

Alaska Department of Environmental Conservation Oil Discharge Prevention and Contingency Plan <u>Certificate of Approval</u>



Certificate Number:	21CER-001	Plan Number: 20-CP-2018	
Plan Title:	City of Saint Paul Bulk Fuel Storage Facility Oil Discharge Pre	evention and Contingency Plan	
Covered Facility(s):	City of Saint Paul Bulk Fuel Storage Facility		
Plan Holder:	City of Saint Paul		
Address:	PO Box 901, Saint Paul, Alaska 99660		
Telephone:	907-546-3113		
Region(s) of Operation (18 AAC 75.495):	Aleutians (Region 5)		
Effective Date of Approval:	January 15, 2021	Expiration Date: January 14, 2026	

This approval is subject to the terms and conditions of the applicable Alaska Department of Environmental Conservation contingency plan approval letter dated 1/15/2021 and continuing compliance with the requirements of AS 46.04 and 18 AAC 75.

Graham Wood, Approving Authority

Braham Wood, Approving Authority De Prevention, Preparedness, & Response Program Manager

# **CITY OF SAINT PAUL**

Oil Discharge Prevention & Contingency Plan And Facility Response Plan

City of Saint Paul Bulk Fuel Storage Facility



# ADEC Plan #20-CP-2018

Approved January 15, 2021

Prepared for:

City of Saint Paul PO Box 901 100 Diamond Hill Road Saint Paul Island, AK 99660

Prepared by:

Integrity Environmental LLC 12110 Business Blvd., Ste. 6 PMB #434 Eagle River, AK 99577 (907) 854-7347 www.integrity-environmental.com

	•	
Facility Name:	City of Saint Paul Bulk Fuel Facility	
Physical Address:	100 Diamond Hill Road Saint Paul Island, AK 99660	
Туре:	Onshore Bulk Fuel Storage, Temporary Storage & Distribution	
Mailing Address:	City of Saint Paul PO Box 901 Saint Paul Island, AK 99660	
Phone Number:	907-546-3175	
Latitude/Longitude: <i>Datum: WGS 84</i>	57° 7' 23.30667''N 170° 17' 4.15848''W	
Owner/Operator:	City of Saint Paul PO Box 901 Saint Paul Island, AK 99660	
NAICS Code:	454311	
Qualified Individuals:	Phillip A. Zavadil 907-546-3113 (office) 907-546-4179 (cell)	
	Monique Barker 907-546-3150 (office) 907-444-2673 (cell	
	Victor Clarey 907-546-3140 (office) 907-631-8670 (cell)	
Date of Operation:	January 1988	
Date of Ownership:	January 1988	
Wellhead Protection Areas:	N/A	
Distance to Navigable Water:	$a \approx 600$ feet	
SIC Code:	5171	
Maximum Oil Storage:	1,817,200 gallons / 43,267 barrels	
Number of Tanks:	14	
Primary Products Handled:	Unleaded gasoline, #2 diesel, winter blend diesel	
Worst Case Discharge:	ADEC: 180,000 gallons / 4,2865 barrels EPA: 600,000 gallons / 14,286 barrels USCG: 23,558 gallons / 561 barrels	
Primary Contact:	Edward Paulus, Facility Manager 907-546-3174 (office) 907-546-4136 (cell)	

# **Facility Information**

#### **Applicability of Substantial Harm Criteria**

Facility Name:	City of St. Paul Bulk Fuel Facility
Facility Address:	100 Diamond Hill Road St. Paul Island, AK 99660

Does the facility transfer oil over-water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes X No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes No X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes X No

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes No X

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No X

# Certification

Signature:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

1- Transis
P. TANATIC

Name:Phillip ZavadilTitle:City ManagerDate:July 20, 2020

#### **DISTRIBUTION LIST**

### **City of Saint Paul**

City of Saint Paul PO Box 901 Saint Paul Island, AK 99660

### State of Alaska

Alaska Department of Environmental Conservation Spill Prevention, Preparedness & Response Division 555 Cordova Street Anchorage, AK 99501 jennifer.sonne@alaska.gov

Alaska Department of Fish and Game Habitat Division 333 Raspberry Road Anchorage, AK 99518 jeanette.alas@alaska.gov

#### Federal Government Agencies

Environmental Protection Agency Region 10 Attn: Bob Whittier 222 W 7<sup>th</sup> Ave. #19 Anchorage, AK 99513-7588 whittier.robert@epa.gov Alaska Department of Natural Resources 555 West 7<sup>th</sup> Avenue, Suite 1400 Anchorage, AK 99501 <u>dnr.cplans@alaska.gov</u>

United States Coast Guard Sector Anchorage G-Wing, Bldg 49000 Army Guard Road JBER, AK 99505 westernalaskafacilities@uscg.mil

# **Promulgation Letter**

This Oil Discharge Prevention and Contingency Plan for the City of St. Paul Bulk Fuel Storage Facility has been reviewed and approved by the management of the City of St. Paul. The resources necessary to fully implement the plan are committed to the operation.

PA. TAVADIL

July 20, 2020

Date

Phillip Zavadil, City Manager

18 AAC 75.425(c)

**Plan Review Procedures** 

This Oil Discharge Prevention and Contingency Plan (ODPCP) will be maintained and updated by the City of Saint Paul. The plan will be updated as needed and submitted to the State and to the applicable resource agencies.

Updated materials will be transmitted to plan holders (see Distribution List section of this plan) by cover letter. The submission will contain a brief description of each amendment, the amended pages, and instruct the holder on making changes. Revisions will be recorded in the Record of Revisions section of this plan.

# **Routine Updates**

Routine plan updates include revision to the list of names, addresses, or telephone numbers of spill command and response personnel; and a revision to a training procedure or course work requirement that does not reduce the amount or quality of training required by this plan. Routine updates to the plan will be submitted within five days after the date the proposed change occurs.

# **Plan Renewal Procedures**

Application for renewal must be submitted at least 180 days, or the number of days stated in the plan approval letter under 18 AAC 75.460(a), in advance of expiration of the plan to permit department review before the plan approval expired. Plans must be renewed every five years.

# **Notification of Non-readiness**

If a significant change occurs in, or is made to, any component of this plan that would diminish response capability, the City of Saint Paul will notify the department in writing within 24 hours.

18 AAC 75.415(a)

18 AAC 75.415(b)

18 AAC 75.420 18 AAC 75.460(d)

18 AAC 75.475

January 2021

#### CITY OF SAINT PAUL BULK FUEL FACILITY LOG OF REVISIONS

### PLAN REVIEW AND UPDATE PROCEDURES

The plan will be reviewed and updated annually for routine changes such as names and phone numbers or other changes that do not increase the capacity to spill nor reduce the response capability of the plan holder. Every revision will be logged on the form below. The revision number and date will be entered in the footer of each page changed. The remarks column is for comments or information to explain the revision. Revisions will be sent to every plan holder with a cover letter listing all revisions and instructions for removing and adding pages. If no changes are required, the fact the plan was reviewed will be logged.

If changes to the facility occur that necessitate a major amendment, such as changes to the type of oil stored, the response capabilities, or any change that significantly affects the plan, the changes must be approved by the department prior to implementation.

The plan is approved by the EPA, USCG, & ADEC. Plan approval expires every five years. The plan must be submitted to each agency in sufficient time before its approval expires to allow the agency to review and re-approve the plan. Routine changes described above should be made before submitting the plan for renewal.

No.	Date	Page / Section Number(s)	Remarks
	Nov 1998	title, page I, ii, iii, iv, 1-1-1, 1-2-1, 1-3-1, 1-5-1, 1-5-3, 1-6-1, 1-6-4-16, 1-8-1, Figs. 1-8-1,2,3,4, Part 1-Appdx A, 2-1-1, 2-1- 5,6, 2-1-10, 2-6-1, 3-1-2, Figs. 3-1-2,4, 3- 2-2, 3-3-1,2,3, 3-4-1, Fig. 3-6-1, 3-9-2, 3,4, 3-10-1, 3-10-3,4, 3-10-12,13, 3-11-2, Part 3 Appdy C Part 4	Response to ADEC request for information & USCG / EPA renewal submittal
	April 2001	Title, i, ii, 1-1-1, 1-2-1, 1-4-1, 1-5-1, 1-5- 2, 1-6-15, Figs. 1-8-1,2,3,4,5 & 6, 2-1-4, 2-1-1 through 2-1-9, 2-1-11, 2-1-14, 2-1- 17, 2-2-1, 2-3-1, 2-5-1, 2-7-1, Appdx A Forms, 3-1-2, Figs. 3-1-2 & 3-1-4, 3-3-1, 3-3-3, 3-3-4, 3-6-2, 3-11-2, 4-5, 4-6, 4-8	Updated pages for plan update
	Nov 2001	Ii, 1-1-1, 1-2-1, 1-2-2, 1-2-4, 1-5-4, 1-6- 9, 1-8-1, 2-1-5, 2-1-6, 2-1-7, 2-1-7B, 2-1- 8, 2-1-9, 2-1-18, 2-1-19, 2-1-20, 2-1-21, 2-1-22, 2-2-1, 2-7-1, II-A-1, II-A-3, 3-3- 3, 3-6-1, 3-6-2, 3-10-3, 3-11-2, 4-8	Response to ADEC request for information & USCG / EPA renewal submittal
	Feb 2002	ii, 2-1-5, 2-1-8, 2-1-9, 2-7-1, Appendix A TOC, II-A-7, II-A-8, II-A-9	Response to January 18, 2002 conditional approval.
	Oct 2002	Pages 1-1-1, 1-2-1, 2-1-10, 2-7-1, 3-3-3	Updates to personnel
	March 2005	Pages 1-1-1, 2-1-10, 3-3-3	Updates to personnel, tank data, and compliance schedule
	Sep 2006	Title, page i, ii, 1-1-1, 1-2-1, 1-2-2, 1-3-2, 1-5-1, 1-5-2, 1-5-3, 1-6-4, 1-6-5, 1-6-7, 1-	Spill Plan update and ADEC, USCG & EPA renewal submittal

It is the responsibility of the plan holder to post the changes in the plan.

No.	Date	Page / Section Number(s)	Remarks
		6-8, 1-6-9, 1-6-10, 1-6-15, 1-8-1, 1-8-2, 1-8-5, 1-8-6, 2-1-4, 2-1-8, 2-1-10, 2-1-18, 2-7-1, Appendix 2 II-A-9, 3-1-4, 3-3-1, 3- 3-3, 3-6-1,	
		3-6-2, 3-9-4, 3-10-3, 3-10-5, 3-10-13, 3- 11-2, 3-11-3,	
		3-11-4, 4-4	
	Dec 2006	Pages ii, 1-2-4, 1-5-2, 1-6-1, 1-6-8, 3-6-2, 3-9-1, 3-10-2, 3-11-2, 3-11-4, 3-11-5, Address & Phone List for C-Plan Holders	Response to ADEC request for Information & USCG / EPA Renewal submittal
	Sep 2007	Pages ii, 2-1-1, 2-1-10, 2-1-11, 2-1-13, 2- 6-1, 4-5 thru 4-11	ADEC regulatory changes
	Jan 2008	Page i, ii, 2-i, 2-1-1a&b, 2-1-11&12, 2-1- 14&15, 2-6-1, Part 2 Appendix A new secondary containment inspection form, 3-9-1, 5-1.	Revisions / additions to pages submitted in September 2007 to address ADEC regulatory changes
	April 2008	Page ii, v, 1-2-2, 1-6-9, 1-6-15, 3-6-2, 3- 3-1, 3-11-2, 3-11-3, 3-11-4, 3-11-6.	Revisions to address EPA letter dated 2/26/07
	Dec 2008	Page ii, 2-1-13	ADEC piping inspection extension
	Jan 2012	Front Page, i, ii, iii, iv, v, vi, 1-1-1, 1-1-2, 1-2-4, 1-2-5, 1-5-1, 1-6-1, 1-6-5, 1-6-7, 1- 6-10, 1-6-16, 1-8-2, 1-8-4, 1-8-5, 1-8-6, 2-i, 2-1-9, 2-1-10, 2-1-10(b), 2-1-11, 2-1- 13, 2-1-15, 2-2-1, 2-4-1, 2-7-1, Part 2 Appdx cover pg, 3-1-4, 3-2-2, 3-3-1, 3-3- 3, 3-6-2, 3-10-12, 3-11-2, 3-11-4, 4-6, 4- 8, 5-1.	ADEC 5 years renewal approval – response to RFAI dated 11/30/11
	June 2012	Pages, ii, iv, v, 1-2-2, Fig 3-6-1	Response to USCG Letter 5/30/12
	Nov 2013	Front Page, i, 1-1-1, 1-2-1, 3-3-3, plan holders list	Update Names and phone numbers
	Oct 2015	Front Page, plan holders list, i, ii, 1-1-1, 1-2-1, 1-2-2, 1-4-1, 1-5-1, 1-5-2, 1-6-1, 1- 6-15, 1-8-2, 1-8-3, 1-8-5, 1-8-6, 2-1-9, 2- 1-10, 2-1-10b, 2-5-1, 2-7-1, 3-1-4, 3-1-5, 3-1-6, 3-3-3, 3-6-2	ADEC 5 year renewal submittal
	Dec 2015	Plan holders list, ii, 1-1-1, 1-2-1, 1-2-2, 1- 2-3, 1-6-4, 1-6-5, 1-6-11, Figures 1-8- 1/2/4/5, 2-1-3, Section 2-1-6, 2-3-2, 2-7, Figure 3-1-2, 2-5-1, 3-3-2, 3-3-8, 3-6-1, 3-10-1/2/3/4/5/6/10/11/12/13, Part 3 App C, Part 4-BAT	Response ADEC RFAI dated 12/1
	March 2020	Pages 1-6-8, 3-10-1, 3-10-2, 3-10-11, 3- 10-12, 3-11-6, III-C-1, and 4-4 in Sections 1.6.4, 3.10, 3.10.4, 3.10.5, 3.11.4, App C, and 4.1.4	Replace references to Unified Plan and Subarea Plan to new Area Contingency Plan
0	July 2020	All	Plan renewal

# **TABLE OF CONTENTS**

# 18 AAC 75.425.(d)(3)

Distribution List	
Promulgation Letter	
Log of Revisions	
	(* DI 11
Section I.U Response A	ction Plan
Section 1.1 Emerg	ency Action Checklist
Section 1.2 Report	ing and Notification
Section 1.2.1 Qu	alified Individuals 1-10
Section 1.2.2 Per	mits 1-10
Section 1.3 Safety	
Section 1.4 Comm	unications 1-14
Section 1.5 Deploy	ment Strategies 1-15
Section 1.5.1 Tra	insport of Resources
Section 1.5.2 Pri	mary Response Action Contractor Mobilization1-16
Section 1.6 Respon	nse Scenario 1-17
Section 1.6.1 Pro	becedures to Stop the Discharge 1-18
Section 1.6.2 Fir	e Prevention and Control1-18
Section 1.6.3 Sur	rveillance and Tracking1-19
Section 1.6.4 Pro	otection of Environmentally Sensitive Areas
Section 1.6.5 Co	ntainment & Control Strategies1-21
Section 1.6.6 Re	covery Strategies1-23
Section 1.6.7 Da	maged Tank Transfer & Storage 1-24
Section 1.6.8 Tra	unsfer & Storage of Recovered Oil 1-24
Section 1.6.9 Ter	mporary Storage and Ultimate Disposal1-25
Section 1.6.10 Wi	Idlife Protection1-27
Section 1.6.11 She	oreline Cleanup Teams 1-29
Section 1.6SC Spi	11 Scenario 1-31
Section 1.6SC.1 V	Vorst-Case Discharge Scenario1-32
Section 1.6SC.1.	1 Narrative
Section 1.6SC.1.	2 Response Resources for this Scenario1-37
Section 1.6SC.1.	3 Scenario Recovery Tables and Figures 1-41
Section 1.6SC.1.4	4 On Water Spill Response 1-44
Section 1.6SC.2 U	JSCG Worst-Case Discharge and
A	ADEC Volume to Water Planning Scenario
Section 1.6SC.2.	1 Narrative
Section 1.6SC.2.2	2 Response Resources for this Scenario1-54
Section 1.6SC.2.	3 Scenario Recovery Table and Figures 1-58
Section 1.6SC.2.4	4 Spill Response if Winds from the South
Section 1.6SC.3	Medium Spill and Maximum Most Probable
	Discharge Scenario1-64
Section 1.6SC.4	Small Spill and Average Most Probable Discharge Scenario 1-66
Section 1.7 Nonme	echanical Response Options
Section 1.8 Facility	y Description
Section 1.8.1 Ma	rine Terminal

Section 2.0 Prev	ention Pro	ograms	2-1
Section 2.1	Discharge	Prevention Programs	2-1
Section 2.1.	Oil Di	scharge Prevention Training Program	2-1
Section 2.1.2	Substa	nce Abuse & Medical Monitoring Program	2-3
Section 2.1.3	Securi	ty Program	2-4
Section 2.2	Discharge	History	2-6
Section 2.3	Potential 1	Discharge Analysis	2-7
Section 2.4	Condition	s that Might Increase Risk of Discharge	2-9
Section 2.5	Discharge	Detection	2-11
Section 2.5.	Facilit	y Inspection	2-11
Section 2.5.2	Discha	arge Detection for New Storage Tanks	2-11
Section 2.5.	Discha	arge Detection of Existing Storage Tanks	2-11
Section 2.5.4	Discha	arge Detection of Facility Piping	2-14
Section 2.5.	Secon	dary Containment Areas	2-16
Section 2.6	Waivers		2-18
Section 3.0 Supp	lemental	Information	3-1
Section 3.1 Fa	cility Desc	ription and Operational Overview	3-1
Section 3.1.	Tank 1	nformation	3-2
Section 3.1.2	Type a	and Amount of Oil	3-5
Section 3.1.3	Pipeli	ne Information	3-5
Section 3.1.4	Transf	er Procedures	3-7
Section 3	1.4.1 Ge	neral Transfer Procedures	3-7
Section 3	1.4.2 Ma	arine Transfers – Barge Receipts & Vessel Loading from D	)ock
	Fu	eling Stations	
Section 3	1.4.3 Ta	nker Truck Loading – Gas Offload from Barges	3-9
Section 3	1.4.4 Ta	nk Iruck Loading – Ierminal Iruck Load Rack	3-10
Section 3	1.4.5 Sta	ationary Tank Loading – Power Plant Tanks	3-11
Section 3.1.	Evacu	ation Plan	3-14
Section 3.2 R	eceiving E	nvironment	3-15
Section 3	2.1 Potent	ial Routes of Discharge	3-15
Section 3	2.2  Estimation	ation of Planning Standard Volume to Reach Open Water	3-10
Section 3.3 C	$\frac{1}{2}$	ystem	3-1/
Section 3	3.1 Incide	nt Commander & Terminal Emergency Response Team	3-1/
Section 3	3.2 Incide	nt Command Posts	3-18
Section 3	3.3 Inclue	nt Command System (ICS) Management Structure	3-18
Section 3	3.4 ICS P( 2.5 Incide	Distributions and Duties	3-19
Section 3	5.5 Inclue	nt Action Plans (IAPS)	3-19
Section 3.4 R	eanstic Re	sponse Operating Limitations	3-21
Section 3.5 L	ogistical S	upport	3-20
Section 3	5.1 Equip	meni	3-20
Section 3	5.2 Person	inei	3-27
Section 3	5.5 Transp	ooriaiiont	3-28
Section 3.6 R	esponse E	quipment	3-29
Section 3	b.1 Owne	a Equipment Inventory	3-29

Section	a 3.6.2 Contracted Equipment Inventory
Section	a 3.6.3 Operational Characteristics and Limitations
Section	1 3.6.4 Storage, Maintenance & Inspection Program
Section	1 3.6.5 Time Frame for Delivery
Section	a 3.6.6 Oil Spill Recovery Vessels
Section 3.7	Non-mechanical Response
Section 3.8	Contracted Resource Information
Section	a 3.8.1 PRAC Information
Section	a 3.8.2 Memorandum of Agreement
Section 3.9	Training and Exercises
Section	a 3.9.1 Training Programs
Section 3.1	D Environmentally Sensitive Areas
Section	a 3.10.1 Seasonal Conditions
Section	n 3.10.2 Product Toxicity
Section	n 3.10.3 Identified ESA's for Saint Paul Island 3-43
Section 3.1	1 Additional Information
Section	n 3.11.1 List of Acronyms
~	
Section 3.1	2 Bibliography
Section 3.1 Section 4.0	2 Bibliography
Section 3.1 Section 4.0 Section 4.1	2 Bibliography
Section 4.0 Section 4.1 Section 4.2	2 Bibliography
Section 4.0 Section 4.1 Section 4.2 Section 4.3	2 Bibliography
Section 4.0 Section 4.1 Section 4.2 Section 4.3 Section 4.4	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10
Section 4.0 Section 4.1 Section 4.2 Section 4.3 Section 4.4 Section 4.5	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13
Section 4.0 Section 4.1 Section 4.2 Section 4.2 Section 4.3 Section 4.4 Section 4.5 Section 4.6	2 Bibliography3-52Best Available Technology Review4-1Field Communications4-2Source Control4-4Trajectory Analysis and Forecasts4-7Wildlife Capture, Treatment & Release Methods4-10Corrosion Control System for Tanks4-13Leak Detection Systems for Tanks4-14
Section 4.0 Section 4.1 Section 4.2 Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.7	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13         Leak Detection Systems for Tanks       4-14         Means of Immediately Determining Liquid Level of Tanks       4-16
Section 4.0 Section 4.1 Section 4.2 Section 4.2 Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8	2 Bibliography3-52Best Available Technology Review4-1Field Communications4-2Source Control4-4Trajectory Analysis and Forecasts4-7Wildlife Capture, Treatment & Release Methods4-10Corrosion Control System for Tanks4-13Leak Detection Systems for Tanks4-14Means of Immediately Determining Liquid Level of Tanks4-16Protective Coatings for Facility Piping4-19
Section 4.0 Section 4.1 Section 4.2 Section 4.3 Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8 Section 4.9	2 Bibliography3-52Best Available Technology Review4-1Field Communications4-2Source Control4-4Trajectory Analysis and Forecasts4-7Wildlife Capture, Treatment & Release Methods4-10Corrosion Control System for Tanks4-13Leak Detection Systems for Tanks4-14Means of Immediately Determining Liquid Level of Tanks4-16Protective Coatings for Facility Piping4-19Maintenance of Buried Metallic Piping4-20
Section 4.0 Section 4.1 Section 4.2 Section 4.3 Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8 Section 4.9	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13         Leak Detection Systems for Tanks       4-14         Means of Immediately Determining Liquid Level of Tanks       4-16         Protective Coatings for Facility Piping       4-19         Maintenance of Buried Metallic Piping       4-20         Response Planning Standard       5-1
Section 4.0 Section 4.1 Section 4.2 Section 4.2 Section 4.3 Section 4.4 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8 Section 4.9 Section 5.0 Section 5.1	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13         Leak Detection Systems for Tanks       4-14         Means of Immediately Determining Liquid Level of Tanks       4-16         Protective Coatings for Facility Piping       4-19         Maintenance of Buried Metallic Piping       4-20         Response Planning Standard       5-1         ADEC Adjusted Planning Standard       5-1
Section 4.0 Section 4.1 Section 4.2 Section 4.2 Section 4.3 Section 4.4 Section 4.5 Section 4.6 Section 4.6 Section 4.7 Section 4.8 Section 4.9 Section 5.0 Section 5.1 Section 5.1	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13         Leak Detection Systems for Tanks       4-14         Means of Immediately Determining Liquid Level of Tanks       4-16         Protective Coatings for Facility Piping       4-19         Maintenance of Buried Metallic Piping       4-20         Response Planning Standard       5-1         ADEC Adjusted Planning Standard       5-1         EPA Response Planning Volumes       5-2
Section 4.0 Section 4.1 Section 4.2 Section 4.2 Section 4.3 Section 4.4 Section 4.4 Section 4.5 Section 4.6 Section 4.7 Section 4.8 Section 4.9 Section 5.0 Section 5.1 Section 5.2 Section 5.3	2 Bibliography       3-52         Best Available Technology Review       4-1         Field Communications       4-2         Source Control       4-4         Trajectory Analysis and Forecasts       4-7         Wildlife Capture, Treatment & Release Methods       4-10         Corrosion Control System for Tanks       4-13         Leak Detection Systems for Tanks       4-14         Means of Immediately Determining Liquid Level of Tanks       4-16         Protective Coatings for Facility Piping       4-19         Maintenance of Buried Metallic Piping       4-20         Response Planning Standard       5-1         ADEC Adjusted Planning Standard       5-1         EPA Response Planning Volumes       5-2         USCG Response Planning Volumes       5-3

# Appendices

Appendix A	Forms	A-1
Appendix B	Incident Command System	B-1
Appendix C	Most Environmentally Sensitive Areas (MESA)	C-1
Appendix D	Cathodic Protection System Information	D-1
Appendix E	Secondary Containment Liner Specifications	E-1

# TABLE OF TABLES

Table 1.2-1	Initial Notifications	1-3
Table 1.2-2	Local and Other Emergency Notifications	1-4
Table 1.2-3	Facility Response Team	1-5
Table 1.2-4	State & Federal Agency Notifications	1-6
Table 1.2-5	Qualified Individuals	1-10
Table 1.2-6	State and Federal Permits	1-11
Table 1.4-1	Communication Equipment	1-14
Table 1.5-1	Resources Mobilization	1-15
Table 1.5-2	Potential Contracted Resources Mobilization	1-16
Table 1.6.10-1	l Local Bird Responders	1-28
Table 1.6.10-2	2 Local Marine Mammal Responders	1-29
Table 1.6SC-1	Recovery Capacity per Operational Period, WCD	1-40
Table 1.6SC-2	2 Land-Based Recovery Table	1-41
Table 1.6SC-3	Recovery Capacity per Operational Period, Release at South Fuel Dock	1-57
Table 1.6SC-4	Boom Requirements by Location	1-57
Table 1.6SC-5	5 Water Based Recovery Table	1-58
Table 2.1-1	Discharge Prevention Training	2-2
Table 2.2-1	Record of Spills Over 55-gal	2-6
Table 2.5-1	Tank Inspection Schedule	2-12
Table 2.5-2	Pipeline Inspection Schedule	2-15
Table 3.4-1	Hours of Daylight in Saint Paul, Alaska on Solstices and Equinoxes	3-24
Table 3.5-1	Logistical Support Services: Western Alaska	3-27
Table 3.5-2	Personnel Mobilization Schedule	3-28
Table 3.5-3	Equipment Mobilization Schedule	3-28
Table 3.6-1	City of Saint Paul Response Equipment	3-29
Table 3.6-2	Aleut Community of Saint Paul Response Equipment	3-31
Table 3.9-1	Training Programs / Drills & Exercises	3-37
Table 3.10-1	Critical Life Periods of Wildlife & Aquatic Plant Life	3-39
Table 3.10-2	Shoreline Type & Predicted Oil Behavior	3-45
Table 4.1-1	BAT: Field Communications	4-2
Table 4.2-1	BAT: Source Control	4-4
Table 4.3-1	BAT: Trajectory Analysis and Forecasts	4-7
Table 4.4-1	BAT: Wildlife Capture, Treatment, & Release Methods	4-10
Table 4.6-1	BAT: Leak Detection Systems for Tanks	4-14
Table 4.7-1	BAT: Means of Immediately Determining Liquid Level of Tanks	4-16
Table 5.2-1	EPA Worksheet to Plan Volume of Response Resources for WCD	5-2
Table 5.3-2	USCG Worst Case Discharge Volume	5-3

# TABLE OF FIGURES

Figure 1.2-1	ADEC Spill Reporting Placard	
Figure 1.2-2	ADEC Oil & Hazardous Substances Spill Notification Form	
Figure 1.6-1	Land Based Spill Response	1-43
Figure 1.6-2	Salt Lagoon Water Based Spill Response	1-46
Figure 1.6-3	Spill Trajectory with Winds from the North	1-60
Figure 1.6-4	Water Based Spill Response	1-61
Figure 1.6-5	Spill Trajectory with Winds from the South	1-63
Figure 1.8-1	General Vicinity Map	1-69
Figure 1.8-2	Site Map	1-70
Figure 1.8-3	Tank Farm Site Map	1-71
Figure 1.8-4	Mechanical Emergency Shut-Down Locations	1-72
Figure 1.8-5	Main Fuel Docks	1-73
Figure 1.8-6	Tank Farm Containment Details	1-74
Figure 1.8-7	Bulk Fuel Truck Rack	1-75
Figure 1.8-8	Evacuation Route	1-76
Figure 1.8-9	Site Elevation	1-77
Figure 3.3-1	Initial Incident Command System Structure for the City of Saint Paul	
Figure 3.10-1	Sensitive Areas	

### ENVIRONMENTAL PROTECTION AGENCY CROSS REFERENCE

This plan follows the contingency planning format of the Alaska Department of Environmental Conservation. As required by 40 CFR 112.20(h), the following cross-reference that identifies the location of the elements listed in Appendix F of 40 CFR 112.20 and 40 CFR 112.20.

40 CFR 112	40 CFR	Subject	Location In This Plan		
Appendix F	112.20				
		General Facility Information	Introduction		
	Appen. C,	Applicability of Substantial Harm Form	Introduction		
	Attach. C-II				
1.1	(h)(1)	Emergency Response Action Plan	Section 1.0		
1.1.1	(h)(1)(i)	Qualified Individual Information	Section 1.2.1		
1.1.2	(h)(1)(ii)	Emergency Notification Phone List	Section 1.2		
1.1.3	(h)(1)(iii)	Spill Response Notification Form	Figure 1.2-1		
1.1.4	(h)(1)(iv)	Response Equipment List and Location	Section 3.6.1		
1.1.5	(h)(3)(vi)	Response Equipment Testing and Deployment	Section 1.5, 3.6.4		
1.1.6	(h)(1)(v)	Facility Response Team List	Table 1.2-3		
1.1.7	(h)(1)(vi)	Facility Evacuation Plan	Section 3.1.5, Figure 1.8-7		
1.1.8	(h)(1)(vii)	Immediate Actions	Sections 1.1		
1.1.9	(h)(1)(viii)	Facility Diagrams	Section 1.8		
1.2	(h)(2)	Facility Information	Introduction and Sections 1.8, 3.1		
1.2.1	(h)(2)	Facility Name and Location	Introduction and Sections 1.8, 3.1		
1.2.2	(h)(2)	Latitude and Longitude	Introduction and Section 1.8		
1.2.3		Wellhead Protection Area	Not Applicable		
1.2.4	(h)(2)	Owner/Operator	Introduction		
1.2.5	(h)(1)(i)	Qualified Individuals	Intro, Section 1.2.1, Table 1.2-5		
1.2.6		Date of Oil Storage Startup	Introduction		
1.2.7		Current Operation	Introduction, Section 1.8		
1.2.8		Substantial Expansions	Section 3.1.3		
1.3	(h)(3)	Emergency Response Information	Part 1		
1.3.1	(h)(3)(i)	Notification	Section 1.2		
1.3.2	(h)(3)(vi)	Facility Response Equipment List	Section 3.6.1		
1.3.3	(h)(3)(vi)	Testing/Deployment	Sections 1.5, 3.6.4 and 3.9.1		
1.3.4	(h)(1)(v)	Personnel	Sections 1.2, 1.5.1, 1.5.2, and 3.8		
1.3.5	(h)(3)(vii)	Evacuation Plan	Section 3.1.5, Figure 1.8-7		
1.3.6	(h)(3)(ix)	Qualified Individual's Duties	Section 1.2.1		
1.4	(h)(4)	Hazard Evaluation	Sections 1.6.5, 2.3, 2.4, 3.4, 3.10		
1.4.1	(h)(4)	Hazard Identification	Sections 1.6.5, 3.1		
1.4.2	(h)(4)	Vulnerability Analysis	Sections 1.6.5 and 3.10		
1.4.3	(h)4)	Analysis of the Potential for a Spill	Section 2.3		
1.4.4	(h)(4)	Oil Spill History	Sections 2.2, 2.4		
1.5	(h)(4)	Discharge Scenarios	Section 1.6SC		
1.5.1	(h)(5)(ii)	Small and Medium Discharges	Sections 1.6SC.2, 1.6SC.3		
1.5.2	(h)(5)(i)	Worst Case Discharge	Section 1.6SC.1		
1.6	(h)(6)	Discharge Detection Systems	Sections 2.5		
1.6.1	(h)(6)	Discharge Detection by Personnel	Sections 2.5.1		
1.6.2	(h)(6)	Automated Discharge Detection	Section 2.5.3		
1.7	(h)(7)(i)	Plan Implementation	Section 1.1, 1.6		
1.7.1	(h)(7)(ii)	Response Resources	Section 1.6SC1.2, 1.6SC2.2		
1.7.2	(h)(7)(iii)	Disposal Plan	Section 1.6.9		

40 CFR 112	40 CFR	Subject	Location In This Plan		
Appendix F	112.20	-			
1.7.3	(h)(7)(iv)	Containment and Drainage Planning	Sections 1.6.1, 1.6.5, 3.2.1, Figure		
			1.8-4		
1.8	(h)(8)	Inspections, Drills/Exercises, Training	Sections 2.5 and 3.9		
1.8.1	(h)(8)(i)	Facility Inspections	Section 2.5.1, Appendix A		
1.8.1.1	(h)(8)(i)	Tank Inspections	Section 2.5.3, Appendix A		
1.8.1.2	(h)(8)(i)	Response Equipment Inspection	Section 3.6.4, Appendix A		
1.8.1.3	(h)(8)(i)	Secondary Containment Inspection	Section 2.5.5, Appendix A		
1.8.2	(h)(8)(ii)	Drills and Exercises	Section 3.9.1		
1.8.2.1	(h)(8)(iv)	Qualified Individual Notification Drill Logs	Section 3.9.1		
1.8.2.2	(h)(8)(iv)	Spill Management Team Tabletop Exercise	Section 3.9.1		
		Logs			
1.8.3	(h)(8)(iii)	Response Training	Section 3.9		
1.8.3.1	(h)(8)(iv)	Personnel Response Training Logs	Section 3.9.1, Appendix A		
1.8.3.2	(h)(8)(iv)	Discharge Prevention Meeting Logs	Section 3.9.1, Appendix A		
1.9	(h)(9)	Diagrams	Section 1.8		
1.10	(h)(10)	Security	Section 2.1.3		
2.0	(h)(11)	Response Plan Cover Sheet	Introduction		
2.1		General Information	Introduction, Sections 1.8, 3.1		
2.2	Appen. C,	Applicability of Substantial Harm Criteria	Introduction		
	Attach. C-II				
2.3		Certification	Introduction		
3.0		Acronyms	Section 3.11		

# **U.S. COAST GUARD CROSS REFERENCE**

The operations are regulated by the USCG regulations 33 CFR 154. The following pages provide information required for Facility Response Plans (FRP) under 33 CFR 154. The overall response is in the form of a cross-reference in accordance with the guidelines as presented in 33 CFR 154.1035.

