ❑ DIRECT THE DELIVERY AND DEPLOYMENT OF THE FIRST EQUIPMENT TO ARRIVE ON-SCENE.
- ❑ DEVELOP SITE SAFETY PLAN (SSP) AND INSTITUTE OPERATIONAL RISK MANAGEMENT (ORM) FOR ALL RESPONDERS, UTILIZING USCG GAR RISK ASSESSMENT MODEL OR ICS-215A HAZARD/RISK ANALYSIS WORKSHEET (SEE SECTION 2200).
- ❑ INITIATE INCIDENT DOCUMENTATION. IDENTIFY AND DOCUMENT THE DISCHARGE SOURCE, RESPONSIBLE PARTY, AND PRESERVE THIS INFORMATION FOR THE DOCUMENT UNIT AND FINANCE/ADMINISTRATION SECTION.
- ❑ IF POSSIBLE, EXECUTE THE COMPLETION AND DELIVERY OF THE FOLLOWING FEDERAL AND STATE FORMS: (1) NOTICE OF FEDERAL INTEREST; (2) LETTER OF DESIGNATION OF SOURCE; (3) ADMINISTRATIVE ORDER (AS NEEDED); AND (4) LETTER OF FEDERAL ASSUMPTION (AS NEEDED).
- ❑ IDENTIFY STAGING AREAS.
- ❑ MONITOR PERSONNEL FOR SIGNS OF EXHAUSTION AND NEED FOR RELIEF/REPLACEMENT AT THE 4 HOUR MARK.

9110.2 – FLORIDA KEYS NATIONAL MARINE SANCTUARY INITIAL ACTIONS CHECKLIST (EXPANDED)

- ❑ CONFIRM THE INCIDENT.
- ❑ PLOT LOCATION OF INCIDENT TO INITIALLY IDENTIFY HABITAT AND THE PROXIMITY TO KNOWN LOCATIONS LISTED CORAL SPECIES AND CULTURAL RESOURCES
- ❑ REQUEST FWC LAW ENFORCMENT AND FKNMS SCIENCE TEAM RESPOND AS NECESSARY.
- ❑ COORDINATE WITH THE QUALIFIED INDIVIDUAL/RESPONSIBLE PARTY RESPONSE TEAM.
- ❑ ASSESS THE SITUATION, INCLUDING AND GROUNDING, FIREFIGHTING, OR SALVAGE PROBLEMS.
- ❑ ESTIMATE CURRENT, TIDE, AND WEATHER EFFECTS ON THE SITUATION AND PRODUCT MOVEMENT.
- ❑ IF SALVAGE, LIGHTERING, OR DEWATERING OPERATIONS WILL BE REQUIRED, REVIEW PLANS AND PROVIDE GUIDANCE MITIGATING INJURY TO SANCTUARY RESOURCES. REQUEST AND ACTIVATE NECESSARY RESOURCES AS APPROPRIATE.
- ❑ IDENTIFY HIGH-PRIORITY SENSITIVE AREAS FOR EARLY PROTECTION AND ASSIST WITH SELECTION OF APPROPRIATE RESPONSE STRATEGIES (SEE SECTION 3200).
- ❑ ESTABLISH A SPECIAL USE AREA, AS NEEDED (SEE 15 CFR 922.164(e)).
- ❑ IF APPROPRIATE, OBTAIN AUTHORIZATION FROM ENVIRONMENTAL RESPONSE MANAGEMENT APPLICATION (ERMA) TEAM TO USE ERMA AS THE COMMAND POST'S COMMON OPERATING PICTURE (COP).
- ❑ PROVIDE ADDITIONAL MAPS: BASE, OVERFLIGHT, SENTRY VESSEL, RESOURCES AT RISK, PROTECTION STRATEGIES, ZONES, SHORELINE SEGMENTS, ETC. AS NEEDED.
- ❑ COORDINATE WITH OTHER LOCAL EXPERTS AND TECHNICAL SPECIALISTS TO IDENTIFY SENSITIVE AREAS, OBTAIN PERMITS, CONSULTATIONS, AND OTHER AUTHORIZATIONS AS NECESSARY. EVALUATE RESPONSE TECHNOLOGIES, DEVELOP CLEAN UP AND ASSESSMENT PLANS, and MONITOR CLEAN UP ACTIONS.
- ❑ DEPLOY FKNMS SCIENCE TEAM MEMBERS AS AERIAL OBSERVERS AS NECESSARY.
- ❑ DEPLOY FKNMS SCIENCE TEAM MEMBERS WITH SHORELINE CLEANUP ASSESSMENT TECHNIQUE TEAMS AS NECESSARY.
- ❑ DEPLOY FKNMS MARITIME HERITAGE STAFF TO ASSIST WITH IDENTIFICATION AND PROTECTION OF HISTORIC/CULTURAL RESOURCES AS NECESSARY.
- ❑ INITIATE INCIDENT DOCUMENTATION. IDENTIFY AND DOCUMENT THE DISCHARGE SOURCE, RESPONSIBLE PARTY, AND PRESERVE THIS INFORMATION FOR THE DOCUMENT UNIT AND FINANCE/ADMINISTRATION SECTION.
- ❑ IF POSSIBLE, EXECUTE THE COMPLETION AND DELIVERY OF NOTICE AND DEMAND LETTER EXPLAINING FKNMS JURISDICTION AND AUTHORITIES.
- ❑ MONITOR PERSONNEL FOR SIGNS OF EXHAUSTION AND NEED FOR RELIEF/REPLACEMENT AT THE 4 HOUR MARK.
- ❑ INITIATE REQUESTS FOR ADDITIONAL PERSONNEL AND EQUIPMENT REQUIRED FOR INITIAL RESPONSE AS THE NEED BECOMES APPARENT; DO NOT WAIT TO SUBMIT AN ORGANIZED OR FORWARD-PROJECTED ESTIMATE FOR THE NEXT OPERATIONAL PERIOD.

FLORIDA KEYS AREA CONTINGENCY PLAN

OIL SPILL

REPORTING FORM (9120)

THIS FORM SHOULD BE USED TO TAKE INITIAL REPORTS AND MAKE APPROPRIATE NOTIFICATIONS.

MISLE NO. : _____

REPORTING PARTY	DATE	NAME	ADDRESS/PHONE
	TIME	ORGANIZATION	

INCIDENT INFORMATION	LOCATION		IN OR NEAR FOREIGN EEZ? Y / N
	INJURIES / FATALITIES / EVACUATIONS?		ACTIONS TAKEN
	AFFECTED AREAS		TYPE/NAME OF PRODUCT
	QUANTITY ONBOARD		QUANTITY SPILLED DISCHARGE INCREASING / DECREASING / SECURED ?
	DESCRIPTION OF INCIDENT		
	AGENCIES / RESOURCES ON-SCENE		
	SHEEN DESCRIPTION ❑ SILVERY/GREY? ❑ RAINBOW? ❑ DARK OR TRUE COLOR?	SIZE (LENGTH, WIDTH)	DIRECTION/MOVEMENT

ON-SCENE WEATHER	VISIBILITY	WINDS	SEAS
	ADDITIONAL WEATHER INFORMATION		

INVOLVED PARTY INFORMATION	NAME	VESSEL NAME
	ADDRESS/PHONE	VESSEL ID NUMBER

WATCHSTANDER ACTIONS	❑ COMPLETE ALL SECTIONS ABOVE; IF INCIDENT IS ASSOCIATED W/ A VESSEL PULL MARINE CASUALTY REPORT QRC ❑ NOTIFY THE NATIONAL RESPONSE CENTER IF NOT ALREADY NOTIFIED BY REPORTING SOURCE (800) 424-8802 ❑ NOTIFY PREVENTION DUTY OFFICER ❑ NOTIFY D7 COMCEN (305) 415-6800 (***SPECIFY IF DISCHARGE IS REPORTED IN OR NEAR FOREIGN EEZ***) ❑ NOTIFY PREVENTION CHIEF ❑ NOTIFY SECTOR COMMANDER ❑ NOTIFY SECTOR RESPONSE CHIEF	
	COMPLETED BY	SIGNATURE

9130 – NOTIFICATION CHECKLISTS

The Notification Check-Off Lists should be utilized by the coordinating agency to ensure that all necessary notifications are conducted. All notifications of non-USCG agencies may be made through the automated Alert Warning System.

9130.1 – FEDERAL ON-SCENE COORDINATOR'S (FOSC) INITIAL NOTIFICATION LIST

DATE	TIME		
		LISA GORDON *EMER. RESPONSE SPECIALIST* *FLDEP* LISA.GORDON@DEP.STATE.FL.US	(305) 481-0960 (305) 289-7071 / MOBILE
		IRENE TONER *DIRECTOR* *MONROE CO. EMER. MGMT.* TONER-IRENE@MONROECOUNTY-FL.GOV	(305) 289-6065 (305) 797-1305 / MOBILE
		SEAN MORTON *SUPERINTENDENT* *NOAA FL KEYS NAT'L MARINE SANTUARY* SEAN.MORTON@NOAA.GOV	(305) 809-4700 (305) 360-2585 / MOBILE
		DAN KIMBALL *SUPERINTENDENT* *NPS, DRY TORTUGAS/EVERGLADES* DAN_KIMBALL@NPS.GOV	(305) 242-7712 (305) 322-6311 / MOBILE
		ANNE MORKILL *WILDLIFE REFUGE MANAGER* *USFWS FL KEYS NAT'L WILDLIFE REFUGE* ANNE_MORKILL@FWS.GOV	(305) 872-2239, EXT 209 (305) 304-4907 / MOBILE
		MAJOR ALFREDO ESCANIO *REGIONAL COORDINATOR* *FLORIDA WILDLIFE CONS. COMMISSION* ALFREDO.ESCANIO@MYFWC.COM	(305) 956-2500, EXT 101 (305) 684-8698 / MOBILE
		BRAD BENGGIO *SSC* *NOAA DISTRICT 7* BRAD.BENGGIO@NOAA.GOV	(305) 530-7931 (206) 849-9923 / MOBILE
		RICHARD KNUDSEN *STATE SSC* *FISH AND WILDLIFE RESEARCH INSTITUTE* RICHARD.KNUDSEN@MYFWC.COM	(727) 896-8626, EXT 3036 (727) 417-6367 / MOBILE (727) 688-5684 / ALT MOBILE

