1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period to be covered by IAP (Date/Time) From: 0600 3/4/11 To: Final Clean up of City of LA Pumpkin Station & Storm Drain System	CG IAP COVER SHEET

3. Approved by Incident Commander(s):

ORG	NAME
US EPA	Marty Powell / Jason Musantel
DFG	Sau Garcia #659 / Bryan Gollhofer #659
LAWPD	Howard Wong #2936
RP/ACTA	Elaine Silvestro

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ☒ ICS 202-CG (Response Objectives)
- ☐ ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)
- ☒ ICS 204-CGs (Assignment Lists)
  One Copy each of any ICS 204-CG attachments:
- ☐ ICS 205-CG (Communications Plan)
- ☒ ICS 206-CG (Medical Plan)
- ☒ ICS 208-CG (Site Safety Plan) or Note SSP Location
- ☒ Map/Chart
- ☒ Weather forecast / Tides/Currents

Other Attachments

- ☒ Incident Phone List
- ☒ Waste Segregation and Qualification Plan
- ☒ MSDS
- ☒ Emergency Rain Event Notification
- ☒ Removal of Oil from City of LA Leeds Ave Storm Drain System and Lift Station
- ☐
- ☐
- ☐
- ☐
- ☐

4. Prepared by:	Date/Time
J. Pantoja	3/4/11 0800

1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period (Date/Time) From: 3-4-11 0600 To:	INCIDENT OBJECTIVES ICS 202-CG

3. Objective(s)

- SAFETY: Ensure the safety of all response personnel, facility employees, and public. See site safety plans for specifics

- ISOLATION AND DENY ENTRY: Keep all non response personnel out of response areas.

- NOTIFICATIONS: Notify proper authorities of any significant changes in spill situations.

- ID AND HAZARD ASSESSMENT: See site safety plan.

- ACTION PLANNING: Maintain containment and remove oil at source, pump station and retention basin.

- CONTAINMENT AND CONTROL: Investigate possible sources and control when found.

- PROTECTIVE ACTIONS: Continually assess downstream impacts and potential protecive and recovery options (Marina's).

- DECONTAMINATION AND CLEANUP: Ensure proper decontamination of personnel and equipment.

- DISPOSAL: Dispose of all recovered as waste as law requires. Ensure that attached Waste Segregation Plan is followed.

- DOCUMENTATION: Ensure proper documentation of all response activities, waste and segregation, and costs associated.

4. **Operational Period Command Emphasis** (Safety Message, Priorities, Key Decisions/Directions)

- SHELL SOURCE AREA:
  - -Continue recovery of surface product (NRC).
  - -Contain and segregate waste; keep separate from other wastes (NRC).
- RR ROW OUTFALL RECOVERY:
  - -Mobilized equipment (NRC).
  - -Maintain established modified collection and treatment of storm water system.
  - -Continue skimming and recovery efforts to minimze downstream impacts to pump station.
  - -Assess cleanup issues to implement once source has been isolated.
  - -During a rain event initiate call out list and staff as necessary.
- SOURCE INVESTIGATION
  - -Work in conjunction with agencies to determine source.
  - -Once source is found, work with responsible party(ies) to revise IAP.
  - -Additional ICS 204's as needed for new projects to identify source.
- CITY PUMP STATION
  - -Cleanup of City Storm Drain and Pump Station will begin and be completed by early March.
  - -Final cleanup of City Stom Drain and Pump Station to be approved by City of LA Watershed Protection Division.
  - -Continue to assess.

Approved Site Safety Plan Located at:

5. Prepared by: (Planning Section Chief) J. Pantoja	Date/Time 3/4/11 0800

1. Incident Name	2. Prepared by: (name) Sau Garcia	INCIDENT BRIEFING
Dominguez Channel Mystery Oil Spill	Date: 02/10/2011 Time: 1430	ICS 201-CG

3. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status)

4. Current Situation:

- Source of crude oil is unknown and is an on going investigation
- Source is believed to be traveling through the ballast of the Alameda Corridor
- Containment and recovery are currently in place at Shell Source Area, Right of Way Trench, and at the City Outfall Pump.


Pacific Coast Highway
Alameda Street
Dominguez Channel
Anaheim Street
1
2
3
4

1. Incident Name: Dominguez Mystery Oil Spill	4. Operational Period: From: 0600 3/4/11 To:	MEDICAL PLAN ICS 206 - EPA

5. Incident Medical Aid Station

Medical Aid Stations	Location	Paramedics Yes	Paramedics No

6. Transportation

A. Ambulance Services

Name	Address	Phone	Paramedics Yes	Paramedics No
South County Medical Transport	228 E. Pacific Coast Highway, Long Beach	562-599-0659	X	

B. Incident Ambulances

7. Hospitals

Name	Address	Travel Time Air	Travel Time Ground	Phone	Helipad Yes	Helipad No	Burn Center Yes	Burn Center No
Pacific Hospital of Long Beach	2776 Pacific Ave. Long Beach 90806		24	562-997-2000		X		X

8. Medical Emergency Procedures

9. Prepared by (Medical Unit Leader)	Date/Time	10. Reviewed by (Safety Officer)	Date/Time
J. Pantoja	3/4/11		

1926 E Pacific Coast Hwy, ...

maps.google.com

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Google maps

emergency hospital loc: 1926 E Pacific Coast Hwy, Los Angeles, C Search Maps Show search options

Get Directions My Maps

Ⓐ 1926 E Pacific Coast Hwy, Los Angeles, CA 907

Ⓑ 2776 Pacific Avenue, Long Beach, CA 90806 (P:

Add Destination - Reverse - Show options

Get Directions

Driving directions to Pacific Hospital of Long Beach

Suggested routes

1. CA-1 S **4.0 mi**	**7 mins**
2. CA-1 S and Pacific Ave 3.8 mi	8 mins
3. CA-1 S, Santa Fe Ave and W Willow St 3.8 mi	9 mins