33 CFR 154	Information	Location in This Plan
1035 (a)	Introduction and Plan Contents	Table of Contents, Introduction
1035 (a)(1)	Facility Name, Address & Telephone	Introduction
1035 (a)(2)	Facility Location	Introduction, Section 1.8.1
1035 (a)(3)	Facility Owner/Operator	Introduction
1035 (a)(4)	Table of Contents	Introduction, Table of Contents
1035 (a)(5)	Cross-reference	Introduction
1035 (a)(6)	Record of Changes	Introduction
1035 (b)	Emergency Response Action Plan	Part 1
1035 (b)(1)	Notification Procedures	Section 1.2
1035 (b)(1)(i)(A)	Facility Personnel	Section 1.2.1
1035 (b)(1)(i)(B)	Agencies	Tables 1.2-1, 1.2-4
1035 (b)(1)(ii)	Notification Form	Figure 1.2-2
1035 (b)(2)	Spill Mitigation Procedures	Section 2.3, 1.6SC
1035 (b)(2)(i)	Volumes by Oil Groups	Section 1.6SC, 5.3
1035 (b)(2)(i)(A)	Average Most Probable Discharge	Section 1.6SC.3, 5.3
1035 (b)(2)(i)(B)	Maximum Most Probable Discharge	Section 1.6SC.2, 5.3
1035 (b)(2)(i)(C)	Worst Case Discharge	Section 1.6SC.1, 5.3
1035 (b)(2)(i)(D)	Worst Case Discharge (Non- Transportation)	
1035 (b)(2)(ii)	Procedures to Mitigate or Prevent Discharges	Section 2.1, 2.5, 3.9
1035 (b)(2)(ii)(A)	Failure of Manifold, etc.	Section 2.3
1035 (b)(2)(ii)(B)	Tank Overfill	Section 1.6.1, 2.3
1035 (b)(2)(ii)(C)	Tank Failure	Section 1.6.1, 2.3
1035 (b)(2)(ii)(D)	Piping Rupture	Section 1.6.1, 2.3
1035 (b)(2)(ii)(E)	Piping Leak	Section 1.6.1, 2.3
1035 (b)(2)(ii)(F)	Explosion or Fire	Section 1.6.2
1035 (b)(2)(ii)(G)	Equipment Failure	Section 1.6.1, 2.3
1035 (b)(2)(iii)	Response Personnel and Equipment	Section 1.2.1, 1.5.1, 3.6
1035 (b)(3)	Facility Response Activities	Section 1.2.1, 1.6, 3.3, Table 1.2-5
1035 (b)(3)(i)	Response Initiation	Section 1.1, 1.2
1035 (b)(3)(ii)	Responsibilities of QI and Alternate	Section 1.2.1
1035 (b)(3)(iii)	Organizational Structure	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(A)	Command and Control	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(B)	Public Information	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(C)	Safety	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(D)	Agency Liaison	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(E)	Spill Operations	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(F)	Planning	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(G)	Logistics	Section 3.3, Figure 3.3-1
1035 (b)(3)(iii)(H)	Finance	Section 3.3, Figure 3.3-1
1035 (b)(3)(iv)	Oil Spill Removal Organization	Section 1.5.2, 3.8
1035 (b)(3)(iv)(A)	Equipment and Supplies	Section 1.6, 3.5-1, 3.6, Table 1.4-1
1035 (b)(3)(iv)(B)	Trained Personnel	Section 3.3.4, Table 1.2-3
1035 (b)(3)(v)	Job Descriptions	Section 3.3

33 CFR 154	Information	Location in This Plan	
1035 (b)(3)(vi)	Dispersants		
1035 (b)(3)(vii)	Aerial Facilities	Section 1.6.3, 3.5.3	
1035 (b)(3)(viii)	Mobile Facilities	Section 1.8.2, 3.1	
1035 (b)(3)(ix)	Mobile Facilities, multiple COTP zones		
1035 (b)(4)	Fish, Wildlife, and Sensitive Areas	Section 1.6.4, 1.6.5, 3.10	
1035 (b)(4)(i)	Identification of Areas for Worst Case Discharge	Introduction, Section 3.2.2, 3.10	
1035 (b)(4)(ii)	Response Actions for Worst Case Discharge	Section 1.6SC.1	
1035 (b)(4)(ii)(A)	Fish, Wildlife and Sensitive Areas	Section 1.6.4, 1.6.5, 3.10	
1035 (b)(4)(ii)(B)	Response Actions to Protect Areas	Section 1.6.4, 1.6.11, 3.10	
1035 (b)(4)(ii)(C)	Location of Sensitive Areas	Section 1.6.4, 3.10, Figures 1.6-4,	
		3.10-1	
1035 (b)(4)(iii)	Resources for Worst Case Discharge	Section 1.2, 1.6SC.1, 3.6, 3.8	
1035 (b)(4)(iii)(A)	Equipment and Personnel to Protect Sensitive Areas	Section 3.6, 3.8, Tables 1.5-1, 3.6-1	
1035 (b)(4)(iii)(B)	Calculation of Planning Distance	Section 3.10	
1035 (b)(4)(iii)(C)	Additional Environments Protected		
1035 (b)(5)	Disposal Plan	Section 1.6.9	
1035 (c)	Training and Exercises	Section 2.1, 3.9	
1035 (c)(1)	Training Procedures	Section 3.9.1	
1035 (c)(2)	Exercise Procedures	Section 3.9.1	
1035 (d)	Plan Review and Updates	Introduction	
1035 (e)	Appendices		
1035 (e)(1)	Facility Specific Information	Section 1.8, 3.1	
1035 (e)(1)(i)	Description of Facility	Section 1.8, 3.1	
1035 (e)(1)(ii)	Vessel Transfers	Section 3.1.4.2, 1.8	
1035 (e)(1)(iii)	Location of First Valve	Figure 1.8-2	
1035 (e)(1)(iv)	Information on Oils at Facility	Section 3.1.2, Appendix C	
1035 (e)(1)(iv)(A)	Generic or Chemical Name	Appendix C	
1035 (e)(1)(iv)(B)	Appearance and Odor	Appendix C	
1035 (e)(1)(iv)(C)	Physical/Chemical Characteristics	Appendix C	
1035 (e)(1)(iv)(D)	Hazards in Handling	Appendix C	
1035 (e)(1)(iv)(E)	Firefighting Procedures	Section 1.6.2	
1035 (e)(2)	List of Contacts	Section 1.2	
1035 (e)(2)(i)	QI and Alternate	Intro, Section 1.2, Table 1.2-5	
1035 (e)(2)(ii)	Oil Spill Removal Contractor	Section 3.8, Table 1.2-1	
1035 (e)(2)(iii)	Agency Contacts	Tables 1.2-1, 1.2-4	
1035 (e)(3)	Equipment Lists and Records	Section 3.6	
1035 (e)(3)(i)	Equipment and Personnel for Average Most Section 1.6SC.4, 3.6		
	Probable Spill		
1035 (e)(3)(ii)	Major Equipment Listing	Section 3.6	
1035 (e)(3)(iii)	OSRO Equipment	Section 3.6.2, 3.8	
1035 (e)(4)	Communications Plan	Section 1.4	
1035 (e)(5)	Site-Specific Safety and Health Plan	Section 1.3	
1035 (e)(6)	Acronyms and Definitions	Section 3.11.1	

#### Section 1.0 Response Action Plan

18 AAC 75.425(e)(1)

This response action plan for the City of Saint Paul Bulk Fuel Facility describes how the City of Saint Paul plans to meet its response planning standard requirements under federal and state law. The plan addresses the requirements of the State of Alaska, the EPA and the USCG. The planning standard for each agency is calculated in accordance with its rules and the highest volume is addressed for the worst case. The plan explains how the response equipment needed to recover the worst case discharge within the shortest time required is mobilized and deployed. See Section 5 of this plan for exact calculations and further discussion.

The City of Saint Paul Bulk Fuel Facility is located at 57° 7' 23.30667" N, 170° 17' 4.15848" W in the Pribilof Islands of Alaska.

City of Saint Paul P.O. Box 901 100 Diamond Hill Road Saint Paul Island, Alaska 99660

Phone:907-546-3110Fax:907-546-3188

The facility is located on Diamond Hill Road, approximately one and a half miles northwest of the community of Saint Paul. The facility sits on four acres and consists of a fuel storage tank farm with a fuel transmission pipeline connecting the tank farm to the City's dock facility and stores #2 diesel, diesel fuel blend, and unleaded gasoline. Product is received via marine delivery, approximately eight times per year. It is distributed at the facility truck rack, at the City service station, and by pipeline to vessels, and to the City power plant.

The largest tank in the City of Saint Paul Bulk Fuel Facility is 14,286 bbls / 600,000 gal. The planning standard volumes are calculated in Section 5 of this plan for each regulatory agency with jurisdiction.

#### Section 1.1 Emergency Action Checklist

18 AAC 75.425(e)(1)(A)

#### **ASSESS SAFETY**

- Check for fire hazards. (see Section 1.6.2)
- Shut off ignition sources.
- Implement and enforce safety precautions and policies; protect yourself and crew.
- Protect the public; get local police assistance for public safety if necessary.
- Call fire department if there is a fire threat.

#### **STOP THE FLOW**

- Follow shutdown procedures.
- Stop pumps and close valves.
- Block drainage routes.

#### **INITIATE CONTAINMENT**

- Deploy boom for spills on water.
- Block flow on land; stop oil from reaching water.

#### NOTIFY THE CITY OF SAINT PAUL OFFICE

- Report damage or injuries.
- Call for any assistance required.
- Report the size and nature of the spill.

The Incident Commander (IC) is responsible for making sure that needed notifications are made. The IC may either do it himself (or delegate this to his staff) or he may ask the assistance of the Qualified Individual (see Table 1.2-1 Initial Notifications).

#### Section 1.2 Reporting and Notification

18 AAC 75.425(e)(1)(B)

Use the table below to make notifications and to log the calls. Blank lines are left for you to log other calls. You must report any spill that threatens to enter the water, or is in the water, to the National Response Center (NRC), to the Coast Guard, and to the Alaska Department of Environmental Conservation (ADEC). Figure 1.2-1 ADEC Spill Reporting Placard gives instructions about the requirements for reporting to ADEC. The Facility Manager or the Qualified Individual (QI) are responsible for notifying ADEC. See Table 1.2-3 for the Facility Manager's name and phone number. QI's are identified in Section 1.2.1.

Agency	Contact	Time/Person Contacted
AK Dept. of Environmental	Anchorage Office 907-269-3063	
Conservation	After Hours 907-269-7649	
U.S. Coast Guard Sector	907-482-4200	
Anchorage		
U.S. Coast Guard National	800-424-8802	
Response Center		
EPA	907-271-5083 (business hrs.)	
	206-553-1263 (24 hrs.)	

#### Table 1.2-1 Initial Notifications

Name	Phone Number
Police	911 / 907-546-3130
Fire	911 / 907-546-3130
EMS	911 / 907-546-3130
Search and Rescue	911 / 907-546-3130
Health Clinic	907-546-8300
TDX	907-546-2312
TDX Saint Paul Fuel Co.	907-546-2404
Trident Seafoods, Inc contacts are Bill Briggs (Safety), Craig Rupp (Engineer), and Dean Fasnacht (Manager)	907-546-2377
Central Bering Sea Fisherman's Association	907-546-2597
Department of Public Safety	907-546-3130
U.S. Environmental Protection Agency (Anchorage)	907-271-5083
Alaska Department of Natural Resources (Anchorage)	907-269-8548
Alaska Division of Emergency Services	907-428-7000
Aleutians West Coastal Resource Service Area	907-272-6700
Pribilof Island (LEPC)	907-581-1233
SERC	907-842-2265
State Fire Marshall	907-269-5482
Radio Station KUHB 91.9 - community notices	907-546-2254
National Weather Service	907-546-2215
Local Water Supply System - City of Saint Paul Public Works	907-546-3176
1-CALL Alaska (Resolve Marine)	907-243-0069
Wildlife Response and Resources <sup>1</sup>	
Aleut Community of Saint Paul Island, Ecosystem Conservation Office	907-546-3200
U.S. Fish & Wildlife Service (Anchorage)	907-242-6893
National Marine Fisheries Service (NMFS) Protected Resources Division (Juneau)	907-586-7236
Alaska Department of Fish & Game (Anchorage)	907-267-2342
NMFS Saint Paul Field Office	907-546-9912
Alaska Fisheries Science Center, Rolf Ream	206-526-4000
Alaska Fisheries Science Center, John Bengtson	206-526-4045
International Dird Descue	907-230-2492
	888-447-1743
Alaska Raptor Rehabilitation Center	907-747-8662
Bird Treatment & Learning Center	907-562-4852

#### Table 1.2-2 Local and Other Emergency Notifications

<sup>1</sup>See Section 1.6.10 for contact information for additional local wildlife responders.

Table 1.2-3	<b>Facility Response Team</b>
-------------	-------------------------------

Name	Work	Cell	City Job Title	Responsibility
Phillip A. Zavadil	907-546-3113	907-546-4179	City Manager	Incident Commander/QI
Monique Baker	907- 546-3150	907-444-2673	City Clerk	Public Information Office
				/Alt. QI
Zachery Lamblez	907-546-3131	907-546-4144	Director of Public Safety/Chief	Safety Officer
			of Police	
Victor Clarey	907-546-3140	907-631-8670	Harbor Officer	Alt. Incident Commander/ Alt.
				QI/ Facility Response Team
Edward Paulus	907-546-3174	907-546-4136	Public Works Director/Facility	Operations Section Chief
			Manager	
Jeff Kowalski	907-546-3165	907-546-4010	Electrician	Planning Section Chief
Emily Melovidov	907-546-3172	907-546-4165	Public Works Administrative	Logistics Section Chief
			Assistant	
Stephanie Mandregan	907-546-3126	907-546-4473	Finance Director	Finance Section Chief
Shane Baldwin	907-546-3176	907-717-4488	Water/Wastewater Operator	Facility Response Team
David Fratis	907-546-3181	907-546-2262	Mechanic	Facility Response Team
Marc Galanin	907-546-3178	907-546-4057	Bulk Fuel Operator	Facility Response Team
Dustin Jones	907-546-3172	907-546-4007	Landfill Operator	Facility Response Team
Alan Kozloff	907-546-3165	907-538-5981	Bulk Fuel Operator	Facility Response Team
Nicolai Kozloff	907-546-3172	907-546-4112	Equipment Operator	Facility Response Team
Anthony Kushin	907-546-3173	907-764-8800	Facilities Maintenance	Facility Response Team
			Specialist	
Shaun Lekanof	907-546-3173	907-546-4125	Facilities Maintenance Worker	Facility Response Team
Steven Melovidov Sr.	907-546-3178	907-546-4087	Bulk Fuel Operator	Facility Response Team
Isiah Porath	907-546-3165	907-546-4146	Power Plant Operator	Facility Response Team
Gabriel Rukovishnikoff Jr.	907-546-3165	907-538-5981	Power Plant Operator	Facility Response Team
Mark Rukovishnikoff	907-546-3176	907-546-4219	Water/Wastewater Operator	Facility Response Team
Sean Scarlett	907-546-3173	907-546-4023	Facilities Maintenance Worker	Facility Response Team
Damon Zacharof	907-546-3181	907-546-4234	Mechanic	Facility Response Team

Area of Responsibility	Agency/Address	Contact(s)
General Oversight	U.S. Dept. of the Interior	Philip Johnson
(ARRT)	1689 C Street, Room 119	907-271-5929
	Anchorage, AK. 99501	
Migratory Birds <sup>1</sup>	U.S. Fish and Wildlife Service	USFWS Regional Spill
Marine Mammals	1011 E. Tudor Road	Response Coordinator
(including sea otters,	Anchorage, AK. 99506	907-242-6893 (24 hour)
walruses, etc.) <sup>1</sup>		
Marine Mammals	National Marine Fisheries Services	Sadie Wright (Juneau)
(including whales,	Federal Building, Room 453	907-586-7630 (work)
porpoises, seals and sea	222 W. 7th Avenue, #43	
lions) <sup>2</sup>	Anchorage, AK. 99513-7577	
General Oversight <sup>3</sup>	Alaska Dept. of Fish & Game	907-267-2805 (work)
Migratory Birds	333 Raspberry Road	907-267-2499 (fax)
Terrestrial Mammals	Anchorage, AK 99518	
Fish Habitat Permit <sup>4</sup>		
Temporary waste and oil	Alaska Department of Environmental	907-269-7510
storage sites, construction,	Conservation	(Anchorage)
transporting contaminated	410 Willoughby Ave., Ste. 303	1-800-478-9300 (24
soils, & burning waste <sup>5</sup>	Juneau, AK 99811	hour)
State-owned lands and	Alaska Dept. of Natural Resources	907-269-8503
interests <sup>6</sup>	Div. of Mining, Land and Water	(Anchorage)
	Southeast Region Office	Email: sero@alaska.gov
	400 Willoughby, Ste. 400	
	Juneau, AK 99801	
Historic, cultural, or	Alaska Department of Natural	907-269-8715
archeology sites <sup>7</sup>	Resources	907-269-8728 (Alt. 1)
	Office of History and Archeology	907-269-8723 (Alt. 2)
	550 West 7th Ave. Suite 1310	907-269-8721 (OHA
	Anchorage, AK 99501	Desk)
NOAA trajectory	National Oceanic Atmospheric	907-428-4143
projections	Administration	
	49000 Army Guard Rd., Ste. G216	
	JBER, AK 99505	

Table 1.2-4	State a	& Federal	Agency	Notifications
-------------	---------	-----------	--------	---------------

<sup>1</sup> USF&WS requires a permit to collect/salvage carcasses, haze wildlife, and collect and hold wildlife, including threatened and endangered species under their jurisdiction.

<sup>&</sup>lt;sup>2</sup> NMFS requires a permit to collect/salvage carcasses, haze wildlife, and collect and hold wildlife, including threatened and endangered species, under their jurisdiction.

<sup>&</sup>lt;sup>3</sup> ADF&G requires a permit to collect, hold, or haze any terrestrial mammals or species on the State endangered species list, and to haze migratory birds. Passive hazing (e.g. with balloons, scarecrows, mylar tape, etc.) does not require an ADF&G permit.

<sup>&</sup>lt;sup>4</sup> Onshore activities involving a fish stream require ADF&G permitting. Title 16 fish habitat permit is required to boom the mouth of a fish stream or for other activities in a fish habitat.

<sup>&</sup>lt;sup>5</sup> Approval is required for temporary waste & oil storage sites, transporting contaminated soils, and burning waste

- <sup>6</sup> DNR requires a permit for activities that exceed the Generally Allowed Uses of State Land described in 11 AAC 96.20.
- <sup>7</sup> DNR-OHA requires a permit for work on historic and archaeological sites on State land. Contact the State Archaeologist. See Appendix A for Alaska Cultural Resources Permit Application



rev. July/2018

# Figure 1.2-1 ADEC Spill Reporting Placard

#### DO NOT DELAY INITIAL NOTIFICATION TO THE NATIONAL RESPONSE CENTER PENDING THE COLLECTION OF ALL INFORMATION

# ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION FORM

								ADEC USE UNLY
ADEC SPILL #:	ADEC SPILL #:		ADEC FILE #:		ADEC LC:	ADEC LC:		
		1						
PERSON REPORTING	ô:	PH	ONE NUMBER:			REPORTED	HOW?	' (ADEC USE ONLY)
						Phon	ie 🗌	] Fax 🗌 PERS 🗌 E-mail
DATE/TIME OF SPILL		DA	TE/TIME DISCOVER	ED:		DATE/TIME	REPO	RTED TO ADEC
and a second second second								Accessed and the second second
INCIDENT LOCATION	V/ADDRESS:	.∂∎	DATUM:	🗌 NA	D27 🗌 NAD83	PRODUCT	SPILLE	D:
Contractor of the south of the			WGS84	4 🗌 Oti	1er			de chi
			LAT.					
			LONG.					
QUANTITY SPILLED:		QUANTITY CONT	AINED:		QUANTITY RECOVERED	);	QU/	ANTITY DISPOSED:
	gallons		🗌 gallo	ns		gallons	07.000	□ gallons
	pounds		🗌 poun	ds		🗌 pounds		D pounds
	POTENTIAL RESPON	SIBLE PARTY:		OTHER	PRP, IF AN Y:			VESSEL NAME:
Name/Business:	-							
Mailing Address:								VESSEL NUMBER:
Contact Name								> 400 GROSS TON VESSEL
Contact Number								
SOUDCE OF COUL								
SOURCE OF SPIEL:								CAUSE CLASSIFICATION:
								Accident
CAUSE OF SPILL:					Ur	ider Investigation		Human Factors
								Structural/Mechanical
Other								
CLEANUD ACTIONS								
CLEANUP ACTIONS.								
DISPUSAL METHOD	S AND LOCATION:							
AFFECTED AREA SIZ	E: SURFACE	TYPE: (gravel. o	sphalt, name of river e	tc.)	RESOURCES AFFECTED	/THREATENED:		(Water sources, wildlife, wells, etc.)
				- 20				(
COMMENTS:								
COLL NAME.				UJEU				
SPILL IN AME:					INAME OF DEUSTAF	INE SPONDING:		
								Yes No
DEC RESPONSE:		C	ASELOAD CODE:		1	CLEANUP CLC	DSURF	ACTION:
Phone follow-up	🗌 Field visit 🗌 Too	k Report	] First and Final	Open/No	LC 🗌 LC Assigned	DNFA D1	víonito	ring 🔲 Transferred to CS or STP
Status of Case: Dopen Closed DATE CASE CLOSED:								
	70.9							2
REPORT PREPARED I	BY:					DATE:		

Revised 6/16/2014

# Figure 1.2-2 ADEC Oil & Hazardous Substances Spill Notification Form

All petroleum discharges will be reported as soon as possible to the City Manager who will become the Initial Incident Commander (IC). The City Manager is:

 Phillip Zavadil

 Office:
 907-546-3113

 Cell:
 907-546-4179

The Initial IC will initiate the response in accordance with the Emergency Action Checklist in Section 1.1. The Initial IC will notify all required federal, state, and local agencies as detailed in Section 1.2. The USCG and the National Response Center will be notified if a spill is to navigable water or adjoining shorelines, or threatens to contaminate water. Immediate response actions will begin while the reporting is being carried out. The Initial IC is responsible for keeping a log of events, communications, and instructions received from agencies concerning a discharge.

#### Section 1.2.1 Qualified Individuals

18 AAC 75.425(e)(1)(B)(i) & (ii)

### **Duties and Authorities**

QI and alternates meet the USCG requirements of 33 CFR 154.1026 and the EPA requirements of 40 CFR Part 112.20(h)(3)(ix).

The City of Saint Paul has designated a Qualified Individuals. This plan serves as the required documentation and confirmation that they maintain the authority to:

- Obligate funds required to carry out response activities
- Act as a liaison with the predesignated Federal On-Scene Coordinator
- Activate and engage in contracting with oil spill removal organizations

# Table 1.2-5 Qualified Individuals

Name	Office	Cell Phone
Phillip A. Zavadil	907-546-3113	907-546-4179
Monique Baker	907-546-3150	907-444-2673
Victor Clarey	907-546-3140	907-631-8670

#### Section 1.2.2 Permits

Even if a permit were not required, it might be necessary to get the agency's permission for access. See Table 1.2-4 for state and federal contacts that would issue permits for activities related to oil spill cleanup.

If federal lands were affected, a land use permit would be required for access. Authorizations required for hazing, capture, or holding injured animals are tabulated on the next page.

	ADF&G			USFWS			NMFS		
Wildlife	Carcass Collection	Capture & hold	Haze	Carcass Collection	Capture & hold	Haze	Carcass Collection	Capture & hold	Haze
Migratory birds	No	No	Yes	Yes <sup>2</sup>	Yes	No	No	No	No
Sea Otters, Walruses,	No	No	No	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	No	No	No
Polar Bears									
Whales, Porpoises,	No	No	No	No	No	No	Yes <sup>3</sup>	Yes <sup>3</sup>	Yes <sup>3</sup>
Seals, Sea Lions									
Terrestrial Mammals,	Yes	Yes	Yes	No	No	No	No	No	No
furbearers, and non-									
migratory birds									
(excluding reindeer) <sup>3</sup>									
Fish, shellfish, and	Yes	No	No	No	No	No	No	No	No
invertebrates									
Bald or golden eagles	No	No	No	Yes <sup>2</sup>	Yes	Yes	No	No	No
Threatened or	No	No	No	Yes <sup>2, 4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>	Yes <sup>4</sup>
endangered species <sup>1</sup>									

 Table 1.2-6
 State and Federal Permits

<sup>1</sup>An ADF&G permit is required to deter, collect, or hold any species on the state endangered species list that is not on the federal endangered species list.

<sup>2</sup> USFWS Office of Law Enforcement Authorization is also required for species managed by USFWS (migratory birds, sea otters, walruses, and polar bears).

<sup>3</sup>Request verbal case-by-case authorization from the NMFS Regional Stranding Program Coordinator or associated co-investigator.

<sup>4</sup>ESA section 7 consultation between federal action agencies (i.e., USCG or EPA) and consulting agencies (USFWS and NMFS).

<sup>5</sup>The reindeer population on the island is managed by the Ecosystem Conservation Office (ECO) located on Saint Paul Island.

To request authorization to initiate wildlife response (carcass collection, hazing, or capture & treatment), see Table 1.2-4 for contact information.

# Section 1.3 Safety 18 AAC 75.425(e)(1)(C)

The Safety Officer is the Director of Public Safety/Chief of Police.

**Zachery Lamblez** Office: 907-546-3131 Cell: 907-546-4144

The Safety Officer (SO) is responsible for preparing a site safety plan based on the assessment of the guidelines discussed below in the initial site characterization. The Site Safety Plan form is located in Appendix A of this plan.

The Safety Officer is responsible for monitoring safety during a spill response and developing measures for protecting the safety of personnel. The Safety Officer will correct unsafe activities or conditions through the regular line of authority, although the Safety Officer has the authority to stop or prevent unsafe acts when immediate action is required.

#### Air Monitoring

If the Facility Manager is concerned about the air quality, before allowing people to enter the spill site and begin the response the air will be checked by the local fire department. The meter will detect whether an explosive danger exists and whether there is sufficient oxygen present for people to enter safely. Benzene is not an issue with a diesel spill. If there is a large gasoline spill, the area will be quarantined, and no response will be undertaken until all safety issues are addressed. These include explosive levels, oxygen, and all aromatics such as benzene, toluene, and total hydrocarbons.

An air sampling monitor is maintained in Harbor office by the City Safety Officer. The device is an MSA Passport Personal Alarm s/n C4-333978. It monitors lower explosive limits (LEL) and O2. The Safety Officer will operate the device. All members of the response team are to be trained in use of the device, respiratory protection, and personnel protective equipment.

Specific duties of the Safety Officer include:

- 1. Check in at the Incident Command Post and receive briefing from Incident Commander.
- 2. Organize work area.
- 3. Brief and assign duties to subordinates.
- 4. Identify hazardous and unsafe situations associated with the spill response.
- 5. Participate in the planning meetings to identify any health and safety concerns inherent in the Incident Action Plan.
- 6. Prepare the safety message for the Incident Action Plan.
- 7. Exercise emergency authority to stop or prevent unsafe acts.

Investigate accidents that occur within the spill response area of activities. In developing a sitespecific safety plan using the following model, all government safety standards will be followed. They include:

- 29 CFR Part 1910, Occupational Safety & Health Standards
- 29 CFR Part 1904, Record Keeping and Reporting Occupational Illnesses
- 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response
- 29 CFR Part 1910.132-37 Subpart 1, Personal Protective Equipment
- 29 CFR Part 1910.38, Employee Emergency Action Plans and Fire Prevention Plan
- 29 CFR Part 1910.1200, Hazard Communication Standards

State of Alaska Department of Occupational Safety & Health standards (8 AAC 61):

- a) Subchapter 1, General Safety Code
- b) Subchapter 4, Occupational Health & Environmental Control Code
- c) Subchapter 5, Construction Code
- d) Subchapter 8, Petroleum Code
- e) Subchapter 10, Hazardous Waste Operations and Emergency Response
- f) Subchapter 15, Hazard Communication Code

#### Information on Oil and Hazardous Material

Safety Data Sheets (SDS) provide procedures for handling or working with hazardous material in a safe manner. They include physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures. SDS's for hazardous products, stored at the Fuel Dock Office and at the Public Works office, are available in the Fuel Dock office, and the Public Works Office to anyone needing one.

18 AAC 75.425(e)(1)(D)

#### Section 1.4 Communications

The Incident Commander is responsible for setting up communications and issuing radios during a spill event through the Marine Sales Department.

If warranted by the magnitude of the incident, the facility Administrative Manager will assume duties as the Communications Unit Leader and develop the Communications Management Plan.

For small spills, adequate communication requires two or more portable VHF radios. A larger spill which requires a command center, etc. will require setting up an expanded communication network. The Communication Unit Leader will oversee the communication center with its telephones (both fixed and mobile) radiotelephone, (VHF, UHF, Marine VHF, and Ground to Air), modems, facsimile machines, and satellite communications. The Communication Unit Leader would employ tactics to meet the specific needs of the spill response.

The Communications Management Plan will assign equipment and frequencies for the field units. If more communication equipment is required, the Communication Unit Leader will order what is needed. The radio requirements worksheet (ICS 216, located in Appendix B of this plan) may be used to assign radios. During a spill event, a phone log should be maintained to document all contacts with agencies and contractors.

Communications with ADEC and the Coast Guard will be initiated and maintained by telephone.

The City of Saint Paul Public Works Dept. communicates on a VHF radio system. All key personnel carry handheld portable radios, and base stations are located in the Harbor Masters office and at the Fuel Dock office. Radios allocated for bulk fuel operations are listed in Table 1.4-1. Channel #1 and #79 are used for all bulk fuel operations. All radios used for communications during marine transfers are intrinsically safe. The normal range of the VHF radios is 10-20 miles, which far exceeds the area that could be impacted by even the worst-case discharge.

On a day to day basis, the Facility Manager is in charge of the radios. The radios have detachable battery packs. Batteries are changed out with extra batteries kept in storage, charged and ready for use. Discharged batteries are charged to be ready for use. Battery chargers are stored in the Fuel Dock office.