COMPLETED BY _____

9130.2 – USCG COMMANDS NOTIFICATION LIST

DATE	TIME		
		SECTOR KEY WEST	
		STA KEY WEST	(305) 292-8856 (305) 797-2878 / DUTY
		STA MARATHON	(305) 743-6388 (305) 481-4014 / DUTY
		STA ISLAMORADA	(305) 664-4404 (305) 747-0141 / DUTY
		ANT KEY WEST	(305) 797-1192 / DUTY
		SENIOR RESERVE OFFICER (SRO)	(713) 569-5444
		AUXILIARY POLLUTION RESPONDERS	
		PHIL GOODMAN (FLOTILLA 13-01)	(305) 600-8441
		DEWEY JACKSON (FLOTILLA 13-08)	(305) 396-1308
		DON KITTSMILLER (FLOTILLA 13-03)	(305) 744-0043
		DISTRICT 7	
		COMMCEN	(305) 415-6800
		NATIONAL STRIKE FORCE (NSF)	
		GULF STRIKE TEAM	(251) 441-6601 (877) 497-6183 / DUTY
		NSF COORDINATION CENTER	(252) 331-6000 (252) 252-3458 / DUTY
		PUBLIC INFORMATION ASSIST TEAM (PIAT)	(252) 331-6000
		FLORIDA SECTORS	
		SEC MIAMI	(305) 535-4316
		SEC ST. PETERSBURG	(727) 824-7527
		SEC JACKSONVILLE	(904) 247-7311
		MARINE SAFETY CENTER (MSC)	
		SALVAGE EMERGENCY RESPONSE TEAM (SERT)	(202) 327-3985 / DUTY

COMPLETED BY _____

9130.2 –SECTOR KEY WEST TYPE 3 INCIDENT MANAGEMENT TEAM (IMT)

ICS POSITION	QUALIFIED PERSONNEL		ASSIGNED TO
INCIDENT COMMANDER (IC)	SECTOR COMMANDER	(305) 292-8713 (305) 797-2173 / DUTY	
	DEPUTY SECTOR COMMANDER	(305) 292-8711 (305) 797-2078 / DUTY	
	SENIOR RESERVE OFFICER	(713) 569-5444	
PUBLIC INFORMATION OFFICER (PIO)	PUBLIC AFFAIRS OFFICER	(305) 292-7512 (305) 292-8727	
	ASSISTANT PUBLIC AFFAIRS OFFICER	(305) 292-8806 (305) 292-8727	
OPERATIONS SECTION CHIEF (OSC)	CHIEF, RESPONSE DEPARTMENT	(305) 292-8730 (305) 797-2107 / DUTY	
	CHIEF, PREVENTION DEPARTMENT	(305) 292-8808	
PLANNING SECTION CHIEF (PSC)	CHIEF, CONTINGENCY PLANNING & FORCE READINESS	(305) 292-8722 (305) 797-1586 / DUTY	
	PORT SECURITY SPECIAILIST	(305) 292-7513 (305) 304-0385	
RESOURCE UNIT LEADER (RESL)	PERSONNEL ADMIN WARRANT	(305) 292-8787	
	SPO CHIEF	(305) 292-8707	
SITUATION UNIT LEADER (SITL)	CHIEF, SECTOR COMMAND CENTER	(305) 292-8803	
	SECTOR COMMAND CENTER SUPERVISOR	(305) 292-8734	
	COMMAND DUTY OFFICERS	(305) 292-8727	
LOGISTICS SECTION CHIEF (LSC)	CHIEF, LOGISTICS DEPARTMENT	(305) 292-1416 (305) 797-1583 / DUTY	
	ENGINEERING OFFICER	(305) 292-8756 (305) 797-2086 / DUTY	
COMMUNICATIONS UNIT LEADER (COML)	SECTOR COMMAND CENTER SUPERVISOR	(305) 292-8734	
	OPERATIONS SPECIALIST CHIEF	(305) 292-8727	
SUPPLY UNIT LEADER (SPUL)	SUPPLY CHIEF	(305) 292-8871	
	SUPPLY LEAD PETTY OFFICER	(305) 292-8839	
FINANCE SECTION CHIEF (FSC)	FINANCE & SUPPLY WARRANT	(305) 292-7532	
	SUPPLY CHIEF	(305) 292-8871	

If qualified personnel cannot be recalled to fill a particular position, the Resource Unit Leader (RESL) should work with the Contingency Planning and Force Readiness staff to identify appropriate personnel resources.

9130.3 – FEDERAL AGENCIES NOTIFICATION LIST

DATE	TIME		
		DEPT. OF HEALTH AND HUMAN SERVICES	
		CDC EMER. OPERATIONS CENTER	(770) 488-7100 / 24 HRS
		DEPT. OF HOMELAND SECURITY	
		FEDERAL EMERGENCY MGMT AGENCY (FEMA) REGION 4 OPERATIONS CENTER	(770) 220-3158 / 24 HRS (770) 220-3159 / 24 HRS (770) 220-3162 / 24 HRS
		DEPT. OF COMMERCE	
		NAT'L WEATHER SERVICE KEY WEST	(305) 294-8904 / 24 HRS **(305) 295-1316 x229
		FL KEYS NAT'L MARINE SANCTUARY	(305) 809-4700 (305) 852-7717
		NOAA DISTRICT 7 OFFICE OF RESPONSE AND RESTORATION	(305) 530-7931 (727) 551-5714
		NAT'L MARINE FISHERIES SERVICE	(305) 361-4200 (305) 595-8352
		DEPT. OF DEFENSE	
		ARMY CORPS OF ENGINEERS (USACE) JACKSONVILLE REGULATORY DIVISION	(305) 526-7181
		NAS KEY WEST – OFFICER OF THE DAY	(305) 293-2268
		NAS KEY WEST PORT OPERATIONS	**(305) 293-4755 x2007
		DEPT. OF INTERIOR	
		USFWS FL KEYS NAT'L WILDLIFE REFUGE	(305) 304-9628 / MOBILE
		NPS DRY TORTUGAS/EVERGLADES NAT'L PARKS	(305) 242-7740 / 24 HRS
		ENVIRONMENTAL PROTECTION AGENCY	
		REGION 4 EMER. OPERATIONS CENTER	(404) 562-8700 (404) 242-3393 / 24 HRS

***DENOTES AUTOMATED LINE OR EXTENSION; MUST BE CALLED PERSONALLY*

COMPLETED BY _____

9130.4 – STATE AGENCIES NOTIFICATION LIST

DATE	TIME		
		FLORIDA DIVISION OF EMER. MGMT.	
		STATE WATCH OFFICE	(800) 320-0519 / 24 HRS
		FLORIDA DIVISION OF ENVIRONMENTAL PROTECTION	
		BUREAU OF EMER. RESPONSE (MARATHON)	(305) 289-7070
		FLORIDA DEPARTMENT OF STATE	
		DIVISION OF HISTORICAL RESOURCES	(859(425-6300

COMPLETED BY _____

9130.5 – LOCAL AGENCIES NOTIFICATION LIST

DATE	TIME		
		MONROE COUNTY	
		EMERGENCY MANAGEMENT	(770) 488-7100 / 24 HRS
		MONROE CO. SHERIFF'S OFFICE	
		NON-EMERGENCY	(305) 289-2371 / 24 HRS
		KEY WEST	
		DISPATCH	(305) 809-1000 / 24 HRS

COMPLETED BY _____

9130.6 –WILDLIFE ORGANIZATIONS AND MARINE ANIMAL FACILITIES NOTIFICATION LIST

DATE	TIME		
		DOLPHIN CONNECTION *DUCK KEY, FL*	(305) 289-9975
		DOLPHIN COVE *KEY LARGO, FL*	(305) 451-4060
		DOLPHIN RESEARCH CENTER *GRASSY KEY, FL*	(305) 481-8808
		DOLPHINS PLUS *KEY LARGO, FL*	(305) 451-1993
		FLORIDA KEYS WILD BIRD CENTER *TAVERNIER, FL*	(305) 852-4486
		FLORIDA KEYS WILDLIFE RESCUE, INC *BIG PINE KEY, FL*	(305) 872-1982
		ISLAND DOLPHIN CARE *KEY LARGO, FL*	(305) 451-5884
		KEY WEST WILDLIFE CENTER *KEY WEST, FL*	(305) 292-1008
		THEATER OF THE SEA *ISLAMORADA, FL*	(305) 394-2534
		TURTLE HOSPITAL *MARATHON, FL*	(305) 743-2552

COMPLETED BY _____

9130.8 –OIL SPILL RESPONSE ORGANIZATIONS (OSRO) NOTIFICATION LIST

DATE	TIME		
		CLIFF BERRY, INC *ENVIRONMENTAL MGMT. RESPONSE*	(800) 899-7745
		OFFSHORE MARINE TOWING, INC / TOWBOAT U.S. *FORT LAUDERDALE, FL*	(954) 783-7821
		NATIONAL RESPONSE CORPORATION *FORT LAUDERDALE, FL*	(631) 224-9141
		MARINE SPILL RESPONSE CORPORATION *MIAMI, FL*	(800) 259-6772
		SWS ENVIRONMENTAL SERVICES *PANAMA CITY BEACH, FL*	(850) 234-8428

COMPLETED BY _____

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9400

AREA PLANNING DOCUMENTATION

This Appendix documents the analysis, risk assessment, and scenario development of the Area Planning Committee; the information in the Appendix defines the conditions this plan was designed to meet and serves as the foundation for the objectives, strategies, resources, training, and policy for response. This appendix is organized as follows:

9410 – DISCHARGE AND RELEASE HISTORY

Utilizing the spill information available through the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE), all reported oil spills were analyzed to meet the requirements for this section. To remove reports that would tend to skew the analysis and make this database more manageable, all reports meeting the below criteria were deleted from the analysis:

1. All oil spill of less than 25 gallons. Because of the large number of recreational vessels within the Florida Keys, a significant percentage of the reported oil spills involved relatively small quantities of oil. These reports are spread throughout the zone. The quantities involved usually dissipate before any response action can begin.