1926 E Pacific Coast Hwy
Los Angeles, CA 90744

Hide

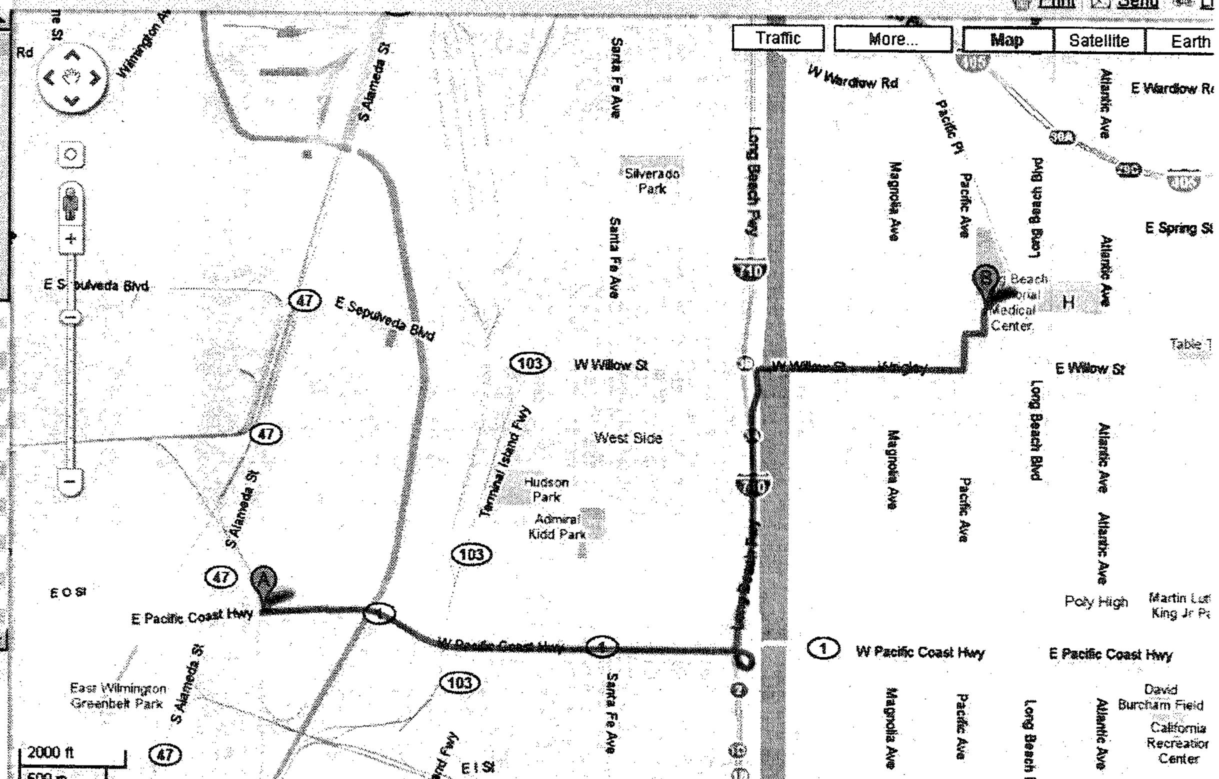
☑ **Driving directions to Pacific Hospital of Long Bea**

☐ emergency hospital loc: 1926 E Pacific Coast Hwy, L

☐ 1926 E. Pacific Coast Highway, wilmington, ca

Print Send Li

Traffic More... Map Satellite Earth



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Your National Weather Service forecast

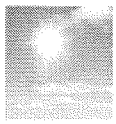
3 Miles ESE Lomita CA

Enter Your "City, ST" or zip code Go BOOKMARK

NWS Los Angeles/Oxnard, CA
Point Forecast: 3 Miles ESE Lomita CA
33.78°N 118.27°W (Elev. 16 ft)

Mobile Weather Information | **En Español**
Last Update: 2:51 am PST Mar 4, 2011
Forecast Valid: 9am PST Mar 4, 2011-6pm PST Mar 10, 2011

Forecast at a Glance

Today	Tonight	Saturday	Saturday Night	Sunday	Sunday Night	Monday	Monday Night	Tuesday
								
Dense Fog	Partly Cloudy	Mostly Sunny	Partly Cloudy	Partly Sunny	Slight Chc Showers	Slight Chc Showers	Breezy	Sunny
Hi 70 °F	Lo 51 °F	Hi 75 °F	Lo 53 °F	Hi 67 °F	Lo 51 °F	Hi 61 °F	Lo 47 °F	Hi 64 °F
					20%	20%		

Detailed 7-day Forecast

Today: Areas of dense fog before 10am. Otherwise, mostly sunny, with a high near 70. Calm wind becoming west between 5 and 10 mph.

Tonight: Partly cloudy, with a low around 51. West wind 5 to 10 mph becoming north.

Saturday: Mostly sunny, with a high near 75. Northwest wind between 5 and 10 mph.

Saturday Night: Partly cloudy, with a low around 53. West wind between 5 and 10 mph.

Sunday: Partly sunny, with a high near 67. West northwest wind between 5 and 10 mph.

Sunday Night: A 20 percent chance of showers. Mostly cloudy and breezy, with a low around 51.

Monday: A 20 percent chance of showers. Mostly cloudy and breezy, with a high near 61.

Monday Night: Partly cloudy and breezy, with a low around 47.

Tuesday: Sunny, with a high near 64.

Tuesday Night: Mostly clear, with a low around 48.

Wednesday: Sunny, with a high near 71.

Wednesday Night: Mostly clear, with a low around 49.

Thursday: Sunny, with a high near 68.

Current Conditions [Move Down]

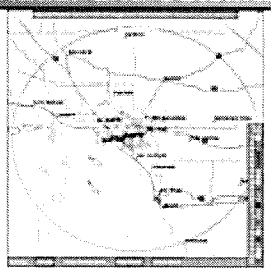
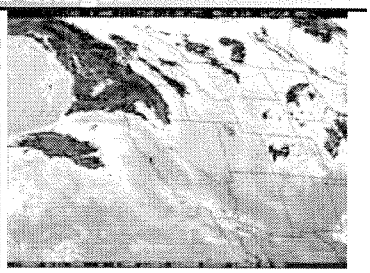
Torrance, Zamperini Field Airport
Last Update on 04 Mar 7:50 PST

Fog

55°F (13°C)

Humidity:	88 %
Wind Speed:	calm
Barometer:	30.19 in (N/A mb)
Dewpoint:	52°F (11°C)
Visibility:	2.00 Miles
More Local Wx:	**3 Day History:**

Radar and Satellite Images

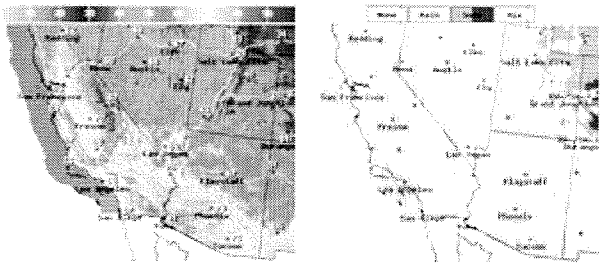
Detailed Point Forecast [Move Up]

Click Map for Forecast Disclaimer

Requested Location Forecast Area
Lat/Lon: 33.78°N 118.27°W **Elevation:** 16 ft

XML

National Digital Forecast Database



Additional Forecasts & Information

Zone Area Forecast for Los Angeles County Coast including Downtown Los Angeles, CA

Forecast Discussion

Printable Forecast	Text Only Forecast
Hourly Weather Graph	Tabular Forecast

Quick Forecast

International System of Units	About Point Forecasts
Observation Map (Regional)	Observation Map (Los Angeles)
Warnings	Experimental Graphical Forecasts
Quantitative Precipitation Forecast	Climatology

Forecast Weather Table Interface

Webmaster
National Weather Service:
Los Angeles/Oxnard, CA

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March - Long Beach, Terminal Island