Description	Qty	Frequency (MHz)	Location
H-M-138 VHF handheld	3	451 - 456	Various
Base stations	4	451 - 456	DPW office & Fuel Dock

#### Table 1.4-1 Communication Equipment

18 AAC 75.425(e)(1)(E)

18 AAC 75.425(e)(1)(E)(i)

#### Section 1.5 Deployment Strategies

The discharge planning volumes and tiered response requirements from the state and federal agencies are provided in Section 5.0 of this plan.

The deployment strategy identifies the specific deployment activities required to respond to the worst case discharges. Below is a table that summarizes how equipment could be mobilized to deploy enough resources to contain and recover the worst case spill in less than 72 hours. The scenario provided in Section 1.6SC meets the planning standards for EPA, USCG, and the State of Alaska.

#### Section 1.5.1 Transport of Resources

City of Saint Paul Bulk Fuel Facility may be accessed by air or waterway. Extreme weather conditions, or an earthquake might close the Saint Paul Island airport. In the event of such weather, reinforcements from other locations across Southwest and Southcentral Alaska could be delayed and should be transported by vessel instead. Local spill response resources locations are depicted on a site map in Figure 1.8-2 and are listed in Section 3.6 of this plan.

Most of the response equipment can be deployed by hand, as it is stored in close proximity to the potential spill sites. Vehicular transportation of personnel and equipment will be in trucks owned and operated by City of Saint Paul. Transportation requirements will consist of moving people and equipment from the fuel dock, city offices, and airport to the spill site.

Resource	Primary Transport Method	Est. Time to Scene	Alt. Transport Method	Est. Time to Scene		
Saint Paul Resources						
City of Saint Paul TERT Personnel	City-owned or Personal Vehicle	15 minutes to 1 hour	N/A	N/A		
City of Saint Paul Owned Spill Response Equipment	Pickup Truck	15 minutes to 1 hour	N/A	N/A		
Bird Responders	Personal Vehicle	1 to 2 hours	N/A	N/A		
Marine Mammal Responders	Personal Vehicle	1 to 2 hours	N/A	N/A		
Anchorage Resources <sup>1</sup>						
Spill response equipment and responders	Chartered aircraft	12-24 hours	N/A	N/A		

# Table 1.5-1 Resources Mobilization

<sup>1</sup>The City of Saint Paul does not rely on response contractors or offsite resources to satisfy the ADEC response planning standard. If it is determined that off-island resources can expedite the cleanup, the QI will mobilize the necessary contractors in Anchorage.

# Section 1.5.2 Primary Response Action Contractor Mobilization

#### 18 AAC 75.425(e)(1)(E)(ii)

The City of Saint Paul does not rely on response contractors or offsite resources to satisfy the ADEC response planning standard. If it is determined that off-island resources can expedite the cleanup or if a release is outside of the harbor in open ocean, the QI will mobilize the necessary contractors. 1-CALL Alaska's (Resolve Marine), a USCG Oil Spill Response Organization (OSRO), contact information is located in Table 1.2-2 of this plan.

Resource	Primary Transport Method	Est. Time to Scene	Alt. Transport Method	Est. Time to Scene			
Dutch Harbor Resources							
1-CALL Alaska	Barge	$18 - 72 \text{ hours}^1$	N/A	N/A			
equipment and personnel							

### Table 1.5-2 Potential Contracted Resources Mobilization

<sup>1</sup>*Time to the scene is dependent on weather and season.* 

18 AAC 75.425(e)(1)(F)

#### Section 1.6 Response Scenario

Response strategies for oil spills are described in this section. This section is organized in two parts:

**Presentation of General Strategies and Guidelines:** Assists in the decision-making process by spill response personnel. These strategies are applicable to many different types of incidents. It is important to note that the actual procedures that will be followed will depend on the spill characteristics, weather, and other environmental conditions. These strategies are to be used as guidelines only.

**Response Scenarios:** Present the possible sequence of events and tactics that might occur in the event of a hypothetical oil spill. The worst case discharge scenario is intended to demonstrate compliance with the ADEC Response Planning Standards. See Sections 3.2.2 and 5.0 of this plan for all response planning standard calculations.

#### Section 1.6.1 Procedures to Stop the Discharge

18 AAC 75.425(e)(1)(F)(i)

The following are descriptions of how to "stop the flow" for discharges from the City of Saint Paul Bulk Fuel Facility. All of these procedures may be executed immediately when a discharge is detected to minimize the amount of discharge entering the water.

The first step in the procedures to stop a discharge are to shutdown pump(s) and close valves that allow product flow to the segment of the system causing the spill. Always close the valve closest to the point of discharge to minimize the volume discharged. To stop a discharge from a leaking hose, stop the flow to the hose by shutting off pumps and closing valves up stream. Figures 1.8-2 and 1.8-3 identifies the location of primary isolation valves and pump control / shutdown locations. Figure 1.8-4 is a piping diagram that illustrates mechanical shutdown locations.

To stop a discharge due to a hose or line failure during the transfer of product from a barge to shore side storage can be done by stopping the flow from the barge and any back flow from the tanks. The pumps on the barge will be shut down and the valves on the tanks will be closed. Two methods of transfer pump shut down exist on the barge: the normal shut down and the emergency shutdown. Closing the tanks and shutting down the barge pumps stops the flow of product to the cargo lines and hoses.

The tank truck loading rack is surrounded by a containment area which drains into an oily water separator. A discharge of product from the storage tanks inside the tank yard will be contained in the secondary containment area surrounding the tanks.

To temporarily patch a leak in a pipe, compression sleeves with bolt tightening mechanisms will be applied over the pipe. Sleeves are to be tightened until flow is stopped. Repair sleeves for the various pipe sizes are available at the facility.

#### Section 1.6.2 Fire Prevention and Control

18 AAC 75.425(e)(1)(F)(ii)

Fire prevention and control measures would be directed by the Incident Commander in conjunction with the City of Saint Paul Department of Public Safety.

The initial actions would be to terminate sources of ignition and establish safety perimeters. The Safety Officer will monitor the area and use the facility LEL/02 to establish/confirm safe work zones. A site safety plan, that addresses fire and safety hazards, would be completed

Access to the dock would be restricted to authorized personnel. If deemed necessary by the Incident Commander, the dock would be evacuated. Section 3.1.5 addresses Evacuation Plans.

Fire response equipment maintained at the facility includes a 300 lb. wheeled ABC extinguisher and several handheld fire extinguishers.

Fire Safety, Prevention, and response considerations are addressed in the facility Operations and Maintenance Manual.
#### Section 1.6.3 Surveillance and Tracking

18 AAC 75.425(e)(1)(F)(iv)

Spill surveillance and tracking would be by visual observation of response personnel and radio reports from vessels in the vicinity and from land.

Surface water circulation in the harbor is primarily wind and tide driven. In the winter, the prevailing winds are from the north, which would tend to hold spilled fuel against the dock and move it to toward a natural collection area next to the south fuel dock. During summer months winds are generally from the south, which would tend move fuel toward the detached breakwater and harbor entrance (NOAA 2020c and P. Zavadil, personal communication, November 10, 2020).

If fuel escapes the harbor, its movement would be influenced by the prevailing winds and currents. It is estimated that percentage of time that wave heights exceed six feet at the entrance to Saint Paul Harbor range from 50% from November through January to 18% from May through September. Such conditions would preclude response outside of the harbor and would rapidly dissipate spilled fuel (see Section 3.10.2). The percentage of time conditions are "flat calm" outside the harbor, is estimated by local residents to be 5% or less (NOAA 2020c and P. Zavadil, personal communication, November 10, 2020).

The Bulk Fuel Facility Manager is a life-long resident of Saint Paul Island and is knowledgeable of local weather, conditions, and currents.

The Harbor Improvement Interim Feasibility Study and Environmental Assessment contains extensive bathymetric and current data for Saint Paul Harbor (Corp. of Engineers 1996). The City of Saint Paul maintains several copies of the Report. The Table of Contents of the Report was previously submitted to ADEC. The Corp. of Engineers dredged the harbor area in 2005.

In this scenario, it is estimated spilled fuel could reach the Salt Lagoon within 2 hours. The reversing tide would / could take sheen out of the harbor within 3-4 hours. Containment and exclusionary boom can be deployed (conditions permitting) within these time frames.

At the direction of the Unified Command, the USCG will request trajectory projections from the National Oceanic Atmospheric Administration (NOAA). See Table 1.2-4 for NOAA contact information.

#### Section 1.6.4 Protection of Environmentally Sensitive Areas 18 AAC 75.425(e)(1)(F)(v)

The Incident Commander, in conjunction with the Wildlife Coordinator, the Planning Section Chief, and the Unified Command, will develop response and protection priorities.

Any time spilled fuel enters the harbor, the following habitat areas are of primary concern:

- The Salt Lagoon year-round.
- Auklet nesting areas along the Village Cove shoreline and on the spit between the lagoon and harbor May through September.
- Fur Seal Rookeries at Reef Point, English Bay and Lukanin Bay Spring through Fall.
- Stellar sea lion rookeries and haulouts

In this scenario, the initial protection strategy would be two-fold. First, containment boom would be deployed to contain spilled fuel within the harbor (see Figure 1.6-4 and Section 1.6.5). Second, a hazing program would be implemented to protect auklets that nest in the cove and harbor breakwaters. The program would be in accordance with a specific wildlife protection program that would be developed in conjunction with the wildlife trustee agencies.

The facility has designated a Wildlife Coordinator and maintains hazing equipment. USDA has conducted bird deterrence training at the facility. Wildlife protection strategies are presented in Section 3.10 of this plan. Information on potential facilities for wildlife cleanup and rehabilitation is located in Section 1.6.10. See Table 1.2-2 of this plan for contact information.

# Surface Geology and Soils

Sensitive shorelines surrounding the harbor include marshes and sheltered tidal flats. See Section 3.10 of this plan for a description of the shoreline types in the region.

#### Fisheries, Processors, and Hatcheries

Trident Seafoods has the only seawater intake at the harbor. The intake is approximately 10 feet beneath the surface and is not likely to be impacted by a spill; however, Trident Seafoods should be immediately alerted of any discharge in order to minimize potential contamination.

Operating times throughout the year can vary. The Facility Manager at the City of Saint Paul Bulk Fuel Facility has knowledge of the openings and closings of the fisheries and processor in the region. Should the operating fisheries or processor be threatened in the event of an oil spill, the Facility Manager will notify them so they can turn off their water intake. See Table 1.2-2 for contact information for local fish processors and the Central Bering Sea Fisherman's Association.

# Drinking Water Sources

The drinking water source for the City of Saint Paul is basaltic aquifers located north of Telegraph Hill, approximately 3 miles east of tank farm. A release from the facility would not impact the community drinking water source.

# Section 1.6.5 Containment & Control Strategies

18 AAC 75.425(e)(1)(F)(vi)

The strategy is to contain the discharge first and to control what oil escapes containment to prevent it from impacting the shore. The most sensitive shorelines will have the highest priority for protection. The least sensitive shorelines may be used for collection and recovery of the oil that escapes initial containment.

#### On Land

The first priority for any oil spilled on land is to prevent it from getting to the water. Most spills will likely be contained by use of absorbents. Sufficient barriers could be built quickly with absorbents or other material, and cleanup could start immediately. Land containment techniques are described below and refer to STAR Manual Sections B-III-3 and B-III-4 for more information.

Wherever equipment must be manhandled, for example at deployment sites and collections sites, the terrain should be considered. Level terrain with good footing is important for personnel carrying or handling heavy equipment such as skimmers, booms, drums, etc. Personnel should not be required to carry skimmers or other heavy equipment over irregular or steep terrain. Many injuries such as slips, trips, falls, sprains, and other more serious injuries can be avoided by selecting level ground with good footing.

The area between the tank yard and Salt Lagoon is suitable for construction of temporary dikes, berms, and lined trenches to contain and recover spilled fuel. Heavy earthmoving equipment is available from the City of Saint Paul for such purpose.

*Berms* - If a spill is flowing in a depression or ditch, construct a simple berm from earth, rocks, logs, debris and other readily available materials and cover with impermeable liner. If there is any flow of water into the containment area, water pooling may present a serious problem. As the water level rises, the oil floating on the surface may spill over the berm and defeat its purpose. If pooling is anticipated, incorporate a water relief drain into the berm; a relief drain can be a length of pipe, hose or conduit with a flow control valve to maintain the oil/water interface above the drain intake. Set the inlet end of the drain below the oil/water interface and the outlet end at the desired level of the pond.

*Culverts* - A culvert can be dammed by using available materials such as plywood, logs, timbers, debris or other material. A relief drain should be employed in the culvert block if there is any flow of water into the pond. Suspend a sheet of plywood from stakes to provide adjustable water relief. The plywood can be lowered or raised to regulate the pond level.

*Trenches* - A trench can be an effective method of containing an oil spill, particularly if the oil is moving through a subsurface layer of soil or a vegetative mat. Dig the trench at a right angle to the flow of oil to a depth which exceeds the affected soil or vegetative layer. Place an impermeable liner around the lower side of the ditch.

*Fence Barriers* - If a spill occurs in an area where the oil does not percolate into a vegetative or soil layer, drive a fence barrier into the soil to block the flow of oil. Construct the barrier from

sheet metal, corrugated roofing material, plywood or other suitable material. Dig sample holes before the barrier material is driven into the ground to determine the depth to which the barrier should be inserted.

#### On water

Oil is contained on the water with containment boom. The boom is deployed around the oil. Sorbent boom should be placed inside the curtain boom to improve the effectiveness of the containment. If the slick escapes to open water before it can be contained, different techniques must be used. Boom must be deployed ahead of the slick in an attempt to capture it. An oil slick tends to spread out as it moves and to form a tear drop shape. It will move with the current at the same speed and with the wind at about 3 % of the wind speed. STAR Manual Section B-III-2 has further information on the containment boom tactic.

To capture a slick on open water, two vessels are required. One vessel controls each end of the boom which is deployed in front of the slick. The slick can then be captured by pulling the boom up to the slick and closing around it. The slick can then be held in place while a third vessel, with a skimmer or absorbents recover the oil; or it can be towed elsewhere for recovery. When sweeping or moving a slick in this manner, boom velocity should be less than one knot or the slick is liable to escape. Refer to STAR Manual Section B-III-6.

If the slick is not contained before reaching shore, it must be stopped from contaminating critical shores and then trapped against shores where impact would be minimal and cleanup easiest. Exclusion booming techniques are used for protection of critical shores. Where there is a long-shore current, exclusion booming is used. Refer to STAR Manual Sections B-III-12 and B-III-13 for further information on the diversion boom and exclusion boom tactics.

Containment actions outside of the harbor are unlikely, due to the open-ocean conditions and rocky shoreline. Based on spill experience and local input, it is estimated that spills of the magnitude of the potential marine transfer discharge would disperse within a short distance of the harbor entrance. Discussion on dispersion and evaporation rates for potential discharge volumes are presented in Section 3.10.2 of this plan.

#### Nearshore

Spills on the water can occur from the dock or vessel during a transfer operation. If no dangerously volatile fuels are handled, the best action is to contain the slick as quickly as possible in the vicinity of the shore or dock. The general procedure is to use a floating containment boom to encircle the slick. Specific deployment methods depend on the situation. Generally, the containment boom can be attached to a pile at the dock or anchored onshore. The deployment skiff then tows the boom so as to encircle the slick. The second end is then tied to a dock pile or again anchored onshore. Refer to STAR Manual Section B-III-5 for further information.

#### Section 1.6.6 Recovery Strategies

*18 AAC 75.425(e)(1)(F)(vii)* 

#### Spill Outside the Containment Area

The City of Saint Paul has enough equipment available on site to recover the response planning standard in less than 72 hours. The strategy is to prevent any oil on land from getting to the water; to contain oil that is on the water; and to control the oil that escapes containment to prevent it from impacting sensitive areas. The resources to accomplish this are summarized in Sections 1.5 and 3.6 of this plan.

#### Spill Inside the Containment Area

In the event the largest tank discharges its entire volume, it would be contained in the containment area. The oil could be pumped into tanks if the capacity existed.

#### Uplands

If the spill is successfully contained on land, it can be recovered and possibly recycled. In case the oil is floating on pools of water, skimmers, a vac truck, or absorbents can be used to recover it. Oil which has penetrated into the soil must be recovered in accordance with a remediation plan approved by ADEC.

#### Shorelines

Spills that are not contained on the open water or on the uplands before reaching the water will contaminate the shoreline. The cleanup methods employed will depend on the type of shoreline affected. See Section 1.6.11 Shoreline Cleanup Teams, for detail on shoreline cleanup.

#### Open water

To recover oil from water, it must first be contained. The facility skimmer will be placed in the containment area with the greatest concentration and thickness. Skimming operations will become inefficient when most of the spill has been removed. Sorbent materials will then be used to pick up the remaining oil.

Spills that have not spread over a large area or that have been driven into streamers by the wind and waves may be recovered using booms and skimmers. Small slicks may be successfully skimmed using two booms, 100 to 150 feet each, to concentrate the oil, with a skimmer boat to remove the oil. Streamers or "wind rows" which are the long parallel rows of oil created by wave action can be skimmed using this configuration beginning downwind and moving upwind along the streamer. The relative skimming velocity will not exceed one knot for these cases.

Sorbent materials will be used for small volume spills in calm seas and to pick up small quantities of oil that are difficult to remove with mechanical equipment, such as skimmers and vacuum devices. Sorbent materials can present a recovery problem if they are placed in an area where tidal action, currents or winds cause them to float away. A tether line can be attached to the sorbent materials to aide recovery.

To increase the efficiency of sorbent materials, they will be moved and turned frequently, and caution will be exercised in removing them from the oil-contaminated area so that oil does not drip on to clean surfaces.

#### Section 1.6.7 Damaged Tank Transfer & Storage 18 AAC 75.425(e)(1)(F)(viii)

In the event of a damaged storage tank and fuel that needs to be removed from the tank, pumps will be used to transfer the fuel to alternate storage. Transfer to alternate storage within the tank yard will be accomplished with the tank farm piping. Transfer to alternate storage outside the tank farm will be accomplished with the use of tank trucks. If a marine vessel is to be used as alternate storage, the transfer will be accomplished with the use of a pipe or hose. Variations to these procedures may be used if circumstances necessitate.

#### Section 1.6.8 Transfer & Storage of Recovered Oil 18 AAC 75.425(e)(1)(F)(ix)

The STAR manual marine and land-based tactics for storage and transfer of recovered liquid (STAR Manual Sections B-III-16 and B-III-17) are adopted for use in this plan.

The primary storage for recovered liquid is the dedicated tanks located at the tank farm. Recovered liquids would be transferred to the City tank truck (4,000 gals.) and transported to available storage at the tank farm, or returned to the vessel. The City of Saint Paul commits that tanks #2 and #3 will remain empty to provide for contingency spill storage capacity. Tanks #2 and # 3 each have safe fill height capacity of 75,787 gallons (Table 3.1-1), thus providing combined contingency spill storage capacity of 151,574 gallons. In addition, there are 6 contingency tanks with 40,000 gallon capacity, and one tank truck with 4,000 gallon capacity.

Correct handling of oil and oily debris is imperative to prevent recontamination and to protect unaffected areas.

The total liquid recovered in the worst-case discharge will be 180,000 gal/4,285 bbls and the plan calls for mobilizing 191,562 gal/4,561 bbls of temporary storage capacity (see Table 1.6SC-1).

The total liquid recovered in the spill scenario for the release at the South Fuel Dock marine header will be 117,810 gal/2,805 bbls and the plan calls for mobilizing 191,562 gal/4,561 bbls of temporary storage capacity (see Table 1.6SC-3).

#### Decanting

Decanting is a method used to remove water from recovered liquid. Decanting is an option which may be used whenever temporary storage capacity is insufficient to hold all the recovered liquid. Application must be made to ADEC for a permit to operate a decanting system. Appendix A of this plan contains a decanting permit application. No decanting is allowed without an approved permit from the State of Alaska. See Section 3.12 Bibliography of this plan for a link to State of Alaska information on decanting.

Before decanting, the liquid must be allowed to sit for some time (generally 30 minutes) to permit settlement and separation of the oil and water (Ross 1999). Water is then removed from the bottom of the storage container. The water may be drained if the storage container has a bottom drain. Otherwise the water may be pumped from the bottom of the container through a suction hose inserted through the oil into the water at the bottom of the container. The discharged water should be returned to the recovery area so any oil accidently discharged will be recovered (Ross 1999).

To determine the amount of water versus oil in a temporary storage container use a method called "sticking the tank." This means sounding the container with a stick or rod with "Kolor Kut" paste (or another similar product) on it. Kolor Kut paste will change color when it comes in contact with water, thereby indicating the level of water in the container. Standard operating procedure is to leave some water in the container to avoid losing any recovered oil. Leaving 20 percent of the water in the container will conservatively prevent oil from being discharged during decanting.

# Section 1.6.9 Temporary Storage and Ultimate Disposal 18 AAC 75.425(e)(1)(F)(x)

#### **General Discussion**

Two types of waste may be generated during a spill response, contaminated solid waste and liquid waste, which is usually a mixture of oil and water. All waste should be quantified and characterized.

# Transportation

If any oily liquids have been identified that require off-site disposal, they will be manifested and transported by permitted carrier to the designated disposal site.

# Disposal

**Recovered Oil:** Reuse and/or recycling are the preferred disposal methods for oil recovered from surface waters during recovery operations. However, oil that has been removed from surface waters is frequently contaminated with water, sand, plants, and plastics and must be treated or processed before it can be reused as a fuel oil or other petroleum. Excess water needs to be removed as it increases the volume of material that has to be transported and can also cause problems for disposal facilities. An oil/water separator or vacuum truck should be available on site to remove the excess water from the recovered oil.

**Oily Debris**: Oily debris includes oil-contaminated soil, sand, logs, and recovery materials such as sorbents and oil mops. Oil-contaminated soil or sand can often be reprocessed for use in asphalt production. Oil-contaminated soil and recovery materials can also undergo bioremediation depending on their content. Oil-contaminated recovery materials can be incinerated or re-used by thermal recovery facilities.

**Segregation:** Oily debris should be segregated as it is collected to minimize the amount of debris that has to be disposed of in a landfill rather than recycled or reused. Beach monitors should be responsible for ensuring segregation.

**On-Site Incineration**: On-site incineration of oily debris requires approval by the designated state agency, the local air pollution control authority, and the local fire department. Best technology must be employed to reduce air pollution. Fires must be attended at all times.

**Off-Site Disposal** - Permitted disposal facilities change services and locations frequently. The Job Aid: Waste Management and Disposal lists contact information for waste disposal contractors that may assist in identifying disposal options. The Job Aid: Waste Management and Disposal is available on the Area Plan References and Tools website (see Section 3.12 of this plan for a link to the Area References and Tools website). Contractors include Emerald Alaska, PSC Environmental Services, and Alaska Soil Recycling. Should the need arise for disposal off site, the following facilities have been identified for waste disposal. The approved disposal plan will designate the facility for disposal. Listed below are potential treatment facilities that would be contacted in the event contaminated liquids or solids cannot be disposed of on the island.

Company	Location	Phone
US Ecology	Anchorage	907-258-1558
Stericycle Environmental Solutions	Anchorage	907-272-9007
Alaska Soil Recycling	Anchorage	907-348-6700

#### **Temporary Storage**

A temporary storage site will be used to stage oily waste. When site approval is received from the agencies, temporary storage area can be constructed in approximately 24 hours. As waste is received at the temporary storage site, it will be tested and classified. Final disposition of the waste will be described in the approved waste disposal plan. Permits required by state and local agencies will be obtained for temporary storage sites. Permits are discussed in Section 1.2.2 and contact information for obtaining permission for temporary storage sites is located in Section 1.2.

Recovered liquids would be stored until such time they could be reprocessed on site, or until transportation could be arranged for off-site reprocessing or disposal. This could range from 3 days to four months, depending on volume, degree of contamination, and season.

Contaminated solids would consist of used sorbents and an extensive volume of contaminated soil and debris. Temporary storage areas (diked and lined) would be constructed adjacent to the tank farm and/or by the public works office (Figure 1.8-1). The temporary storage sites (cells) would be constructed of locally available materials (dunnage and liner material or visqueen). The initial temporary storage cell would be approximately  $40' \times 40' \times 2'$ , thus allowing storage of approximately 150 ea. 55 gallon open-top drums. Sorbent material would be collected in impervious containers and/or plastic bags and stored in the lined area pending disposal.

#### Section 1.6.10 Wildlife Protection

18 AAC 75.425(e)(1)(F)(xi)

The person responsible for initiating wildlife response is the City Manager:

# Phillip Zavadil Office: 907-546-3113 Cell: 907-546-4179

The City Manager is responsible for understanding wildlife response tasks and the qualifications necessary to perform the tasks.

A summary of response tasks concerning wildlife:

Level of Response	Activity
Primary	Keep oil from reaching wildlife or habitat. Prevention of secondary
	contamination through scavenging of dead and oiled wildlife.
Secondary	Haze wildlife away from contaminated habit.
Tertiary	Capture and treat contaminated wildlife.

Federal laws and regulations limit the City of Saint Paul handling of seabirds, marine mammals and other wildlife. Under these laws and regulations, it is illegal for anyone to haze, handle, or capture wildlife except personnel from the responsible government agencies, and trained individuals authorized by the responsible government agencies.

Plans for protection, recovery, disposal, rehabilitation and release of wildlife affected by an oil spill are subject to the *Wildlife Protection Guidelines for Oil Spill Response in Alaska* and the *Wildlife Protection Guidelines: Pribilof Islands* (see Section 3.12 of this plan for a link to the Area References and Tools website). The *Wildlife Protection Guidelines for Oil Spill Response in Alaska* should be referenced for protection strategies for pinnipeds, cetaceans, and terrestrial animals, and for additional information on the protection of migratory birds and northern fur seals, such as forms, tactics, response planning standards, and permit/authorization information. The *Wildlife Protection Guidelines: Pribilof Islands* contains information specific to the protection of migratory birds and northern fur seals. This document also contains a list of hazing and protection equipment located on the island, contact information for individuals on the island that are trained in wildlife hazing, potential bird stabilization facilities, and response strategies (ADEC 2014b).

A specialist from NOAA NMFS will provide oversight and permitting/authorizations for carcass collection, deterrence, and capture of marine mammals under their jurisdiction (NMFS 2017). A specialist from USFWS will provide oversight for any actions that are taken with regards to sea otters and migratory birds. NOAAs Pinniped and Cetacean Oil Spill Response Guidelines and the Arctic Marine Mammal Disaster Response Guidelines provide guidance on dealing with marine mammals during a spill response (Ziccardi, et. al. 2015 and NMFS 2017).

The City of Saint Paul and other community groups like Tanaq, TDX, NOAA, USFWS, NMFS, and others have trained personnel, equipment, and treatment capability on-island that has been structured and organized within a joint working group for both birds and marine mammals

present in the region. The involvement of outside contractors is seen by the City of Saint Paul as something that would happen only if they could not offer solutions themselves on-island. This is due to the extreme remoteness and sensitive bird and mammal populations. Local subsistence hunters know the animals well and receive updated training as part of regular marine mammal and migratory bird observer positions and frequently perform response interactions like removal of marine debris and entanglements. The working group has determined that prevention and redirection are the best methods to prevent loss of wildlife - and that treatment is the third option that should occur locally, humanely, and as soon as possible.

Bird deterrence equipment and hazing kits are available at the City of Saint Paul Public Works Department, the NMFS Lab Building, and at TDX. A NOAA NMFS connex located north of the Garco building contains 1,400 30-pound bags of sphag-sorb that should be deployed to protect fur seal haulouts and rookeries (ADEC 2014b).

There are a number of residents of Saint Paul Island that are trained in bird deterrence or bird capture and stabilization. They are listed below:

Name	Phone Number	Type of Training
Jason Simeonoff	907-546-4251	Bird deterrence
Joshua Rukouishnikoff	907-310-3339	Managing Wildlife Hazards at Airports
Charles Stepetin	907-782-5226	Bird Hazing
Phillip Zavadil	907-546-3113 (office) 907-546-4179 (cell)	Bird capture and stabilization
Aquilina Lestenkof	907-546-4109	Bird capture and stabilization

#### Table 1.6.10-1 Local Bird Responders

Sources: (ADEC 2014b and P. Zavadil, personal communication, November 3, 2020)

Bird capture and stabilization sites are available at the Alaska Maritime National Wildlife Refuge Office. They have space for 20-30 captured birds and 24 bird stabilization spaces. The City of Saint Paul Public Works Trades Building is available for use for bird stabilization. Additional potential bird stabilization facilities are listed in Table10A of *The Wildlife Protection Guidelines: Pribilof Islands* (ADEC 2014b).

Locations on Saint Paul Island for wildlife triage that can accommodate birds and/or marine mammals are as follows:

- NOAA Lab Building
- NOAA Garco Building
- Trident Seafoods
- City Public Works Building
- City Motor Pool Building
- City Polar Star Building
- TDX POSS Camp

Sources: (ADEC 2014b and P. Zavadil, personal communication, November 3, 2020)

The Aleut Community of St. Paul Island, Ecosystem Conservation Office has a Marine Mammal Stranding Agreement with NMFS NOAA (Stranding Agreement Number: SA-AKR-2019-04). This agreement states the Aleut Community of St. Paul Island may take species of marine mammals covered under the Marine Mammal Protection Act for the purpose of live stranding first response (initial assessment and care at the site of stranding and assist in the appropriate disposition of the animal), beach triage, beach release, temporary holding for assessment and triage, translocation and/or transportation to a NMFS authorized rehabilitation center within the Alaska Region. Contact information for the Aleut Community of St. Paul Island is located in Table 1.2-2 of this plan.

Key responders listed in the stranding agreement are:

Name	Work Number	Cell Number
Lauren Divine	907-564-3231	907-891-3031
Paul Melovidov	907-546-3226	907-546-4030
Aaron Lestenkof	907-546-3241	907-546-4450
Pamela Lestenkof	907-546-3238	907-726-7252

#### Table 1.6.10-2 Local Marine Mammal Responders

Each of these individuals has Level 1 whale training and lab and field necropsy and biopsy training. Aaron Lestenkof and Paul Melovidov have marine mammal handling training specific to fur seals.

The Alaska Fisheries Science Center will be contacted for questions regarding fur seals. Contact information for these individuals is located in Table 1.2-2 of this plan.

If there is oiled wildlife that needs to be captured, treated, and rehabilitated, that exceeds on island capabilities, the City of Saint Paul will mobilize appropriate wildlife contractor(s) to respond, in coordination with NMFS, USFWS, and ADF&G.

For wildlife permit contacts, refer to Table 1.2-4 State and Federal Agencies Contacts. Authorizations required for hazing, capture, or holding injured animals are tabulated in Table 1.2-6 State and Federal Permits.

Dead, oiled wildlife must be collected and disposed of to prevent secondary contamination of other wildlife. Dead wildlife collected shall be submitted to the appropriate wildlife agency representatives. Disposition of carcasses will be done under their direction. A data sheet for collected dead oiled wildlife can be found in the *Wildlife Protection Guidelines for Oil Spill Response in Alaska* (see Section 3.12 of this plan for a link to the Area References and Tools website).

#### Section 1.6.11 Shoreline Cleanup Teams

18 AAC 75.425(e)(1)(F)(xii)

The techniques and equipment used for shoreline cleanup will be determined by the Shoreline Cleanup Assessment Technique (SCAT) team. The SCAT team is composed of the NOAA representative in Alaska, State, federal and local government representatives.

Shoreline will be identified by type, sensitivity and the degree of impact. This information will be obtained from the SCAT team through field inspections that will be conducted at the spill site. The SCAT team will recommend shoreline cleanup strategies and methods. The Unified Command will approve the method to be used in accordance with proper agency approval.

Shoreline cleanup must be coordinated with affected landowners. Permits may be required to enter and to operate on private land.

Only non-invasive manual cleanup techniques and bio-remediation are proposed due to evidence indicating that invasive cleanup operations do more harm than good. Such things as the removal and erosion of beach gravel not only disturb resident life but can hinder recovery.

The primary shoreline cleanup methods the City of Saint Paul will use are manual collection. Sorbent boom and sorbent sweeps are good for low impact beach cleaning, and sorbent pads may be used to clean rocky shoreline. Water washing may be used with the sweeps if the Unified Command agrees to its use. The tools required for manual shoreline cleanup are available at the facility. They include:

- rakes,
- shovels, (pointed & flat)
- sorbent booms,
- sorbent sweeps,
- survey stakes,
- barrier tapes,
- pitch forks, and
- plastic bags with wire ties.