2. All MARPOL I reports. Coast Guard aircraft fly extensively over the Florida Straits and report all sheen sightings offshore as apparent MARPOL Annex I violations. These discharges usually occur well offshore, with no possibility of effective cleanup.

3. All reports of floating and beached drums. Floating and beached drums are frequently reported but rarely result in actual pollution and then only in small quantities.

The following is the list of noteworthy oil spill reports which occurred between July 1, 1988 and June 30, 1993:

MSIS CASE	DATE	PIN	LOCATION, MATERIAL, AMOUNT
MP91006388	25 JUN 91		OFF MOLASSES REEF, JET FUEL, 1,344,000 GAL, POTENTIAL
MP89009532	30 OCT 89		DRY TORTUGAS, #6 OIL/DIESEL, 120,000/23000 GAL, POTENTIAL
MP91003087	28 MAR 91		OFF KEY LARGO, #6 OIL, 7000 GAL
MC93010757	18 JUN 93	271	SOUTH OF KEY WEST, DIESEL/LUBE OIL, 6000/150 GAL
MP88008461	19 DEC 88		DRY TORTUGAS, DIESEL, 6000 GAL, POTENTIAL
MC92005979	23 APR 92	185	MOLASSES REEF, DIESEL, 3000 GAL, POTENTIAL
MC93004349	13 MAR 93	122	SE OF KEY WEST, DIESEL, 3000 GAL,POTENTIAL
MC93014899	19 AUG 93	404	BOCA CHICA, JP-5, 999 GAL, POTENTIA L
MC93010336	12 JUN 93	254	ISLAMORADA, DIESEL, 500 GAL
MC93006935	22 APR 93	187	SOUTHWEST OF KEY WEST, DIESEL, 300 GAL
MP91000130	02 JAN 90		KEY LARGO, DIESEL, 200 GAL
MP89000061	29 DEC 88		BOCA CHICA, WASTE OIL, 200 GAL
MP91000372	04 JAN 91		KEY WEST, BILGE OIL, 75 GAL
MP91011375	26 JUL 91		KEY LARGO, #6 OIL, 65 GAL
MP88006938	15 0CT 88		MARATHON, DIESEL, 50 GAL
MC92021818	23 DEC 92	606	BOCA CHICA, DIESEL, 40 GAL
MC92019388	03 NOV 92	537	KEY WEST, DIESEL, 30 GAL
MP89008180	24 SEP 89		MARATHON, DIESEL, 30 GAL
MC92010800	05 JUL 92	364	KEY WEST, UNKNOWN OIL, 26 GAL
MP90000021	28 DEC 89		KEY WEST, BILGE OIL, 25 GAL

TABLE 9400-1: SPILL HISTORY 1988 - 1993

The following are significant pollution response cases in the Florida Keys from 2008 through 2010:

MISLE NO.	DATE	DESCRIPTION
435874	12/12/2008	F/V SANTA LUCIA – F/V RAN AGROUND ON CALDA BANK, 2 MILES NORTH OF KEY WEST – 1,130 GAL, DIESEL, POTENTIAL
447858	04/12/2009	KEYS BOAT WORKS FIRE – 3 RECREATIONAL VESSELS BURNED TO WATERLINE AND SANK – 300 GAL, DIESEL
449694	04/27/2009	OSV RISEN STAR – INTERNAL FUEL LINE RUPTURED WHILE VESSEL WAS MOORED ON STOCK ISLAND – 400 GAL, DIESEL RECOVERED/36,000 GAL POTENTIAL
479177	10/20/2009	MARATHON CONSTRUCTION BARGE – O_2 TANKS DISCOVERED IN WATER DISCHARGING DIESEL – 250 GAL DIESEL
501497	05/22/2010	F/V MISS SUZANNE – COMMERCIAL F/V ABANDONED AND ADRIFT 13 MILES OFFSHORE; F/V TOWED TO SAFE LOCATION, PRODUCT REMOVED, AND DESTROYED – 800 GAL, DIESEL, POTENTIAL

TABLE 9400-2: SPILL HISTORY 2008 - 2010

From 2008 through 2011, the Sector Key West experienced a 250% increase in pollution response cases. This increase in pollution response activities can be directly attributed to the Deepwater Horizon incident in 2010. The high media, political, and social attention given to this incident drastically raised the level of concern for residents of the Florida Keys, whose economy is primarily based on the sensitive marine environment. In addition to this, the public's understanding of the reporting process was improved. These two factors directly resulted in the increased pollution reporting. With international offshore drilling commencing in 2012, the public's concern has not waned and a continuation of increased reporting resulting in response should be expected in the future.

YEAR	TOTAL CASES	FEDERALIZED CASES	FUND CEILING
2007	78	9	$40,500
2008	39	6	$37,000
2009	56	12	$89,000
2010	66*	17	$320,495
2011	98	5	$45,000

**All Deepwater Horizon responses were counted as a single case in 2010.*

TABLE 9400-3: SPILL HISTORY 2007 - 2011

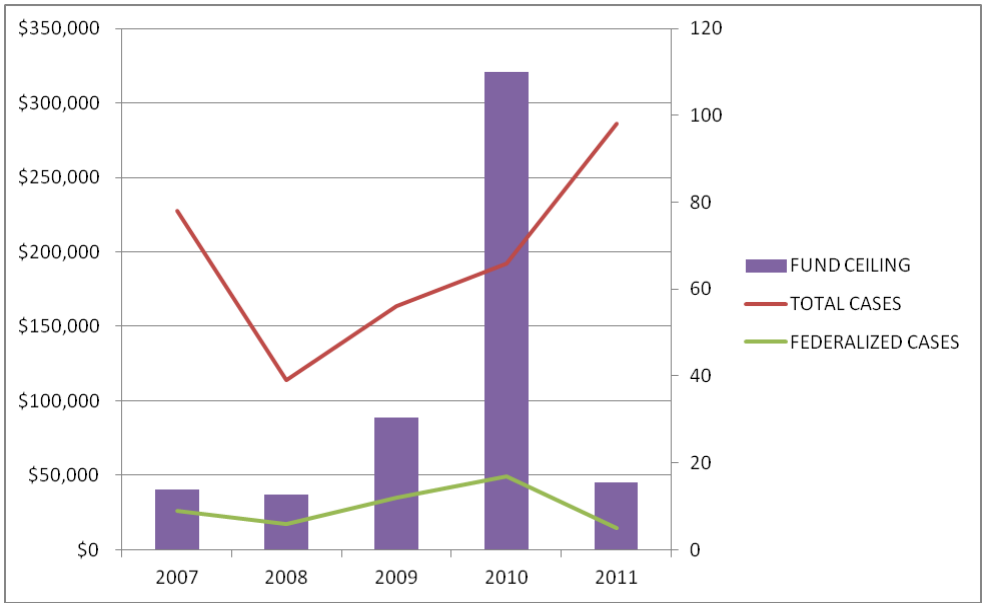

FIGURE 9400-1: OIL SPILL RESPONSE CASE/COST COMPARISON 2007 - 2011

9420 – RISK ASSESSMENT FOR AREA

9420.1 – AREA OIL POLLUTION RISKS

Threats – facilities/installations: Three facilities in the Key AOR are required to have Facility Response Plans (FRP) due to the quantity of oil transferred and/or stored onsite. A copy of the Facility Response Plans for each facility is maintained by Sector Key West. A potential exists for a spill to occur during offloading, storage, and transfer of product at each of these facilities. Potential spills are described in each facility FRP in terms of the average most probable, maximum most probable and worst case discharges. The primary petroleum products being transferred/stored at these facilities include: JP-5, No 2 fuel oil, diesel fuel, gasoline, lube oil and mineral oil.

Threats – road/ship transport: The largest concern from a release occurring on the highway system is from an accident involving a tanker carrying gasoline and/or diesel fuel. Numerous tankers carrying these products transit the Keys on a daily basis as there are no terminal facilities for the storage of vehicular fuels located in the Keys. An accident on US 1 on one of the numerous bridges running from Key Largo to Key West could result in a significant discharge of petroleum products into the very sensitive marine ecosystem. Two facilities in the Key West AOR receive fuel by vessel. Both facilities conduct transfer operations within either a slip or a confined area. Additionally the vessels are boomed-off and are under continuous surveillance during unloading operations. These actions limit the potential risk of a spill escaping the containment areas.

Threats – offshore drilling platforms: A number of neighboring countries have, or will shortly, initiate plans to conduct drilling operations that due to their close proximity to the United States coastline, will likely present an environmental threat to the United States Exclusive Economic Zone (EEZ), Territorial Seas, Coastal and Inland waterways and shorelines. The impacts from a WCD scenario in one of these neighboring country's territorial seas would likely result in a Spill of National Significance (SONS) and would impact multiple Captain of the Port (COTP) zones within the Seventh District Area of Responsibility (AOR) during the course of the incident and resulting response operations.

9420.2 – AREA HAZARDOUS MATERIALS RISK

Threats - facilities/installations: In this region, there are a few facilities which store hazardous materials. These include several propane storage facilities, one facility which stores small quantities of anhydrous ammonia and a few facilities that store small quantities of chlorine gas for disinfection of water.

Threats - road/ship transport: Tank trucks carry and deliver propane to several propane storage facilities located throughout the Keys. There is no hazmat brought into the Keys by ship and only small (consumer-sized) quantities of Hazmat are delivered by truck. A list of facilities storing Hazmat's is maintained by the Sector Key West Planning Department.

9420.3 – OFFSHORE

Threats - ship transport: There is very limited knowledge regarding types and quantities of HAZMAT that may be transported offshore of the Florida Key. However, it is likely that significant quantities of Hazmat are routinely moved through Sector Key West's AOR while en-route to other ports.

9420.4 – MARINE FIRE RISKS

A risk of a marine fire exists at every marina and fuel storage facility within the Keys. Additionally, large and small vessels docked or transiting the Florida Keys are also at risk of experiencing an onboard fire. To identify the facilities at risk, a list of Marinas that provide fueling services is located in Section 9253. Also, the following facilities within the Key West area have some risk of experiencing a marine related incident involving a fire.