Date	Day	Time	Height		Time	Height		Time	Height		Time	Height		Time	Height
03/01/2011	Tue	12:59AM LST	1.7	L	07:00AM LST	5.5	H	01:51PM LST	-0.5	L	08:12PM LST	4.2	H		
03/02/2011	Wed	01:36AM LST	1.4	L	07:37AM LST	5.5	H	02:19PM LST	-0.4	L	08:34PM LST	4.4	H		
03/03/2011	Thu	02:08AM LST	1.1	L	08:10AM LST	5.4	H	02:43PM LST	-0.3	L	08:55PM LST	4.6	H		
03/04/2011	Fri	02:39AM LST	0.9	L	08:41AM LST	5.2	H	03:05PM LST	-0.1	L	09:15PM LST	4.7	H		
03/05/2011	Sat	03:10AM LST	0.7	L	09:11AM LST	4.9	H	03:26PM LST	0.2	L	09:37PM LST	4.8	H		
03/06/2011	Sun	03:42AM LST	0.6	L	09:42AM LST	4.5	H	03:47PM LST	0.6	L	09:59PM LST	4.9	H		
03/07/2011	Mon	04:17AM LST	0.6	L	10:15AM LST	4.1	H	04:07PM LST	0.9	L	10:23PM LST	4.9	H		
03/08/2011	Tue	04:54AM LST	0.7	L	10:51AM LST	3.6	H	04:26PM LST	1.3	L	10:49PM LST	4.8	H		
03/09/2011	Wed	05:39AM LST	0.8	L	11:35AM LST	3.1	H	04:43PM LST	1.7	L	11:21PM LST	4.7	H		
03/10/2011	Thu	06:37AM LST	1.0	L	12:40PM LST	2.6	H	04:56PM LST	2.1	L					
03/11/2011	Fri	12:02AM LST	4.6	H	08:03AM LST	1.0	L								
03/12/2011	Sat	01:05AM LST	4.4	H	09:47AM LST	0.8	L								
03/13/2011	Sun	03:39AM LDT	4.4	H	12:00PM LDT	0.4	L	07:25PM LDT	3.1	H	10:51PM LDT	2.8	L		
03/14/2011	Mon	05:08AM LDT	4.7	H	12:49PM LDT	0.0	L	07:39PM LDT	3.5	H					
03/15/2011	Tue	12:13AM LDT	2.3	L	06:15AM LDT	5.2	H	01:28PM LDT	-0.4	L	08:00PM LDT	3.9	H		
03/16/2011	Wed	01:09AM LDT	1.7	L	07:10AM LDT	5.6	H	02:03PM LDT	-0.7	L	08:25PM LDT	4.4	H		
03/17/2011	Thu	01:57AM LDT	1.0	L	08:00AM LDT	5.8	H	02:38PM LDT	-0.8	L	08:54PM LDT	5.0	H		
03/18/2011	Fri	02:44AM LDT	0.3	L	08:48AM LDT	5.9	H	03:12PM LDT	-0.7	L	09:25PM LDT	5.6	H		
03/19/2011	Sat	03:30AM LDT	-0.3	L	09:36AM LDT	5.7	H	03:46PM LDT	-0.4	L	09:58PM LDT	6.0	H		
03/20/2011	Sun	04:17AM LDT	-0.6	L	10:24AM LDT	5.4	H	04:20PM LDT	0.0	L	10:34PM LDT	6.2	H		
03/21/2011	Mon	05:07AM LDT	-0.8	L	11:15AM LDT	4.7	H	04:56PM LDT	0.5	L	11:12PM LDT	6.2	H		
03/22/2011	Tue	06:00AM LDT	-0.7	L	12:11PM LDT	4.1	H	05:33PM LDT	1.1	L	11:55PM LDT	6.0	H		
03/23/2011	Wed	07:00AM LDT	-0.5	L	01:17PM LDT	3.5	H	06:14PM LDT	1.7	L					
03/24/2011	Thu	12:43AM LDT	5.6	H	08:11AM LDT	-0.1	L	02:48PM LDT	3.1	H	07:05PM LDT	2.2	L		
03/25/2011	Fri	01:44AM LDT	5.0	H	09:37AM LDT	0.1	L	04:50PM LDT	3.1	H	08:34PM LDT	2.7	L		
03/26/2011	Sat	03:08AM LDT	4.6	H	11:04AM LDT	0.1	L	06:21PM LDT	3.4	H	10:44PM LDT	2.7	L		
03/27/2011	Sun	04:43AM LDT	4.5	H	12:13PM LDT	0.0	L	07:09PM LDT	3.7	H					
03/28/2011	Mon	12:13AM LDT	2.3	L	06:01AM LDT	4.5	H	01:03PM LDT	0.0	L	07:42PM LDT	4.0	H		
03/29/2011	Tue	01:09AM LDT	1.8	L	06:59AM LDT	4.6	H	01:42PM LDT	0.0	L	08:08PM LDT	4.3	H		
03/30/2011	Wed	01:51AM LDT	1.4	L	07:44AM LDT	4.7	H	02:12PM LDT	0.1	L	08:30PM LDT	4.5	H		
03/31/2011	Thu	02:25AM LDT	1.0	L	08:22AM LDT	4.7	H	02:38PM LDT	0.3	L	08:51PM LDT	4.8	H		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 3/4/11 0600 To:	**ICS 204-CG**

3. Branch	4. Division/Group/Staging
Recovery Group	**Right of Way Trench**

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pederson	City of Los Angeles	213 - 725 - 6308
Branch Director:	Elaine Silvetro	ACTA	310 - 650 - 3359
Division/Group Supervisor/STAM:	NRC Environmental Services, Inc.		

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Senior Project Manager	Asher Grimes	310 - 629 - 2760	1		☐
Project Accountant			1		☐
Project Managert	Mike Sica	310 - 628 - 0725	1		☐
Field Supervisor			2		☐
Vacuum Truck Driver			2	to be mobilized	☐
Technician			12	to be mobilized	☐
4 pickup trucks				to be mobilized	☐
2 gear trucks				to be mobilized	☐
ER Trailer				to be mobilized	☐
Incident command Trailer				to be mobilized	☐
1 Tractor				to be mobilized	☐

7. Work Assignments

Maintain walls with lessons learned in mind. Widen outfall to allow more retention time. Recover liquids in vacuum truck.

8. Special Instructions

Build containment with permanency in mind. Keep sandbags segregated from Shell site.
- Read, understand, and follow site safety plan.
- Do not attempt to captured or approach oiled / injured wild life. Notify an on - site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562 - 477 - 7081.
- Refer all media questions and concerns to martin Powell @ 562 - 760 - 7028.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
J. Pantoja	3/4/11				
0800					

1. Incident Name **Dominguez Channel Mystery Oil Spill**	2. Operational Period (Date/Time) From: 3/4/11 0600 To:	**Assignment List** **ICS 204-CG**
3. Branch **Recovery Group**	4. Division/Group/Staging **Right of Way Trench**	

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pederson	City of Los Angeles	213 - 725 - 6308
Branch Director:	Elaine Silvetro	ACTA	310 - 650 - 3359
Division/Group Supervisor/STAM:	NRC Environmental Services, Inc.		

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
1 Vacuum trailer			1	to be mobilized	☐
1 generator			1	Pre staged	☐
1 Skimmer			1	Pre staged	☐
1 Air Compressor			2	Pre staged	☐
2 3" pumps			2	Pre staged	☐
12 25" hose			12	Pre staged	☐
2 light towers				Pre staged	☐
2 - 4" trash pumps				Pre staged	☐
8" sorbent boom				Pre staged	☐
sorbent pads				Pre staged	☐
visqueen				Pre staged	☐

7. Work Assignments

Maintain walls with lessons learned in mind. Widen outfall to allow more retention time. Recover liquids in vacuum truck.

8. Special Instructions

Build containment with permanency in mind. Keep sandbags segregated from Shell site.
- Read, understand, and follow site safety plan.
- Do not attempt to captured or approach oiled / injured wild life. Notify an on - site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562 - 477 - 7081.
- Refer all media questions and concerns to martin Powell @ 562 - 760 - 7028.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
J. Pantoja 0800	3/4/11				

1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period (Date/Time) From: 3/4/11 0600 To:	Assignment List ICS 204-CG
3. Branch Recovery Group	4. Division/Group/Staging Right of Way Trench	

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pederson	City of Los Angeles	213 - 725 - 6308
Branch Director:	Elaine Silvetro	ACTA	310 - 650 - 3359
Division/Group Supervisor/STAM:	NRC Environmental Services, Inc.		