A description of shoreline types in the region is provided in Table 3.10-2 Shoreline Type Predicted Oil Behavior.

#### Section 1.6SC Spill Scenario

18 AAC 75.425(e)(1)(F)

The response strategy is the plan of action that is the framework the City of Saint Paul follows when responding to an oil spill. This determines the focus of the efforts which are then translated into action through the step-by-step tactics employed.

The strategy for responding to a spill is to stop it, to contain it, and to recover it. Since part of the purpose of containing the spilled product is to prevent it from damaging the environment, The City of Saint Paul has defined the following strategies to govern response to oil spills.

- Stop the source of the spill as soon as possible.
- Contain the spilled product.
- Protect threatened sensitive environmental and wildlife.
- Recover product and clean up contaminated areas.

The situation may not always allow the response to step sequentially through these strategies. Although the Incident Commander will be guided by this strategy, logic and judgment will always be relied upon to determine when exceptions are necessary.

For example, usually the product spilled would be diesel fuel, but it is possible that responders face a gasoline spill. In this case, containment would not be correct. Dispersion or evacuation would be safer because of the possibility of explosion and fire.

In case of a diesel spill that was not quickly contained and was threatening wildlife or a sensitive environment, the priority of the response might shift to protecting the threatened environment or wildlife instead of containment. Marine mammal response will be provided by authorized personnel from the Aleut Community of St. Paul Island (see Table 1.2-2 and Section 1.6.10 for contact information).

The Incident Commander is expected to use judgment and to modify the plan to meet the circumstances.

The scenarios below are not written to be followed in a real spill response. They illustrate a hypothetical response to a spill by describing how response resources might be used to respond to an imaginary spill. They are not prescriptive, rather they can be used as a general guide for spill response. In the case of a real spill, the Unified Command would consult with the agencies having jurisdiction to decide what resources should be protected and what methods should be used.

#### Section 1.6SC.1 Worst Case Discharge Scenario

**Scenario summary:** An unexplained catastrophic weld seam failure occurs to Tank #8 causing a release of 180,000 gallons #2 diesel. The secondary containment wall was damaged earlier that day and repairs had not been completed when the weld seam failure occurs. The release flows to the west and collects in low points between the tank farm and the Polovina Turnpike. The release occurs at 1200h on a day in September. The tide is ebbing, and winds are from the north at 8 knots. The sky is overcast, visibility is eight miles, and the temperature is 50°F.

#### Scenario Assumptions

- The Safety Officer position is performed concurrently with other response duties of the Director of Public Safety/Chief of Police (or his designee) in the first 6 hours of response. The Safety Officer does not count towards total personnel in a time period.
- The full-version of the Spill Tactics for Alaska Responders (STAR) manual was used for reference to applicable spill response tactics throughout the scenario.
- Community members on Saint Paul Island have been trained in bird deterrence and bird capture and stabilization (ADEC 2014b). The Aleut Community of St. Paul Island has four individuals on staff that are trained in marine mammal response. At the discretion of the Incident Commander, trained individuals will be contacted to assist with bird hazing, capture, and stabilization and marine mammal response as needed during the response. The National Marine Fisheries Service (NMFS) office on the island will be contacted to provide oversight with regards to wildlife protection during a large spill response at the facility. See Table 1.2-2 for contact information and Section 1.6.10 of this plan for more information on wildlife protection procedures.
- At the discretion of the IC and the Operations Section Chief, protection strategies will be deployed at threatened environmentally sensitive areas. The IC's local knowledge of the region including weather and wildlife habitats will help determine which areas are threatened and require protection measures. See Sections 1.6.10 and 3.10 of this plan for locations of environmentally sensitive areas and strategies for protecting them.
- The scenario described below is purely conjectural and depends on many assumptions that may not apply to a real spill. It is written solely for the purpose of demonstrating on paper how a spill response might be conducted. In reality, a major spill response will be conducted under the direction of the Unified Command, who will respond to the real situation, following the principles set forth and using the resources described in this plan and not by following the scenario described below.
- Figure 3.10-1 displays the planning distance surrounding the facility.

# Section 1.6SC.1.1 Narrative

Hour	Response Activity
<b>First Operation</b>	onal Period
1200h 0 Hour	The catastrophic tank failure and release from the impoundment area is discovered immediately. The City Manager assumes the position of initial Incident Commander (IC). The IC's first concern is safety of all personnel. Personnel are evacuated from the area and accounted for. The IC conducts an initial briefing with responders on site, and delegate initial tasks. All ignition sources are shut off and all safety precautions are enforced. Police and fire departments are notified of the danger
1215h (15 min)	The IC conducts an initial site assessment and determined initial safety and response actions. The IC notifies QI and makes other local notifications (see Table 1.2-2 for list of local emergency contacts). All City of Saint Paul emergency response personnel are requested to meet at the public works office immediately. The QI will report the spill to the Alaska Department of Environmental Conservation and to the National Response Center.
1230h (30 min)	A safety perimeter and security patrol are established. Roadblocks are erected on Polovina Turnpike and Diamond Hill Road. Radio alerts are broadcast to the community. A command center is established at the Public Works office. An incident and safety briefing is held.
1300h (Hour 1)	The IC, in conjunction with the Wildlife Coordinator, the Planning Section Chief, and the Unified Command, develop appropriate response and protection priorities. Local resources and personnel arrive. The local availability of additional trained responders requires shift work to facilitate continuous operations during the containment and initial recovery phases. After the notifications have been made, the initial site assessment completed, the IC conducts an initial tactical briefing for the crew. He sets the objectives for the response. The IC assigns tasks. The first priority is to contain the spill on land in the low areas located on the eastern side of the tank farm. Initial containment and recovery actions will be initiated only when conditions are determined safe by the IC. A safety plan is developed.

Hour	Response Activity			
1400h	Earthen berms and containment ditches are assembled using the City of Saint			
(Hour 2)	Paul's heavy equipment. Containment ditches are constructed to prevent fuel from migrating subsurface to the Salt Lagoon and to create recovery sites.			
	Temporary storage sites (cells) are constructed of locally available materials (dunnage and liner material or visqueen). The initial temporary storage cell is approximately 40' x 40' x 2', thus allowing storage of approximately 150 ea. 55 gallon open-top drums. Additional storage cells are constructed depending on the volume of debris anticipated. Local materials are available to construct approximately 20,000 sq. feet of storage space.			
	The net result is a large area of terrestrial contamination that will require an extensive and on-going remediation program.			
1500h	The City of Saint Paul's Slickbar Slurp skimmer, two Honda trash pumps, and			
(Hour 3)	a converted tank truck are used to recover product from collection sites on land located east of the tank farm. Direct suction is the initial means of recovery, later followed by trenching and water flushing operations to recover the fuel remaining in the soil.			
	Recovered product is stored in the city tank truck, salvage drums, a bladder tank, and out of service contingency tanks. See Section 1.6SC.1.2 of this plan for a listing of all storage devices and capacities.			
1600h (Hour 4)	Tactics meeting is held. A decontamination plan is prepared. The decontamination equipment and services will be located harbor master's office where there is hydrant access. An equipment drop is set up where PPE is removed and sorted. Another station is set up for equipment cleaning. Contaminated disposable equipment is sealed in double plastic bags. Reusable equipment is cleaned and set up for the next shift.			
1700h (Hour 5)	A Wildlife Unit is assembled under the guidance of the Planning Section Chief. They will implement protection strategies in conjunction with wildlife agencies through Unified Command Planning Section.			
	Local responders trained in bird deterrence or capture and stabilization are notified of the spill and requested to report to the spill site. At the discretion of the IC, appropriately trained personnel from the Aleut Community of St. Paul Island will be notified of the release and requested to report to the spill site to handle hazing, capture, or stabilization of injured wildlife (see Section 1.6.10). A wildlife response plan for hazing, capture, stabilization, or treatment of injured wildlife is prepared by the Planning Section. The plan is submitted to ADF&G, USFWS, and NMFS. A copy is given to the UC.			
2000h	The Incident Management Team (IMT) holds the first planning meeting.			
(Hour 8)				

Hour	Response Activity			
2200h	As daylight is decreasing, recovery operations are shut down for the night and			
(Hour 10)	the area is secured.			
	The Incident Action Plan (IAP) is prepared and approved.			
	With the use of portable lights, collection, cleaning, and/or disposal of sorbent materials continues through the night.			
	The waste management contractor will manage recovered liquid and collected waste. It will be inventoried, characterized and stored for ultimate disposal. Each container will be labeled with its contents, quantity, and date. Identification numbers for tracking will be assigned. ADEC must approve the removal and transportation of all wastes.			
Second Opera	ting Period			
2300h (Hour 11)	Oily debris will be double bagged and placed in dumpsters or shipped on vans or trucks to the City of Saint Paul facility. Contents will be classified and labeled for tracking. With an ADEC in-situ burning permit, some oiled wastes may be burned in a controlled burning operation on site. Applications for temporary storage sites and waste disposal are made to ADEC in hour 6-8.			
0900h (Hour 21)	The supervisors are briefed on the IAP and given their assignments for the next shift during the Operational Period Briefing. The Planning Section Leader briefs the IMT on the new objectives and the Operations Section Leader reviews the tactical plan with the team leaders.			
	A situation briefing covers the weather, spill trajectory forecast, safety, and environmental concerns. Assignments are made by the Operations Section Leader. Logistics provides an update on the supplies and resources.			
	The same recovery tactics continue in the second operational period with use of the Slickbar Slurp skimmer, two honda trash pumps and the converted tank truck.			
1300h (Hour 25)	As the pools of diesel are decreasing, the Slickbar Slurp skimmer is no longer effective at recovering product from land. The skimmer is cleaned and maintenance is performed if necessary and then it is returned to storage.			
1600h (Hour 28)	The pumps are no longer effective at recovering product from the low spots on land. Water flushing operations are deployed in highly saturated soils. Sorbent pads are used to collect the thinnest concentrations.			
2200h (Hour 34)	As daylight is decreasing again, portable lights are staged near the recovery sites to allow waste management operations to continue into the night.			
	The IMT conducts another planning meeting and reviews all information about the incident. Following the objectives set for the response and based on the accomplishments and status reports, the Planning Section works into the night to develop the IAP for the third day.			

Hour	Response Activity		
Third Operating Period and Beyond			
0900h	The Planning Section reviews the progress and begins to develop the long-		
(Hour 45)	range plan for completing the cleanup. Objectives are reviewed with the		
	Unified Command and amended as deemed appropriate.		
	Decontamination and packing of equipment continue. The waste management contractor continues to dispose of the waste and inventory the recovered product.		
Day 4	Waste disposal is completed by the waste management contractor. All equipment is returned to storage. Damaged equipment is repaired or replaced.		

Worst Case Discharge Scenario – City of Saint Paul Tank #8 Catastrophic Release				
<b>Response Type:</b>		Type / Amount:		
		Ultra-low sulfur dies	sel #2	
Catastrophic tank	and SCA failure,	Est. amt. discharged	Est. amt. discharged: 180,000 gallons (4,286 bbls)	
release to SCA and	l land outside SCA.	Est. amt. to reach op	en water: 0 gallons (0 bbls)	
		Est. amt. to remain on land: 180,000 gallons (4,286 bbls)		
Time:	1200h	Wind:	8 knots from the north	
Season:	Fall	Temperature:	50° F	
Visibility:	8 miles	Location:	City of Saint Paul Tank Farm	
Low Tidos	0229h at 1.55 feet	High Tidos.	0805h at 2.39 feet	
Low Hues.	1437h at 1.06 feet	rigii Tides:	2112h at 2.48 feet	
Dawn:	0855h	Dusk:	2133h	
Weather:	Overcast			
Source				

# Section 1.6SC.1.2 Response Resources for this Scenario

Tank #8 has an unexplained catastrophic failure at a weld seam. Diesel flows through the damaged wall of the secondary containment that was under repair at the time of the weld seam failure. A total of 180,000 gallons (4,286 barrels) is released and with the topography near the tank farm, the release all remains on land accumulating in low points between the tank farm and Polovina Turnpike.

See Sections 3.2.2 and 5.1 of this plan for the RPS calculations and the reasoning for the estimated amount to reach water.

#### Expected Trajectory (Section 1.6.3)

Spilled fuel would be contained by the natural topography and man-made barriers in the area between the tank farm and Polovina Turnpike. See Figure 1.6-1 for the containment locations on land.

#### **Regional Geography (Section 3.10)**

The facility is located on a stretch of land between Salt Lagoon to the west and the Bering Sea to the east. Sensitive shorelines in the region include marshes, fine-grained sand beaches, gravel beaches, and sheltered tidal flats. A release from the tank farm would be contained on land and would not impact the waters of Salt Lagoon or the Bering Sea. The area that would be immediately and significantly impacted (between the tank farm and Polovina Turnpike) is not environmentally sensitive. No known archeological / historical sites would be impacted.

#### **Discharge Tracking (Section 1.6.3)**

City of Saint Paul personnel will use visual observation from the facility and from Polovina Turnpike to monitor the release during the spill response.

#### Protection of Environmentally Sensitive Areas (Section 1.6.10 and 3.10)

The area that would be immediately and significantly impacted (between the tank farm and Polovina Turnpike) is not environmentally sensitive. No known archeological / historical sites would be impacted.

Bird hazing and deterrence equipment is available on the island and can be used by trained community members.

#### **Recovery Strategies (Section 1.6.6)**

- Containment dikes, berms, and trenches would be constructed with City and Saint Paul operators and heavy equipment, including a backhoe, front end loaders, dump truck, dozers, graders, Bobcat loader, and a Uni-loader.
- Operators would be briefed on the containment plan by the Incident Commander and Operations Section Chief. The first priority would be construction of dikes to prevent fuel from reaching the lagoon or harbor. Trenches would be dug across the drainage path to provide collection points. See STAR Manual Section B-III-3 Dikes, Berms, and Dams.
- Members of the Facility Response Team terrestrial containment unit would deploy impervious barriers (visqueen) along the harbor side of the trenches to prevent fuel from migrating through the trenches. Test wells would be dug to determine the extent and migration of subsurface contamination.
- Trenching, diking and digging test holes would continue throughout the cleanup process. When fuel ceased flowing directly to collection points, water flooding would be initiated to increase flow to collection areas.
- Recovery efforts would be initiated when initial containment is in-place. Direct suction would be the initial means of recovery. Following initial recovery efforts, trenching and water flushing operations would be initiated to recover fuel remaining in the soil. See STAR Manual Section B-III-7 On-Land Recovery.

# **Response Resources for This Scenario (Section 3.6)**

Personnel	Available	Hours to Scene	
City of Saint Paul Response Team	22	Immediate – 2 hours	
Total	22		
Boom	Feet	<b>Hours to Scene</b>	Transportation
			Method
Sorbent boom (8"x10")	480	0.5	Truck

# Total

			Transportation
Vehicles/Heavy Equipment	Available	<b>Hours to Scene</b>	Method
Pickup trucks	4	0.5	Own Power
Crew cab – carry-alls	4	0.5	Own Power
Drop box flatbed trucks	2	0.5	Own Power
Tractors	1	0.5	Own Power
Dozers	2	0.5	Own Power
12 yd. dump truck	1	0.5	Own Power
Front end loaders	3	0.5	Own Power
Backhoe	1	0.5	Own Power
Road grader	2	0.5	Own Power
Uni-loader	1	0.5	Own Power
Bobcat loader	1	0.5	Own Power
Total	22		

Skimmers/Recovery Devices	Available	Hours to Scene	Transportation Method
Slickbar Slurp weir skimmer	1	0.5	Truck
3" Honda trash pump	3	0.5	Truck

Temporary Storage	Available	Capacity ea. (gal)	Total Capacity (gal)	Time to Scene (hrs)	Transpor- tation Method
Tanks 2 and 3 in tank farm	2	75,787	151,574	0	N/A
Contingency tanks at	6		40,000	0	NI/A
facility					1N/PA
55-gal salvage drums	20	55	1,100	0.5	Truck
Bladder tank	1	250	250	0.5	Truck
Tank truck	1	6,000	6,000	0.5	Own Power
Total Storage in Saint Pau		198,924			

Skimmers	EDRC <sup>1</sup> BBL/DAY	EDRC BBL/HR	EDRC GAL/HR
Slickbar Slurp weir skimmer	684	28.5	1,200
3" Honda trash pump	1,989	82.86	3,480
Vac truck (converted tank truck with use of 3" Honda trash pump)	1,989	82.86	3,480

<sup>1</sup> Effective Daily Recovery Capacity (EDRC): Manufacturer's rate in BPH times 24 hours times 20% = EDRC. The EDRC or Oil Recovery Efficiency Factor, is the ratio, expressed as a percentage, of the volume of oil recovered to the volume of total liquids recovered; it does not count down time of the equipment when it is being set up, or when recovery is halted to empty out temporary storage.

Skimmer/ Pump	Period of Operations	Response Time (Hrs From Spill)	De-Rated Capacity (Gal/Hr)	Hours Operating	Oil Recovered (Gal)	
Slickbar Slurp	1500 - 2300	3 – 11	1,200	8	9,600	
3" Honda Trash	1500 - 0900	3 - 11	3 /80	8	27,840	
Pump (A)			5,400	0		
3" Honda Trash	1500 - 0900	3 – 11	3,480	0	27,840	
Pump (B)				0		
Vac Truck	1500 - 0900	3 - 11	3,480	8	27,840	
Total Op Pd 1					93,120	
Slickbar Slurp	0900 - 1400	21 - 26	1,200	5	6,000	
3" Honda Trash	0900 - 1700	21 - 29	2 490	Q	27,840	
Pump (A)			3,480	0		
3" Honda Trash	0900 - 1700	21 - 29	3,480	Q	27,840	
Pump (B)				0		
Vac Truck	0900 - 1700	21 - 29	3,480	8	27,840	
Total Op Pd 2					89,520	
TOTAL RECOVERY 182,640 gal / 4,348 bbl						

Table 1.6SC-1 Recovery Capacity per Operational Period, WCD<sup>1</sup>

<sup>1</sup> This table represents total recovery capacity over each operational period. See Section 1.6 for further details on operational timing and collection strategies.

#### Section 1.6SC.1.3 Scenario Recovery Table and Figures

#### Table 1.6SC-2 Land-Based Recovery Table

			ED	ORC in barr	els per day									
					Vac Truck									
					(Converted									
			3" Honda	3" Honda	Tank Truck			Total						
		Slickbar	Trash	Trash	using " Honda		Fuel	Fuel		Empty	Offsite	TSC		
Time	HR	Slurp	Pump (A)	Pump (B)	Trash Pump)	<b>Total EDRC</b>	Recov'd	Recov'd	TSC	TSC	storage	deliv'd	Available Storage	Capacity
12:00	0	-	1 ( )	1 ( )	17	0	0.0	0.0			9		8	
13:00	1					0	0.0	0.0						
14:00	2					0	0.0	0.0	4704	4704		4704	Contigency Tanks #2 and #3	3,609
15:00	3	684	1989	1989	1989	6651	277.1	277.1	4704	4427			Emergency Use Tanks	952
16:00	4	684	1989	1989	1989	6651	277.1	554.3	4704	4150			Vac Truck	143
17:00	5	684	1989	1989	1989	6651	277.1	831.4	4704	3873				
18:00	6	684	1989	1989	1989	6651	277.1	1108.5	4704	3596				
19:00	7	684	1989	1989	1989	6651	277.1	1385.6	4704	3318				
20:00	8	684	1989	1989	1989	6651	277.1	1662.8	4704	3041				
21:00	9	684	1989	1989	1989	6651	277.1	1939.9	4704	2764				
22:00	10	684	1989	1989	1989	6651	277.1	2217.0	4704	2487				
23:00	11					0	0.0	2217.0	4704	2487				
0:00	12					0	0.0	2217.0	4704	2487				
1:00	13					0	0.0	2217.0	4704	2487				
2:00	14					0	0.0	2217.0	4704	2487				
3:00	15					0	0.0	2217.0	4704	2487				
4:00	16					0	0.0	2217.0	4704	2487				
5:00	17					0	0.0	2217.0	4704	2487				
6:00	18					0	0.0	2217.0	4704	2487				
7:00	19					0	0.0	2217.0	4704	2487				
8:00	20					0	0.0	2217.0	4704	2487				

			EDRC in barrels per day											
		Slickbar	3" Honda Trash	3" Honda Trash	Vac Truck (Converted Tank Truck using " Honda		Fuel	Total Fuel		Empty	Offsite	TSC		
Time	HR	Slurp	Pump (A)	Pump (B)	Trash Pump)	<b>Total EDRC</b>	Recov'd	Recov'd	TSC	TSC	storage	deliv'd	Available Storage	Capacity
9:00	21	684	1989	1989	1989	6651	277.1	2494.1	4704	2210				
10:00	22	684	1989	1989	1989	6651	277.1	2771.3	4704	1933				
11:00	23	684	1989	1989	1989	6651	277.1	3048.4	4704	1656				
12:00	24	684	1989	1989	1989	6651	277.1	3325.5	4704	1379				
13:00	25	684	1989	1989	1989	6651	277.1	3602.6	4704	1101				
14:00	26		1989	1989	1989	5967	248.6	3851.3	4704	853				
15:00	27		1989	1989	1989	5967	248.6	4099.9	4704	604				
16:00	28		1989	1989	1989	5967	248.6	4348.5	4704	356				

#### Table 1.6SC-2 Land-Based Recovery Table (continued)

Daylight Hours
Darkness Hours
First Operational Period
Second Operational Period

#### Current to: 6/10/2020 Figure 1.6-1 Land Based Spill Response Author: Integrity Environmental LLC http://www.integrity-envrionmental.com **City of Saint Paul** Tank PW Public Works Office Diamond Hill Road • Day Tank Tank Truck Saint Paul Island, AK 99660 Out-of-Service Tank Skimmer (.) Within: Sec 25, T. 35 S., R. 132 W., Spill Response Equipment C Contingency Tank ٠ Seward Meridian, Alaska. F Fire Station Aboveground Pipeline Tank Farm: 57 7' 23.30667"N O Fuels Office Belowground Pipeline 170 17' 4.15848' W W Warehouse Temporary Storage Site USGS 63K Quad: Pribilof Islands C-4 T Tank Truck Loading Rack Secondary Containment Area Coordinate System: M City Machine Shop Tank Farm and Power Plant NAD 1983 Alaska Albers Transfer Pump Building Evaporation Pond Ρ PP Power Plant Potential On-Land Containment Site 170.26667° W W PW Μ PP 50 100 200 Feet CNES/Airk

170.26667° W

#### Section 1.6SC.1.4 On Water Spill Response

With the numerous swales, depressions, and a road separating the tank farm from the waters of Salt Lagoon, water response tactics were not included in the main worst case discharge scenario. This section is included in the plan to address the potential water response should a release make it to the waters of Salt Lagoon.

#### **Changes to the Spill Scenario Tactics**

With the release being to water, the Aleut Community of St. Paul Island will be contacted to request marine mammal responders report to the release site. Local bird responders will also be contacted and requested to report to the release site (see contact information in Section 1.2.2 and 1.6.10). Deterrence, hazing, and collection actions with regards to wildlife will be approved by the applicable regulating agency prior to taking any actions. A specialist from NOAA NMFS will provide oversight and permitting/authorizations for carcass collection, deterrence, and capture of marine mammals under their jurisdiction (NMFS 2017). A specialist from USFWS will provide oversight for any actions that are taken with regards to sea otters and migratory birds. See Sections 1.6.4, 1.6.10, and 3.10 for more information on environmentally sensitive areas and protection measures.

Two loops of 400 feet of containment boom will be deployed at the release site on Salt Lagoon. The Slickbar Slurp weir skimmer will be deployed within the containment boom and will begin to recover product by hour 3 of the response. Recovered oily water will be stored in contingency tanks at the facility as noted in Section 1.6SC.1.2.

Passive recovery on water will occur with use of the City's sorbent materials: sorbent pads, rolls, and sweeps. The sorbent materials will be deployed within the containment boom to recover the thinnest concentrations of product on the water. The three trash pumps discussed previously would still be used to recover product pooled on land and that which remains inside secondary containment.

#### **Additional Response Resources**

All of the response resources listed in Section 1.6SC.1.2 would be used if the release made it to Salt Lagoon. In addition to that equipment, the following personnel and equipment would also be needed.

Personnel	Available	Hours	to Scene	
Marine Mammal Responders	2	Immediate – 2 hours		
Bird Responders	2	Immediate – 2 hours		
Total	4			
Boom	Feet	Hours to Scene	Transportation Method	
Contractor boom (8" x 12")	800	0.5	Truck	
Total	800			

Sorbent	Qty	Hours to Scene	Transportation
			Method
Sorbent pads (18"x18")	4 bales	0.5	Truck
Sorbent rolls (36"x150")	3 rolls	0.5	Truck
Sweeps (18"x100')	5	0.5	Truck
Total			

Figure 1.6-2 displays the potential oil spill path and boom and skimmer placement on water.



# Section 1.6SC.2 USCG Worst-Case Discharge and ADEC Volume to Water Planning Scenario

The estimated maximum volume of a discharge during marine delivery is 3,300 gallons (Section 2.3). The USCG worst case planning volume is 23,558 gals. Based on design and transfer procedures, it is extremely unlikely facility operations could result in marine discharge of 23,558 gallons. The following response actions are applicable to any significant marine discharge. The planning numbers are based on state and federal regulations.

**Scenario Summary:** This scenario assumes a discharge of diesel totaling 23,558 gallons (561 barrels) occurs at the South Fuel Dock as result of a vessel tank being damaged during transfer. The entire release spreads on the dock and flows into the waters of Village Cove. It is a December morning at 1000 hours. The temperature is 36° F, tide is flooding, and the wind is 15 knots from the north.

# Scenario Assumptions

- The Safety Officer position is performed concurrently with other response duties of the Director of Public Safety/Chief of Police (or his designee) in the first 6 hours of response. The Safety Officer does not count towards total personnel in a time period.
- Recovery operations start 30 minutes after sunrise, and end 30 minutes before sunset unless specifically described differently in the scenario.
- The winds in Saint Paul are generally from the north in the winter and from the south in the summer. The following scenario is written for December, so the winds are assumed to be from the north. Figure 1.6-4 displays the discharge trajectory and spill response should the winds be to the south.
- The full-version of the Spill Tactics for Alaska Responders (STAR) manual was used for reference to applicable spill response tactics throughout the scenario.
- At the discretion of the IC and the Operations Section Chief, protection strategies will be deployed at threatened environmentally sensitive areas. The IC's local knowledge of the region including weather and wildlife habitats will help determine which areas are threatened and require protection measures. See Sections 1.6.10 and 3.10 of this plan for locations of environmentally sensitive areas and strategies for protecting them.
- Community members on Saint Paul Island have been trained in bird deterrence and bird capture and stabilization (ADEC 2014b). The Aleut Community of St. Paul Island has four individuals on staff that are trained in marine mammal response. At the discretion of the Incident Commander, trained individuals will be contacted to assist with bird hazing, capture, and stabilization and marine mammal response as needed during the response. The National Marine Fisheries Service (NMFS) office on the island will be contacted to provide oversight with regards to wildlife protection during a large spill

response at the facility. See Table 1.2-2 for contact information and Section 1.6.10 of this plan for more information on wildlife protection procedures.

• The scenario described below is purely conjectural and depends on many assumptions that may not apply to a real spill. It is written solely for the purpose of demonstrating on paper how a spill response might be conducted. In reality, a major spill response will be conducted under the direction of the Unified Command, who will respond to the real situation, following the principles set forth and using the resources described in this plan and not by following the scenario described below.

Hour	Response Activity
<b>First Operatio</b>	onal Period
1000h (Hour 0)	The spill is detected immediately by facility and vessel personnel. Transfer operations are terminated, and the dock secured. Ten facility and harbor operators are present on the dock. The City Manager assumes duties as Incident
	Commander (IC). All other City of Saint Paul response personnel are requested to report to the office. All ignition sources are shut off and valves are closed.
1015h (15 min)	Conduct a safety survey and damage assessment. Obtain condition report from damaged vessel. Determine initial safety and response actions.
	Conduct an initial briefing with the responders on site. Delegate initial tasks:
	• Two persons will prepare the containment boom stored on the dock for deployment.
	• Four persons will prepare the utility skiffs (in maintenance building) for boom deployment.
	• Two persons will use radios and phones in Harbor office to mobilize the Facility Response Team and Incident Command Team. The Harbor office will serve as the initial Command Center. Other vessels and processors in the area will be alerted.
	The IC conducts an initial site assessment and realizes he will need help. The IC notifies QI and makes other local notifications at this time (see Table 1.2-2 for list of local emergency contacts). The QI will report the spill to the Alaska Department of Environmental Conservation and to the National Response Center.
1100h (Hour 1)	A large volume of spilled fuel remains in the natural eddy at the south side of the South Dock. Significant sheens are moving with the wind volumes of contaminated debris and soil (see Figure 1.6-3 for a spill trajectory map).
	City Public Safety is mobilized to manage security and safety perimeters.

# Section 1.6SC.2.1 Narrative

Hour	Response Activity
	USF&WS and ADF&G are notified of the spill. NMFS Saint Paul field office is also notified. The NMFS Juneau office of protected resources is notified at this time as well (see Table 1.2-2 for contact information). With the release being to water, there is potential for marine mammals to be threatened by the spill. The Aleut Community of St. Paul Island is contacted to request marine mammal responders report to the release site. Local bird responders are contacted and also requested to report to the release site (see contact information in Section 1.2.2 and 1.6.10).
	The members of the Facility Response Team/ICS (Table 1.2-3/Figure 3.3-1) assemble at the Harbor office. The IC and QI conduct and initial briefing with all assembled. The IC reviews the Contingency Plan, projects the initial spill trajectory, and in conjunction with the QI, develops response strategies.
	The first response tactic is to deploy two sets of containment boom (600 feet) are around damaged vessel. This is accomplished with use of the 29' Defender Class vessel and four crew members (see Figure 1.6-4 for boom deployment locations).
1115h (1 hour, 15 min)	• Identification of safety concerns, personnel protective gear requirements, and decontamination procedures - development of an Incident Safety Plan. If there are any safety concerns, direct radio contact shall be made to the Operations Section Chief prior to any action. The No Smoking rule shall be strictly enforced within the security perimeters.
	• A review of ICS functions and communications capability.
	• An assessment of facility response equipment and local resources. A review of general containment / recovery strategies and priorities.
	• The Operations Section of the Response Team shall be divided in task groups, each with designated functions. Each task group shall have a leader who shall be assigned a radio. Radio communication from the team leaders shall be to the Operation Section Chief.
	<ul> <li>Initial response objectives are reiterated:         <ul> <li>Contain maximum amount of spilled fuel in area adjacent to the South Dock.</li> </ul> </li> </ul>
	• Deploy exclusion boom to prevent fuel from entering the Salt Lagoon.
	• Deploy boom to the detached breakwater to prevent fuel from
	<ul> <li>Contain fuel in significant quantities at recovery sites to enable mechanical recovery.</li> </ul>
1130h	• Team #1 (5 persons) will operate the 29-ft Defender Class boat and deploy boom as follows:

Hour	Response Activity
(1 hour, 30 min)	<ul> <li>At entrance to Harbor - 500 feet of containment boom in 1-2 sets.</li> <li>At Small Boat Harbor breakwater to the spit of land across from it to the east - 500 feet of containment boom in two strands. (At the discretion of the IC, this boom can be moved during low tide to the spit of land closer to the Small Boat Harbor breakwater. The boom will be monitored throughout the response)</li> </ul>
	• Team #2 (2 persons) will use the 29-ft Defender Class boat to monitor the boom around vessel spill site and assist team #3 & 4 with recovery at South Dock. This will take place after Team #1 has completed boom deployment.
	After boom is deployed, teams will initiate a sorbent and boom sweeping operation to herd/coral fuel to recovery sites.
	• Team #3 & 4 (2 persons ea.) will setup and operate two recovery sites. The Slickbar Slurp skimmer will be used at the South Dock recovery site. 5,000 gal. contingency tanks will be positioned to store recovered liquids. As the contingency tanks fill with oily water, the facility tank truck transfers oily water to Tanks #2 and #3 at the facility. In addition, the facility tank truck will transport recovered liquids to storage at the tank farm. City dumpsters and flatbed trucks will transport contaminated debris (sorbents) to a temporary storage site at the tank farm. Saturated and wet materials will be transported in impervious containers or in liquid-tight, oily waste storage/disposal bags. The City of Saint Paul maintains 3 each cases of 100 oily waste bags for this purpose. The bags are 33" x 46", 4-mil thickness. Storage containers will be confirmed to be impervious, or they will be lined with appropriate visqueen or liner material.
	• Team #5 (2 persons - Wildlife Unit) will implement protection strategies in conjunction with wildlife agencies through Unified Command Planning Section. See Section 1.6.10 of this plan for more information.
1200h (Hour 2)	<ul> <li>Additional agency personnel arrive on-scene, and the Unified Command is established. Preliminary discussions with the Unified Commander address the following issues:</li> <li>The local availability of additional trained responders and means of implementing shift work to facilitate continuous operations during the containment and initial recovery phases.</li> <li>Projects weather conditions.</li> <li>Spill trajectory updating – access to NOAA's webGNOME model (NOAA 2020b)</li> <li>Potentially threatened sensitive areas.</li> </ul>

Hour	Response Activity
	• Projected volumes of liquid recovery. Storage and separation options -
	projected time frames.
	<ul> <li>Projected volumes of contaminated debris and soil.</li> </ul>
	Temporary storage options.
	• Treatment, remediation, and disposal options.
	• Logistical considerations for spill responders, the United Command and
	their support staff personnel – housing, food, first-aid, communications.
	<ul> <li>Meeting schedules and frequency of community notices and press</li> </ul>
1 = 0.01	releases.
1500h	A wildlife protection plan is developed, permits are approved, and the tactics
(Hour 5)	are deployed by the Wildlife Unit. Hazing and sphag-sorb available on the
	island is brought to the spill site and used as needed by appropriately trained
	personnel. Special attention is given the protection of fur seal and sea lion
1 (0.01	haulouts and bird deterrence.
1600h	Portable lights are positioned on the dock illuminating the recovery site
(Hour 6)	allowing the skimmer to operate past sunset.
2000h	At the end of this operating hour, the skimmer is removed from the water and
(Hour 10)	the release site is secured for the night. Recovery with use of the skimmer will
	resume in the morning.
	Continue collection, cleaning, or disposal of sorbent material. This process continues throughout the response as long as sorbents are used to recover product. Used sorbents collected are wrung out for reuse or placed in double plastic bags and stored with waste for ultimate disposal. Crew members monitor the containment and sorbent boom as needed throughout the night.
	The waste management contractor will manage the recovered liquid and collected waste. It will be inventoried, characterized, and stored for ultimate disposal. Each container will be labeled with its contents, quantity, and date. Identification numbers for tracking will be assigned. ADEC must approve the removal and transportation of all waste.
2100h (Hour 11)	The IMT conducts the first planning meeting and reviews all information about the incident. Following the objectives set for the response and based on the accomplishments and status reports, the Planning Section works into the night to develop the IAP for the second day.
	Oily debris will be double bagged and placed in dumpsters or shipped on vans or trucks to the City of Saint Paul facility. Contents will be classified and labeled for tracking. With an ADEC in-situ burning permit, some oiled wastes may be burned in a controlled burning operation on site. Applications for temporary storage sites and waste disposal are made to ADEC in hour 6-8.