- Ralph Garcia Generating Plant - Stock Island
  Risk: Unloading and storage of No. 2 fuel oil & storage of other petroleum products
- Naval Air Station Key West – Boca Chica
  Risk: Receipt and storage of JP-5 & storage of other petroleum products
- Key West Pipeline Company – Trumbo Point
  Risk: Receipt, storage, and transfer of JP-5
- Key West Cruise Ship & Ferry Docks
- Navy Mole Pier

9430 – PLANNING ASSUMPTIONS – BACKGROUND INFORMATION

9430.1 – OIL SPILL PLANNING FACTORS AND ASSUMPTIONS

The following planning factors and assumptions are made concerning the resources needed to respond to a worst case discharge of oil in the Sector Key West AOR.

1. Equipment: Not enough boom has been identified to adequately protect the entire length of the Keys; 386,000' required, 165,000 readily available. The Logistics Division of the Incident Command System will be directed to begin immediate research into obtaining more from locations in other parts of the U. S. The only fire boom is located in Alaska and Texas or Florida. Until the government pre-approves more locations where in situ burning is allowed, contractors will not stockpile it. Obtaining enough boats to deploy and maintain the boom and to provide logistics support will require the contracting of most of the local small passenger and commercial fishing boats located throughout the area. This will also increase the amount of safety training needed to comply with the law.

2. Personnel: There will not be enough personnel to deploy boom as soon as it arrives. There will also be a shortfall in the number of personnel available to monitor the scattered cleanup sites. The Coast Guard will utilize personnel from outside the State of Florida. It is anticipated that many contractors will have to subcontract outside labor. The spill impact area has inadequate food and lodging facilities. Berthing and feeding provisions will have to be supplied by DOD assets through the RRT.

3. Funds: No funding shortfalls are expected.

4. Minimum response times:

   A. Land response times will be long due to only one congested highway to the Keys. The State Agency Coordinator will be immediately requested to have the Governor of Florida declare a State of Emergency within the Florida Keys. The Florida Highway Patrol and local police departments will be used to convoy equipment deliveries and control civilian access to the Keys. Aircraft will be used to the greatest extent possible.

   B. The Monroe County hurricane evacuation procedures will be employed. These limit Keys access only to local residents possessing ID cards or other proof of residence in the impacted areas.

   C. No significant delays are anticipated for aircraft responses.

   D. Procurement of fire boom will require coordination of a Contractor, a Coast Guard C-130 aircraft, and land based trucking companies. No local or regional spill contractors have expressed interest in purchasing or maintaining this type of boom until more areas have pre-approval for the use of in-situ burning.

   E. Obtaining the total number of feet of standard boom required will occur over several days. As more companies stockpile boom, this response time should decrease.

F. There may be significant delays in contracting for vessels required to support the response.

G. Location and identification of additional resources: The Sector does not have sufficient personnel to assign to the tasks of locating additional equipment during an incident. The National Strike Force Coordination Center (NSFCC) or District Response Advisory Teams (DRAT) should be tasked to provide this assistance to FOSCs.

9430.2 – HAZARDOUS MATERIALS PLANNING FACTORS AND ASSUMPTIONS

This section outlines the planning factors and assumptions relied upon in developing the Hazardous Materials Annex, Annex 7000 to this plan. There is not a significant quantity of hazardous materials stored within the Florida Keys (see Section 9432 for locations of Hazmat stored). It is assumed that response actions to Hazmat incidents within the Florida Keys will be responded to by one of the flowing agencies depending on location of the incident.

- City of Key West
- Naval Air Station Boca Chica Fire Department or
- Miami –Dade Fire Rescue.

9440 – PLANNING SCENARIOS

9440.1 – OIL SPILL SCENARIOS

This section outlines a response to four oil spill scenarios: an average most probable discharge, a maximum most probable discharge, and two worst case discharges. An essential part of contingency planning is anticipating the effects of a spill and preparing in advance the response actions to spills that are likely to occur in the area. These assessments are most accurately achieved by conducting table-top drills and exercises.

The environmental sensitivity of natural resources within the Florida Keys makes rapid and effective spill response essential. In developing the Worst Case Discharge Scenarios, it became clear that where it is practical, the Coast Guard response options should include in-situ burning and use of dispersants. In addition, it may be necessary for the FOSC to direct destruction of the vessel and cargo under the Intervention on the High Seas Act, as amended (33 USC 1471-1487).

Each of these four response options involves RRT concurrence and in the case of intervention, with further review by the Coast Guard Commandant. Any delay in approval will adversely impact the response action. To minimize potential delays, the FOSC shall retain the option of ordering the staging of fire boom, dispersants, dispersant application equipment and any other assets deemed necessary while awaiting RRT and Commandant authorization for use.

The discharge scenarios described in this section include the following quantities of oil:

- AVERAGE MOST PROBABLE DISCHARGE (AMPD): estimated to be 60 GAL of diesel
- MAXIMUM MOST PROBABLE DISCHARGE (MMPD): estimated to be 10,000 GAL of No 6 fuel oil
- WORST CASE DISCHARGE (WCD) #1: projected to be 12,000,000 GAL of crude or refined oil
- WORST CASE DISCHARGE (WCD) #2: an uncontrolled discharge of 75,000 bbls per day for 30 days from an offshore drilling platform

9440.2 – AVERAGE MOST PROBABLE DISCHARGE SCENARIO

The average most probable discharge of oil in the Sector Key West area of responsibility is a mystery sheen resulting from a diesel fuel spill of 10-20 gallons. These spills probably originate from fishing vessels based on their location. They may be fuel directly entering the water or fuel entering the bilges and then being pumped overboard. By the time these spills are reported, the sheen is generally too thin to be sampled. Clean up of these spills is almost never possible.

The average most probable discharge of oil in the Sector Key West area of responsibility for which a cleanup occurs is a diesel fuel spill of 60-100 gallons in the Key West Bight. Due to the immediate availability of some response equipment most of the spill is contained. When this size spill occurs from a commercial or recreational vessel the response often requires the Sector to initiate cleanup.

At 0800 a 50 feet yacht overfills it fuel tank discharging diesel fuel into the water in the Key West Harbor. At 0845 a report is received of approximately 60 gallons of diesel fuel oil trapped around the yacht and the dock; some of which is contained using port authority boom. Upon notification, the Sector Response Officer sends out the duty pollution investigators. The local FDEP representative and FWCC are notified of the incident. Pollution investigators determine that the responsibility party has hired a response contractor in Big Pine Key.

The cleanup contractor's crew arrives at 10:30 AM with additional boom and sorbent materials. 50 feet of containment boom is deployed to contain the remaining oil slick and sorbent pads are used to absorb the contained oil. The pads are collected into plastic trash bags and double bagged for disposal when they become oil soaked. All oiled boats, docks, and equipment is thoroughly decontaminated using pressure washers. By 1600, pollution investigators determine that the area has been sufficiently clean-up and response efforts are terminated.

9440.3 – MAXIMUM MOST PROBABLE DISCHARGE SCENARIO

At 0500 on a Sunday morning the M/V Portsmith Trader, an 800-foot cargo vessel carrying 1.2 million gallons of fuel runs aground in the Florida Keys National Marine Sanctuary on Elbow Reef off Key Largo. The vessel is aground on top of the City of Washington, a historic resource listed on the Florida Keys Shipwreck trail. As the vessel grounds, extensive damage occurs to the coral reef system and historical artifacts on the reef. Additionally, one of the vessel's fuel tanks is damaged releasing 10,000 of No. 6 fuel oil. The vessel Master contacts Coast Guard Sector Key West immediately after the grounding.

The Sector Key West Response duty officer is notified of the event at 0515. The initial information passed by the Master is that the cargo ship has grounded on Elbow Reef and that oil is in the water. The duty officer notifies the Commanding Officer and Executive Officer, recalls the duty section, and instructs the OPCEN to immediately call in all available Sector personnel, notify District 7 Command Center and Sector Miami for assistance and inform NOAA National Marine Sanctuary, FWCC, DEP, State Warning Point and Monroe County (Emergency Management, Police, Fire Rescue) of the incident.
It will take Station Islamorada about one hour to get a small boat on scene to evaluate the situation. The Sector duty officer should consider the following initial actions:

1. Request that Station Islamorada dispatch a small boat to provide timely evaluation of the situation.

2. Inform the Seventh Coast Guard District MEP duty officer and operations center of the casualty. Secure a Federal Project Number from the duty MEP officer. Request an over-flight be arranged via the Seventh Coast Guard District Command Center. Request a Coast Guard cutter to serve as On-Scene Commander.

3. Determine if the ship is contracting for response services. If not then contact a BOA oil spill contractor and alert them of the need for response.

4. Contact ships agent.

The initial report received at 0615 from the Station Islamorada small boat, is that the vessel is hard aground and that a large quantity of oil is in the water and appears to be moving toward shore. Reports to Sector Key West from the vessel state that a damage survey is being conducted by the crew but is not complete. Two tugs are on the way from Port Everglades to assist the vessel.

9440.4 – WORST CASE DISCHARGE SCENARIO #1

This worst case discharge scenario is a collision involving a fully loaded Very Large Crude Carrier (VLCC) and a container vessel, 15 miles south of Big Pine Key in the Florida Straits, in adverse weather conditions. The container ship struck the VLCC amidships at a 70 degree angle from the bow. The container ship's bow is heavily damaged but it is still seaworthy and under its own power. The VLCC has cargo tanks 4P and 5P ruptured with the adjacent longitudinal and transverse bulkheads fractured. The vessel is dead in the water, operating on emergency power only. The crew is abandoning ship. The leaking crude oil is burning. The fire is limited to the oil in the leaking tanks and to the immediate vicinity of the vessel. The Master is able to contact Coast Guard Sector Key West prior to the ship's crew abandoning the vessel via the starboard lifeboat.

9440.5 – WORST CASE DISCHARGE SCENARIO #2

At 0400 on 12 April 2012, the Deepwater Neptune, an ultra-deepwater dynamically positioned, semi-submersible offshore drilling platform, exploded in the Florida Straits for unknown reasons in adverse weather conditions. The offshore "rig" is fully engulfed in flames. The fire has spread to an area around the rig on the waters' surface. The crew is abandoning the rig. The free flowing crude oil is burning at the surface, in 4 to 6 foot seas.