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	
Pressure washer				To be mobilized	☐
Skidsteer loader				To be mobilized	☐
2 Baker Tanks				Pre staged	☐
Rocket launcher				To be mobilized	☐
Roll off bins				To be mobilized	☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

Maintain walls with lessons learned in mind. Widen outfall to allow more retention time. Recover liquids in vacuum truck.

8. Special Instructions

Build containment with permanency in mind. Keep sandbags segregated from Shell site.
- Read, understand, and follow site safety plan.
- Do not attempt to captured or approach oiled / injured wild life. Notify an on - site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562 - 477 - 7081.
- Refer all media questions and concerns to martin Powell @ 562 - 760 - 7028.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by:	Date/Time	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
J. Pantoja	3/4/11				
0800					

1. Incident Name **Dominguez Channel Mystery Oil Spill**	2. Operational Period (Date/Time) From: 0600 3/4/11 To:	**Assignment List** **ICS 204-CG**
3. Branch **Recovery Group**	4. Division/Group/Staging **Shell Source Area**	

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pedersen	City of Los Angeles	213 – 725 - 6308
Branch Director:	Elaine Silvestro	ACTA	310 – 650 - 3359
Division/Group Supervisor/STAM:	NRC Environmental Services Inc.		

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# of Persons	Reporting Info/Notes/Remarks	
500 bbl baker tank					☐
1 vac truck operator					☐
1 tech					☐
1 tractor					☐
1 vacuum trailer					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

Maintain walls with lessons learned in mind. Widening of Outfall was completed and capacity was increased. Recover liquids in Baker tanks.

8. Special Instructions

All discharge must be monitored. Working near water. Wear life jackets.
- Read, understand, and follow site safety plan.
- Do not attempt to capture or approach oiled/injured wildlife. Notify an on-site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562-477-7081
- Refer all media questions and concerns to Martin Powell @ 562-760-7028

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by	Date/Time	11. Reviewed by (PSC)	Date/Time	12. Reviewed by (OSC)	Date/Time
A. Wilson	3/4/11 0800				

1. Incident Name	2. Operational Period (Date/Time)	Assignment List
Dominguez Channel Mystery Oil Spill	From: 0600 3/4/11 To:	ICS 204-CG

3. Branch	4. Division/Group/Staging
Recovery Group	City Outfall Pump

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pedersen	City of Los Angeles	213-725-6308
Branch Director:	Elaine Silvestro	ACTA	310-650-3359
Division/Group Supervisor/STAM:	Mike Sica	NRC Environmental Services	310-628-0725

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# of Persons	Reporting Info/Notes/Remarks	
1 Supervisor			2	ACTA	☐
6" pump					☐
Absorbent boom					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

Continue utilizing pads and sorbent boom to remove sheen and oil and maintain passive cleaning operations. Man the pump Monday thru Friday at 0800; 1500; 2400 and on Saturday and Sunday at 0800 and 2000.

8. Special Instructions

All discharge must be monitored. Working near water. Wear life jackets.
- Read, understand, and follow site safety plan.
- Do not attempt to capture or approach oiled/injured wildlife. Notify an on-site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562-477-7081
- Refer all media questions and concerns to Martin Powell @ 562-760-7028

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by	Date/Time	11. Reviewed by (PSC)	Date/Time	12. Reviewed by (OSC)	Date/Time
A. Wilson	3/4/11 0800				

1. Incident Name **Dominguez Channel Mystery Oil Spill**	2. Operational Period (Date/Time) From: 0600 3/4/11 To:	**Assignment List** **ICS 204-CG**
3. Branch **Recovery Group**	4. Division/Group/Staging **Rain Event**	

5. Operations Personnel

	Name	Affiliation	Contact # (s)
Operations Section Chief:	Steve Pedersen	City of Los Angeles	213 – 725 - 6308
Branch Director:	Elaine Silvestro	ACTA	310 – 650 - 3359
Division/Group Supervisor/STAM:	NRC Environmental Services Inc.		

6. Resources Assigned "X" indicates 204a attachment with additional instructions

Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# of Persons	Reporting Info/Notes/Remarks	
6 Baker Tanks					☐
1 vac truck operator					☐
1 tech					☐
1 tractor					☐
1 vacuum trailer					☐
Sorbent pads					☐
					☐
					☐
					☐
					☐
					☐

7. Work Assignments

In case of a rain event, notify appropriate personnel as listed in the Emergency Rain Event Notifications list. NRC will respond to capture and treat and store all rainfall at the 18" corrugated steel pipe outflow..

8. Special Instructions

All discharge must be monitored. Working near water. Wear life jackets.
- Read, understand, and follow site safety plan.
- Do not attempt to capture or approach oiled/injured wildlife. Notify an on-site DFG personnel or a member of the Unified Command.
- Report all oiled wildlife to Cory Kong @ 562-477-7081
- Refer all media questions and concerns to Martin Powell @ 562-760-7028

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager	

Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by	Date/Time	11. Reviewed by (PSC)	Date/Time	12. Reviewed by (OSC)	Date/Time
A. Wilson	3/4/11 0800				

WORK ACTIVITY
Removal of Oil from City of Los Angeles Leeds Avenue
Storm Drain System and Lift Station

ACTA, POLB and POLA have been served with an Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge by the USEPA (OPA CWA 311-09-2011-0001). It has been jointly agreed between the parties that ACTA will take the lead in implementing all necessary actions to remove, mitigate or prevent a substantial threat from the discharge of oil or hazardous substances into or on navigable waters or adjoining shorelines associated with the identified spill.

The site is located along the ACTA Right of Way south of Alameda Street adjacent to the Tesoro Refinery in an area commonly referred to as the Texaco Slot. It appears that fugitive oily product has entered the track storm drain system within the ACTA Right of Way in the area north of Pacific Coast Highway and then migrated south with the recent high storm activity in the Southern California area where the oily waste was discharged into Leeds Ave near the intersection with Grant Street. The oily runoff then entered the City of Los Angeles' storm drain system on Leeds Avenue just north of the intersection with Opp Street and traveled south into the City's sump lift station located on I Street where it was discharged into the Dominguez Channel. The location of interest, the City of Los Angeles' storm drain system and sump lift station, is the subject of this Work Activity.

At the request of the USEPA and the City of Los Angeles, ACTA assumed maintenance and operation (M&O) of Sump Lift Station No. 692 on January 21, 2011. The M&O activities have included the drawdown of nuisance water that continually enters the pump station, the removal of any oily sheen on top of the water in the wet well, placement and maintenance of the boom in the Dominguez Channel, and coordination with the City of Los Angeles or their contractor during rain events. However, ACTA would like to return the M&O of this sump lift station back to the City of Los Angeles. In order to do this, ACTA understands that the sump lift station wet well and the storm drain system between the catch basins located on the east and west side of Leeds Avenue (north of Opp Street) and the wet well need to be cleaned of oily material. Since the pre-release conditions of the City of Los Angeles Sump Lift Station No. 692 and the storm drain line leading from the Leeds Avenue catch basins to this lift station was not documented, these components will be cleaned until the cleaning waters produce no oil sheen. However, it should be noted that due to the nature of crude oil, staining will remain where the oil was in contact of the concrete pipeline and walls of the wet well.

Therefore, ACTA proposes to perform the following:

- Mobilize personnel and equipment to the site to remove oily water from sump lift station including water from connector laterals. Remove sorbent materials and other potentially clogging debris from the sump lift station wet well. Use vacuum trucks to remove water from the wet well and connector laterals. Offload oily water from the vacuum trucks into staged 21,000-gallon Baker tanks on-site. Estimated volume is 100,000 plus gallons.