Second Operational Period				
0700h	The IAP prepared by the planning section overnight is distributed. The			
(Hour 21)	supervisors are briefed on the IAP and given their assignments for the next			
	shift. The Planning Section Chief briefs the IMT on the new objectives and the			
	Operations Section Chief reviews the tactical plan with the team leaders.			
0800h	The Slickbar Slurp is deployed off the dock and resumes recovering the product			
(Hour 22)	that remains within the loop of containment boom. The skimmer discharges to			
	the same contingency storage that was used in the first operational period.			
	The crew will continue to monitor collection, exclusion, and deflection boom			
	sites. They will also continue to collect oiled debris, identify and label, and			
	record it. The Wildlife Unit will continue their approved operations.			
	A Shoreline Cleanup Task Group is established and begins survey of shorelines			
	within Village Cove. The Wildlife Unit continues with approved hazing and			
	deterrence tactics as needed during the second operating period.			
1800h	Towards the end of this operating hour, the skimmer is no longer effective at			
(Hour 32)	recovering product on the water. Sorbent pads and/or sweeps are deployed			
	within the containment boom at the dock to recover the thinnest concentrations			
	of fuel on the water.			
	The Unified Command agrees to stop all remaining recovery operations at the end of this hour. See Table 1.6SC-3 for total fuel and total oily water recovered.			
1900h	Any remaining oily water in contingency tanks staged near the dock is			
(Hour 33)	transported to Tanks #2 and #3 at the facility for storage until a waste disposal			
	plan is in place.			
	The Planning Section reviews the progress and begins to develop the long- range plan for completing the cleanup. Objectives are reviewed with the Unified Command and amended as deemed appropriate.			
	The Shoreline Cleanup Task Group continues beach surveys until dusk ADEC			
	Contaminated Sites will be contacted about a cleanup plan for the contaminated			
	soils around the plant.			
	Decontamination and packing of equipment continue. The waste management contractor continues to dispose of the waste and inventory the recovered product.			
	The demobilization of marine recovery equipment continues until equipment is cleaned, repaired, and returned to its place of storage.			

Third Operational Period and Beyond				
3-5 days	The Wildlife Unit continues their operations until the spill response operations			
	cease.			
	The Shoreline Recovery Task Group performs shoreline surveys to evaluate current status. No recoverable fuel is located, and their efforts are suspended.			
	A vessel decontamination area is set up and vessels are decontaminated in accordance with the STAR Manual Tactic B-V-2 before being released from the spill.			
	The inner loop of sorbent boom at the discharge site remains in place for several			
	days after the spill to recover any fuel that may be released to waters of the			
	harbor with storm water runoff from the land impacted by the spill.			
6-7 days	Waste disposal is completed by the waste management contractor. All			
	equipment is returned to storage. Damaged equipment is repaired or replaced.			
	Except for soil and ground water remediation work, the project is demobilized.			

Worst Case Discharge Scenario – Release at South Fuel Dock					
Respon	se Type:	Type / Amount:			
		Diesel			
Vessel tank damaged during fuel		Est. amt. discharged: 23,558 gallons (561 bbls)			
transfer at the South Fuel Dock.		Est. amt. to reach open water: 23,558 gallons (561 bbls)			
		Est. amt. to remain on land: 0 gallons (0 bbls)			
Time:	1000h	Wind:	15 knots from the north		
Season:	Winter	Temperature:	36° F		
Visibility:	5 miles	Location:	South Fuel Dock		
Low Tidos:	0319h at -0.46 feet	High Tides:	1119h at 3.63 feet		
Low Hues.	1636h at 2.61 feet		2021h at 2.98 feet		
Dawn:	1055h	Dusk:	1738h		
Weather:	Overcast				
Source					

#### Section 1.6SC.2.2 Response Resources for this Scenario

A vessel tank is damaged during a fuel transfer at the South Fuel Dock. A total of 23,558 gallons (561 barrels) is released, with all of it flowing into the waters of Village Cove.

See Section 5.3 of this plan for the USCG worst case discharge calculations.

#### Expected Trajectory (Section 1.6.3)

Spilled fuel would flow into the waters of Village Cove. For this scenario, assuming an average current of 2 knots and a maximum wind speed from the north of 15 knots, product is projected to accumulate against the shoreline surrounding the South Fuel Dock for the first hours of the response during which time the tide is flooding and slack. When the tide starts to turn, the release will slowly spread north, but with winds from the north at 15 knots, it is likely the release would stay in the Village Cove and may reach Salt Lagoon during the next high tide at 1636h. Estimates on the spill trajectory are derived by taking three percent of wind speed and adding or subtracting it from the current speed. With the high wind speed competing against the current, it is likely the release could not spread far on the water because it would be pushed back against the dock and shoreline.

See Figure 1.6-3 for the projected trajectory over time for his hypothetical spill response scenario if no response actions occurred.

#### **Regional Geography (Section 3.10)**

Sensitive shorelines in the region include marshes, fine-grained sand beaches, gravel beaches, and sheltered tidal flats. The distance of water area and shoreline potentially affected by a spill is recognized as at least a five-mile radius surrounding the release site, dependent upon tidal and weather-driven water currents.

#### Discharge Tracking (Section 1.6.3)

- Initial visual assessment is maintained by crew on the dock.
- City of Saint Paul personnel use visual observation and its response skiff for on-water surveillance.
- Surface water circulation in the harbor is primarily is wind and tide driven. In the winter, the prevailing winds are from the north, which would tend to move toward the main breakwater and fuel dock.
- If fuel escapes the harbor, its movement would be influenced by the prevailing winds and currents
- In this scenario it is estimated spilled fuel could reach the Salt Lagoon within 2 hours. The reversing tide would / could take sheen out of the harbor within 3-4 hours.

# Protection of Environmentally Sensitive Areas (Section 1.6.10 and 3.10)

- The City of Saint Paul personnel consult with ADEC, ADF&G, USFWS, and NMFS representatives on sensitive areas.
- Water intakes for seafood processors in the harbor will be protected with the use of deflection or diversion booming. Seafood processors will be notified of the release and instructed to turn off water intakes during the spill response.
- The NOAA connex on Saint Paul Island has sphag-sorbent that is used to protect seal haulouts and rookeries.
- Bird hazing and deterrence equipment is available on the island and can be used by trained community members.
- Diversion booming is considered to prevent oil from contacting beaches further from the spill site. See STAR Manual Section B-III-8 Diversion Boom.
- See STAR Manual, B-III-12, Exclusion booming, Figure EX-3 exclusion boom configuration will be considered for protecting ESAs. Also see STAR Manual, B-III-13, Deflection booming for another tactic on protecting ESAs.

## Recovery Strategies (Section 1.6.6)

- Containment boom is deployed at the release site on the water. A shoreside recovery operation will be set up at this location. Skimmers will be deployed from the dock and will discharge to storage devices and/or tank trucks. See STAR Manual, Section B-III-2, Containment Boom and Section B-III-10, Shoreside Recovery.
- The containment boom is lined with a strand of sorbent boom to passively recover the spilled product. The boom is monitored throughout the response and replaced as needed. Sorbent pads and sweeps be will deployed to pick up the thinnest concentrations of oil. See STAR Manual, Section B-III-11, Passive Recovery.
- The City of Saint Paul will contract personnel and equipment to perform shoreline cleanup in accordance with the Incident Action Plan.

## **Response Resources for This Scenario (Section 3.6)**

Personnel	Available	Hours to Scene		
City of Saint Paul Response Team	22	Immediat	te $-2$ hours	
Total	22			
Boom	Feet	Hours to Scene	Transportation Method	
Harbor boom (11"x10")	1,000	0.5	Truck	
Harbor boom (14"x16")	700	0.5	Truck	
Ocean boom (14"x22")	600	0.5	Truck	
Contractor boom (8"x12")	1,000	0.5	Truck	
Total	3,300			
Sorbent Boom 5"	Feet	Hours to Scene	Transportation Method	
Sorbent boom	480	0.5	Truck	
Total	480			
Vessels	Available	Hours to Scene	Transportation Method	
29' Defender Class Boat	1	0.5	Own Power	
Skimmers/Recovery Devices	Available	Hours to Scene	Transportation Method	
Slickbar Slurp weir skimmer with	1	0.5	Truck	
3" Honda trash pump	1	0.5	Truck	
	Capacity	Total Time	to Transpor-	

Temporary Storage	Available	Capacity ea. (gal)	Total Capacity (gal)	Time to Scene (hrs)	Transpor- tation Method	
Tanks 2 and 3 in tank farm	2	75,787	151,574	0	N/A	
Contingency tanks at	6		40,000	0	N/A	
facility						
55-gal salvage drums	20	55	1,100	0.5	Truck	
Bladder tank	1	250	250	0.5	Truck	
Tank truck	1	4,000	4,000	0.5	Own Power	
<b>Total Storage in Saint Pau</b>		196,924				

Skimmers	EDRC <sup>1</sup>	EDRC	EDRC
	BBL/DAY	BBL/HR	GAL/HR
Slickbar Slurp weir skimmer with diesel pump	684	28.5	1,200

<sup>1</sup> Effective Daily Recovery Capacity (EDRC): Manufacturer's rate in BPH times 24 hours times 20% = EDRC. The EDRC or Oil Recovery Efficiency Factor, is the ratio, expressed as a percentage, of the volume of oil recovered to the volume of total liquids recovered; it does not count down time of the equipment when it is being set up, or when recovery is halted to empty out temporary storage.

Skimmer	Period Of Operations	Response Time (Hrs From Spill)	De-Rated Capacity (Gal/Hr)	Hours Operating	Oil Recovered (Gal)	
Slickbar Slurp	1200 - 2100	2-11	1,200	9	10,800	
Total Op Pd 1					10,800	
Slickbar Slurp	0800 - 1900	22-33	1,200	11	13,200	
Total Op Pd 2					13,200	
TOTAL RECOVERY24,000 gal / 571 bbl						

<sup>1</sup> This table represents total recovery capacity over each operational period. See Section 1.6 for further details on operational timing and collection strategies.

	Type/Amount (ft)				
Location	Containment	Sorbent			
South Fuel Dock at the release site	800	$400^{1}$			
West entrance to the harbor (two	1,000				
strands of 500 feet each)					
Small Boat Harbor breakwater to spit	1,000				
of land across from it (two strands of					
500 feet each)					
Additional containment boom to	500				
protect seawater intake and another					
other ESAs in the region <sup>2</sup>					
TOTALS	3,300	400			

#### Table 1.6SC-4 Boom Requirements by Location

<sup>1</sup>Sorbent boom will be deployed inside containment boom at the release site. It will be rung out and replaced every 6 hours in the first operating period and every 12 hours in the second operating period or as necessary. <sup>2</sup>The Facility Manager will determine which, if any, anadromous or sensitive areas are within the spill path. See Section 3.10 for other environmentally sensitive areas in the region.

# Section 1.6SC.2.3 Scenario Recovery Table and Figures

Table 1.6SC-5	Water-Based	Recovery	Table
---------------	-------------	----------	-------

		EDRC in bar	rrels per day									
						Total						
					Total	Oily	Total					
		Slickbar		Fuel	Fuel	Water	Liquid		Empty	TSC		
Time	HR	Slurp	<b>Total EDRC</b>	Recov'd	Recov'd	Recov'd	Recov'd	TSC	TSC	deliv'd	Available Storage	Capacity
10:00	0		0	0.0	0.0	0	0	0	0			
11:00	1		0	0.0	0.0	0	0	4561	4561	4,561	Contigency Tanks #2 and #3	3,609
12:00	2	684	684	28.5	28.5	114	143	4561	4419		Emergency Use Tanks	952
13:00	3	684	684	28.5	57.0	228	285	9122	8837			
14:00	4	684	684	28.5	85.5	342	428	9122	8695			
15:00	5	684	684	28.5	114.0	456	570	9122	8552			
16:00	6	684	684	28.5	142.5	570	713	9122	8410			
17:00	7	684	684	28.5	171.0	684	855	9122	8267			
18:00	8	684	684	28.5	199.5	798	998	9122	8125			
19:00	9	684	684	28.5	228.0	912	1140	9122	7982			
20:00	10	684	684	28.5	256.5	1026	1283	9122	7840			
21:00	11		0	0.0	256.5	1026	1283	9122	7840			
22:00	12		0	0.0	256.5	1026	1283	9122	7840			
23:00	13		0	0.0	256.5	1026	1283	9122	7840			

		EDRC in bar	rels per day									
		CP-11k-ser		E-1	Total	Total Oily	Total		E	TEC		
Time	пр	Slickbar	Tatal EDDC	Fuel	Fuel	Water	Liquia	TEC	Empty	150	Arus lable Stevens	Constant
Time	HK	Slurp	Iotal EDRC	Recov'a	Recovid	Recov a	Recov a	150	15C	aenva	Available Storage	Capacity
0:00	14		0	0.0	256.5	1026	1283	9122	/840			
1:00	15		0	0.0	256.5	1026	1283	9122	7840			
2:00	16		0	0.0	256.5	1026	1283	9122	7840			
3:00	17		0	0.0	256.5	1026	1283	9122	7840			
4:00	18		0	0.0	256.5	1026	1283	9122	7840			
5:00	19		0	0.0	256.5	1026	1283	9122	7840			
6:00	20		0	0.0	256.5	1026	1283	9122	7840			
7:00	21		0	0.0	256.5	1026	1283	9122	7840			
8:00	22	684	684	28.5	285.0	1140	1425	9122	7697			
9:00	23	684	684	28.5	313.5	1254	1568	9122	7555			
10:00	24	684	684	28.5	342.0	1368	1710	9122	7412			
11:00	25	684	684	28.5	370.5	1482	1853	9122	7270			
12:00	26	684	684	28.5	399.0	1596	1995	9122	7127			
13:00	27	684	684	28.5	427.5	1710	2138	9122	6985			
14:00	28	684	684	28.5	456.0	1824	2280	9122	6842			
15:00	29	684	684	28.5	484.5	1938	2423	9122	6700			
16:00	30	684	684	28.5	513.0	2052	2565	9122	6557			
17:00	31	684	684	28.5	541.5	2166	2708	9122	6415			
18:00	32	684	684	28.5	570.0	2280	2850	9122	6272			

Table 1.6SC-5	Water-Based	Recovery	Table	(continued)
---------------	-------------	----------	-------	-------------

Daylight Hours
Darkness Hours
First Operational Period
Second Operational Period



Current to: 11/11/2020

#### Figure 1.6-4 Water Based Spill Response



170.28333° W



170.28333° W

## Section 1.6SC.2.4 Spill Response if Winds from the South

The winds in Saint Paul are generally from the north in the winter and from the south in the summer. By midsummer, south through southwest winds become prevalent at Saint Paul, at average speeds of 10 to 12 knots, slightly lower than the winter months average. Considering the high average wind speed, it is likely a diesel release at the South Fuel Dock in the harbor would quickly move out of harbor and along the southern shore of the island. After 4-6 hours, it is reasonable to assume spilled product would reach the open ocean. City of Saint Paul owned containment boom and work skiffs cannot operate properly in open ocean waters and recovery operations would not be feasible. Focus would be on protecting wildlife populations, any threatened environmentally sensitive areas, and shoreline cleanup. See Sections 1.6.4, 1.6.10, 1.6.11, and 3.10 for more information on environmentally sensitive areas and protection measures.

The same spill response tactics as discussed in Section 1.6SC.2.2 would be deployed within the harbor if winds were from the south to protect the environmentally sensitive areas in the harbor. Figure 1.6-5 on the next page shows the projected spill trajectory with winds from the south.

Should the release reach open ocean and warrant assistance from off-island resources, 1-CALL Alaska will be contacted and requested to come to Saint Paul (see Table 1.2-2 for contact information). 1-CALL Alaska is a qualified USCG OSRO and has the capability to respond to releases in open ocean. They have barges, boom, skimmers, and other equipment necessary for open ocean response. The equipment they send will be dependent on the product type and amount released. Estimated equipment and personnel mobilization times are provided in Table 1.5-2 of this plan.



## Section 1.6SC.3 Medium Spill and Maximum Most Probable Discharge Scenario

**EPA Medium Scenario Planning Volume:** A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility (Tank #8), whichever is less, provided that this amount is less than the worst-case discharge amount. Ten percent of 600,000 gallons is 60,000 gallons. The medium spill scenario is therefore 36,000 gallons/857 bbls.

**USCG Maximum Most Probable Planning Volume:** Maximum Most Probable Discharge (MMPD) is 10% of USCG WCD (0.1 \* 561 bbls) and is equal to 56 bbls or 2,352 gallons.

The EPA volume of a medium oil spill is calculated to be 36,000 gallons/857 bbls. The comparable USCG response planning volume is the maximum most probable discharge volume, which is calculated to be 56 bbls. This scenario is written for the EPA response planning standard because is it the larger of the two.

## Scenario Summary

The estimated discharge volume of an operational spill in the tank farm is 3,300 gallons (Section 2.3). For planning purposes, this scenario is applicable for spills up to 36,000 gallons (the EPA medium scenario volume). Such a discharge could occur from tank overflow during marine re-supply. A spill would require operator error and alarm malfunction. All storage tanks are equipped with high level alarms and manual valve shutdowns. A motorized valve is on the 8-inch main fill line. During delivery, the tanks are continuously monitored by facility operators who maintain radio contact with the delivery vessel. Spilled fuel would be contained within the subdikes that surround each tank (Figure 1.8-3). The subdikes are approximately 18" high, constructed of compacted scoria, and comply with Uniform Fire Code criteria.

## **Response Actions for a Medium Spill**

- Radio the barge to stop the delivery. Shut down booster pump. Confirm spilled fuel is contained within the dike, and there are no means of fuel escaping the impoundment area confirm the stormwater drainlines are closed and locked. Close tank and pipeline valves (after pump pressure is reduced). Restrict access until the spill is completely removed.
- Limit the spread of fuel to the subdike area of the tank that was overfilled. Use sorbent booms and sorbent material to build berms to contain fuel. Line berms with visqueen and/or sorbents to make an impervious barrier. Do not use heavy equipment in the impoundment area as it may severely compromise the bentonite lined secondary containment area.
- If the spill escapes the tank farm impoundment area, prevent, or divert product from any body of water, drainage ditches, or structures. If necessary, activate the City's earthmoving equipment to build collection and/or containment sites.

- Figure 1.8-3 illustrates drainage patterns and possible blocking/containment sites. Surface drainage appears to be west to Polovina Turnpike, however, the porous soil will reduce surface drainage. There are no developed stormwater channels or drainage culverts in the immediate vicinity. Construct berms and diversion channels to prevent spilled product from approaching the Salt Lagoon.
- Attempt to limit the amount of soil contamination. Contaminated soil must be cleaned or treated.
- Recover fuel from the impoundment area using the facility portable pumps, Slickbar weir skimmer, and/or sorbents depending on the size of the spill and contained accumulation.
- If fuel enters any body of water, direct response crews to deploy the facility containment and sorbent booms (see Section 1.6SC.2).
- Recovered materials (soil/debris) can be stored in 55-gallon drums. If necessary, a temporary storage site can be constructed (see Figure 1.6-1). Recovered liquids may be pumped to, and stored in, the City's empty horizontal tanks or tank trucks.
- If fuel is spilled on snow, shovel contaminated snow into any container with an impermeable lining (trash bin, drums, plastic bags, etc.). Contaminated snow will be stored in a secure, lined, and diked area.
- Recovered product and contaminated material must be disposed of in a manner approved by the ADEC. The Incident Commander will arrange for proper disposal of all recovered oil, oily sorbents, and other oiled debris.

## Section 1.6SC.4 Small Spill and Average Most Probable Discharge Scenario

**EPA Small Scenario Planning Volume:** A discharge of 2,100 gallons or less, provided that this amount is less than the worst-case discharge amount. 2,100 gallons is less than the worst-case discharge which is 600,000 gallons. The small scenario planning volume is therefore 2,100 gallons/50 barrels.

**USCG Average Most Probably Discharge Scenario Planning Volume:** Average Most Probable Discharge (AMPD) is 1% of USCG WCD (.01 \* 561 bbls) and is equal to 5.6 bbls.

The EPA small spill of non-persistent oil is 2,100 gallons (50 barrels). The comparable USCG AMPD spill is an average most probable discharge calculated to be 6 barrels (rounded up). This scenario is written for the EPA response planning standard because is it the larger of the two.

## Scenario Summary

The estimated discharge volume of an operational spill at the truck rack is 450 gallons (Section 5.3). For planning purposes, this scenario is applicable for spills up to 2,100 gallons (the EPA small scenario volume). All truck loading is conducted by facility operators. Loading is engaged by a hand-held valve with preset stop meters. Emergency shutdown controls are immediately accessible to the operator. Maximum loading rate is approximately 150 gpm. Truck loading is conducted on a bermed, concrete impoundment area with containment volume of approximately 4,000 gallons.

## **Response Actions for a Small Spill**

- Shutdown pumps and close valves that allow product flow to the segment of the system causing the spill. Confirm drain line to separator is closed and spilled fuel is contained within concrete impoundment area.
- Remove any sources of ignition. Do not move vehicle until the spill is completely removed.
- Notify the Facility Manager. If fire or explosion hazards exist call the Fire Department. Restrict access to the spill area. If necessary, cordon-off area.
- Spilled fuel should be contained in the truck rack impoundment area. If fuel escapes the impoundment area, block the overland flow with sorbents. Use hand tools to construct berms and/or trenches. Hand tools, sorbents, and recovery equipment are stored control building adjacent the truck rack. Limit the amount of soil contamination.
- Depending on the size of the spill, recover spilled fuel using the portable pump or sorbents stored in the control building. If fuel has been spilled on snow, shovel the contaminated snow into plastic bags or any container with an impermeable lining.
- With concurrence of the City Manager and ADEC arrange for disposal of all recovered oil, oily sorbents, and other oiled debris.

18 AAC 75.425(e)(1)(G)

# Section 1.7 Nonmechanical Response Options

Not applicable at this facility.

# Section 1.8 Facility Description

18 AAC 75.425(e)(1)(H) 18 AAC 75.425(e)(3)(A)

This section includes diagrams of the facility for reference in conducting emergency operations, with locations of response equipment and other features pertinent to the response plan clearly marked.

See Section 3.1 of this plan for a complete facility description.

## Section 1.8.1 Marine Terminal

**Simultaneous Transfers:** The marine dispensing facilities and a fuel barge off-loading hydrant are located at the City dock facilities, which include two gravel-filled concrete caisson, steel pile docks on the breakwater. There is one marine dispensing station on the north dock capable of fueling a single vessel up to 180 feet, two on the south dock capable of fueling a single vessel up to 180 feet. Barges of similar size can off load at either the North Dock or South Dock Marine Headers. Fuel is dispensed via two (2) inch, spring loaded, hose reels and/or a dry-disconnect camlocked hoses. All vessel fueling is conducted by City operators, who continuously monitor each dispensing station during the entire transfer. The types of vessels transferring fuel are fishing vessels, cargo vessels, tugboats, workboats, recreational vessels, commercial vessels, and tank barges.



















## Section 2.0 Prevention Programs

18 AAC 75.425(e)(2)

The prevention program is made up of several parts which together reduce the chance that a spill will occur or minimize its size. The prevention measures and policies include inspection and maintenance programs, training, drug abuse program, medical examinations, and security.

The prevention programs in place are described in this part. The subsections below describe the spill prevention programs for Critical Job training, substance abuse, medical monitoring, security, product transfer, storage tank maintenance, secondary containment, and facility piping.

Section 2.1Discharge Prevention Programs18 AAC 75.425(e)(2)(a)

## Section 2.1.1 Oil Discharge Prevention Training Program 18 AAC 75.425(e)(2)(A)(i)

The training and qualifications for all City of Saint Paul Bulk Fuel Facility personnel involved in fuel and bulk petroleum transfers is the responsibility of the Facility Manager. Each position involved in transfer operations has a job description with specific knowledge level requirements. See Section 3.9 for the facility's comprehensive personnel training program for spill prevention and response. Training records are maintained at the tank farm office and are available upon request. Documentation of training, including content and signatures of participants is maintained at the facility in retrievable form for five years. At minimum, training addresses the following topics:

- A. Pollution control laws, rules, and regulations
- B. Fuel Storage Systems:
  - 1. Purpose and application
  - 2. System elements:
    - a. Tanks
    - b. Pumps
    - c. Accessory equipment
  - 3. Operation and maintenance of equipment
  - 4. Fuel transfer procedures
- C. Spill Prevention and Control:
  - 1. Potential spill sources
  - 2. Procedures to prevent spills
  - 3. Review of control measures:
    - a. Secondary containment
      - b. Safety valves
    - c. Pump shutoff switches
- D. Emergency response procedures:
  - 1. Initial spill response / notification procedures
  - 2. Personnel safety MSDS review
  - 3. Location and use of emergency phone numbers
  - 4. Location and use of fire extinguishers

- 5. Location and use of spill cleanup materials
- 6. Review of facility spill prevention and response plans
- 7. Local spill response resources

Prior to an operator working unsupervised he/she will be trained and competent in fuel handling procedures and understand applicable safety and spill prevention requirements. On a day-to-day basis, the procedures to ensure fuel operators understand spill prevention measures include on-the-job training and supervision of operators by the Facility Manager.

In conjunction with supervised on-the-job training, the facility Operations & Maintenance Manual (OMM) is a fundamental training and reference tool. The OMM details all facility operating and maintenance activities. It is a comprehensive, three volume, 400-page, site-specific guide. It also includes reference manuals for all equipment in operation at the facility. The manual is reviewed annually with operating personnel and is updated when necessary by the City Manager or Engineer.

	Facility Manager	Asst. Manager / Operation Manager	Facility Operators
Duties	Overall management,	Supervises facility	Conduct day to day
	product management,	personnel, product	operations of fuel
	inventory,	handling, and fuel	facility. Conducts
	compliance. Usually	transfers. Coordinates	transfers, monitors
	not involved with day	necessary facility	fuel systems, tank
	to day transfers or	repairs and	levels, secondary
	fuel handling	maintenance with	containment areas.
		Facility Manager.	Alerts facility
			management to
			irregularities.
Level of knowledge	No defined level of	No defined level of	No defined level of
appropriate to	knowledge required -	knowledge required -	knowledge required -
position	Experience and	Knowledge and	Attitude, knowledge,
	business acumen	experience in bulk	and experience in
	acceptable to the City	facility operations,	facility operations
	Manager.	personnel	acceptable to facility
		management,	management.
		regulatory	
		requirements	
		acceptable to Facility	
		Manager.	
Required licenses,	None	None	Tank truck drivers
certifications,			are required to
prerequisites to hold			maintain a
position			commercial driver's
			license.

 Table 2.1-1
 Discharge Prevention Training

	Facility Manager	Asst. Manager / Operation Manager	Facility Operators		
Discharge	See Section 2.1.1 above				
<b>Prevention Training</b>					
Start of employment					
and annual					
operations /		1	/		
discharge	V	V	v		
in compliance with					
An CER 112 7(f) as					
described above					
Person in charge					
training (bulk			$\checkmark$		
marine transfers) in	✓	$\checkmark$	(designated		
compliance with 33			operators)		
CFR 154.710(c)			- · ·		
Annual Review of					
facility spill					
prevention and					
response plans -	√	$\checkmark$	$\checkmark$		
Implementation and					
prevention					
requirements in					
ADEC ODPCP.					
Salety meetings	<b>v</b>	v	¥		

# Table 2.1-1 Discharge Prevention Training

# Section 2.1.2 Substance Abuse & Medical Monitoring Program 18 AAC 75.425(e)(2)(A)(ii)

It is company policy to provide a healthy, safe, and secure work environment for its employees, citizens of the community, facility visitors, and clients. It has established a substance abuse program and supports a medical program.

**Substance Abuse:** On a day-to-day basis, close supervision and daily contact with all employees is the means by which the City ensures any person who is responsible "for an activity that might result in a violation of this chapter (18 AAC 75), is free of substance abuse ... problems which would impair that person's ability to conduct his/her job."

Controlled substances and consumption of alcohol are prohibited on facility premises. Violations result in disciplinary action or termination. Reports of suspected substance abuse are addressed immediately by the Bulk Fuel Facility Manager, and/or the Director of Public Works. Any person

who is suspected of alcohol consumption is subject to immediate breathalyzer testing (conducted by the City Police Dept.). If the individual refuses to be tested, he/she is removed and prohibited from the facility.

One program to prevent substance abuse is the City Employee Assistance Program. The program is available to all employees. The program deals with a wide range of human problems which affect work performance and attendance, including alcoholism, drug abuse, mental or emotional illness, finances, marital or family stress, legal problems, and other concerns.

**Medical Monitoring:** On a day-to-day basis the Bulk Fuel Facility Manager is responsible for determining that employees and contractors are physically and mentally capable of performing all functions of their jobs. When there is doubt regarding an employee's health or fitness, the Facility Manager is to take appropriate action, which may include temporary reassignment or an immediate request for medical services.

All tank farm employees complete annual wellness surveys and medical intake forms. All employees have direct access to the local clinic, and based on small size of the village, the clinic staff knows, and monitors, chronic conditions of nearly all residents, and call them in for follow-up examination when health specialists make scheduled visits to the island.

# Section 2.1.3 Security Program

18 AAC 75.245(e)(2)(A)(iii)

The facility tank farm is surrounded by an eight-foot high chain link fence that is topped with three strands of barbed wire. The area is monitored daily by facility tank truck drivers, and/or by the service station attendant. The gates that provide access to the tank farm and truck rack are locked when the area is unattended.

During hours of darkness, the storage area is illuminated by tank-mounted light stands. Emergency notification placards are posted at the service station office.

The tank farm storage tank valves are chain-locked when not in use - and after each tank truck loading. The secondary containment drainage valve requires a key to be opened and that key is kept secure to prevent unauthorized use. On the fuel dock the header valves are locked when transfers are not in progress. All pump controls are within lockable buildings that are accessible only to authorized personnel. Loading connections not in service are capped and flanged.