The Sector Key West Command Center is notified of the event at 0415 that an offshore drilling platform suddenly exploded in a position approximately 50 nautical miles south of Key West and positioned in the Florida Gulf Stream Current. The rig is fully engulfed in flames and has broken free from its well-head, leaving free-flowing crude oil to discharge into the Florida Straits. Several crewmembers are severely injured. A "MAYDAY" was issued prior to the crew abandoning the rig.

Coast Guard Sector Key West received the "MAYDAY" and tasked a USCG Patrol Boat to divert to the last reported position of the rig vessel to investigate. The initial information passed to the patrol boat is that the vessel exploded after an uncontrolled fire ignited and has broken free from the well head with no way of stopping the discharge of oil from the well. When the patrol boat arrived on-scene and located the injured crew in lifeboats, the Master informed the patrol boat commanding officer that the last calculated rate of flow could be up to 75,000 barrels per day. Several of the rig's crewmembers are critically injured and require immediate treatment for any chance of survival. The patrol boat confirmed the drill rig was the Deepwater Neptune exploratory drilling rig, located in the waters of Cuba's Exclusive Economic Zone. The patrol boat cannot stabilize the injured rig workers, and has departed the scene with the rig's crewmembers onboard.

9440.6 – HAZMAT RELEASE SCENARIOS

This section details the Hazardous Materials Release Scenarios considered in Section 7000. The scenarios do not list facility specific information and do not include Cameo or Marplot dispersion data. This information is protected and maintained in a separate document by Sector Key West.

9440.7 – FACILITY SCENARIO: ANHYDROUS AMMONIA RELEASE

Scenario: A 150 pound cylinder containing anhydrous ammonia is accidentally knocked over while conducting maintenance work in the area. The cylinder hits the ground causing a leak in the fill valve. The maintenance worker replacing the cylinder is able to escape before being overcome with the ammonia fumes. All of the remaining ammonia in the tank (9.67 pounds) escapes from the cylinder within two minutes.

Weather on-scene: winds 15 knots from SE, 78° F, Relative Humidity is 75%

Primary Concerns: The primary concern is a release of toxic gases and the resulting inhalation hazard to population centers. Level A PPE.

Hazard Assessment: Hazardous Products

Products Involved: Anhydrous Ammonia

AMMONIA, anhydrous
CAS number(s): 7664-41-1 UNNA number: 1005

General Description
Anhydrous ammonia is a colorless to milky white liquid when stored and shipped as a compressed liquefied gas. When released on land, the liquid will boil (rapidly vaporize) producing large amounts of a colorless gas that is lighter than air. When released in water, the ammonia cold liquid will float and boil when initially released. The majority of the spilled liquid ammonia will go into solution with the receiving water, but a portion will also be lost as a gas. When released from a tank under pressure, the cold ammonia gas will freeze water droplet in the air, causing what looks as a white puff. The cold dense gas will initially be heavier than air. The gas has a sharp irritating odor at low concentrations. In liquid form, it is infinitely soluble in water, but will float and boil when initially released.

Refrigerated ammonia at –26° F. Not at much pressure as relief valve is set at 3 psi.

Physical and Chemical Properties
Vapor Density= 0.771 g/L @ 0˚ C (lighter than air, but behaves as heavy gas when released as liquid ammonia)
Vapor Pressure= 8.5 atmospheres
Water Solubility= 34% (highly soluble)
Molecular Wt.= 17.0 amu
Boiling Point= -28˚ F
Freezing Point= -108˚ F

Flammability and Reactivity Properties
Auto ignition Temperature= 1204˚ F
Lower Explosive Limit= 15%
Upper Explosive limit= 28%
Strong oxidizer that reacts with the following compounds:
Acids
Halogens
Salts of silver, zinc, and mercury
Corrosive to copper and galvanized surfaces

Fire Hazard
Ammonia is a combustible gas, although it is difficult to ignite. It is often considered nonflammable and is labeled by DOT as a nonflammable gas. Mixtures of ammonia and air will explode under favorable conditions, such as in a fire where another fuel source is present and burning. Ammonia has a narrow explosion and flammability range (LEL 16% and UEL 25%, LFL 15.5 and UFL 27%). Combustion by-products include nitrogen oxides.

Health and Safety
Contact with liquid ammonia can cause frostbite; therefore, direct physical contact should be avoided. Ammonia is a strong irritant, which can cause severe damage to the respiratory tract, including death by

edema. At concentrations near 5000 ppm, even short periods (a few minutes) of exposure to ammonia may be almost immediately fatal due to serious edema, strangulation, and asphyxiation. The table below[1] provides a brief description of human health effect at different exposures to ammonia.

Range of Effects for Exposure to Ammonia

Air Concentrations	Duration of Exposure	Effects
< 0.5 ppm		Minimal risk level. No noticeable effect
1 - 20 ppm		Noticeable odor, some irritation
50 ppm	< 24 hr.	Temporary eye and throat irritation, coughing.
300 ppm		IDLH, strong irritation even during short exposure durations
5000 ppm	< 30 minutes	Kills quickly

Exposure Limits

Occupational exposure limits

Threshold Limit Value (TLV)
Time Weighted Average (TWA) for 8 hours: 25 ppm
TLV Short term Exposure Limit (STEL) for 15 minutes: 35 ppm
ERPGs: ERPG-1: 25 ppm.ERPG-2: 150 ppm, ERPG-3: 750 ppm

Personal Protection

Respirator Recommendations (NIOSH)
Up to 250 ppm: (APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern. Any supplied-air respirator.

Up to 300 ppm: (APF = 25) Any supplied-air respirator operated in a continuous-flow mode. Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern. Any chemical cartridge respirator with a full-facepiece and cartridge(s) providing protection against the compound of concern. Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern. Any self-contained breathing apparatus with a full facepiece. Any supplied-air respirator with a full facepiece.

Emergency or planned entry into unknown concentrations or IDLH conditions: Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape: (APF = 50) Any air-purifying, full-face piece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern. Any appropriate escape-type, self-contained breathing apparatus

Protective clothing (NIOSH)

For 8 hours: Butyl, Teflon, Viton, Responder, Trellchem, Tychem

For 4 hours: Nitrile

Sampling
Real-time air sampling for ammonia may be done by colorimetric tubes (Drager or similar) and by hand-held instruments utilizing electro-chemical sensors (e.g. GasTech Genesis, and others)

Risk assessment
The primary concern is human health hazard and safety both at the site and the surrounding population for potential air hazard.

9440.8 – FACILITY SCENARIO: LIQUEFIED PETROLEUM GAS (PROPANE) RELEASE

Scenario: A 30,000 gallon liquid propane tank experiences a corrosion-related failure in the tank approximately 12 inched from the tank bottom. As the propane begins to escape, the hole continues to open to a diameter of 2-inches. The tank is 81% full at the time of the release. The release occurs over a 1 hour period discharging 99,416 pounds of LPG at a rate of 1,900 pounds/minute.

Weather on-scene: winds 15 knots from NW, 78° F, Relative Humidity is 75%

Hazard Assessment: Hazardous Products

Products Involved: Propane

LIQUEFIED PETROLEUM GAS, Propane
CAS number(s): 74-98-6 UNNA number: 1978/1961

General Description
A colorless, odorless gas (extremely flammable) or liquid that contains a mixture of butane, isobutene, propylene, butylenes and other hydrocarbons of low molecular weight that is refined from petroleum. Maintained as liquid under pressure. Leaking vessels can release either the liquid, which quickly vaporizes, or the gaseous mixture. The gas is heavier than air. A flame can flash back to the source of the leak very easily. Under prolonged exposure to heat the containers may rupture violently and rocket.

Physical and Chemical Properties
Vapor Density= 1.52
Vapor Pressure= 208 PSIA @ 37.8 C (max.)
Water Solubility= Slightly
Molecular Wt.= 44.9 amu
Boiling Point= -43.8˚ F
Freezing Point= -305.9˚ F

Flammability and Reactivity Properties
Auto ignition Temperature= 842˚ F
Lower Explosive Limit= 2.2%
Upper Explosive limit= 9.5%

Fire Hazard
Extremely flammable. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Ruptured cylinders may rocket.

Health and Safety

Contact with liquid propane can cause frostbite and burns; therefore, direct physical contact should be avoided. The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if it gets on the skin. This material can act as a simple asphyxiant by displacement of air. Signs and symptorns of the resultant central nervous system effects may include rapid breathing, in coordination, rapid fatigue, excessive salivation, disorientation, headache, nausea and vomiting. Convulsions, loss of consciousness, coma and/or death may occur if exposure to high concentrations continues.

Exposure Limits
Occupational exposure limits
Threshold Limit Value (TLV): 1000 ppm
Immediately Dangerous to Life and Health (IDLH): 2000 ppm
TEELs: TEEL-1: 2000 ppm. TEEL-2: 2000 ppm, TEEL-3: 2000 ppm

Personal Protection

EYE PROTECTION:
Appropriate eye protection must be worn when working with this material or serious harm can result. Wear chemical goggles and a face shield at all times.

SKIN PROTECTION:
Do not get on skin or on clothing. Wear protective clothing including gloves when handling.

RESPIRATORY PROTECTION:
No special respiratory protection is normally required.

VENTILATION:
Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard. Emergency or planned entry into unknown concentrations or IDLH conditions: Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Risk assessment
Extremely flammable product. Therefore, the primary concern is fire and explosion hazards associated with leak of propane from its storage container. Vapors may spread along the ground to ignition source and flash back to storage container. Prolonged exposure to heat may cause the container to explode.

9440.9 – MARINE FIREFIGHTING SCENARIOS

Refer to **Volume V Marine Firefighting Plan**.

9440.10 – SALVAGE SCENARIOS

Refer to the **Salvage Response Plan** annex of the Florida Keys Area Maritime Security Plan.

9440.11 – WEAPONS OF MASS DESTRUCTION SCENARIOS

Refer to **Section 7000**.

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LIST OF AGREEMENTS

Definitions:

Memorandum of Understanding (MOU): A document that describes very broad concepts of mutual understanding, goals, and plans shared by the parties.