- Delineate and establish safe working areas around storm drain catch basins and manholes on Leeds Avenue to clean storm drain Inlets and pipeline. Perform permitted confined space entries. Utilize a sewer line jetter to pressure wash the interior of the storm drain lines leading from the Leeds Avenue catch basins to the sump lift station wet well until clean. If necessary, enhance cleaning by using vacuum trucks to transport hot water from an offsite source to the jetter. During cleaning operations, use a vacuum truck to pump out all storm drain line

cleaning fluids and off load oily water from the vacuum trucks into 21,000-gallon Baker tanks on-site. If necessary, an inflatable plug will be placed into the sump lift station inlet pipe to facilitate cleaning.

- Pressure wash (steam clean if necessary) the internal spaces of the sump lift station wet well until the removal of oil is visually evident. Remove accumulated waters from the wet well with a vacuum truck and off load oily water from the vacuum trucks into 21,000 gallon Baker tanks.

- Transport and dispose of collected water and wash out Baker tanks. At the completion of the work activity, the interior of the Baker tanks will be washed clean and the waste water disposed of in a similar manner.

It should be noted that prior to this Work Activity, ACTA will increase the volume of the containment basin for the oily water emanating from the ACTA Right of Way prior to the entrance of the western catch basin on Leeds Avenue, north of Opp Street. However, this will be the subject of a separate work activity.

ACTA is proceeding with the work under a full reservation of all its rights, remedies, and defenses.

Dominguez Channel Mystery Oil Spill
Emergency Rain Event Notifications

- Steve McQuay, DWP Sanitation Supervisor, City of Los Angeles Pump Station Operator
  24-Hour Notification: 213-300-3662
  Alternates:
    Howard Wong: 213-725-6313
    Steven Pedersen: 213-725-6308

- NRC Environmental
  24-Hour Notification: 1-800-337-7455
  Alternates:
    Michael Sica: 310-628-0725
    Jim Kiatos: 310-628-1211

- Randy Stuart, Balfour Beatty Rail for RR Crossing Access
  24-Hour Notification: 310-863-0912
  Mike Mejia for all TV events: 310-863-0860

- Tesoro Tower/Shell Sump Valve Operation
  310-522-8665 (if no answer will roll over to cell phone for on-call person)

- Steven Pedersen, LA City (Courtesy Call): 213-725-6308
  Alternates:
    Joe Fortaleza: 213-725-6304
    Tri Tran: 213-725-6306

- OSC Marty Powell, EPA: 562-760-7028

Jan. 17, 2011

Waste Segregation and Quantification Plan

Date: January 14, 2011

Incident Name: Dominguez Channel Mystery oil Spill

Location Latitude: 33.785010, Longitude: -118.2372450

OBJECTIVE

To facilitate proper disposal and quantification of recovered pollutant generated from response and recovery operations associated with the incident named above.

WASTE STREAM SEPARATION

Recovered pollutant shall be separated by waste stream type and location where the waste was recovered. **Pollutants recovered from Waters of the State shall be kept separate from pollutants recovered elsewhere.**

Liquids: Liquids shall be held in secure tanks for gauging to determine oil content by DFG and Responsible Party representatives prior to disposal. In order to expedite cleanup and disposal, a direct assessment of the contents can be made, or a representative sample may be analyzed by the TSD Facility. Liquids recovered during flushing or steaming and Decontamination operations should be kept separate from recovered free floating oil.

Solids: Recovered pollutant held in solids will be placed onto roll-off bins or over-pack drums with tare weights. Solids shall be segregated as follows; sorbents, debris (oiled), soil, or PPE. Solids recovered from Waters of the State or adjacent shorelines shall be stored separate from those recovered elsewhere.

Vegetation/Wildlife: Vegetation and/or wildlife removed in the cleanup operation will be bagged and weighed separately.

QUANTIFICATION

Quantification of recovered pollutants will be conducted in accordance with California Code of Regulations Title 14, Section 877. The Responsible Party and the Department of Fish and Game may stipulate to the amount of oil spilled and/or recovered. The amount of recovered pollutant can be determined by visual assessment by DFG and responsible party or by lab analysis of samples taken in the presence of DFG and responsible party representatives.

FINAL DISPOSAL

When quantification is final, the waste may be disposed of in accordance with all Federal, State, and Local laws. A copy of the Hazardous Waste Manifest and associated documents shall be provided to the DFG as proof of disposal.

INCIDENT NAME: Dominguez Channel Mystery Oil Spill

The following table indicates the types of waste to segregate. Place a checkmark in the appropriate box for this incident. This plan should be included in the IAP.

Waters of the State of California			
Liquids		Solids	
Free Floating Product		Sorbent materials	
Flushing and/or Steam Cleaning		Vegetation / Sediment	
Decontamination		Impacted Wildlife	
		Oiled Trash & Debris	
		PPE	
		Response Materials	
Non-Waters of the State			
Liquids		Solids	
Recovered on property	✓	Sorbent Boom/Pads	✓
Recovered off property		Vegetation / Soils	
W/I 2ndry containment		Impacted Wildlife	
Product from Source		Oiled Trash & Debris	✓
Steam Cleaning		PPE	✓
Decontamination	✓	Response Materials	✓

Comments: _____

1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period (Date / Time) From: 02/11/11 0600 To: 03/04/11 0600	COMMUNICATIONS LIST ICS 205A-CG

3. Basic Local Communications Information

Agency	Name	Method(s) of contact (radio frequency, phone, pager, cell #(s), etc.)
US EPA	Jason Musante	213-479-2120
US EPA	Martin Powell	562-760-7028
CA DFG OSPR	Anastasia Norris	310-310-9917
CA DFG OSPR	James Foto	562-598-4292
LA WPD	Howard Wong	213-725-6313
BBRI	Mike Mejia	310-863-0860
Shell	Brett Bernstein	213-494-6598
OLBI	Dean Persinger	562-624-3284
OLBI	Charlie Waters	562-900-2347
ACTA	Elaine Silvestro	310-650-3359
ACTA	Jorge Pantoja	310-816-0460
EPA START	Adam Smith	310-405-2393
CA DFG OSPR	Bryan Gollhofer	562-708-7757
CA DFG OSPR	Sau Garcia	562-843-2714
LA WPD	Eric Lee	213-725-6313
LA WPD	Gonzalo Barriga	213-725-8862
CAL FIRE	Tom Williams	562-425-1902
CA DFG OSPR	Corey Kong	562-477-7081
Tesoro	Pang Mueller	310-522-4976
Tesoro	Emile Nour	310-522-6212
Crimson	Tracy Wilkinson	562-346-4296
Crimson	Mike Romley	661-343-3218
City of LA	Steve Pedersen	213-725-6308
NRC ES	Michael Sica	310-628-0725
NRC ES	Jim Kiatos	310-628-1211

4. Prepared by: (Communications Unit)
S. Garcia

Date / Time
02/09/11 1200

Initial Site Safety Plan
Project Name: Dominguez Channel Mystery Oil Spill

ICS KEY PERSONNEL - NRCES		
Project Manager	**Mike Sica**	310-628-0725
Project Supervisor	**Jim Kiatos**	310-628-1211
Regional Health & Safety Mgr	**Aimee Wilson**	310-629-1190
Safety Director	**Mike Amen, CIH, CSP, CHMM**	503-978-7297

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Date: **1.17.11** **Start Time: 0700** **Job Number: 56448**

☒ **Land Emergency Response** ☐ **Marine Emergency Response** ☐: **Land Service** ☐ **Marine Service**

SITE DESCRIPTION	This site specific health and safety plan has been developed to provide a safe work environment for the contracted work to be performed at Leeds Avenue near the intersection with Grant Street in Wilmington, California.