All truck loading, service station operations, and marine transfers are conducted by facility personnel. Facility operators are issued keys which are required for access to the storage facility and activation of the truck rack and pumps. Prior to being authorized access, all operators must demonstrate to the Facility Manager their understanding of facility operations and emergency response procedures. The Facility Manager maintains records of outstanding keys. Locks are changed when determined appropriate by the Facility Manager.

On the fuel dock, the marine sales office and harbormaster office are adjacent to the south fueling station. Access to the north dock is controlled at the harbormaster office. The fuel headers are protected from vehicular traffic by steel bollards. The area is well illuminated.

After each transfer, the City operators ensure the valves are properly closed and locked.

During all marine transfers, at least one City operator is in continuous attendance at the fuel header. Fire extinguishers are staged at the transfer location, and all fire or ignition sources are removed prior to transfer operations. In the event of discharge, or any emergency, the operator(s) would secure the valve at the header, depress the emergency shutdown alarm at the header, secure the valve at the connection to the main line, and then initiate spill response operations.

The storage and dock area is regularly patrolled by the City Police. In the event of heightened risks, or threats of sabotage or vandalism, the Facility Manager may hire additional security patrols.

# Section 2.2 Discharge History

18 AAC 75.425(e)(2)(B)

Date	Cause	Product	Size of Spill (gallons)	<b>Corrective Actions</b> <b>Preventive Measures</b>
January 1992	Fuel pipeline – Mid- line air vent failed during product delivery	#2 Diesel	100	Air vent was replaced. Inspection & transfer procedures reviewed with operators.
March 1992	Fuel Dock Header - Valve was not isolated or closed while filling day tank	#2 Diesel	600	Header can now be isolated with a new valve installed. Operator training & inspection procedures reviewed with crew.
October 1995	Fuel line, north dock - Line broken during excavation for dock repairs day tank	#2 Diesel	500	Locate procedures, excavation spotting and operating procedures reviewed.
April 1998	Tank overfill	#2 Diesel	300	Personnel not to leave tank and must check in by VHF with marine fuel dept. at the start and end of fill operation
February 1999	Tank-to-tank transfer - person left post	#2 Diesel	1,500	Radio comms added, persons required during transfer.
December 2000	Power plant tank operator forgot to close fill valve when filling day tank – tank 11.	#2 Diesel	120	Set up standard procedures with radio comms, require 2 persons for transfer operation.
December 2009	Spill was caused by operator error.	Gasoline	169	Training refresher was provided to the fuel operator.
December 2012	Spill was caused by operator error.	Diesel	100	Training refresher was provided to the fuel operator.

# Table 2.2-1 Record of Spills Over 55-gal

## Section 2.3 Potential Discharge Analysis

18 AAC 75.425(e)(2)(C)

The intent of this section is to identify potential spills and to estimate their size, frequency, cause, duration, and location. Prevention measures to mitigate each potential spill are described.

Source	Aboveground Storage Tank (AST)		
Cause of	Overfills, corrosion, or physical damage that ruptures the tank		
discharge			
Size/rate of flow	Size depends on rate of flow and duration – a few gallons up to 600,000		
	gallons (the shell capacity of the single largest tank). Very low 1 gallon		
	per day up to ruptured shell 20 gallons per minutes (gpm).		
Frequency	Very low because of regular inspection and maintenance		
Duration	A leak from small holes caused by corrosion in the bottom might endure		
	for weeks or months depending on the flow rate and the time it takes to		
	be visible at the telltales. Ruptures in the shell will be discovered within		
	minutes and could be stopped in minutes to hours, depending on the size,		
Location	Tank farm		
Prevention	Inspection and maintenance. Transfer procedures.		
Source	Aboveground Pipeline Outside of Impoundment Area		
Cause of	Corrosion, rupture, and flange failure cause leaks in pipelines. Rupture is		
discharge	most likely caused by physical damage. Flange failure is usually caused		
	by gasket failure.		
Size/rate of flow	Flow depends on size of hole and pressure. The total volume of the 8-inch		
	gallons		
Frequency	Very low because of inspection and maintenance		
Duration	Leaks in above ground nines are easily and quickly detected – duration is		
Duration	estimated to be one hour.		
Location	Cargo lines run parallel to the shore along the length of the facility.		
Prevention	Inspection and maintenance; emergency pipe clamp repair kits are kept		
	on hand. All fuel dispensing is performed by qualified facility operators.		
Source	Tank Truck Loading Rack		
Cause of discharge	Degradation of the hose over time or physical damage to the hose.		
Size/rate of flow	The maximum loading rate is 150 gpm. It is estimated approximately 50		
	to 550 gallons could be discharged.		
Frequency	Very low frequency.		
Duration	The spill quantity from a failure would be proportional to the time elapsing		
	before the delivery terminated. Based on operating procedures and close		
	proximity of shutdown controls, it is estimated that it would take less than		
	a minute to respond. Assuming operator negligence, it could take up to 3		
	minutes.		
Location	Hoses at the TTLR.		
Prevention	Transfer procedures and personnel training.		

Source	Hose Break / Dock Piping Failure at Marine Headers
Cause of discharge	At the fuel dock, there is reasonable potential for a discharge resulting
	from hose or piping failure while marine transfer is in progress. Transfer
	spills are most commonly the result of operator error. Infrequently they are
	caused by equipment failure.
Size/rate of flow	Maximum rate of flow during barge delivery is 1,100 gpm. Maximum rate
	of flow during vessel refueling is 318 gpm. The estimated discharge is 500
	- 3,300 gallons.
Frequency	Very low because of close attention of fuel operators and training.
Duration	Less than one minute up to 3 minutes, assuming operator negligence.
Location	Fuel dock
Prevention	Transfer procedures and personnel training are the primary means of
	preventing transfer spills. During marine transfers, a shoreside watchman
	stands duty at the receiving header. The watch maintains radio contact with
	the barge/vessel and can terminate the transfer within seconds. Secondary
	containment (drip pans), which comply with Coast Guard regulations, are
	positioned beneath each header. Emergency pipe repair patch kits (6" and
0	8") are maintained at the facility.
Source	Valves
Cause of discharge	Deteriorated seals or flanges.
Size/rate of flow	Normally less than one gallon. Flow rate is one gallon per hour.
Frequency	Very low because of inspections and maintenance.
Duration	Less than one hour.
Location	Tank farm, marine headers, TTLR.
Prevention	Inspection and maintenance.
Source	Camlock Connection
Cause of discharge	Faulty camlock connection not properly seated; damaged O-rings.
Size/rate of flow	Estimate 0.25- to 1-gallon. Flow rate 25 gallons per minute
Frequency	Less than once a year.
Duration	Less than a minute because transfers though camlocks are attended by
	operators.
Location	Fuel headers and other transfer areas.
Prevention	Transfer procedures and personnel training.

# Section 2.4 Conditions That Might Increase Risk of Discharge 18 AAC 75.425(e)(2)(D)

The intent of this section is to identify conditions or operations that might increase the risk of a spill and to describe measures being taken to reduce the risk for each one identified.

Seismic/Tsunami Hazard: Saint Paul Island is located approximately 275 miles north of the nearest megathrust subzone (Western Aleutians). Large earthquakes (magnitude of 6.0 or higher) in this megathrust zone are common (Wesson et al., 2007). Earthquakes north of this megathrust zone moving towards Saint Paul Island are less frequent. Earthquake swarms, a series of earthquakes that differ from a typical mainshock or aftershock sequence, have occurred in recent history off St. George Island. The cause of earthquake swarms is undetermined (UAF 2020).

Several earthquakes have occurred in along the Aleutian Islands and in Western Alaska since the Facility was constructed. None have resulted in any damage. The bulk plant and facility piping are inspected after any major earthquake to ensure no damage has occurred. See Section 3.1.1 for a description of each tank's foundation. The facility is located within the tsunami inundation area (ADNR 2020b). Should a tsunami warning be issued on the island, facility personnel will evacuate in accordance with community tsunami evacuations routes. Tanks and piping not in use are kept closed and/or locked as appropriate to prevent a release should there be an earthquake or subsequent tsunami.

**Flooding:** The area is not subject to flooding. The tank farm impoundment area, and the area surrounding the tank farm, has been graded and contoured to drain surface water away from the storage tanks and exposed pipelines.

Soil instability, erosion, or permafrost are not problems specific to this facility.

**Weather:** Bad weather can increase the risk of spills by making employees rush to complete jobs or making it hazardous to transfer fuel at the dock. To mitigate against these risks, employees are cautioned during safety meetings about operating in bad weather. They are instructed to slow down and be sure to follow procedures when operating in bad weather. If they think the weather is too severe to operate safely, they have the authority to stop. Any time an employee thinks an operation is not safe for any reason, he knows he should stop. Whenever the weather conditions make it hazardous to transfer fuel at the Fuel Dock, the delivery will be rescheduled to a time when the weather returns to safe operating conditions. Extreme weather is further discussed in Section 3.4 of this plan.

Act of Vandalism/Sabotage: Sabotage or vandalism are possible; however, the isolation and character of Saint Paul Island reduce the threat. The facility is illuminated and surrounded by an eight-foot chain-link fence. Entrance gates are locked when the facility is unattended. All tank valves and valves located outside of the fenced area are chained and locked when not in use.

**Equipment/Operator Failure:** Failure of equipment is a cause of spills, and old, poorly maintained equipment is more likely to fail than new, well maintained equipment. The City of Saint Paul performs regular inspections and maintenance to eliminate equipment at risk of a failure.

An operating factor that would increase the risk of a spill is having unqualified or untrained employees transferring fuel. The City of Saint Paul screens applicants by checking their qualifications before hiring anyone. Once hired, employees are given specific job training. Throughout their tenure, employees attend regular safety meetings and attend periodic refresher training in operations and spill response. Crew motivation and training are the first line of spill prevention.

**Ice:** There is typically no ice in the bay since Saint Paul is essentially an ice-free port. Fuel transfers are not conducted if ice jeopardizes safety or prevent spill response.

#### Section 2.5 **Discharge Detection**

This section provides a description of the existing and proposed means of discharge detection, including facility inspection schedules, discharge detection systems in place, and monitoring systems. If electronic or mechanical instrumentation is employed, detailed specifications, including threshold detection, sensitivities, and limitations of equipment will be provided.

## Section 2.5.1 Facility Inspection

Direct Observation: Oil spills will be primarily detected by direct observation of the event. Whenever oil is being transferred to a vessel, the person in charge of delivery will stand by the point of transfer. He will keep a continuous watch for any sign of a spill.

During bulk fuel deliveries to the facility, a watchman also will be stationed at the tanks. He will be in radio communication with the person in charge of the delivery who will be keeping watch at the delivery point on the dock. If any irregularity occurs, including overflowing a tank, the watchman will notify the person in charge of delivery who will immediately order the discharging vessel to shut down its pumps. Except for overfill alarms, there is no electronic monitoring to detect spills.

Periodic Inspection: The City of Saint Paul personnel have been trained to observe all piping systems and tanks externally to look for obvious leaks or defects in the tanks or piping systems. They visually inspect the facility for evidence of any discharge during daily operations. This inspection is recorded on the daily inspection form. Monthly and annually the Facility Manager or his designee perform a more detailed inspection, identifying potential areas of concern (areas at risk for discharge) and record these observations on the monthly and annual inspection forms. All forms are located in Appendix A of this plan.

Inspection training: The Facility Manager and tank farm operators are designated and trained to observe facility tanks and piping for the monthly inspection requirements of API 653 and API 570.

## Section 2.5.2 Discharge Detection for New Storage Tanks

New storage tanks will be equipped with leak detection observable form outside the tank designed and built in accordance with API 650 as adopted by reference in Alaska regulations 18 AAC 75.065(j).

# Section 2.5.3 Discharge Detection for Existing Storage Tanks

## **Maintenance & Inspection**

Tanks are inspected as part of the periodic plant inspections. There are daily and monthly inspections. The monthly inspections include API 653 requirements. (see Facility Inspection Checklist, Appendix A of this plan) All tanks are inspected and maintained in accordance with API 653. Inspections are conducted by API authorized inspectors. The inspection intervals are

18 AAC 75.425(e)(2)(E)

18 AAC 75.425(e)(2)(A)

January 2021

18 AAC 75.065(a)(1), (a)(2)

determined by the inspector, but ADEC can reduce the interval for older tanks, riveted tanks, tanks with a history of problems, or after significant earthquakes.

Horizontal tanks are inspected in accordance with the Steel Tank Institute Standard SP001 (Standard for the inspection of Aboveground Storage Tanks).

Except as noted below, all records and documentation of maintenance, repairs, or alterations are kept for the life of the tank and are available to ADEC upon request. Records and documentation of inspections required by Section 6.3.1 of API 653 will be kept for five years and are available to ADEC upon request. The schedule of tank inspections is provided in the table below.

Tank Number	Date Const.	Last	Next	Last	Next		
		Internal	Internal	External	External		
API 653 Inspected Tanks							
1	1961	2016	2026	2016	2021		
2	1961	2012	2022	2018	2023		
3	1961	2016	2026	2016	2021		
4	1961	2016	2026	2016	2021		
5	1961	2016	2026	2016	2021		
6	1961	2016	2026	2016	2021		
7	1961	2012	2022	2018	2023		
8	1988	2012	2022	2018	2023		
9	1988	2012	2022	2018	2023		
STI SP001 Inspected Tanks							
11	1992			2016	2026		

# Tank 2.5-1 Tank Inspection Schedule

Annual inspections of the impressed current system are completed to assess operation of system and to ensure the system is operating as designed by providing adequate protection from corrosion damage. In accordance with 18 AAC 75.065(h)(1)(B), operation and maintenance of the cathodic protection system is consistent with NACE Standard SPO193 "External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms."

The City of Saint Paul will notify ADEC before making any major repair or alteration to a regulated tank. The City of Saint Paul will also notify ADEC when taking a tank out of service and before returning any tank to service. A field constructed above ground oil storage tank removed from service for more than one year must be cleaned, marked, and secured in accordance with 18 AAC 75.065(o) which requires that the tank be free of oil,

- Marked with the words "out of service" and with the date taken out of service,
- Secured to prevent unauthorized use, and
- Disconnected from the facility piping.

## **Overfill Prevention**

18 AAC 75.065(k)(1) and (3)

Overfill prevention is provided to diesel service tanks (1, 5, 6, 7, 8, & 9) by the Senix ToughSonic CHEM 20 system, which was installed in 2018. Diesel service tanks have high level alarms that are set to 95% and low levels are set at 5%. The low level is set to prevent damage to the pumps. When the high level alarm is triggered, the M-1 valve system automatically closes.

Overfill prevention is provided to gasoline service tanks (4 and 7) with floating roofs by the APG, model PT-500 submersible level transmitter that continuously measures the liquid level in the tanks. These two tanks do not have automatic shutoff valves. The overfill prevention system for Tank 7 was installed in 2018, Tank 4 was installed in July 2020.

All tank gauges report to a computer terminal located in the office. It shows the liquid levels for each tank and valve status on the automatic valve. Note that tanks 2 and 3 are currently kept empty for oil spill response and are not equipped with ultrasonic level gauges.

In accordance with 18 AAC 75.065(l), the overfill protection devices are tested before each transfer operation or monthly whichever is less frequent. The testing is conducted from the control panel by adjusting the ultrasonic transducer detection setting to the liquid level in the tank which sounds the alarm and confirms proper operation. The detection level is reset following each test. The controller also indicates component malfunction. If a gauge does not operate correctly it will be repaired or replaced and calibrated in accordance with manufacturer's instructions. If a gauge cannot be repaired immediately, fueling will only commence if the liquid level is continuously monitored in a safe manner to prevent overfill during tank filling.

Tanks are hand gauged monthly and prior to barge deliveries. During product receipt, tank levels are closely monitored by a person on top of the tank and/or a person observing the liquid level controller. Tank levels are recorded hourly during product receipt.

# Leak Detection

18 AAC 75.065(h)(1)(A), (i)(4)(A)

18 AAC 75.06(h)(1)(B)

All tanks at the facility were placed in service prior to May 14, 1992 and are therefore exempted from the leak detection requirements of 18 AAC 75.065(h)(1)(A).

Within the tank yard, there are two monitoring wells that enable periodic subsurface inspection (see Figure 1.8-3). The wells are 8-inch diameter PVC wells set above the impermeable liner. They are inspected (visual and olfactorily tested) semi-annually.

# **Cathodic Protection**

Tank bottoms are cathodically protected in accordance with 18 AAC 75.065(h)(1)(B). The cathodic protection system for the tank farm consists of an impressed current to provide corrosion protection for the aboveground storage tank bottoms and buried piping at the tank farm. The impressed current system consists of a rectifier in the tank farm office connected to 34 buried HSCI anodes around the perimeter of the tank farm with a ground return line from the bulk fuel tanks back to the rectifier.
The cathodic protection system for the tanks was originally designed by Norton Corrosion Ltd. in 1999. Cathodic protection systems installed on facility tanks are consistent with NACE SP0193, designed by a corrosion expert, and installed under the supervision of a corrosion expert. Throughout the years multiple updates to the system were installed by Norton Corrosion Ltd. and the City of Saint Paul. Extensive work was performed in 2000, 2002, 2003 and 2012 to increase cathodic protection system coverage between the piping and the tanks. This work has resulted in bonding of the systems together to prevent interference.

Appendix D includes schematics of the cathodic protection system for the tank farm. Test stations are located throughout the facility. Monthly readings of the rectifiers are logged (see Appendix A for a copy of the Rectifier Log).

#### Section 2.5.4 Discharge Detection of Facility Piping 18 AAC 75.075(a), (c), (d)

Discharges are detected by visual inspections. All aboveground pipes and valves are visually checked for leaks before and during transfers or at least monthly, whichever is less frequent.

Before transferring fuel in an area not protected by secondary containment, all hoses are checked for wear, cracks, or damage. All camlock fitting seals are checked for damage before connecting. A catchment basin is placed under each connection to catch any leaks when weather conditions allow. After the transfer is started, all hoses and connections are monitored until the transfer is completed.

#### **Hydrostatic Testing**

The City of Saint Paul hydrostatically tests cargo piping from the tank farm to the dock and hoses to 1.5 times the maximum allowable working pressure (225 psi for cargo piping, 150 psi for flexible hoses) annually in accordance with United States Coast Guard regulations. This testing is documented and maintained on site. Logs of all inspections, tests, and repairs are maintained in the plant records for three years. These records include the results of tests and details of all repairs or maintenance performed.

#### **Cathodic Protection**

There are several buried pipeline systems that are cathodically protected at this facility. Cathodic protection systems installed on facility oil piping are consistent with NACE SP0169, designed by a corrosion expert, and installed under the supervision of a corrosion expert. These include localized facility piping; pipelines connecting the tank farm to the tank truck loading rack and powerplant; and pipelines connecting the tank farm to the Port and to the South Dock. System installation dates vary between 1987 and 2003. Extensive work was performed in 2000, 2002, 2003 and 2012 to increase cathodic protection system coverage between the piping and the tanks. This work has resulted in bonding of the systems together to prevent interference.

33 CFR 156.170(c)(1)(iii) 33 CFR 156.170(f)(1)

18 AAC 75.080(f)

BG: Belowground AG: Aboveground

Appendix D includes schematics of the cathodic protection system for the tank farm. Test stations are located throughout the facility. Monthly readings of the rectifiers are logged (see Appendix A for a copy of the Rectifier Log).

# **Third Party Inspection**

Piping is maintained and inspected in accordance with the current edition of Piping Inspection Code, Inspection, Repair, Alteration, and Rerating of In-service Piping Systems (API 570). The inspections will be done by an API certified inspector on the identified schedule based on pipe classification. Aboveground pipe will be visually inspected externally for corrosion, cracking, leaks, misalignment, vibration, supports, and insulation.

If there is buried piping without cathodic protection is electrically inspected at least every three years (not to exceed 39 months between intervals).

All Facility pipes and valves are maintained in accordance with the corrosion control program described in this section of this plan. Aboveground pipes are protected from atmospheric corrosion with a coating. Wherever pipes are exposed to vehicular traffic, the pipes are protected from damage.

All piping inspections are maintained for the life of the pipelines.

Pipeline Circuit	API 570 Class	Last Inspection	Next Inspection
4-inch BG	1	2012	2020
4-inch AG	1	2012	2020
6-inch BG	1	2012	2020
6-inch AG	1	2012	2020
8-inch BG	1	2012	2020
8-inch AG	1	2012	2020

# Table 2.5-2 Pipeline Inspection Schedule



18 AAC 75.080(h)

City of Saint Paul Bulk Fuel Facility

#### Section 2.5.5 Secondary Containment Areas

18 AAC 75.075(d)

#### Tank Farm

The tank farm containment structure consists of a diked and lined impoundment area that is surfaced with compacted bentonite with a calculated permeability that is sufficiently low enough to meet the definition of 18 AAC 75.990(124). The dike surrounding the impoundment area is 5-6 feet high and provides a total impoundment volume of approximately 1.9 million gallons. A cross section of the tank farm and containment liner details is illustrated in Figure 1.8-6.

A typical section through the structure consists of a scoria surface layer, a 3-foot structural fill layer of sand to keep liner moist, and a pre-manufactured impermeable bentonite liner system over a prepared structural (sand) fill zone. Compaction of the top six inches under the tanks to 95% maximum density was performed prior to final placement of the tanks. The liner specifications are as follows: Prefabricated three-layered liner system consisting of a layer of woven polypropylene, a layer of sodium bentonite clay with a minimum of 1 pound per square foot and a layer of polyester for protection during installation. The liner penetration sealer was composed of 100% granular bentonite (sodium montmorillonite). The bentonite liner extends up all main dikes and is keyed into the top of each to provide a water-tight, leak-proof liner throughout the storage area.

A copy of the manufacture's specifications of the tank yard liner material is provided in Appendix E of this plan. The liner was installed by Alaska Mechanical, in accordance with bid specifications prepared by URS, and industry standards. The bid specifications are maintained at the City Public Works office.

Subdikes have been constructed around each tank for small spills and fire control. The subdikes are approximately 18 inches high, constructed of compacted scoria, and comply with Uniform Fire Code criteria. Stormwater is removed from all cells via a drainage line to an oil/water separator.

#### Tank Truck Loading Rack

The truck loading rack is a steel framed, open-sided, metal roofed structure with a concrete slabon-grade foundation. The structure has a single pantographic fill arm for filling of the City's fuel truck for heating oil delivery to the community. An elevated walkway allows access to the truck's fill line, and a meter with preset and emergency shut offs. Remote controls for the truck rack are located in the adjacent control building.

Loading is conducted on a 16' x 32' concrete slab that is surrounded by an 8-inch concrete berm (see Figure 1.8-7). Drainage within the concrete loading area is to a catch basin that is piped to the tank yard drainage system and oil/water separator. The volume of the secondary containment system is approximately 4,000 gallons, which exceeds the largest single compartment of truck that use the rack.

## **Power Plant Day Tank**

The power plant day tank is skid mounted, steel, double-walled, closed top integral secondary containment. Tank #11 has capacity of 10,000 gallons.

#### **Containment at Marine Headers**

Fuel barges connect to the fuel hydrant with a 6-inch flexible hose equipped with a flanged gasket fitting. Pumps onboard the barge push fuel through the pipeline.

Beneath each marine header is a fixed drip pan for secondary containment. The capacity of the drip pan exceeds the Coast Guard volumetric requirement of two barrels.

#### Drainage

In the tank farm, interior elevations are graded for positive drainage. Stormwater drains to a collection sump that drains through a valved pipeline to an oil/water separator that discharges to facility property on the southwest side of the tank farm to an evaporation pond (see Figure 1.8-3). The valve on the tank farm stormwater drain line requires a valve key to operate. Access to the valve key is secured at all times.

The water in the secondary containment area is visually inspected for oil sheen before it is drained. If sheen is present, the fuel is recovered with use of sorbent pads. No water is drained until all visible sheen has been removed. All drainage events are recorded on the inspection log which is kept at the plant for five years. A record is kept of the date and time of the drainage, whether or not a sheen was visible on the water, the estimated water depth in inches before the water is drained, and the time the drainage stopped. If an oil sheen was present, a record of the action taken to remove the oil is also recorded. Drainage valves are closed and locked upon completion of each drainage. See Appendix A of this plan for the drainage log form.

#### **Inspections & Maintenance**

The secondary containment areas are visually inspected daily. Any debris, vegetation, excess water, or other things that obstruct the operation of the containment are removed. The inspector looks for any defects, damage, or signs of leaks or spills. Problems are logged on the inspection log. Repairs or cleanup are undertaken to ensure the containment area is operating properly, and free of debris and excess water.

18 AAC 75.425(e)(2)(F)

# Section 2.6 Waivers and Compliance Schedule

Not applicable at this facility.

#### Section 3.0 Supplemental Information

18 AAC 75.425(e)(3)

This section is the location for background information needed to support the plan. It also contains general information about the setting, layout, and operation of the facility.

## Section 3.1 Facility Description and Operational Overview 18 AAC 75.425(e)(3)(A)

The Saint Paul Bulk Fuel Storage Facility is operated and maintained by the City of Saint Paul. The general system consists of a fuel storage tank farm and a fuel transmission pipeline connecting the tank farm to the City's dock facility.

The tank farm is a four-acre site located on Diamond Hill Road, approximately 1½ miles northeast of the community. The fuel transfer system consists of an eight (8) inch buried steel pipeline in diesel service that extends from the storage facility to the dispensing and receiving stations on the docks. It extends east to Tolstoi Boulevard, then north along Harbor Road to its intersection with Polovina Turnpike. The line continues northeast along Polovina Turnpike, then southeast along Diamond Hill Road to the fuel farm pump station. Note that gasoline is currently transferred via tank truck to the Saint Paul Bulk Fuel Facility.

The tank farm contains nine, welded steel, vertical tanks. Total storage capacity is 1.8 million gallons. There are six 80,000-gallon tanks, one 120,000-gallon tank, and two 600,000-gallon tanks. The 600,000-gallon tanks were fabricated on-site in 1988. The other tanks were refurbished and relocated to the current site in 1988. They are positioned on gravel pad foundations. Detailed tank information is presented in Section 2.5.3 of this plan.

These nine above described bulk storage tanks are located within a diked and lined impoundment area that is surfaced with compacted bentonite. Each tank is segregated by subdikes for small spill and fire control. The volume of the impoundment area is approximately 1.9 million gallons. Interior elevations are graded for positive drainage, and stormwater runoff is handled by catch basins and drainage lines which discharge to an oil/water separator located outside the containment structure. Details of the secondary containment system are presented in Section 2.5.5 of this plan.

Located next to the northwest corner of the tank farm, are two 3,600-gallon, horizontal day tanks that supply gasoline and diesel fuel to the service station operations. These tanks are not connected to the tank farm piping. The diesel tank is filled by tank truck. The gasoline tank is filled using a portable pump and hose from the tank farm. Service station operations are conducted by a City employee from the tank farm office. Normal transfer procedures are followed to transfer gas.

There is one 10,000-gallon horizontal day tank (Tank #11) located next to the City Power Plant that is used for power generation. The tank is connected to the main tank farm by a belowground pipeline. The City of Saint Paul operates and maintains the tank and associated piping that services the power plant.

The tank truck load rack is adjacent the northeast corner of the tank farm. The rack is used to load tank trucks that deliver home heating oil. The truck rack is a steel framed, covered, top loading, downspout system. An elevated walkway allows access to the fill line and a meter with preset and emergency shut offs. Remote controls are also located in the adjacent control building. Fuel is loaded via a handheld valve, which is operated by the truck driver. The concrete loading area is surrounded by an 8" berm that provides secondary containment that drains to the tank farm separator.

A combination office/control building is located adjacent to the truck rack. A pump station immediately west of the containment structure contains fuel transfer pumps and tank truck loading pumps.

The marine dispensing facilities and a fuel barge off-loading hydrant are located at the City dock facilities, which include two gravel-filled concrete caissons, steel pile docks on the breakwater. There is one marine dispensing station on the north dock capable of fueling a single vessel up to 180 feet, two on the south dock capable of fueling a single vessel up to 285 feet or two vessels up to 100 feet. Barges of similar size can off load at either the North Dock or South Dock Marine Headers. Fuel is dispensed via two (2) inch, spring loaded, hose reels and/or a dry-disconnect camlocked hoses. All vessel fueling is conducted by City operators, who continuously monitor each dispensing station during the entire transfer. Section 3.1.4 describes transfer procedures.

The Dock Building, a structure containing the main control relays, office space, spill control equipment storage and firefighting equipment, is located adjacent to the south dock.

#### Section 3.1.1 Tank Information

#### 18 AAC 75.425(e)(3)(A)(i), (ii)

The facility tank farm and associated piping was installed in 1988. The tank farm consists of seven tanks (1-7) that were relocated from a previous storage site, and two tanks (8 and 9) that were constructed on-site. Tanks 1-7 were originally constructed to API 12-C standards. When they were relocated in 1988, they were completely inspected, rehabilitated, and upgraded to meet API 650 standards. Tanks 8 and 9 were constructed to API 650 standards. Tanks 1-9 are vertical, welded-steel construction, with cone roofs. They are positioned on gravel pad foundations. These tanks have spiral stairways with treads attached to shell top platform, and handrails around roof perimeter, and are equipped with manual shutdown valves. Total storage capacity of the tank farm is 1.8 million gallons.

Two 3,600 gallons horizontal tanks are located next to the tank farm. They supply gasoline and diesel fuel to the service station located adjacent the tank farm. The tanks were installed in 1988. They meet UL Standard 142, and are skid-mounted tanks, with double-wall, closed top integral secondary containment.

There is a 10,000-gallon (Tank #11) horizontal tank, located next to the Power Plant. This tank is used as a "Day Tank" for power generation. The tank was put in service in 1992 and retrofitted and moved to the new power plant in 1998. The tank is constructed to UL Standard 142, skid

mounted, steel tank, with double wall, closed top integral secondary containment with an 8" diameter manhole, 4" diameter vent, and 2" diameter fill and return fuel taps. The tank is always visually monitored during fill operations to protect from overflow.

More information about each tank is provided below in Table 3.1-1.

Tank ID	Diam. (ft.)	Height/ Length (ft.)	Volume (gal)	Safe Fill Capacity (gal)	Year Constr.	Constr. Std.	Foundation	Product
1	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	Unleaded Gasoline
2	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	Empty – Contingency Spill Storage
3	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	Empty – Contingency Spill Storage
4	30	24	120,000	117,655	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	Unleaded Gasoline
5	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	# 2 Diesel
6	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	# 2 Diesel
7	25	22	80,000	75,787	1961 (O) 1988 (R)	API 12C (O) API 650 (R)	Gravel Pad	# 2 Diesel
8	66	24	600,000	588,647	1988	API 650	Gravel Pad	# 2 Diesel
9	66	24	600,000	588,647	1988	API 650	Gravel Pad	Winter Diesel Blend
10						Out of Service		
11	10	17.5	10,000	9,800	1992(O) 1998 (R)	UL 142 Double Wall	Skid on Gravel Pad	Winter Diesel Blend
12						Out-of-service		
Tanks	is not regulated by 18 AAC 75							
CS -1		17.5L x 6H x 6.2W	3,600	3,240	1988	UL 142 Double Wall	Skid on Gravel Pad	Unleaded Gasoline
CS-2		17.5L x 6H x 6.2W	3,600	3,240	1988	UL 142 Double Wall	Skid on Gravel Pad	#2 Diesel
		Total	1,817,200					

 Table 3.1-1
 Oil Storage Container Information

(O) – original

API 653 – American Petroleum Institute, Standard 653

(R) – relocated / refurbished

CS - City Service Station Day Tank

#### Section 3.1.2 Type and Amount of Oil

18 AAC 75.425(e)(3)(A)

The facility stores #2 diesel fuel, a diesel fuel blend, and unleaded gasoline. Product is received via marine delivery, approximately eight times per year. It is distributed at the facility truck rack, at the City service station, by pipeline to vessels, and to the City power plant. Annual throughput is approximately 2,500,000 gallons. Average daily throughput is approximately 6,850 gallons.

#### Section 3.1.3 Pipeline Information

18 AAC 75.425(e)(3)(A)(i), (ii) 18 AAC 75.080

The fuel transfer system consists of a single eight (8) inch buried steel pipeline that extends from the storage facility to the dispensing and receiving stations on the docks, a total distance of approximately 8,000 feet. It extends east to Tolstoi Boulevard, then north along Harbor Road to its intersection with Polovina Turnpike. The line continues northeast along Polovina Turnpike, then southeast along Diamond Hill Road to the fuel farm pump station. The eight (8) inch transmission line to the tank farm is cathodically protected, welded steel.