Memorandum of Agreement (MOA): A document describing in detail the specific responsibilities of and actions to be taken by each of the parties so that their goals may be accomplished. A MOA may also indicate goals of the parties to help explain their actions and responsibilities.

9510 – FEDERAL MEMORDANDA OF AGREEMENT/UNDERSTANDING

9510.1 – MEMORDANDUM OF UNDERSTANDING BETWEEN ENVIRONMENTAL PROTECTION AGENCY AND THE UNITED STATES COAST GUARD [1982]

This MOU between the U.S. Coast Guard and the Environmental Protection Agency is a Letter of Agreement to provide pre-consultation and concurrence for the authorization of limited use of dispersants and other chemicals on oil spills by pre-designation USCG On-Scene Coordinators.

9510.2 – MEMORDANDUM OF UNDERSTANDING BETWEEN ENVIRONMENTAL PROTECTION AGENCY AND THE UNITED STATES COAST GUARD [1979]

This MOU between the U.S. Coast Guard and the Environmental Protection Agency states the agreement between the two services that the responsibility for the mitigation of damage to the public health and welfare caused by the discharge of hazardous substances shall be shared.

9510.3 – MEMORDANDUM OF UNDERSTANDING BETWEEN ENVIRONMENTAL PROTECTION AGENCY, UNITED STATES COAST GUARD, AND NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [1980]

This MOU between the U.S. Coast Guard, the Environmental Protection Agency and the National Institute for Occupational Safety and Health Administration provides guidance for the protection of workers who investigate and clean up hazardous waste sites and respond to hazardous substance emergencies.

9510.4 – MEMORDANDUM OF UNDERSTANDING BETWEEN DEPARTMENT OF THE INTERIOR AND DEPARTMENT OF TRANSPORTATION [1971]

In order to assure the most efficient use of resources under the National Oil and Hazardous Substances Pollution Contingency Plan, the Secretaries of the Department of the Interior and Transportation agree to share responsibilities in reference to Hazardous Substance Release Response.

9510.5 – MEMORDANDUM OF UNDERSTANDING BETWEEN ENVIRONMENTAL PROTECTION AGENCY AND UNITED STATES COAST GUARD [1982]

The U.S. Coast Guard and the Environmental Protection Agency agree that a mechanism is required to fund to fund USCG costs incurred during emergency response to releases, or the threats of releases of hazardous substances or pollutants or contaminants. This Memorandum of Understanding establishes the accounting, contracting, and fund management control policies and procedures for USCG response actions.

9510.6 – MEMORDANDUM OF UNDERSTANDING BETWEEN U.S. FISH AND WILDLIFE SERVICE AND UNITED STATES COAST GUARD [1979]

The purpose of this agreement is to specify the conditions and procedures under which the U.S. Fish and Wildlife Service will provide the U.S. Coast Guard Federal On-Scene Coordinators with appropriate technical expertise as well as services in support of the Federal Government's efforts to control and clean up oil and hazardous chemical discharges.

9510.7 – MEMORDANDUM OF UNDERSTANDING FOR UNITED STATES COAST GUARD AUXILIARY IN SUPPORT OF THE MARINE ENVIRONMENTAL PROTECTION PROGRAM [1995]

Through mutual involvement and commitment, a Coast Guard objective has been set to mobilize the Coast Guard Auxiliary in a dynamic "Team Coast Guard" approach, which actively engages Auxiliarists as "Full Partners" in aggressively promoting marine environmental protection and effectively reducing pollution in our nation's waterway.

9510.8 – MEMORDANDUM OF UNDERSTANDING BETWEEN DIRECTOR OF MILITARY SUPPORT (DOMS) AND UNITED STATES COAST GUARD [1996]

This MOU specifies the procedures by which the U.S. Coast Guard can request the U.S. Air Force Reserve to provide aircraft, equipment and personnel for the application of oil dispersants during oil spill cleanup and removal operations and establish interagency cost reimbursement.

9510.9 – MEMORDANDUM OF UNDERSTANDING BETWEEN UNITED STATES COAST GUARD AND ENVIRONMENTAL PROTECTION AGENCY [1981]

The MOU states the agreed upon functions for responses to releases from vessels and facilities. Functions related to immediate removal action concerning releases or threats of releases at facilities other than active or inactive "hazardous waste management facilities".

9510.10 – INTER-AGENCY MEMORDANDUM OF UNDERSTANDING REGARDING OIL SPILL PLANNING AND RESPONSE ACTIVITIES UNDER THE FEDERAL WATER POLLUTION CONTROL ACT'S NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN AND THE ENDANGERED SPECIES ACT [2001]

The inter-agency (USCG, EPA, NOAA, NMFS, FWS, and DOI) agreement provides a general framework for cooperation and participation among all the parties in the exercise of their oil spill planning and response responsibilities with regard to wildlife.

9510.11 – MEMORDANDUM OF UNDERSTANDING BETWEEN U.S. COAST GUARD, U.S. ENVIRONMENTAL PROTECTION AGENCY, AND CORPORATION FOR NATIONAL AND COMMUNITY SERVICE [2010]

This MOU between the U.S. Coast Guard (USCG), Environmental Protection Agency (EPA), and Corporation for National Community Service describes the major responsibilities of each Party in developing and supporting an unaffiliated volunteer management program to be implemented following an oil or hazardous substance pollution incident as requested by the USCG or EPA On-Scene Coordinator.

9510.12 – PROGRAMMATIC AGREEMENT ON PROTECTION OF HISTORIC PROPERTIES DURING EMERGENCY RESPONSE UNDER THE NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN [1997]

The *Programmatic Agreement on Protection of Historic Properties during Emergency Response under the National Oil and Hazardous Substances Pollution Contingency Plan* (PA) requires consideration of historic properties in planning for and conduct of emergency response under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The PA was developed to help Federal agencies sufficiently comply with the requirements of the statute. This document is intended to assist Federal On-Scene Coordinators (FOSCs) in areas where the pre-spill planning called for in the PA has not yet been completed. However, it should not be used to replace existing regional PAs developed pursuant to the national PA or existing Area Contingency Plan (ACP) provisions developed pursuant to a regional or the national PA. It should also not be used as a substitute for completing the pre-spill planning called for in the PA.

9510.13 – INTERAGENCY MEMORANDUM OF AGREEMENT REGARDING OIL SPILL PLANNING AND RESPONSE ACTIVITIES UNDER THE NATIONAL CONTINGENCY PLAN AND THE ENDANGERED SPECIES ACT [2001]

The Interagency Memorandum of Agreement Regarding Oil Spill Planning and Response Activities under the National Contingency Plan and the Endangered Species Act (MOA), which was signed by the USCG, among others, aligns the consultation requirements with the pollution response responsibilities outlined in the NCP (40 CFR 300). This document is intended to assist Federal On-Scene Coordinators (FOSCs) in areas where the pre-spill planning called for in the MOA has not yet been completed. It should not be used to replace existing Area Contingency Plan (ACP) provisions developed pursuant to the MOA or existing regional guidance on implementation of the MOA. It should also not be used as a substitute for completing the pre-spill planning called for in the MOA.

9520 – STATE MEMORDANDA OF AGREEMENT/UNDERSTANDING

9520.1 – MEMORANDUM OF AGREEMENT BETWEEN THE UNITED STATES COAST GUARD AND THE STATE OF FLORIDA [1995]

This Memorandum of Agreement (MOA) coordinates the relationship between the State of Florida and the U.S. Coast Guard to provide the foundation for cooperation in the full range of marine pollution related activities. The objective of this cooperative agreement is to ensure a sound state, regional, national, and international marine environmental protection strategy by:

(1) minimizing duplication of requirements;
(2) making the most efficient use of state and Coast Guard resources; and
(3) eliminating barriers to marine transportation due to differing federal and state regimes.

9530 – LOCAL MEMORDANDA OF AGREEMENT/UNDERSTANDING

9530.1 – MEMORDANDUM OF UNDERSTANDING BETWEEN SECTOR MIAMI AND SECTOR KEY WEST

This Memorandum of Understanding (MOU) defines the responsibilities of U.S. Coast Guard Sector Key West and U. S. Coast Guard Sector Miami relating to Captain of the Port (COTP), Officer in Charge Marine Inspection (OCMI), Federal On-Scene Coordinator (FOSC), and Federal Maritime Security Coordinator (FMSC). The MOU intends to cover the duties, responsibilities and authorities of the above-mentioned titles and the resources, personnel and equipment before, during and after approval of the creation of said Sectors by Congress.

9530.2 – MEMORDANDUM OF UNDERSTANDING BETWEEN U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION 4 AND U.S. COAST GUARD – FIFTH, SEVENTH, AND EIGHTH DISTRICTS [1999]

The intent of this memorandum is to delineate the Region 4 Inland and Coastal Zone geographical boundaries establishing responsibility for the pre-designation of On-Scene Coordinators (OSCs) for pollution response pursuant to the National Oil and Hazardous Substances Contingency Plan (NCP).