SCOPE OF WORK	. Site Orientation prior to work assignment (layout, ingress; egress; emergency evac, phones) . Preventive booming: containment of liquids on the surface of the water to prevent migration into open water . Continue recovery of surface product . Follow waste segregation & recovery plan and keep separate from other wastes . Maintain established temporary sand bag containment pond . Continue skimming and recovery efforts to minimize downstream impacts to pump station . Assess cleanup issues to implement once source has been isolated

EQUIPMENT	• Pickup truck • Gear truck • Generator • Weir skimmer • Air compressor • 3" pump & hoses • Light tower • 4" trash pump • Baker tanks • Vacuum trucks • Emergency response trailer • Rocket launcher • Roll off bins • Combustible gas indicator (4 gas meter) w/ PID

CHEMICAL INFORMATION (see MSDS)

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Crude Oil (sour)	☐ VD = 3 - 5 ☐ VP = variable ☐ S.G. = AP 0.7 to 0.9 ☐ FP = <73 to >200 F	PEL: 5 mg/m³ as mineral oil mist	Inhalation Ingestion	Eye, nose and throat irritation, vertigo, nausea, dyspnea, central
Benzene	☐ S.G. = 0.88 ☐ VP = 75mmHg ☐ FP = 12 F ☐ LEL: 1.2% ☐ UEL = 7.8%	PEL: 1 ppm IDLH: 500ppm	☐ Contact ☐ Inhalation ☐ Ingestion ☐ Absorption	Irrit eyes, skin, nose, resp sys; dizz; head, nau, staggered gait; anor, lass; derm; bone marrow depress;
Hydrogen Sulfide	☐ MW = 34.1 ☐ Sol = 0.4% ☐ IP 10.4 6eV ☐ UEL = 44% ☐ LEL = 4.0%	PEL: 20 ppm IDLH: 100ppm	☐ Inhalation ☐ Contact	Irrit eyes, resp sys; apnea, coma, convuls; conj, eye pain, lac, photo; dizz, head

PERSONAL PROTECTIVE EQUIPMENT

TASK	Level	MASK /CARTRIDGE /AIR	ADDITIONAL PPE
Establish support area / prepare	D	N/A	Hardhats, safety glasses, nomex coveralls, tyvek coveralls, leather gloves, PVC steel toe boots
Preventive Booming	D	N/A	Hardhats, safety glasses, tyvek coveralls, leather gloves, PVC steel toe boots, PFD.
Operator – Vac Truck	D	N/A	Hardhats, full-face shields, safety glasses, hearing protection, coveralls, neoprene outer gloves, PVC steel toe boots, high visible traffic vests
Load / transport material	D	N/A	Hardhats, safety glasses, tyvek coveralls, nitrile liner gloves, steel toe boots, high visible traffic vests
Decontaminate equipment	D	N/A	Hardhats, full-face shields, safety glasses, poly coated tyvek coveralls, neoprene outer gloves, nitrile liner gloves, PVC steel toe boots
Confined Space Entrants – NOT ANTICIPATED AT THIS SITE	B	Full-face air positive pressure demand respirator	Hardhat, safety glasses, nomex coveralls, nitrile steel toe boots, nitrile liners, pvc gloves, full body harness, retrieval winch set up, safety/rescue line for winch retrieval

ACTIVITY HAZARD ANALYSIS

Hazards Throughout the Job		
ITEM	**HAZARD**	**PREVENTION**
General Work Area	Slip / trip / fall	• designated pathways cleared of debris • use step ladders for platforms requiring climbing up or down • see attached safety memo regarding climbing on ladders/equip
General Work Area –lifting	Strain	• plan and stage to minimize long distance carrying • split heavy loads into smaller loads • use assistant for heavy or awkward load
General Work Area –Traffic	Struck by	• Set up visible barricades on access roads; • Wear high visibility safety vests
Refueling Equipment	Fire Spill	• Flammable liquids in explosion proof containers • No flammable liquids or gas stored in unmarked containers • Fire extinguisher near refueling and storage areas • Area in front of extinguishers kept clear • Spill containment plan discussed and in place
Heat stress	Heavy PPE Lack of breeze	• Drink plenty of fluids
Traffic	Struck by	• Set up visible barricades • Only authorized NRCES personnel in work zones

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Hazards Unique to Each Phase of Project		
ITEM	**HAZARD**	**PREVENTION**
Trains on active railway	Struck by train Uneven walking surface	• Must have flagger present at all times to grant access to walk near railway • Reflective orange safety vests must be worn • Must maintain a minimum distance of 25' from track • Use caution while walking on rocky surface • Ensure steel toe boots are laced up and secure on ankle
Load containment materials	Material	• plan and stage to minimize long distance lifting /carrying

Hazards Unique to Each Phase of Project		
into drop boxes	handling	• split heavy loads into smaller loads • use mechanical lifting aids when possible • have assistant for heavy or awkward loads
Transport absorbent boom materials to and from work sites	Lifting Strain	• Do not fill bags completely full • buddy system for awkward loads
FLAMMABLE LIQUIDS	Smoking/ignition source	• Post NO SMOKING signs around spill site/keep public out of work zone
Low visibility	No sunlight	• Set up light towers • Use head lamps on hard hats if needed
Liquid Pumping / agitation Into vacuum truck	Static Contact Liquid Spill	• Bond and ground vacuum truck • Bond and ground tank during cleaning / pumping • Intrinsically safe equipment • Spill containment plan discussed and in place during all cleaning operations • Operator present at all times
Air monitoring	Inhalation Over exposure	• Ensure current calibration • Fresh air calibration • Bump test • MUST have (1) 4 gas meter per group in skiffs/vessels
Confined Space – NOT ANTICIPATED AT THIS SITE	Atmosphere Rescue Ventilation	NRCES confined space permit for each entry. NRCES rescue /retrieval equipment in *Safety Required Sec.* *Note that this is horizontal rescue so may require wrist bands also*
Confined Space Entry - NOT ANTICIPATED AT THIS SITE	Hazardous Atmosphere Slips Trips Falls Illumination Opening of manhole	• A confined space permit will be filled out by the supervisor prior to each entry at a new location. • Pre-entry air monitoring will be conducted to confirm a non-hazardous atmosphere. • Continuous air monitoring will be conducted by the hole watch and documented on NRCES' air monitoring log • Forced air ventilation will be maintained • All vertical entries will be made with the use of a winch and attendant. • Three Points of contacts at all times when ascending or descending ladders • Lower and raise equipment in buckets / ropes • Any employee who participates in confined space entry has been trained in accordance with 29 CFR 1910.146 and 8 CCR 515. • Good housekeeping practices will be maintained during entry. Ensure there are not any items sitting below the ladder that could pose a tripping hazard. • Intrinsically safe flash lights & lights will be used to increase visibility in confined spaces • When opening is removed, a "hole watch" will be posted at that position until the cover is replaced. • Prior to entry, the confined space supervisor will fill out the confined space permit.