Dock piping consists of an eight (8) inch line to the barge hydrant, and a six (6) inch line to the south fuel dock and to the north fuel dock. The six (6) inch lines provide fuel to the dock-side dispensing stations, while the eight (8) inch fuel transmission main allows refueling of the day tank and the main storage tanks of the tank farm

The pipeline valve types are Forged Steel ASTM A105 gate valves and ASTM A-126 class B iron check valves.

See Figure 1.8-2 for a site map of the facility showing the pipeline layout.

## **Buried Pipe**

18 AAC 75.080(d), (g), (h)

All underground piping is welded-steel construction, seamless pipe, with marker tape added above the piping. Pipe depth varies from 4 to 8 feet burial depth. Locate services are provided by the City of Saint Paul to all contractors working near any utilities.

New buried metallic pipe will be welded construction only. No clamped or threaded couplings will be used. The newly installed metallic pipe will have protective coating and cathodic protection. The cathodic protection will be designed, built, operated, and maintained in accordance with *Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping Systems*, (NACE RP0169-2002). The cathodic protection system will be designed by a corrosion expert. Installation of the cathodic protection system will be supervised by a corrosion expert. The cathodic protection system will have accessible test leads to test the effectiveness of the system.

## **Out of Service Pipes**

Unless completely removed, any facility piping taken out of service for more than one year must be free of oil. The pipe must be labeled with its origin, date taken out of service, and the lettering

18 AAC 75.080(o)

"OUT OF SERVICE". The pipe must be isolated from the system and secured to prevent its use. The City of Saint Paul will notify ADEC when piping is removed from service and when the above actions have been taken.

## Section 3.1.4 Transfer Procedures

18 AAC 75.425(e)(3)(A)(vi)

#### Section 3.1.4.1 General Transfer Procedures

All appropriate measures to prevent spills or overfilling during a transfer of oil shall be taken, including reduced loading rates at the beginning and the end of a transfer.

A qualified person will be designated to be in charge of every transfer operation. The person will not be allowed to be the person in charge until he has had sufficient training and experience to demonstrate to his supervisor that he has the capabilities to conduct a safe transfer. In addition, the person in charge of any transfer will be trained in how to respond to an oil spill. This training will ensure that the person knows how to follow the emergency action checklist, the reporting and notification requirements, safety procedures, and the proper response actions.

During bulk fuel deliveries to the plant, a watchman will be stationed in the tank farm. He will be in radio communication with the person in charge of the delivery and the barge tankerman. The duties of the watchman are to monitor all gauges to make sure they are working properly and to watch for leaks or other irregularities in the tank farm. When topping-off a tank the watchman will be stationed at the tank. Topping-off a tank means filling it to the safe fill height.

The procedure called topping-off involves filling the last one foot to six inches depending on the size of the tank. Large diameter tanks fill more slowly than small diameter tanks. During the topping-off procedure the watchman will closely monitor the height of product in the tank and inform the person in charge and the tankerman of the progress. When the person in charge, at his discretion, thinks it is necessary he may station the watchman on top of the tank to monitor the topping-off. This decision depends on the size of the tank, the type of level gauges, or any other factors the person in charge deems appropriate. The watchman will notify the person in charge and the tankerman to stop the transfer when the product reaches the safe fill level.

If any irregularity occurs during the transfer, the watchman will notify the person in charge of delivery who will immediately order the discharging vessel to stop the transfer.

The tank barges and the tank truck loading racks have emergency shut-off switches accessible to the operator to shut down transfers in the shortest amount of time. The tanks have electronic high level alarms with audio and visual signals to warn employees if a tank is being overfilled.

**Training -** Training of facility personnel in transfer procedures will be conducted on date of hire, and on a quarterly basis. Training will consist of classroom review of all facility transfer procedures noted above and detailed on following pages, and facility spill history (see Section 3.9). A field exercise of each transfer procedure will be accomplished with all personnel. Training will be conducted by the Marine Sales Division Head in cooperation with the City Safety Manager.

# Section 3.1.4.2 Marine Transfers - Barge Receipts & Vessel Loading from Dock Fueling Stations

Product is delivered to the facility by barge approximately eight times a year. On average, one or two vessels are fueled per day from the dock fueling stations. All marine transfers are conducted

in accordance with Coast Guard requirements listed in 33 CFR, Parts 154 and 156. In accordance with Coast Guard and ADEC regulations, placards are posted at marine transfer areas and in the fuel dock office. Placards indicate no smoking and restricted access areas and provide spill notification information.

All transfer pumping shall begin and end slowly. Only after inspection of area, confirmation there are no leaks, and that product is being professionally delivered should transfer volume be increased. Gradually build to full flow over a period of about 10 minutes. Marine transfer procedures include (in part):

- Certification of Vessel Contingency Plan is verified to ADEC (for vessels that carry fuel as cargo)
- Receiving Tanks are gauged to confirm ullage. Transfer volumes are confirmed with all operators.
- All transfer equipment is inspected by dock-watch personnel. Aboveground cargo pipelines are visually inspected. Equipment deficiencies or concerns are reported to the Facility Manager for documentation and corrective action.
- A Pre-Transfer Conference is conducted between the shore side and vessel persons-incharge. The conference addresses items listed in 33 CFR, Part 156.120. Procedure to ensure transfer pressure does not exceed Maximum Allowable Working Pressure (MAWP) is discussed. Topping off procedures are confirmed.
- A Declaration of Inspection (DOI) is completed prior to the transfer. The DOI addresses items listed in 33 CFR, Part 156.150. The DOI is to be initialed by each person-in-charge at every watch change (for transfers to vessels with capacity of 250 barrels or more). Upon signing the DOI, both persons in charge are certifying they are ready to begin transfer.
- Radios are issued to transfer personnel and communications procedures established between all operators. Radio checks are to be conducted at least hourly during the transfer.
- Fire extinguishers are staged at transfer location and all sources of ignition removed from the site.
- Line-Up: The persons-in-charge confirm that pipeline and tank valves are set in a manner consistent with the transfer plan.
- Hook-Up: Couplings are made to meet federal requirements. Drip pans/collection areas are inspected and cleared of ice and water.
- Initial Transfer: When flow commences, a complete inspection of the vessel, surrounding waters, pipeline and tanks is made to verify everything is in proper order and there are no leaks or spills. Initial delivery and topping off shall be at reduced rates.
- Tank Topping Off/Switching: From the standpoint of oil pollution and safety, filling the tanks up to the determined ullage, securing them and transferring flow to other tanks is a most critical operation. Full attention is given to these duties.
- Completion of Transfer: The shore side person in charge shall ensure all facility equipment is secured (locked) and good condition for next transfer. Any equipment malfunctions or concerns shall be reported to Bulk Fuel Manager.

#### Section 3.1.4.3 Tanker Truck Loading - Gas Offload from Barges

Truck loading procedures comply with DOT loading regulations (49 CFR Part 177), and EPA spill prevention guidelines (40 CFR, Part 112). The fuel truck is designed for "top loading". Facility operators conduct all truck loading. Loading procedures include (in part):

#### **Pre-Transfer Procedures**

- While engine is idling, set parking brake.
- Turn off engine and radios.
- Chock wheels to prevent movement of truck.
- Inspect vehicle, tank and valves to make sure everything is in order.
- Inspect surrounding area to determine if unsafe or fire hazards exist.
- Radios are issued to transfer personnel and communications procedures established between all operators and barge crew. Radio check is to be conducted at least hourly during transfer.
- Bonding cable is attached to Barge before opening dome cover.
- Fire extinguisher is staged to the transfer site.
- Each compartment is visually inspected prior to loading.
- Hose is passed from Barge and couplings made to tank bottom fill to meet federal requirements. Drip pans/collection areas are inspected and cleared of ice and water.
- The persons-in-charge confirm that hose and tank valves are set in a manner consistent with the transfer plan.
- Roads are blocked off and proper signs and firefighting equipment is set in place.
- Block valve is opened.

#### Transfer

- Product flow is commenced from the barge to the tank truck. A complete inspection of the barge, surrounding waters, hose, and tanks is made to verify everything is in proper order and there are no leaks or spills.
- Product flow is to be started at a reduced rate until the end of the downspout is submerged, then full flow rate is slowly initiated.
- The self-closing loading valve must remain under the loaders hand control.
- Tank is filled to predetermined level. One person remains on top of tanker monitoring tank fill.
- When topping the tank off flow rate is reduced.

## Delivery

- When loading is completed barge pumps are turned off, block valve closed, and the hose is unhooked and placed in the drip pan.
- Bonding cable is disconnected from barge.
- Inspection is made of truck and surrounding area to make sure everything is in order.
- Chock is removed; truck is ready to drive away.

- Tanker truck is driven to the tank farm for off-loading.
- Bonding cable is attached to the product tank from the tanker.
- Hose from tank truck is connected to product tank.
- Roads into tank farm are blocked off and proper signs and firefighting equipment is set in place.
- The person-in-charge confirms that hose and tank valves are set, and visual contact is maintained between tanker operator and observer on top of product tank.
- Block valve is opened, and the operator starts pumping until tanker is empty.
- When offloading is completed tanker pump is turned off, block valve closed, and the hose is unhooked and placed in the drip pan.
- Bonding cable is disconnected from product tank.
- Inspection is made of truck and surrounding area to make sure everything is in order.
- Chock is removed; truck is ready to drive away.
- Tanker truck returns to barge for additional loads repeating transfer and delivery steps until all product is transferred.

#### Shutdown

- When loading is completed barge pumps are turned off, the hose is unhooked and drained back into barge.
- When off-loading is completed tanker pump is turned off, the hose is unhooked and drained into the gasoline day tank.

#### Section 3.1.4.4 Tank Truck Loading - Terminal Truck Load Rack

Truck loading procedures comply with DOT loading regulations (49 CFR Part 177), and EPA spill prevention guidelines (40 CFR, Part 112). The single bay truck rack is designed for "top loading". Facility operators conduct all truck loading. Loading procedures include (in part):

#### **Pre-Transfer Procedures**

- While engine is idling, set parking brake.
- Turn off engine and radios.
- Chock wheels to prevent movement of truck.
- Inspect vehicle, tank and valves to make sure everything is in order.
- Inspect surrounding area to determine if unsafe or fire hazards exist.
- Bonding cable is attached to tank before opening dome cover.
- Each compartment is visually inspected prior to loading.
- Downspout is carefully inserted into tank.
- An inspection is made to verify everything is in order.
- Block valve is opened.

#### Transfer

- The pump control switch is located adjacent to the loading arm so operator has easy access to it.
- Product flow is to be started at a reduced rate until the end of the downspout is submerged, then full flow rate is slowly initiated.
- The self-closing loading valve must remain under the loaders hand control.
- Tank is filled to predetermined level.
- When topping the tank off flow rate is reduced.

## Shutdown

- When loading is completed pumps are turned off, the downspout is unhooked and drained into the compartment. The downspout is then put into holder.
- Block valve is closed.
- Bonding cable disconnected.
- Inspection is made of truck and surrounding area to make sure everything is in order.
- Chock is removed; truck is ready to drive away.

## Section 3.1.4.5 Stationary Tank Loading - Power Plant Tanks

Facility operators conduct all tank transfers / loading. City personnel will respond to oil spills during transfer of fuel by City. After transfer is complete and valves are secured, stationary tank owner will be responsible for spill response from tank. Loading procedures include (in part):

## **Pre-Transfer Procedures**

- Establish communications via VHF handheld radios. (Ch. 79)
- The person-in-charge confirms that pipeline and tank valves are set in a manner consistent with the transfer plan. Ensure valves to fuel dock and other bulk fuel tanks are closed.
- Measure power plant day tank to determine amount of fuel to be transferred. Normal fill level in tanks is to 82" deep, or 14" from top of tank.
- Log totalizer meter numbers.

## Transfer

- Operator at fuel farm stands-by at pump control and mechanical valve at Truck Rack
- Operator at fuel farm opens mechanical valve and starts pumping after being notified by power plant day tank personnel that they are ready for transfer.
- Power plant day tank personnel stands on tank being fueled and sounds off every 100 gallons until tank is topped off all the time keeping close radio communications. (Every 5-10 min.)
- Radio communications are at shorter intervals when nearing top off of tank.

#### Shutdown

- As soon as the power plant day tank is filled to predetermined level, the power plant day tank operator closes valve on day tank and calls tank farm to shut off pumps and stop operations.
- The flow switch at the tank farm pump building automatically shuts the pump off.
- Valves at the truck rack, pump building and bulk fuel tank are secured.
- Operator at fuel farm prints ticket and calls power plant operator with total gallons delivered.

#### Section 3.1.4.6 Stationary Tank Transfer - Bulk Fuel Farm Tank-to-Tank Transfers

All tank-to-tank transfers are conducted by facility operators and comply with EPA spill prevention guidelines (40 CFR, Part 112). Loading procedures include (in part):

#### **Pre-Transfer Procedures**

- The person-in-charge confirms that transfer hose, connections and tank valves are set correctly and connections are secure and to make sure everything is in order.
- Inspect surrounding area to determine if unsafe or fire hazards exist.
- Ensure that drip pans are installed at all hose connection points.
- Intrinsically safe VHF radios are issued to transfer personnel and communications procedures established between operators. Radio check is to be conducted at least hourly during transfer.
- Fire extinguishers are staged to the transfer site, one at transfer pump, and other at receiving tank.
- Determine how much fuel is to be transferred and make sure tank is gauged accordingly.
- The person-in-charge confirms that hose and tank valves are set in a manner consistent with the transfer plan.
- The person-in-charge will contact supervisor with permission to start and record start time.
- Block valve is opened.

#### Transfer

- Open valves and start transfer pump.
- Person on top of the tank stands on the tank being filled and sounds off every foot of depth, then every tenth of a foot until tank is topped off all the time keeping close radio communications with pump operator. (Every 15 minutes). Radio communications are at shorter intervals when nearing top of tank.
- Pump operator will walk along the hose line and check for leaks at all times. Shutdown:
- When the tank being transferred from is empty, pump operator will notify person on the top of the tank and shut off transfer pump and close valves.
- When the tank being transferred to is full, person on top of the tank will notify the pump operator to shut off transfer pump and close valves.
- Person-in-charge contact supervisor and secure transfer procedures.
- Gauge both tanks and log amount of fuel transferred.

- Purge transfer hoses and pumps, disassemble hoses and pumps and secure to storage location.
- Drain drip pans, clean and secure to storage location.

#### Section 3.1.5 Evacuation Plan

#### **Evacuation of Injured Personnel**

When anyone is injured, rescue, aid or evacuation may be necessary. Call 911 for medical assistance and have the person taken to the Saint Paul Health Clinic. See Table 1.2-2 for local emergency contact information. If local facilities cannot provide adequate care, contact local emergency services (911) to arrange evacuation.

#### **Evacuation of Facility**

In response to an oil spill the immediate action will be to control the source, alert personnel within the vicinity, and establish a safety perimeter.

If determined necessary by the Incident Commander or public safety personnel, area evacuation will be initiated. If evacuation is warranted it will be initiated by voice or loudspeaker. Personnel in the spill zone will be instructed by voice to evacuate the vicinity to an upwind position of the discharge, and then reassemble for a centralized check-in and evacuation validation (roll-call). Public safety notices may broadcast to the community on local radio.

In the tank yard area, the likely evacuation route would be toward Polovina Turnpike. At the marine transfer areas, the evacuation route would be toward the head of dock / breakwater.

It is extremely unlikely that community evacuation would be warranted for the following reasons:

- The tank farm is geographically isolated and removed from the community
- All marine transfers are conducted from the dock which is a restricted access area
- The pipeline from the dock to the tank farm is underground

If, for any reason, the Incident Commander determines that a partial community evacuation is appropriate, it will be conducted in conjunction with the local public safety officials. Personnel from the Saint Paul Police and Fire Departments will contact the residents of each structure within the area to be evacuated area and notify occupants of the appropriate action. It is likely the reassembly area would be the Saint Paul school. Following the initial contact and evacuation, an inspection of each structure would be conducted to ensure complete evacuation of the designated area.

Figure 1.8-8 illustrates evacuation routes. Terminal evacuation plans are discussed periodically with facility personnel during safety meetings. In the event of a fire or threat of fire, the Saint Paul Director of Public Safety shall be alerted. The Director of Public Safety or the Saint Paul Fire Chief shall then serve as the On-Site Fire Fighting Coordinator. The Director of Public Safety shall coordinate the appropriate community plans.

#### Section 3.2 Receiving Environment

18 AAC 75.425(e)(3)(B)

#### Section 3.2.1 Potential Routes of Discharge

**Topography:** The terrain on Saint Paul Island consists of rugged hills, ridges, and rocky shorelines. The island consists of cinder cones and lava soils. Soils formed from volcanic ash dominate the island, with rock, gravels and sands making up the landscape. Soil particles range from cinders to clay. Soils lie from 10 to 40 inches deep, with tall grass and low shrubs forming the principle vegetative cover. The area surrounding the tank farm is undeveloped and used only for storage of crab pots. Small hills rise to the north and south of the tank farm. To the west, approximately 500 feet, is Polovina Turnpike and then the Salt Lagoon. To the east, approximately 1,000 feet, is Lukanin Bay and the Bering Sea. See Figure 1.8-9 for a depiction of elevation data surrounding the tank farm.

The harbor consists of two rubble mound breakwaters that extend into Village Cove. The harbor entrance, between the two breakwaters, is approximately 300 feet wide. The coastline outside of the harbor is lined with steep cliffs and rocky shorelines.

**Tank Farm:** Figure 1.8-3 illustrates surface drainage patterns and potential containment sites in the tank farm vicinity.

Drainage within the tank farm and at the truck rack is to collection sumps which are piped to an oil/water separator that discharges to facility property just east of the tank yard. The drain lines remain closed and locked, except when draining is in progress.

Surface drainage surrounding the tank yard appears to be to the west, however, there are no defined drainage patterns, stormwater channels, or drainage culverts. In the unlikely event that spilled fuel escaped the tank farm and/or truck rack impoundment areas, it would quickly penetrate the porous volcanic soils and migrate downward to groundwater.

Even in the worst-case discharge (tank & dike failure), it is extremely unlikely surface flow would reach the Salt Lagoon. Fuel would accumulate in a large lowing area immediately west of the tank farm, and Polovina Turnpike would block surface flow.

**Fuel Pipeline:** Migration of a spill from the buried supply pipeline (dock to tank farm) would be variable and depend upon the location and nature of the leak or rupture. Spilled fuel would likely migrate subsurface along pipeline route, or northwest toward the harbor and lagoon.

**Fuel Docks (marine transfer discharge):** A release at the Fuel Docks, not contained in the drip pans, would flow over the docks and into the water. See Section 1.6.3 for a description of the spill trajectory on water.

#### Section 3.2.2 Estimate of Planning Standard to Reach Open Water

*18 AAC 75.425(e)(3)(B)(ii)* 

The State of Alaska requires that the on-water portion of a spill be estimated. State guidelines require that the volume estimated to reach the water be based on the overall condition of the facility including prevention measures in place that will reduce the size of a potential spill to water. Prevention measures to be considered include shutoff valves, overfill alarms, and secondary containment. The open water portion of a spill must be a reasonable estimate of the volume expected to reach the water under a reasonable marine spill scenario.

The ADEC response planning standard for the facility is calculated to be 180,000 gallons (see Section 5.1). A discharge of such volume could only result from tank rupture or catastrophic event. The impoundment area is designed to contain such a discharge and has volume of approximately 1.9 million gallons.

Subdikes within the tank farm impound and isolate storage tanks (see Section 2.5.5). In the event of a tank failure and breach of the perimeter dike, the subdikes would still retain a significant volume of spilled fuel within the tank farm. Even assuming 180,000 gallons (RPS volume) escaped the tank farm, the volume to reach open water is estimated to be zero. This determination is based on observations by the City Engineer considering the tank farm location, soils, topography, and manmade barriers (Polovian Turnpike). If fuel escapes the tank farm, it will flow to a natural containment area west of the tank farm (see Figure 1.8-3) and percolate into the sandy soils.

During marine delivery, the potential discharge volume is calculated to be 3,300 gallons. Secondary containment structures (drip pans & plugged scuppers) could contain some discharged products, however, it is likely the majority of spilled fuel would drain directly into the harbor. The USCG Worst Case Discharge planning volume is 23,558 gallons (see Section 5.3). Section 1.6SC presents response scenarios for worst case planning volumes.

#### Section 3.3 Command System

18 AAC 75.425(e)(3)(C)

Organization of the company's response is based on Incident Command System (ICS) principles. The Facility's initial emergency response team is led by the Facility Manager, who is the initial facility incident commander. For larger, more significant spills, the company corporate officials will assume ICS positions under the unified command approach described in this section.

The key roles, and structures of the incident command system for oil spills are summarized in this plan. For further detailed descriptions, the following resources contain additional information:

- National Response Framework (FEMA)
- U.S. Coast Guard Incident Management Handbook (IMH)
- Section 4300 Resources of the Arctic and Western Alaska Area Contingency Plan (see Sec. 3.12 of this plan)
- National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet (Appendix B of this plan)

The Facility Manager and key corporate officials are thoroughly trained in these principles. All facility employees receive familiarity-type training on ICS. And, ICS is used in training and drills/exercises for all facility employees.

#### Section 3.3.1 Incident Commander & Terminal Emergency Response Team

The Facility Manager will act as the initial On Scene Commander (OSC). The alternate OSC is the Assistant Facility Manager. Refer to Section 1.2 of this plan for personnel and contact information for these two positions. The OSC will be able to perform the following duties:

- Activate internal alarms and hazard communication systems to notify all facility personnel;
- Notify all response personnel, as needed;
- Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;
- Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Coordinator, and the Location Emergency Planning Committee;
- Assess the interaction of the discharged substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;
- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);
- Assess and implement prompt removal actions to contain and remove the substance released;
- Coordinate rescue and response actions as previously arranged with all response personnel;
- Use authority to immediately access company funding to initiate cleanup activities; and
- Direct cleanup activities until properly relieved of this responsibility.

**Saint Paul Bulk Fuel Facility Emergency Response Team:** For minor spills and initial response actions, the facility will use its Facility Response Team. The Facility Response Team is comprised of facility employees and designated local individuals. The Response Team is on 24-hour emergency notice. All team members can respond to the facility within one-hour notice. This team is prepared to react to the appropriate level of any incident with their focus on spill detection, notification of involved parties, stopping the source of a spill, initiating safety actions, and taking immediate action to mitigate the effects of a spill. Team members are trained in spill response, safety, and incident command. On an annual basis, Response Team members participate in a one-day response and safety training program which includes hands-on equipment deployment and response plan review.

Facility personnel assigned to the Facility Response Team are listed in Section 1.2, Table 1.2-3, of this plan.

#### Section 3.3.2 Incident Command Posts

In the event of an oil spill, an Incident Command System (ICS) will be established by the City of Saint Paul for management of the spill.

For any size spill, the forward incident command post will be established at Public Works office, City office or bulk plant office. This location has telephone and radio communications capabilities (See Section 1.4) and will be utilized to provide operations leadership, supervision, and support.

#### Section 3.3.3 Incident Command System (ICS) Management Structure

Figure 3.3-1 depicts the ICS structure that will be established and utilized by the City of Saint Paul. in a large spill event. It must be noted that the ICS structure is flexible, allowing for expansion, contraction, or modification as warranted and desired.

The ICS Team is expected to maintain applicable training, please refer to Section 3.9 and Appendix B of this plan for further details on ICS training for the City of Saint Paul personnel.



## Figure 3.3-1 Initial Incident Command System Structure for the City of Saint Paul

#### Section 3.3.4 ICS Positions and Duties

For personnel assigned to major ICS positions please refer to Section 1.2 of this plan. Descriptions for each ICS position in the ICS chart are presented in Appendix B of this plan.

#### Section 3.3.5 Incident Action Plans (IAPs)

Incident Action Plans (IAPs) consist of standardized forms that assist in the development and publishing of response plans for a specific operational period. The IAP is completed for larger complex spills that require multiple teams, multiple shifts, and that will continue past one operational period (more than 24 hours). Different parts of the IAP are completed by different sections, but the overall development of the IAP is coordinated by the Planning Section Chief. The IAP serves as a checklist to ensure that proper considerations have been in the development of the plan for the next operational period, and also as a tool to document the plan, environmental conditions, and response activities.

It is extremely important for the ICS team to ensure that their first priority is to ensure safety of the responders and public, then to focus on the support of the operational team. The development of the IAP is a lesser priority to these tasks.

The forms for the Incident Action Plan can be found in Appendix B of this plan.

#### Section 3.4 Realistic Response Operating Limits

18 AAC 75.425(e)(3)(D)

This section describes the realistic maximum response operating limitations that could be encountered at the facility, along with response strategies within those limitations to reduce environmental consequences.

If environmental conditions are severe, placing fueling personnel, vessels, tank trucks, and visitors/customers at risk, fueling operations will cease until conditions improve. The Facility Manager is responsible for making such decisions based on experience and understanding of such conditions described in this section.

**Prevention Action Measures:** Only the most experienced facility persons-in-charge will oversee transfer operations in situations where environmental conditions are severe. Examples of specific prevention actions are:

*Modified DOI* - Identifying steps to prevent a spill during harsh environmental conditions are addressed in the Declaration of Inspection between the barge and facility persons-in-charge. This may include such steps as:

- Delaying transfer operations until environmental conditions improve to safely transfer.
- Stopping transfer operations if environmental conditions deteriorate considerably and make operations dangerous for barge and facility personnel.
- Increasing the number of personnel watching connections of transfer lines and mooring arrangement of the barge.

*Marine Fuel Dock Operations* - As a rule-of-thumb, fueling operations for customer vessels at the Marine Fuel Dock will not take place, (or cease if already started) for elevated winds, high seas, or other conditions that would affect safe fueling, at the discretion of the Facility Manager.

Marine transfers are conducted only when the persons-in-charge of facility and vessel determine environmental conditions will not jeopardize safe, spill-free operations. If the weather is severe enough to place fueling personnel at risk, operations will cease until the weather improves. Such weather conditions may include wind over 40 knots, chop over 4 feet, and poor visibility due to snow, darkness, etc. Local estimates are that such conditions can exist 10-50% of the time depending on season.

#### Weather:

*Temperature* – Temperatures remain cool throughout the year, with the highest recorded temperature in August being 52 degrees. Extreme highs in summer months are in the low fifties. On average, there are five days during winter months when the temperature falls below zero (Weatherspark 2020). Air and water temperature can influence the behavior of oil and the nature of control measures. Significant temperature drops increase the viscosity of oil and may gel diesel fuel which will reduce its migration. Additional protective clothing, and constant equipment maintenance is critical during periods of extreme cold. In freezing conditions containment boom may develop a layer of ice that will reduce buoyancy and efficiency. Elevated temperature will lower viscosity of oil resulting in increased penetration into underlying soils. In addition, evaporation and volatility will increase with temperature.

*Precipitation* – Average annual mean precipitation is 25 inches with an average snowfall of 56 inches. May tends to be the driest month, with precipitation increasing until August and then decreasing again (Weatherspark 2020). Rainfall can influence the response in a number of ways. Obviously, direct rainfall can cause recontamination by washing oil from contaminated areas to clean areas. Rainfall is particularly detrimental in leaching oil from debris stockpiles and impoundment areas. Indirect effects include stream/river elevations and overland flow, reduction of access, and general deterioration of operating conditions.

Snow may aid the containment of a terrestrial oil spill through its absorbent qualities and the relative ease with which large quantities of it can be moved. Snow can, however, complicate locating oil beneath it. Since oil-contaminated snow is visible only at the points of penetration and surface oiling, the extent of the spill may be significantly greater than initial impressions. Careful probing and digging is required to determine the extent and perimeter of contamination.

*Wind Speed* – Saint Paul Island is characterized by windy periods throughout the year. Frequent storms occur from October to April accompanied by gale force winds and blizzard conditions. Average wind speed is 12 to 22 mph; highs range from 20 to 40 knots. The predominant winds are from the north in the winter, and from the south in the summer (Weatherspark 2020).

Wind will increase the evaporation rate of spilled oil. For refined products, in storm conditions, 50% or more of the spill volume may evaporate within 2 to 4 hours. Oil slicks will drift at approximately 3% of wind speed. Wind shifts also influence cleanup operations. Spilled product blown to a containment area, for instance, may be driven to unprotected areas when the wind shifts. Changes of this nature can require redeployment of containment and cleanup equipment. If not foreseen, wind shifts can cause unnecessary spread of oil, additional contamination, and increased cleanup effort.

Winds can also generate waves capable of interfering with the effectiveness of containment and recovery equipment. Generally, if swells exceed 3 feet or currents exceed 2 knots, standard 8" x 12" containment boom maintained at the facility and on delivery barges will be ineffective and booming should be considered only at alternate locations. Similarly, most calm water and harbor skimmers, such as those at the facility and on barges, are not effective in seas in excess of 2-3 feet.

*Visibility* – Year-round, Saint Paul Island experiences continuous low cloudiness and heavy fog. Fog or haze occurs on Saint Paul Island 22 to 29 days per month from May through August. Snow and land fog during the winter restrict visibilities to less than 7 miles on about 8 to 12 days per month and to less than 0.5 mile on about 2 to 5 days per month (NOAA 2020c).

Sea States, Tides, Currents: Within Village harbor, conditions are protected and safe for moorage through the year.

Between Otter Island and Reef Point, Saint Paul Island, the tidal currents are strong, and with heavy winds the tide rips are dangerous especially on the ebb current. In 1976, the NOAA Ship SURVEYOR observed currents setting northwest at about 2.5 knots about 2.1 miles southwest of the southwest end of Otter Island (NOAA 2020c).

According to the United States Coast Pilot, the diurnal range of the tide at Village Cove is 3.2 feet, the mean range is 2.0 feet. Around the island the current sets east on the flood and west on the ebb, following the trend of the shore. Average velocity at strength of current is 1 to 2 knots, but with continued strong winds on one direction it may increase to 3 knots. Currents within the harbor are generally less than one knot, and flow along the breakwater to and from the harbor entrance. Normal wave conditions in the harbor consist of waves less than 0.5 foot (NOAA 2020c) and (NOAA 2020b).

Should a spill impact marine waters, it would occur at the fuel dock(s) which are within the protected harbor. Conditions in the harbor do not exceed the operating limitations of response equipment maintained at the facility, however, discretion regarding safety considerations may delay operations.

Outside of the harbor, it is extremely unlikely that containment and recovery operations would be conducted on the open-ocean or rugged shorelines, regardless of conditions. It is estimated that percentage of time that wave heights exceed six feet at the entrance to Saint Paul Harbor range from 50% from November through January to 18% from May through September. The percentage of time conditions are "flat calm" outside the harbor, is estimated by local residents to be 5% or less.

Modeling and dye studies presented in the Environmental Assessment of Saint Paul Harbor (Corps of Engineers, February 1988) indicate water circulation within the harbor is in a clockwise gyre. The EA summarizes as follows:

"a. The mathematical model indicates that the inner break water would reduce the tidal elevation into the Salt Lagoon by a maximum of 0.3 foot, which appears insignificant.

b. Dye and sediment studies show that a gyre is established in a clockwise direction through the gap between the inner breakwater and the boulder spit and out the entrance channel. This gyre appears to generate good circulation through the mooring basin and docking area during moderate.

c. Even with storm events of 10-foot waves, wave induced circulation is poor in the area of the west dock."

3D modeling in the General Design Memorandum of Saint Paul Harbor, (USACE 1996), indicate maximum wave and surge conditions in the harbor will be 3.3 ft. waves and 1.2 ft/sec. surge during major storm event. In these conditions the harbor is normally closed.

The positioning and anchoring of booms and other devices must accommodate currents. In addition to moving oil, strong currents can also cause direct boom failure, and complicate recovery by directing flotsam and debris to containment and recovery areas. When boom is deployed, it requires regular monitoring and maintenance.

**Ice and Debris:** Saint Paul may be surrounded by drifting ice blocks from February to May, as it lies toward the south boundary of winter sea ice. The severity of winter conditions in the Bering Sea directly effects the ice conditions in the Pribilof Islands. Although occurring very rarely (once every ten years, according to local residents) prolonged north and northeasterly winds may result

in ice pack movement as far south as the Pribilof Islands. Fuel deliveries are not conducted when ice jeopardizes safety or would prevent spill response.

If contaminated debris (flotsam, driftwood, etc.) is recovered during cleanup operations it will be transported to a temporarily diked and lined storage site at the facility (Figure 1.6-1). Oil will be removed from recovered debris by hand-cleaning and air-drying. Cleaned debris will be disposed of at the St. Paul landfill in accordance with local ordinances. Section 1.6.9 presents disposal options and requirements.