9600

CONVERSIONS

9610 – OIL SPILL CONVERSION FACTORS

[Taken from the ExxonMobil Oil Spill Response Field Manual]

VOLUME	FLOW RATE
1 yd^3 = 27 ft^3 = 46,656 in^3 1 gallon liquid US = 0.134 ft^3 = 231 in^3 1 gallon British = 1.2 gallon liquid US 1 API barrel = 42 gallon liquid US	1 gpm = 0.0167 gps (gal/sec) = 60 gal/hr = 1440 gal/day 1 gpm = 0.00223 cfs (ft^3/sec) 1 gpm = 34.3 API bbl/day
LENGTH	**VELOCITY**
1 ft = 0.333 yd = 12 in 1 fathom (US) = 6 ft 1 mile (US) = Furlong = 660 ft 1 mile (US) = 320 Rod = 5,280 ft 1 mile (US) = 0.87 Nautical Mile (NM)	1 knot = 1NM/hr 1 knot = 1.15 mph (US) 1 knot = 1.69 ft/sec 1 knot = 6,080 ft/hr 1 mph = 88 ft/min = 1.47 ft/sec
AREA	**MASS/WEIGHT**
1 yd^2 = 9 ft^2 = 1,296 in^2 1 acre = 43,560 ft^2 = 4,840 yd^2 1 square mile = 640 acre 1 ton (short) = 2,000 lb	1 slug = 32.17 lb 1 lb = 16 oz 1 long ton = 1.12 ton
SURFACE TENSION	**FORCE**
1 lb/ft = 0.0833 lb/in	1 lb (force) = 32.17 poundal
PRESSURE	**APPLICATION RATES**
1 atm = 406.8 in of water 1 atm = 14.70 lb/in^2 = 2,116 lb/ft^2 1 lb/in^2 = 27.68 in of water 1 lb/in^2 = 144 lb/ft^2	1 gal/ft^2 = 1.604 in thick 1 gal/ft^2 = 1,037 API bbl/acre
MISCELLANEOUS	
Storage volume for boom, volume/length: ft^3/ft x 0.093 = m^3/m mg/L = parts per million (ppm) = % x 10^{-2} x 10^6 = ppm (example: 0,7% oil content; 0.007 x 10^6 = 7,000 ppm) water density = 62.4 lb/ft^3 = 8.34 lb/gal viscosity in centipoise (cp) = viscosity in centistokes (cSt) x density temperature Fahrenheit =(temperature Centigrade x 1.8) + 32	

9620 – OIL LAYER THICKNESS/CONCENTRATION

[Taken from the NOAA Open Water Oil Identification Job Aid]

DEFINITIONS

Sheen: Sheen is a very thin layer of oil (less than 0.0002 inches or 0.005 mm) floating on the water surface and is the most common form of oil seen in the later stages of a spill. According to their thickness, sheens vary in color from rainbows, for the thicker layers, to silver/gray for thinner layers, to almost transparent for the thinnest layers.

Metallic: The next distinct oil color, thicker than rainbow, that tends to reflect the color of the sky, but with some element of oil color, often between a light gray and a dull brown. Metallic is a "mirror to the sky."

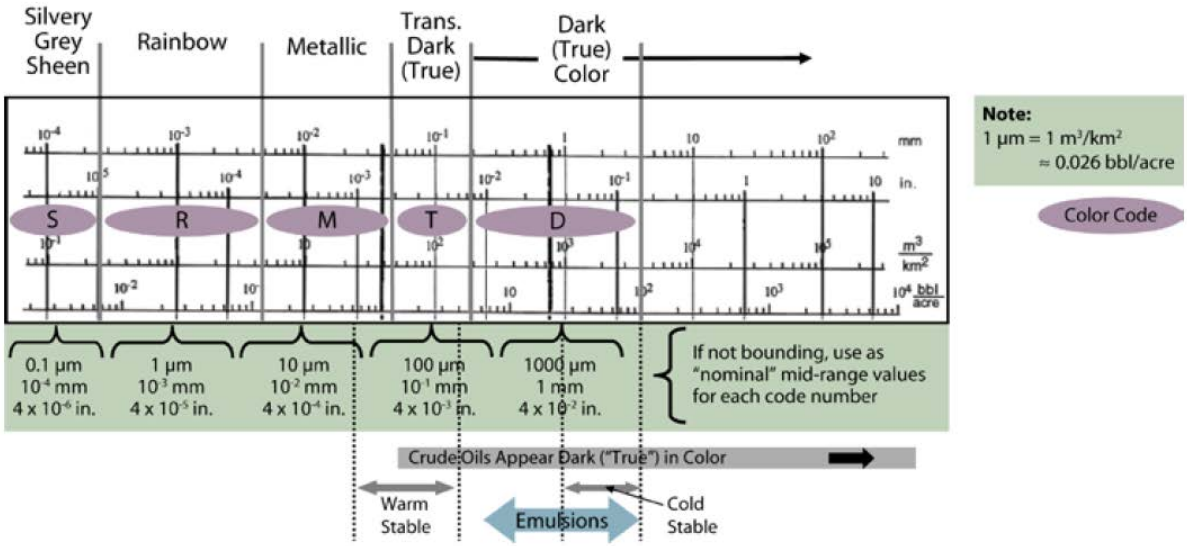
Transitional Dark (or True) Color: The next distinct oil on water layer thickness after metallic, that tends to reflect a transitional dark or true oil color. At the "Transitional" stage, most of the oil will be just thick enough to look like its natural color (typically a few thousandths of an inch, or few hundredths of a millimeter), and yet thin enough in places to appear somewhat patchy.

Dark(or True) Color: Represents a continuous true oil color (i.e., its natural color), commonly occurring at thicknesses of at least a hundredth of an inch (or, a little over a tenth of a millimeter). Oil thickness at this "Dark" stage (especially in a calm and/or contained state) could range over several orders of magnitude. At sea, however, after reaching an equilibrium condition, most oils would not achieve an average thickness beyond a few millimeters. Heavy fuel oils and highly weathered or emulsified oils (especially on very cold water) could, of course, reach equilibrium states considerably greater than a few millimeters.

CODE	DESCRIPTION	LAYER-THICKNESS INTERVAL		CONCENTRATION	
		µm	In	m^3 perKm^2	bbl/acre
S	Sheen (silvery/gray)	0.04 – 0.30	1.6×10^{-6} – 1.2×10^{-5}	0.04 – 0.30	1×10^{-3} – 7.8×10^{-3}
R	Rainbow	0.30 – 5.0	1.2×10^{-5} – 2.0×10^{-4}	0.30 – 5.0	7.8×10^{-3} – 1.28×10^{-4}
M	Metallic	5.0 – 50	2.0×10^{-4} – 2.0×10^{-3}	5.0 – 50	1.28×10^{-3} – 1.28
T	Transitional Dark (or True) Color	50 – 200	2.0×10^{-3} – 8×10^{-3}	50 – 200	1.28 – 5.1
D	Dark (or True) Color	>200	$> 8 \times 10^{-3}$	>200	>5.1

TABLE 9600-1: BONN (BAOAC) DATA – METRIC AND ENGLISH UNITS

Oil Code Thickness and Concentration Values



9630 – RADIATION UNITS

COMMON UNITS	SI UNITS
1 curie (Ci)	3.7×10^{10} becquerel (Bq)
100 rad	1 gray (Gy)
1 rad	0.01 gray (Gy)
100 rem	1 sievert (Sv)
1 rem	0.01 sievert (SV)

9640 – TEMPERATURE CONVERSIONS

Temperature			
Celsius	Fahrenheit	Celsius	Fahrenheit
0	32	110	230
1	34	115	239
5	41	120	248
10	50	125	257
15	59	130	266
20	68	135	275
25	77	140	284
30	86	145	293
35	95	150	302
40	104	155	311
45	113	160	320
50	122	165	329
55	131	170	338
60	140	175	347
65	149	180	356
70	158	185	365
75	167	190	374
80	176	195	383
85	185	200	392
90	194	205	401
95	203	210	410
100	212	215	419
105	221		

9650 – NOAA UNIT CONVERTER FOR OIL SPILLS (NUCOS)

The NOAA Unit Converter for Oil Spills (NUCOS) is a simple desktop tool that converts basic units of velocity, mass, length, etc., but more specifically, converts units that are unique to oil spill response. NUCOS includes some of the lesser known units used in managing oil and chemical spills. For example, it converts the units for oil volume, viscosity, and density from the conversion list of the Dispersant Mission Planner 2, a tool that helps spill responders assess dispersant application system performance.

http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/response-tools/nucos-unit-converter-spill-responders.html

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9700

RESPONSE REFERENCES

9710 – STATUTES/REGULATIONS/AUTHORITIES

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (42 USC § 9601 - 9675)

FEDERAL WATER POLLUTION CONTROL ACT AMMENDMENTS OF 1972 / CLEAN WATER ACT (33 USC § 1251 – 1387)

NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN (40 CFR 300)

OCCUPATIONAL SAFETY AND HEALTH STANDARDS (29 CFR 1910)

OIL POLLUTION ACT OF 1990 (33 USC § 2701 – 2761)

REFUSE ACT OF 1899 (33 USC § 407)

RESOURCE CONSERVATION AND RECOVERY ACT (42 USC § 1801 - 1812)

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (42 USC § 9601)

NAVIGATION AND NAVIGABLE WATERWAYS (33 CFR 1 – 199)

TRANSPORTATION (46 CFR 1 – END)

SHIPPING (49 CFR 1 – END)

9720 – INSTRUCTIONS/GUIDELINES/STANDARD PROCEDURES AND PRACTICES

MARINE SAFETY MANUAL, VOLUME IX, MARINE ENVIRONMENTAL PROTECTION (COMDTINST M16000.14)

NATIONAL INCIDENT MANGEMENT SYSTEM

NATIONAL RESPONSE FRAMEWORK

OVERVIEW: ESF AND SUPPORT ANNEXES COORDINATING FEDERAL ASSISTANCE IN SUPPORT OF THE NATIONAL RESPONSE FRAMEWORK

REGIONAL IV OIL AND HAZARDOUS SUBSTANCE POLLUTION CONTINGENCY PLAN (RRT) AND ASSOCIATED GUIDANCE, MANUALS, AND PLANS
http://www.nrt.org/production/NRT/RRTHome.nsf/Allpages/newrrt_iv-opsmanual.htm

HAZARDOUS MATERIALS RESPONSE SPECIAL TEAMS CAPABILITIES AND CONTACT HANDBOOK

9730 – TECHNICAL REFERENCES

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH) THRESHOLD LIMIT VALUES (TLVs) AND BIOLOGICAL EXPOSURE INDICES (BEIs)
https://www.acgih.org/

AN FOSC'S GUIDE TO ENVIRONMENTAL RESPONSE

AN FOSC'S GUIDE TO NOAA SCIENTIFIC SUPPORT

CHEMICAL HAZARD RESPONSE INFORMATION SYSTEM (CHRIS) MANUAL (COMDTINST M16465.12C)

EMERGENCY RESPONSE GUIDEBOOK (ERG)

EPA NATIONAL CONTINGENCY PLAN (NCP) PRODUCT SCHEDULE
http://www.epa.gov/oem/docs/oil/ncp/schedule.pdf