SAFETY EQUIPMENT REQUIRED:

✓	Eyewash / Shower	✓	Decon Pool / Supplies	✓	Wheel chocks for trucks
✓	First Aid Kit	✓	Fire Extinguisher (A/B/C)	✓	4 Way air monitoring instrument
✓	Reflective orange vest	✓	Barricades / rope	✓	Ladder

TRAINING REQUIREMENTS:

✓	HAZWOPER 40 / 24	✓	Hazwoper Supervisor	✓	Current 8 Hour Refresher
✓	First Aid /CPR	✓	Hazard Communication	✓	Incident Command System

DECONTAMINATION AND DISPOSAL

DECONTAMINATION EQUIPMENT	
☒ Visqueen (Ground)	☒ Rags to wipe boot bottoms
☒ Carpet Strips (Ground)	☒ Labeled Drums for disposal items
☒ Decon Pool / wash boots	☒ chairs to sit on for PPE removal
	☒ Soap /Water to wash face / hands
	☒ Disposable Paper Towels
	☒ Caution tape to designate decon area

PERSONNEL DECONTAMINATION PLAN

- ☐ Establish three stage contamination reduction zone with small decon area at exit
- ☐ Lay down visqueen under barrier
- ☐ Place empty lined and labeled drums for contaminated PPE
- ☐ Untape gloves and boots
- ☐ Rinse boots if not using boot covers
- ☐ Sit on chair prior to removing boots or outer PPE
- ☐ Remove boots and outer gloves ;
- ☐ dispose of tape / boots / gloves in labeled drum
- ☐ Unzip suit / pull off hood (if hooded)
- ☐ Roll down suit / inside out and place into labeled container: DO NOT USE KNIVES TO CUT OFF PPE
- ☐ Remove inner gloves
- ☐ PPE and debris will be bagged, accounted for, and bulked into the applicable waste bin

EMERGENCY MEDICAL TREATMENT AND FIRST AID

TYPE CONTACT	FIRST AID
Eyes	• Flush each eyes continuously for 15 minutes; • Tilt head to side to ensure liquid runs onto floor not other eye • refer to EMT for evaluation
Skin	• Remove contaminated clothing immediately • Wash skin continuously for 15 minutes; • refer to physician if redness, swelling, or pain persists after washing
Breathing	• Call 911; • Remove to fresh air immediately; • begin CPR until EMT arrives
Ingestion	• aspiration hazard • do not induce vomiting • do not give anything by mouth

EMERGENCY RESPONSE PLAN
Attach Map to Nearest Hospital

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
NEAREST HOSPITAL	Pacific Hospital of Long Beach 2776 E Pacific Ave. Long Beach, CA 90806
NEAREST PHONE	Supervisor cell phone
FIRST AID KIT	Supervisor Truck
FIRE EXTINGUISHER	Supervisor truck and charged extinguishers on site
EYEWASH STATION AND EMERGENCY SHOWER	Supervisor will determine location on site or provide 55 gallon drum of water and hand pump
EVACUATION ROUTE / MEETING POINT	To be discussed and diagramed before start of job scope

ACCIDENT / INCIDENT REPORTING

NRCES Notification Requirements	
FIRST AID INJURIES REQUIRING MEDICAL TREATMENT VEHICLE ACCIDENT NEAR MISS	▪ Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer ▪ Site Project Supervisor will immediately notify the NRCES Project Manager via cell phone. ▪ If unable to reach the Project Manager, contact the NRCES Operations or NRCES Safety Manager. ▪ Call their cell phones ▪ Safety Manager will provide employee disposition guidelines and coordinate an accident investigation either by himself or Project Supervisor ▪ NRCES Project Manager will relay information to Project Site Superintendent ▪ Accident reporting forms are available electronically ▪ Report all incidents to NRCES Safety Director ▪ Ensure incident documented on Daily Safety Meeting Form ▪ Determination will be made regarding need for post accident drug testing

SAFETY PLAN APPROVAL

Site Safety Officer_____ **Date** _____

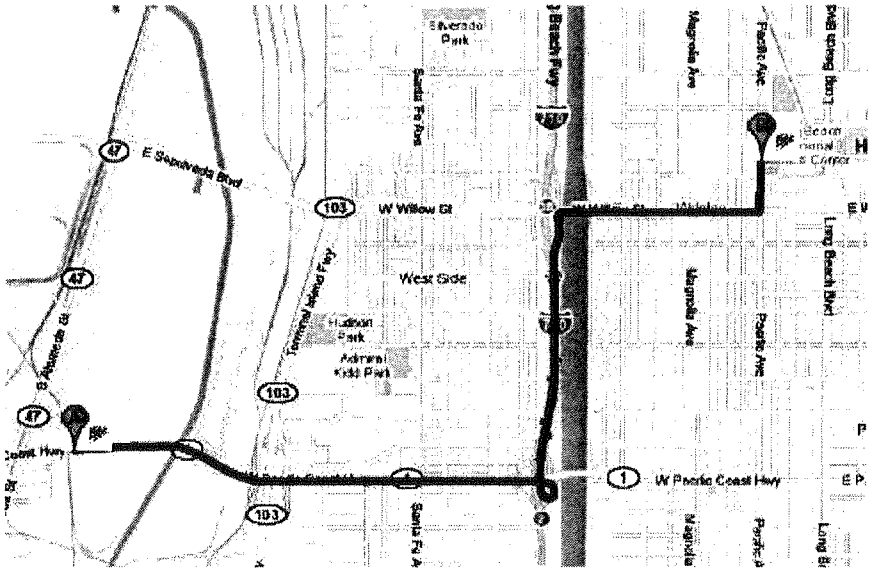
ACKNOWLEDGMENTS

I have read and understand the topics outlined on all pages of this HASP and will follow all the required safety rules.
****I am aware that I am to sign in at the beginning of the shift and sign out at the end of my shift on the daily safety meeting form.**
I must notify the on site supervisor of any injury /accident/ near miss that I had or observed during my shift**
I understand that I have the right to stop work and report any potential hazards to the NRCES Site Supervisor.
After an injury/accident/near miss is reported, the Site Supervisor must call the H & S Manager at 310-629-1190.

Date	Print Name	Signature

ATTACHMENT B

Medical Facilities



1926 E Pacific Coast Hwy, Los Angeles, CA 90744

1	1. **Head east on CA-1 S** About 2 mins	go 1.7 mi total 1.7 mi
710	2. **Slight right to merge onto I-710 N toward Pasadena** About 1 min	go 1.0 mi total 2.7 mi
	3. **Take exit 3A for Willow St E**	go 0.2 mi total 3.0 mi
	4. **Merge onto W Willow St** About 2 mins	go 0.7 mi total 3.7 mi
	5. **Turn left at Pacific Ave** Destination will be on the right About 1 min	go 0.2 mi total 3.9 mi

2776 Pacific Ave, Long Beach, CA 90806

ATTACHMENT A
MATERIAL SAFETY DATA SHEETS

Crude Oil (Sour)

AMERADA HESS CORPORATION

NFPA 704 (Section 16)

MATERIAL SAFETY DATA SHEET

Crude Oil (Sour) **MSDS No. 6608**

1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-99)

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC** **(800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000

SYNONYMS: Crude Petroleum; Sour Crude

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Jan-99)

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Petroleum Oil CAS NUMBER: 8002-05-9	OSHA PEL-TWA: 5 mg/m^3 as mineral oil mist ACGIH TLV-TWA: 5 mg/m^3 as mineral oil mist* *1997 NOIC: sum of 15 NTP-listed polynuclear aromatic hydrocarbons 0.005 mg/m^3, A1	100
Hydrogen Sulfide (H_2S) CAS NUMBER: 7783-06-4	OSHA PEL-Ceiling/Peak: 20 / 50 ppm ACGIH TLV-TWA/STEL: 10 / 15 ppm	< highly variable - see below >
Benzene CAS NUMBER: 71-43-2	OSHA PEL-TWA/STEL: 1 / 5 ppm ACGIH TLV-TWA: 0.5 / 2.5 ppm, A1, skin US Coast Guard: same as OSHA	Variable AP 0.1 to 1.0

A natural product derived from various oil production field primarily consisting of a complex combination of paraffinic and aromatic hydrocarbons and small amounts of nitrogen and sulfur compounds.

Crude oils are generally referred to as "sour" if they can release dissolved hydrogen sulfide (H_2S) which could result in a hazardous condition. The amount of dissolved H_2S can vary considerably with the crude oil source. Some sour crude oils can have an appreciable percentage of H_2S.

3. HAZARDS IDENTIFICATION (rev. Jan-99; Tox 99)

EMERGENCY OVERVIEW

CAUTION!

FLAMMABLE LIQUID - MAY EVOLVE TOXIC AND FLAMMABLE HYDROGEN SULFIDE GAS - SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR FATAL IF SWALLOWED

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

HYDROGEN SULFIDE (toxic gas) may be released. High concentration may cause immediate unconsciousness - death may result unless victim is promptly and successfully resuscitated. Hydrogen sulfide causes eye irritation.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

EYES

Contact with eyes may cause moderate to severe irritation.

SKIN
Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly. Rare, precancerous warts on the forearms, backs of hands and scrotum have been reported from prolonged or repeated skin contact.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: Irritating and toxic hydrogen sulfide gas may be found in confined vapor spaces. Greater than 15 - 20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50 - 500 ppm can cause headache, nausea, and dizziness, loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless the victim is removed from exposure and successfully resuscitated.

The "rotten egg" odor of hydrogen sulfide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm. At high concentrations, the victim may not even recognize the odor before becoming unconscious.

CHRONIC and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. This product contains polynuclear aromatic hydrocarbons which have been shown to be carcinogenic in laboratory animals after repeated and prolonged skin contact. The significance of these results to human exposures has not been determined - see Section 11, Toxicological Information.

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Pre-existing, chronic respiratory disease, liver or kidney dysfunction, or central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES (rev. Jan-99; Tox-99)

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES (rev. Oct-94)

FLAMMABLE PROPERTIES:

FLASH POINT:	< 73 to > 200 °F (< 23 to > 93 °C)
AUTOIGNITION TEMPERATURE:	N/D
OSHA/NFPA FLAMMABILITY CLASS:	1B (flammable liquid)
LOWER EXPLOSIVE LIMIT (%):	N/D
UPPER EXPLOSIVE LIMIT (%):	N/D

FIRE AND EXPLOSION HAZARDS
Flash point and explosive limits are highly dependent on the crude oil source. Treat as an OSHA/NFPA flammable liquid unless otherwise indicated. Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS
Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Jan-99)

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Hydrogen sulfide may be evolved during a release - ensure response personnel are adequately protected - see Section 8.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system

is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

7. HANDLING and STORAGE (rev. Jan-99)

HANDLING PRECAUTIONS

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Hydrogen sulfide may accumulate in tanks and bulk transport compartments. Consider appropriate respiratory protection (see Section 8). Stand upwind. Avoid vapors when opening hatches and dome covers. Confined spaces should be ventilated prior to entry.

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

Naturally Occurring Radioactive Materials (NORM):

Industry experience indicates that this material may contain small amounts of naturally-occurring uranium, thorium, and their decay products (NORM) which can accumulate in oil production and process equipment, particularly the equipment handling the water associated with crude oil production. Scales, other deposits, and sludges from this equipment may have a significant accumulation of NORM. Gamma radiation above background may be detected external to equipment contaminated with NORM. Production equipment should be assessed for external gamma radiation; access may need to be restricted in accordance with OSHA 29 CFR 1910.96 during operation. Such equipment should also be assumed to be internally contaminated with long half-life decay products that emit alpha radiation, which is a hazard if inhaled or ingested. Unless measurements indicate otherwise, steps should be taken to minimize skin and inhalation exposure to NORM dusts/mists by wearing personal protective clothing [such as disposable Tyvek ® (DuPont)], utilizing respiratory protection (minimum of HEPA filter), and practicing good personal hygiene. Please refer to API Bulletin E2, "Bulletin on Management of Naturally Occurring Radioactive Materials in Oil and Gas Production," April 1, 1992, for additional information on managing NORM.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-99)

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION
Safety glasses or goggles are recommended where there is a possibility of splashing or spraying

SKIN PROTECTION
Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information

RESPIRATORY PROTECTION
If a hydrogen sulfide hazard is present (that is, exposure potential above H_2S permissible exposure limit), use a positive-pressure SCBA or Type C supplied air respirator with escape bottle.

Where it has been determined that there is no hydrogen sulfide exposure hazard (that is, exposure potential below H_2S permissible exposure limit), a NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES (rev. Oct-94)

APPEARANCE
Variable depending on its source; typical is a thick, dark yellow to brown or greenish black liquid

ODOR
A characteristic, petroleum/asphalt-type odor

Hydrogen sulfide (H_2S) has a rotten egg "sulfurous" odor. This odor should not be used as a warning property of toxic levels because H_2S can overwhelm and deaden the sense of smell. Also, the odor of H_2S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H_2S should not be used as an indicator of a hazardous condition - a H_2S meter or colorimetric indicating tubes are typically used to determine the concentration of H_2S.

BASIC PHYSICAL PROPERTIES
The properties of crude oil are highly variable depending on its source.

BOILING RANGE:	AP 100 - 1000+ °F (> 260 °C)
VAPOR PRESSURE:	Variable
VAPOR DENSITY (air = 1):	3 - 5 typical
SPECIFIC GRAVITY (H_2O = 1):	AP 0.7 to 0.9 (varies)
PERCENT VOLATILES:	Variable
EVAPORATION RATE:	Variable
SOLUBILITY (H_2O):	Insoluble to slightly soluble

10. STABILITY and REACTIVITY (rev. Oct-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS
Material is stable under normal conditions. Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES (rev. Jan-99; Tox-99)

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: **OSHA:** NO **IARC:** NO **NTP:** NO **ACGIH:** 1997 NOIC: A1
Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

MUTAGENICITY (genetic effects)

Some crude oils and crude oil fractions have been positive in mutagenicity studies.

12. ECOLOGICAL INFORMATION (rev. Jan-99)

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS (rev. Jan-99)

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION (rev. Jan-99)

PROPER SHIPPING NAME:	PETROLEUM CRUDE OIL
HAZARD CLASS; PACKING GROUP:	3; determine flash point to accurately classify packing group
DOT IDENTIFICATION NUMBER:	UN 1267
DOT SHIPPING LABEL:	FLAMMABLE LIQUID

15. REGULATORY INFORMATION (rev. Jan-99)

U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	–	–

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 1.0

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (flammable liquid)
Class D, Division 1A (Very toxic, acute)
Class D, Division 1B (Very toxic by other means)

16. OTHER INFORMATION (rev. Feb-00)

NFPA® HAZARD RATING	HEALTH:	2	Moderate
	FIRE:	3	High
	REACTIVITY:	0	Negligible
HMIS® HAZARD RATING	HEALTH:	3*	High
	FIRE:	3	High
	REACTIVITY:	0	Negligible
			*Chronic

SPECIAL HAZARDS: May release toxic hydrogen sulfide (poison gas).

SUPERSEDES MSDS DATED: 01/27/99

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General Info: (800)467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617) 770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

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