EXXONMOBIL OIL SPILL RESPONSE FIELD MANUAL

EXXONMOBIL RESPONSE GUIDANCE FOR FIRST RESPONDERS TO MARITIME PETROCHEMICAL SPILLS

JANE'S CHEM-BIO HANDBOOK

MARINE SAFETY LAB SAMPLE HANDLING AND TRANSMITTAL GUIDE

NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH) MANUAL OF ANALYTICAL METHODS
http://www.cdc.gov/niosh/docs/2003-154/

NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH) POCKET GUIDE TO CHEMICAL HAZARDS

NATIONAL INTEROPERABILITY FIELD OPERATIONS GUIDE

NATIONAL POLLUTION FUNDS CENTER TECHNICAL OPERATING PROCEDURES (TOPS)

- DETERMINING REMOVAL COSTS UNDER THE OIL POLLUTION ACT OF 1990
- REMOVAL COST POLICY AND OPERATING PROCEDURES (CERCLA)
- RESOURCE DOCUMENTATION UNDER THE OIL POLLUTION ACT OF 1990
- DESIGNATION OF SOURCE UNDER THE OIL POLLUTION ACT OF 1990
- STATE ACCESS UNDER THE OIL POLLUTION ACT OF 1990
- STATE ACCESS REGULATIONS
- GENERAL CLAIMS GUIDANCE

NATIONAL POLLUTION FUNDS CENTER USER REFERENCE GUIDE (eURG)
http://www.uscg.mil/npfc/URG/default.asp

NIOSH/OSHA/USCG/EPA OCCUPATIONAL SAFETY AND HEALTH GUIDANCE MANUAL FOR HAZARDOUS WASTE SITE ACTIVITIES (AKA "THE FOUR AGENCY GUIDE")

NOAA DISPERSANT APPLICATION OBSERVER JOB AID

NOAA INTRODUCTION TO COASTAL HABITATS AND BIOLOGICAL RESOURCES FOR SPILL RESPONSE

NOAA OIL AND SEA TURTLES: BIOLOGY, PLANNING, AND RESPONSE

NOAA OIL SPILLS IN CORAL REEFS: PLANNING AND RESPONSE CONSIDERATIONS REPORT

NOAA OIL SPILLS IN MANGROVES: PLANNING AND RESPONSE CONSIDERATIONS

NOAA OPEN WATER OIL IDENTIFICATION JOB AID FOR AERIAL OBSERVATION

NOAA SHORELINE ASSESSMENT MANUAL / JOB AID

NOAA SHORELINE COUNTERMEASURES MANUAL FOR TROPICAL COASTAL ENVIRONMENTS

RESPONSE STRATEGIES FOR GROUP V PERSISTENT OILS

SPECIAL MONITORING OF APPLIED RESPONSE TECHNOLOGIES (SMART) PROTOCOL

U.S. COAST GUARD INCIDENT MANAGEMENT HANDBOOK (COMDTPUB P3120.17A)

U.S. NAVY SALVOR'S HANDBOOK

U.S. NAVY SALVOR'S MANUAL

- VOLUME 1: STRANDINGS AND HARBOR CLEARANCE
- VOLUME 3: FIREFIGHTING DC
- VOLUME 4: DEEP OCEAN OPERATIONS
- VOLUME 5: POL OFFLOADING
- VOLUME 6: OIL SPILL RESPONSE

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9900

DEEPWATER HORIZON LESSONS LEARNED

On April 20, 2010, the Macondo 252 well, 45 miles off the coast of Louisiana experienced a catastrophic blowout, causing a major explosion, fire, and subsequent sinking of the Mobile Offshore Drilling Unit (MODU) DEEPWATER HORIZON. The fire and explosion caused the deaths of 11 persons aboard the unit, and the blowout resulted in a catastrophic oil spill one mile below the surface of the ocean, leading to an unprecedented oil spill response – the most challenging and complex our nation has ever mobilized. The continuous discharge of large quantities of oil from the well for almost three months severely tested our nation's capability and capacity to effectively remove oil from the water, beaches, and marshes. The Deepwater Horizon oil spill was the nation's first declared Spill of National Significance (SONS) and the first time in history where a National Incident Commander (NIC) was designated.

Following major oil spill, Coast Guard internal regulations call for an Incident Specific Preparedness Review (ISPR) to conduct a thorough examination of the Coast Guard preparedness process and to critically evaluate this process in conjunction with the implementation, integration, and effectiveness of national, regional, and local oil spill response plans. The ISPR can be found on Sector Key West's Homeport site at https://homeport.uscg.mil/keywest.

In May 2011, the Seventh Coast Guard District Commander directed all Coast Guard Sectors to begin a thorough review and update of the respective Area Contingency Plans (ACP) in collaboration with the federal, state, local, and industrial response organizations that make up the Area Committees. This planning effort was preemptive to the increased threat of a major oil spill emanating from international waters, with drilling scheduled to commence in Cuba during early 2012.

The following areas of concern were provided to all Seventh Coast Guard District subordinate units to consider while updating their respective Area Contingency Plans, incorporating the Lessons Learned from the Deepwater Horizon response:

1. **The oil spill response equipment used by existing Oil Spill Removal Organizations (OSROs) to support the response to a WCD of an uncontrolled discharge of 50,000 bbls/day lasting at least 30 days.**

   Response: **Section 9400 Area Planning Documentation** has been updated to include the Worst Case Discharge scenario described above. In addition to this, a full standalone plan has been developed to address this scenario and is included in the ACP as **Volume II Worst Case Discharge Plan**.

2. **The alternative technologies to be utilized for response, specifically dispersant and insitu burn approval, monitoring, and decision protocols.**

   Response: The previous version of the ACP already contained protocols for dispersant, insitu burning, and bioremediation operations. They have been included in this revision in **Sections 1640**, **1650**, and **1660**.

3. **Incident Command Post (ICP) locations/staging areas to accommodate a large influx of personnel.**

   Response: The Coast Guard Auxiliary helped identify and/or verify nearly 50 staging areas. Each of these are listed with site descriptions, along with Incident Command Post locations, in **Volume VI Resources and Support**.

4. **Initial emergency response procedures for oil entering U.S. waters from a foreign nation. Consider overflight/oil migration monitoring/shoreline monitoring capabilities.**

   Response: **Volume II Worst Case Discharge Plan** includes the initial actions listed in **Section 9100** as well as Worst Case Discharge-specific actions for the response organization. The entire volume functions as a game plan for this type of response.

5. **The use of volunteers.**

   Response: **Section 4320 Volunteers** provides guidance on the Volunteer Management Program in the Florida Keys. The section currently provides overarching guidance on the use of volunteers in a response, as well as HAZWOPER training requirements. Sector Key West, the Coast Guard Auxiliary, and the Monroe County Bureau of Emergency Management are currently developing a more robust program and associated outreach to implement pre-incident volunteer opportunities and training. This will be integrated in subsequent updates to the ACP.

6. **Protocols for high-level media briefings, which will be heightened, rapid, and intense.**

   Response: **Section 2300 Information** has been updated in collaboration with local Coast Guard and NOAA public affairs officers. The section provides public affairs guidance for small and larger scale incidents and provides Florida Keys-specific media outlets and points of contact. **Volume II Worst Case Discharge Plan** also addresses public information and crisis communications.

7. **Cultural & historical properties that could be impacted.**

   Response: A list of cultural and historical properties is maintained by the Sector Key West Contingency Planning and Force Readiness staff. Federal and state natural resource trustees have been integrated into the shoreline cleanup response strategies included in **Section 3230 Shoreline Recovery**. Resource Advisors will be present during shoreline cleanup assessments in order to ensure that cultural and historical properties are addressed in response planning and not adversely affected by shoreline cleanup operations.

8. **Coordination with the National Incident Command (NIC) and the Area Command.**

   Response: **Section 1400 National Response System** describes the NIC and Area Command role. This relationship is further described and applied to a Worst Case Discharge Scenario in **Volume II**.

9. **Identification of pre-staged resources capabilities/response gaps throughout the Area of Responsibility (AOR).**

   Response: **Volume II Worst Case Discharge Plan** addresses the resource gaps of the Florida Keys. **Volume VI Resources and Support** has integrated the former Appendix 9200 Personnel and Services Directory and acts as “one stop” shop for all resources needs and

procedures. Current resource gaps are currently being addressed by the Area Committee; the ACP will be updated during the annual review as these gaps are resolved.

10. **Identify and prioritize Environmentally Sensitive Areas (ESA's) with an appropriate protection strategy (booming, etc.).**

    Response: The Florida Wildlife Conservation Commission Fish and Wildlife Research Institute (FWRI) has updated the Geographic Response Plans (GRP) for the Florida Keys. Research Planning, Inc., who developed the original Florida Keys Tidal Inlet Protection Strategies (TIPS) in 1994, conducted a full update of all TIPS. The Florida Keys Area Committee developed guidance on the use of and prioritization of these protection strategies, both of which take into account the Environmental Sensitive Indices (ESI). All of these resources have been consolidated in **Volume III Shoreline Protection**.

11. **Anticipated emergency response training gaps (ICS training, OSHA, Aerial Observer, and Federal On-Scene Coordinator).**

    Response: **Volume II Worst Case Discharge Plan** addresses the resource gaps faced by the Florida Keys. Due to Sector Key West's shortage of pollution response trained personnel, a training program for the Coast Guard Auxiliary has been developed and implemented. This program trains this volunteer force to become Shoreline Cleanup Assessment Team (SCAT) members, Aerial Observers, Pollution Responders, and Federal On-Scene Coordinator Representatives.

    Training requirements have been listed throughout the plan. The Sector Key West Contingency Planning and Force Readiness staff has developed a training plan to coordinate training with and for the entire response community in the Florida Keys. This includes the pre-incident training of volunteers.

12. **Monitoring and Decontamination of Vessels.**

    Response: The Florida Keys Decontamination Plan was developed as a referenced plan in **Section 4400**. This plan utilized Regional Response Team (RRT) IV guidance on the use of Surface Washing Agents. Regional guidance for the decontamination of vessels responding to a Worst Case Discharge scenario for an uncontrolled release from a drilling platform in international waters is currently under development by the RRT.