**Hours of Daylight:** Darkness can exacerbate difficult response conditions if severe weather conditions exist at the time of a spill. Darkness has little effect in the summer due to prolonged daylight; however, late fall, winter, and early spring can present response challenges caused by darkness for more than half the day.

Season	Hours of Daylight (% of day)
Winter	34%
Spring	50%
Summer	66%
Fall	50%

#### Table 3.4-1 Hours of Daylight in Saint Paul, Alaska on Solstices and Equinoxes

Source: (Weather Spark 2020)

During darkness, ships with sufficient lighting to illuminate the spill area allowing observation of boom would be used if possible. Also, shoreside efforts at lighting will be enhanced. Darkness does not stop deployment of earth moving equipment to contain and control a discharge at the site.

#### **Response Limitations**

The number of days during which environmental conditions would preclude any response to a spill resulting from facility operations is zero. Response to terrestrial spills may be initiated 12 months per year, 24-hours per day.

Should a spill impact marine waters, it would likely occur at the fuel dock(s) which are within the protected harbor. Conditions in the harbor do not exceed the operating limitations of response equipment maintained at the facility, however, discretion regarding safety considerations may delay operations.

*Skimmers/boom* – Skimming and boom equipment have varying limitations dependent on the vessel being used and the type of water they will be operating in. In open water, using large vessels with high volume skimmers and large primary storage devices, they can operate in seas up to six feet and in winds up to 30 knots. In protected waters, using vessels of opportunity (fishing vessels), they can operate in seas to three feet and winds up to 25 knots. In calm water, using small fishing vessels, work boats, or skiffs, they can operate in seas of 1 foot and winds up to 15 knots. And in fast water, including rivers and areas with significant tidal current, using small vessels or skiffs, they can operate in rivers up to two feet and winds up to 15 knots, or tidal waters up to one foot and winds up to 15 knots (ADEC 2014a).

The containment boom will not operate effectively in seas over three feet or winds over 20 knots. These extreme conditions are also unsafe for personnel to operate skiffs on the water. Therefore, traditional response activities would not be conducted when such conditions, or worse, exist.

*Vessels* – Sea states can limit the size of vessel capable of responding. City of Saint Paul contracts a 29' defender class vessel with twin 300 HP engines. The vessel will only be deployed if the sea states do not exceed the vessel limitations.

*Personnel* - Colder air and water temperatures during the winter season will likely make response operations on the water more hazardous and less effective. The City of Saint Paul. understands this situation and is prepared for adverse weather. Examples of this preparation include enhanced personal protective equipment (PPE) for working in severe weather conditions, and training for severe weather with modified response strategies.

*Logistics* – Severe weather can delay and significantly increase the time for spill response resources from outside the region to arrive. Flight access could be limited during severe weather. It is not common for delays to extend to 48-72 hours but is possible given extreme weather conditions such as blizzards, high winds, or dense fog.

#### Section 3.5 Logistical Support

18 AAC 75.425(e)(3)(E)

On-site response equipment is stored in vans located next to the fuel dock office within 100 feet of the marine headers. Additional equipment is stored at the tank farm and at the Public Works office and at the tank farm. Boom deployment boats are stored at the Machine Shop which is adjacent to the tank farm (see Figure 1.8-3). Most of the response equipment can be deployed by hand, as it is stored in close proximity to the potential spill sites. Vehicular transportation of personnel and equipment will be in trucks owned and operated by City of Saint Paul. Transportation requirements will consist of moving people and equipment from the fuel dock, city offices, and airport to the spill site. A listing of city owned vehicles available to support logistical operations is located in Section 3.6 of this plan.

If it is determined that off-island resources can expedite the cleanup, the QI will mobilize the necessary contractors. The City does not rely on response contractors or offsite resources to satisfy the ADEC response planning standard.

#### Section 3.5.1 Equipment

*Staging Areas* - Any significant response effort will require dedicated areas for equipment delivery, inventory, repair, and temporary storage. The City of Saint Paul has identified areas to serve as dedicated areas for equipment staging and temporary waste storage areas in the event of an emergency. These areas are designated on Figure 1.6-1.

*Air Service and Landing Sites* – The Saint Paul Island Airport is a state owned, public use airport, and is located approximately 2.5 miles from the Bulk Fuel Facility.

*Fueling Sites* – The City of Saint Paul operates the City Gas Station, located at 1001 Diamond Hill Road near the City Public Works compound. Gasoline and #2 diesel are available.

Maintenance Facilities – The island has a machine shop with limited facilities for repairs.

*Boat Ramps* – The harbor boat ramp, would be used to launch response vessels in the event of an emergency.

Services	Location	Contact	
Air Support			
Alaska Airline (passengers)	Anchorage	800-252-7522	
Alaska Air Cargo	Anchorage	800-225-2752	
Peninsula Air	Anchorage	800-448-4226	
ACE Air Cargo	Anchorage	907-334-5100	
Northern Air Cargo	Anchorage	800-478-3330	
Lynden Air Cargo	Anchorage	907-243-7248	
Telephone Services			
GCI	Anchorage	800-800-4800	
Barge Services			
Coastal Transportation	Dutch Harbor	907-581-2144	
Shipping Service			
Lynden Transport (Alaska Marine Lines)	Anchorage	1-888-596-3361	
Waste Disposal			
Alaska Soil Recycling (ASR)	Anchorage	(907) 348-6700	

## Section 3.5.2 Personnel

*Lodging* – The King Eider Hotel is the only hotel on Saint Paul Island. The hotel maintains 40 rooms and is open year-round.

During the summer tourist season, most lodging facilities are booked at capacity and availability will be limited. Some possible alternatives to traditional lodging may be the use of portable work camps/shelters, school gyms, Alaska National Guard Armories, etc.

*Food* - A significant response to a facility oil spill will require significant quantities of food for a short period of time in Saint Paul, and the associated equipment necessary for proper food handling, storing, preparing and disposal. These tasks would require food services contract support from the local area as long as the requirements did not exceed local capability.

*Clothing* - Alaska's environmental conditions during the late fall-winter-early spring seasons dictate that response personnel are equipped to operate in the potentially harsh environment. Additional responders arriving to support facility responders must have adequate clothing for the season to begin working immediately. There are local resources for seasonal clothing, however they would be limited and should not be relied upon exclusively.

*Training and Safety Equipment* - Personnel involved in oil spill response activities must comply with all applicable worker federal and state health and safety laws and regulations (See the Occupational Safety and Health Administration (OSHA) standards for hazardous waste operations and emergency response found in 29 CFR 1910.120 and 8 AAC 10.010, respectively.). Responders must be HAZWOPER-trained with up-to-date certification. Personal Protective Equipment (PPE) requirements will be determined by the Site Safety Officer. Response personnel should report with the proper PPE.

*Communications* - Adequate communications equipment along with a well-thought out communications plan are imperative to a coordinated response. Section 1.4 details local communication capacity. For advanced spill response communications on larger spills, the resources (portable communication centers) of the City of Saint Paul and the State of Alaska would be utilized.

<b>Table 3.5-2</b>	Personnel	Mobilization	Schedule
--------------------	-----------	--------------	----------

Description	Method	Est. Mob. Time
Saint Paul-based responders	Personal vehicles	15-30 minutes
Anchorage-based responders	Contracted and Commercial flights	12-24 hours

#### Section 3.5.3 Transportation

Marine – The Alaska Marine Highway route does not include the Pribilof Islands.

*Aircraft* – Commercial flights are available to Saint Paul Island on a daily basis through chartered air services such as Grant Aviation out of Dutch Harbor or Cold Bay. Contracted flights are available for transporting equipment and personnel through companies such as Northern Air Cargo or ACE Air Cargo. Contact information for these companies and others is located in Table 3.5-1.

*Vessels* – Fishing vessels operate in and around the area as well as the nearby communities. Vessel availability will depend on the season and the location of the oil spill. The City of Saint Paul has an agreement with the Tribal Government of Saint Paul for access to their 29' Defender Class vessel.

Description	Method	Est. Mob. Time
City of Saint Paul based equipment	Response vehicles, skiffs	Immediate – 2 hrs
Anchorage based equipment	Chartered aircraft	12-24 hrs

18 AAC 75.425(e)(3)(F)

#### Section 3.6 Response Equipment

The following pages contain lists of equipment inventory at the City of Saint Paul. The vessels under City of Saint Paul control are checked out annually each spring. Other City of Saint Paul equipment is inventoried annually and requires no other maintenance. The readiness of contractor equipment is the responsibility of that contractor.

#### Section 3.6.1 Owned Equipment Inventory

18 AAC 75.425(e)(3)(F)(i), (iv), (v), & (vi)

The following equipment is maintained at City of Saint Paul Bulk Fuel Facility.

Quantity	Description	Location		
Containment				
1,080 ft.	Contractor Boom (8" x 12")	Fuel Dock Vans		
600 ft	Outer-Harbor/Ocean Boom (14"x22")	Fuel Dock Vans		
700 ft	Harbor Boom (14"x16")	Fuel Dock Vans		
1,000 ft	Harbor Boom (11"x10")	Fuel Dock Vans		
10 each	Anchor / Buoy Systems	Fuel Dock Vans		
Recovery				
4 bales	Sorbent Pads (18"x18")	Fuel Dock Vans		
3 rolls	Sorbent Rolls (36"x150')	Fuel Dock Vans and Tank Farm Building		
400 ft	Sorbent Boom (8"x10')	Fuel Dock Vans		
80 ft	Sorbent Boom (8"x10')	Tank Farm Building		
5	Sweeps (18"x100')	Tank Farm Building		
1	Sorbent Wringer	Tank Farm Building		
1	Slickbar Slurp weir Skimmer with Diesel Pump (100 gpm)	Fuel Dock Vans		
3 each	3" Honda trash pump (290 gpm)	Machine Shop at Tank Farm		
500 ft	1 <sup>1</sup> / <sub>2</sub> ", 2" & 3" Service w Fittings/Reducers	Fuel Dock & Public Works		
Temporary storage				
20	55-Gal. Salvage Drums	Fuel Dock & Tank Farm		
1	Bladder Tank - 250 gal	Fuel Dock		
6	Tanks-not in Service (Total Volume 40,000 Gal)	Tank Farm		
Utility vehicles				

#### Table 3.6-1 City of Saint Paul Response Equipment

Quantity	Description	Location
1 each	International - 6,000 Gal. with trash pump (290 gpm)	Public Works
4	Pickup Trucks	Public Works
4	Crew Cab - Carry-Alls	Public Works
2	Drop Box Flatbed Trucks	Public Works
1	Tractors	Public Works
2	Dozers	Public Works
1	12 yd. Dump Truck	Public Works
3	Front End Loaders	Public Works
1	Backhoe	Public Works
2	Road Grader	Public Works
1	Uni-Loader	Public Works
1	Bobcat Loader	Public Works
Miscellaneous	·	
16 each	VHF Radios - Portable & Base Stat.	Office & Various
1	LEL/02 meter	Harbor Office
Assorted	Pipeline, Tank Patch Materials	Tank Farm
5 Sets	Rakes/Shovels	Dock, Tank Farm, Public Works
Assorted	Damming Materials	Dock, Tank Farm, Public Works
10 Sets	Protective Clothing & PFD's	Dock, Tank Farm, Public Works
10 each	Fire Extinguishers	Dock, Tank Farm, Public Works
3 Cases 100 Bags each	Oily Waste Storage/Disposal Bags – 33'x46" – 4 mil	Public Works

All barges that deliver fuel to the facility comply with state and federal regulations that require tank vessels to maintain, onboard containment boom and recovery equipment. The current standard requires barges to maintain at least three times the length of the vessel of 8"x12"

containment boom and skimming capability. Should a discharge occur when a fuel barge is at the Saint Paul dock, the response equipment on the barge would be made available.

# Section 3.6.5 Time Frame for Delivery

This section is reserved for describing procedures for bringing equipment outside the region of operation to meet the response planning standard. This plan does not call for bringing in outside equipment to meet the response planning standard. The time frame for delivering equipment to

# Section 3.6.2 Contracted Equipment Inventory

The City does not rely on a primary response action contractor or offsite resources to satisfy the ADEC response planning standard.

The Aleut Community of Saint Paul Island provides access to a 29-foot Defender Class vessel and a captain to operate it in the event of a spill to water. Information on the boat is given below:

# Table 3.6-2 Aleut Community of Saint Paul Island Response Equipment

Quantity	Description	Location
1	29' Defender Class Vessel with twin 300 HP engines	Boat Harbor

#### Section 3.6.3 Operational Characteristics and Limitation 18 AAC 75.425(e)(3)(F)(iii)

The City of Saint Paul equipment ratings are given in the equipment table (Table 3.6-1). Skimmers are rated according to the USCG effective daily recovery capacity.

#### Section 3.6.4 Storage, Maintenance & Inspection Program 18 AAC 75.425(e)(3)(F)(vii)

The majority of the facility response equipment is maintained "ready-for-deployment" in vans located next to the fuel dock office. Additional equipment is maintained at the tank farm.

The containment boom can be deployed, by hand, from the vans, across the dock, to response boats in the harbor. The City's response boats are stored in the maintenance building which is adjacent the harbor boat ramp. The containment and recovery systems are compatible and have deployed previously. The equipment is tested, at minimum, during the annual response training program (see Section 3.9). The Bulk Fuel Manager conducts a documented equipment inventory and inspection every six months (see Appendix A). Equipment maintenance is conducted when necessary, and after each deployment and during the six-month inspection. The Bulk Fuel Manager maintains the necessary maintenance records.

18 AAC 75.425(e)(3)(F)(ii)
meet the response planning standard is provided in the mobilization table in the Table 3.5-3 Equipment Mobilization Schedule.

# Section 3.6.6 Oil Spill Recovery Vessels

18 AAC 75.425(e)(3)(F)(iv) & (v)

Vessels used for oil spill recovery are listed in Table 3.6-1 and Table 3.6-2.

# Section 3.7 Non-mechanical Response

# 18 AAC 75.425(e)(3)(G)

The City of Saint Paul does not propose to use any non-mechanical response for containment and recovery of oil.

18 AAC 75.425(e)(3)(H)

18 AAC 75.425(e)(3)(H)

### Section 3.8 Contracted Resource Information

### Section 3.8.1 PRAC Information

The City does not rely on response contractors or offsite resources to satisfy the ADEC response planning standard.

### Section 3.8.2 Memorandums of Understanding 18 AAC 75.425(e)(3)(K)

The City of Saint Paul has Memorandums of Understanding with the following organizations on Saint Paul Island:

• Aleut Community of Saint Paul Island

The spill response equipment associated with this MOU is provided in Section 3.6 of this plan. A copy of the MOU is included in the following pages for reference.

# Memorandum of Understanding for Spill Response between City of Saint Paul and Aleut Community of St. Paul

This Memorandum of Understanding (hereinafter MOU) is entered into by and between the City of Saint Paul (hereafter CSP) and Aleut Community of St. Paul Island (hereafter ACSPI). Both CSP and ACSPI operate in the Saint Paul Island, Alaska area. CSP is regulated by and required to submit an oil spill response plan to the Alaska Department of Environmental Conservation (ADEC), the United States Coast Guard (USCG), and the United States Environmental Protection Agency (USEPA).

Given the remote location of Saint Paul Island, Alaska, and the absence of local oil spill response services, both parties wish to share, to the maximum extent practicable, their trained oil spill response personnel, and spill response equipment. For purposes of this MOU, "spill" shall mean only those discharges which require equipment beyond the capabilities of the City or other Discharging Party. For purposes of this MOU, the party which discharges or has the threat of a discharge is referred to as the Discharging Party.

#### Scope of Response Resources

The response resources referenced in this MOU is the vessel Lunax, which is owned by ACSPI. This is a 29' defender class vessel with twin 300 HP engines.

#### Appointees Under this MOU

Each party will appoint a person to serve as the official contact and coordinate activities in carrying out this MOU. The initial appointees of each party are:

Phillip A. ZavadilPatrick BakerCity of Saint PaulAleut Community of St. Paul IslandPO Box 901PO Box 86St. Paul Island, Alaska 99660St. Paul Island, Alaska 99660(907) 546-3113(907) 223-8754pazavadil@stpaulak.compnbaker@aleut.com

### **Duties of Each Party**

Each party agrees, to the maximum extent practicable, to;

- Make best efforts to coordinate any oil spill response training and drill programs, including ADEC conducted exercises;
- The City shall provide the ACSPI with a current copy their approved spill response plan, and any subsequent changes and/or additions;
- Notify the other party if they are unable to meet the terms of the MOU;

- The City shall ensure that all response personnel subject to this MOU have current safety and oil spill response training in accordance with industry standards under applicable state and federal law, and;
- The ACSPI shall have in force at all times appropriate liability insurance for all equipment which may be used during training or spill response for the City or Discharging Party.

### **Conditions of Response**

The ACSPI will make best efforts to make the vessel Lunax available to respond to a spill. The ACSPI shall provide the City with notice in the event that the vessel Lunax unavailable, for any reason, to respond.

### Compensation

The CSP will compensate the ACSPI four thousand dollars (\$4,000.00) annually for the use of the vessel Lunax in the event of an emergency where the City needs to respond to a spill and for spill response training. The annual payment of \$4,000.00 is a standby rate including eight (8) hours for training annually. In the event of a spill the Discharging Party shall compensate the ACSPI for the use of the response resource at a rate established by the ACSPI.

#### Term

The term of this MOU is for a period of five (5) years from the effective date and may be extended upon written mutual agreement. This MOU shall be formally reviewed annually to ensure the fulfillment of purposes and to make any necessary revisions. Either party may terminate this MOU at any time upon thirty (30) day written notice to the other party.

### Not A Contract

The provisions of this MOU set forth mutual intentions and policies of the parties made in the spirit of cooperation and mutual concern. This MOU does not create any legally enforceable obligation of either party to the other. By signing this MOU, however, the CSP and ACSPI will strive to reach, to the best of their ability, the purposes stated in this MOU.

### Signatories

City of Saint Paul (CSP) by:

Phillip A. Zavadil, City Manager

Aleut Community of St. Paul Island (ACSPI) by:

Date:

Date:

Amos Philemonoff, President

# Section 3.9 Training and Exercises

18 AAC 75.425(e)(3)(I)

As described below, the City of Saint Paul has implemented training programs to comply with the requirements of ADEC, and the federal requirements presented in the National Preparedness for Response Exercise Program (PREP).

Section 2.1.1 identifies the training programs, drills, and exercises, that persons with responsibilities under this plan are to attend.

# Section 3.9.1 Training Programs

**ADEC Requirements:** ADEC regulations state, "In addition to maintaining continuous compliance with other applicable state and federal training requirements, the plan holder shall demonstrate that:

- designated oil spill response personnel are trained and kept current in the specifics of plan implementation, including the deployment of containment boom, operation of skimmers and lightering equipment, and organization and mobilization of personnel and resources
- personnel are trained and kept current in methods of preventing oil discharges as required by 18 AAC 75.020
- proof of that training is maintained for five years and is made available to the department upon request.

**Spill Response & Prevention Training:** To satisfy ADEC requirements, members of the Facility Response Team participate in an annual spill response/prevention training program. It is conducted by response action contractors, consultants, and/or City personnel. The exact training content and presentation may vary from season to season, however, at minimum, the annual program addresses the following topics:

- an inspection and operation of facility spill response equipment,
- a review and updating of this contingency plan,
- spill prevention & regulatory required operating and transfer procedures,
- a discussion of potential spills and response actions,
- a review of reporting and regulatory requirements,
- operating health and safety considerations.

**Safety Training:** To comply with state and federal OSHA safety training requirements, designated spill responders, who are subject to exposure of hazardous substances, are to be trained to the required "HAZWOPER" standard. As discussed later in this section, facility response team personnel participate in Hazwoper training.

# Federal Requirements

Response Training and Drills (OPA 90): 40 CFR, Part 120 establishes EPA response training and drill procedures, schedules, and documentation requirements for fuel facilities and spill

response personnel. Coast Guard training and drill requirements are presented in 33 CFR, Parts 154.1050 and 1055.

The National Preparedness for Response Exercise Program (PREP) is an effort to clarify and coordinate the federal training requirements mandated by OPA 90. It further defines the training requirements of the Coast Guard and EPA.

In compliance with PREP, response training must be provided to individuals/positions with specific duties in this plan. The facility owner / operator must maintain records sufficient to document the required training, for a period of 5 years, and make them available for inspection upon agency request. The records shall be maintained at the City of Saint Paul Public Works office.

Required drills and exercises include:

- Qualified Individual Notification Drill\*
- Equipment Deployment Drills semiannually
- Spill Management Team Tabletop Exercise annually
- Unannounced Drills as initiated by agencies
- Triennial Exercise of Entire Response Plan

\* At this Facility both the Qualified Individual and Alternate Q.I. are City employees who are in contact on a regular basis. Therefore, Q.I. Notification Drills are deemed not necessary.

See Appendix A for the PREP annual training and drill documentation.

**Coast Guard Person-in-Charge Training:** To comply with Coast Guard regulations (33 CFR, Part 154.710), the terminal and vessel persons in-charge of marine transfers must have had a minimum of 48 hours of experience in oil transfer operations, and, at minimum, they must know:

- The hazards of each product transferred
- The rules in 33 CFR, Parts 154 and 156
- The facility operating and fuel transfer procedures
- The oil barge transfer systems (in general)
- The oil barge transfer control systems (in general)
- The facility oil transfer control systems
- Oil spill reporting procedures
- The facility oil spill contingency plan procedures

Training Program Requirement	Incident Commander	Incident Command Team Members	Facility Response Team Members	Facility Wildlife Coordinator
ADEC - annual spill prevention, response exercise & C-Plan review*	~	$\checkmark$	~	$\checkmark$
USCG - Person in Charge Training 33 CFR, Part 154			~	
Safety Meetings - Monthly and Unscheduled			~	
PREP - Management Tabletop Exercise - Annual*	~	~		
PREP - Equip. Deployment Drill - Semiannual*	~		~	
PREP - Unannounced Drill- when directed	~	$\checkmark$	~	
PREP - Triennial Exercise*	~	$\checkmark$	~	$\checkmark$
HAZWOPER - 40 hour	✓			
HAZWOPER - 24 hour	✓		✓	
HAZWOPER - Annual refresher*	~	$\checkmark$	~	
Incident Command Training	~	$\checkmark$		~
Bird hazing training as required by ADF&G				√
Bird stabilization training as required by USFWS				✓
First Aid & Fire Safety - Annual*	~		~	

Table 3.9-1 Training Programs / Drills & Exercises

\* These programs may be conducted concurrently.

# Section 3.10 Environmentally Sensitive Areas

18 AAC 75.425(e)(3)(J)

The Alaska Department of Conservation (ADEC), Environmental Protection Agency (EPA) – Region 10, and the United States Coast Guard (USCG) Sector Juneau manage response operations in accordance with the Alaska Regional Contingency Plan (RCP) and four Area Contingency Plans (ACP). *The Arctic and Western Alaska Area Contingency Plan* covers Saint Paul. *The Arctic and Western Alaska Area Contingency Plan* covers Saint Paul. *The Arctic and Western Alaska Area Contingency Plan* contains the environmental information required to be in this ODPCP under 18 AAC 75.425(e)(3)(J). The information in ACP is incorporated into this plan by reference (ADEC 2019). *The Wildlife Protection Guidelines: Pribilof Islands* and *The Wildlife Protection Guidelines for Oil Spill Response in Alaska* are referenced in *The Arctic and Western Alaska Area Contingency Plan* (section 3600 – Wildlife). *The Wildlife Protection Guidelines: Pribilof Islands* document contains specific measures to protect wildlife on the Pribilof Islands (ADEC 2014b). Links to all of these documents are located in Section 3.12 of this plan through direct links or through the link to the Area Plan References and Tools website.

The Planning Distance for non-persistent oils discharged into tidal waters is five miles from the facility down current during ebb tide and to the point of maximum tidal influence or five miles, whichever is less, during flood tide. The Planning Distance calculation is in compliance with EPA regulation 40 CFR 112, Appendix C, Attachment C-III.

Contact information for all Federal and State agencies mentioned in this section are found in Table 1.2-4 in Section 1.2.1 of this plan. If there is oiled wildlife that needs to be captured, treated, and rehabilitated, that exceeds on island capabilities, the City of Saint Paul will mobilize appropriate wildlife contractor(s) to respond, in coordination with NMFS, USFWS, and ADF&G. More information regarding wildlife protection is provided in Section 1.6.10 of this plan.

**Rat Prevention:** The Pribilof Islands are "rat free." Additional measures will be required to ensure rats are not introduced to Saint Paul Island during spill response if vessels or aircraft from outside Saint Paul are brought to the island to assist with spill response. A Fish and Wildlife Service representative will provide the FOSC with rat prevention information that will be given to any spill response vessel and/or aircraft operators. Rat prevention materials are stock piled on the island and are listed in the *Wildlife Protection Guidelines: Pribilof Islands* (ADEC 2014b).

# Section 3.10.1 Seasonal Conditions

18 AAC 75.425(e)(3)(J)(i)

The seasonal effect on environmental sensitivity is limited to whether or not some forms of wildlife or aquatic plant life are in critical periods of life. Critical periods are generally defined as time periods where species are involved in migration, breeding, nesting, and/or rearing young. It may also refer to time periods during the life cycle of a species, such as the juvenile stages for fish, or larvae stage for aquatic insects.

Table 3.10-1 identifies critical periods for wildlife observed in the Saint Paul Island area. This information can be used to determine additional ESA's during a spill response.

	MO	NTH										
SPECIES	J	F	Μ	Α	Μ	J	J	Α	S	0	Ν	D
Present within 5 miles of terminal site												
Birds												
Common murre	Х	Х	Х	Х	Х	NH	NH	F	F	Х	Х	Х
Thick-billed murre	Х	Х	Х	Х	X	NH	NH	F	F	Х	Х	Х
Horned puffin					X	NH	NH	F	F			
Tufted puffin					X	NH	NH	F	F			
Parakeet auklet	Х	Х	Х	Х	X	NH	NH	F	F	Х	Х	Х
Red-faced	Х	Х	Х	N	N	Н	Н	F	F	Х	Х	Х
cormorant												
Crested auklet	Х	Х	Х	Х	N	Н	F	Х				
Red-legged				Х	X	Ν	Ν	HF	F			
kittiwake												
Black-legged	Х	Х	Х	Х	X	Ν	NH	HF	F	Х	Х	Х
kittiwake												
Northern fulmar	Х	Х	Х	Х	Х	NH	NH	NH	NF	Х	Х	Х
Grey-crowned rosy	Х	Х	Х	Х	N	Н	F	Х	Х	Х	Х	Х
finch												
Winter wren	Х	Х	Х	Х	Ν	Н	F	Х	Х	Х	Х	Х
Glaucous-winged	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
gull												
Glaucous gull	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Least auklet	Х	Х	Х	Х	N	Н	F	Х	Х	Х	Х	Х
Ruddy turnstone							Х	Х				
Red-necked					NH	NH	F	F	Х	Х		
phalarope												
Rock sandpiper					Ν	Η	F	Х	Х			
Pintail	Х	Х	Х	Х	Ν	NH	Н	F	F	Х	Х	Х
Common goldeneye	Х	Х	Х	Х						Х	Х	Х
Barrows goldeneye	Х	Х	Х	Х						Х	Х	Х
Long-tailed duck	Х	Х	Х	Х	Ν	NH	Н	F	F			Х
Aleutian tern	Х	Х	Х	Х						Х	Х	Х
Steller's eider <sup>2</sup>	Х	Х	Х	Х						Х	Х	Х
Short-tailed	Х	Х	Х	Х						Х	Х	Х
albatross <sup>1</sup>												
Spectacled eider <sup>2</sup>	Х	Х	Х									X
Fish												
Pacific herring	Х	Х	Х	SL	SL	SL	SL	Х	Х	Х	Х	Х
North Pacific cod	Х	SL	SL	SL	L	Х	Х	Х	Х	Х	Х	Х
Rock sole			SL	SL	SL	SL	Х	Х	Х	Х	Х	

Table 3.10-1	<b>Critical Life</b>	Periods of	Wildlife &	Aquatic	<b>Plant Life</b>
--------------	----------------------	------------	------------	---------	-------------------

Walleye pollock	Х	SL	SL	SL	SL	SL	L	Х	Х	Х	Х	Х
Alaska plaice	Х	Х	Х	Х	SL	SL	L	Х	Х	Х	Х	Х
	MO	MONTH										
SPECIES	J	F	Μ	Α	Μ	J	J	Α	S	0	Ν	D
Arrowtooth	SL	SL	SL	SL	L	Х	Х	Х	Х	Х	Х	SL
flounder												
Greenland turbot	Х	SL	SL	L	Х	Х	Х	Х	Х	Х	Х	Х
Pacific halibut	SL	SL	L	Х	Х	Х	Х	Х	Х	Х	Х	SL
Yellowfin sole					Х	Х	SL	SL	L	Х	Х	
Chinook salmon						Х	Х	Х	Х			
Chum salmon						Х	Х	Х	Х			
Sockeye salmon						Х	Х	Х	Х			
Pink salmon						Х	Х	Х	X			
Coho salmon						Х	Х	Х	Х			
Invertebrates												
Tanner crab	SL	SL	SL	SL	SL	L	Х	Х	Х	Х	Х	Х
Blue king crab	SL	SL	SL	SL	SL	SL	L	Х	Х	Х	Х	Х
Korean hair crab	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Opiolio tanner crab	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Red king crab	Х	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	Х
Marine Mammals												
Bearded seal	Х	Х								Х	Х	Х
Northern fur seal				Х	Х	Р	Р	Р	Х	Х	Х	Х
Pacific harbor seal	Х	Х	Х	Х	Х	Р	Р	Х	Х	Х	Х	Х
Stellar Sea Lion <sup>1</sup>	Х	Х	Х	Х	Х	Р	Р	Х	Х	Х	Х	Х
Ribbon seal	Х	Х								Х	Х	Х
Spotted seal	Х	Х								Х	Х	Х
Ringed seal	Χ	Х								Χ	Х	Х
Humpback whale <sup>1</sup>					Х	Х	Х	Х	Х			

Sources: (ERMA 2020), (ADEC 2014b), (ADEC 2019), (NOAA and USCG 1998), (Audubon 2020), (ADF&G 2020b), and (USFWS 2020)

<sup>1</sup>Endangered species

<sup>2</sup>*Threatened species* 

Code	Life Stage
Ν	Nesting
Η	Hatching
F	Fledging
S	Spawning
L	Larva
Р	Pupping
Х	Multiple, undetermined
	Blank calls indicate species is not present

Fish

NOAA National Marine Fisheries Service designated Saint Paul Island as an essential fish habitat (ERMA 2020). Essential fish habitats are habitats necessary for marine species to complete their lifecycles.

The eastern Bering Sea is one of the world's most prolific commercial fishing areas. About 300 species of marine fin fishes inhabit the Bering Sea. The majority are benthic and occupy deep or intermediate-depth waters along the continental shelf. Some of the most commercially important fish are pollock, sole, cod, turbot, sablefish, halibut, salmon, herring, and crab.

# Birds

Cliff-nesting sea bird colonies in the area are the most important in the northern hemisphere. Numerous marine birds and varieties of ducks, geese and shorebirds also inhabit the area. Major least auklet nesting areas are reported along the Village Cove shoreline and on the spit between the lagoon and harbor. Specific habitat information, maps and critical life periods are identified in the Alaska Sensitive Areas Compendium available on ADEC's Area Plan References and Tools website (ADEC 2020b).

Eel grass and freshwater rooted aquatic vegetation (as well as invertebrates) are the major food source of many avian species and should be protected in the event of a discharge.

# Marine Mammals

Nearly 80 percent of the world population of northern fur seals uses the Pribilof Islands for breeding, and over half of the entire population uses Saint Paul's shores for summer breeding. Fur seal rookeries are at Reef Point, English Bay and Lukanin Bay (see the *Pribilof Islands Wildlife Protection Guidelines*). The seals are present at these rookeries only during late spring, summer, and fall. Sea lions are also present at haul-out areas on the northern end of the Saint Paul Island.

Although highly unlikely, sea otters may be found in small numbers in the waters surrounding the Pribilof Islands (ADF&G 2020b).

# Section 3.10.2 Product Toxicity

18 AAC 75.425(e)(3)(J)(ii)

Hydrocarbon-based fuels are complex mixtures of hundreds of chemicals. Smaller, light-end chemicals are more acutely toxic to organisms, but they volatilize rapidly into the atmosphere and are not persistent in the water column. In contrast, larger multi-ringed chemicals are more persistent in the environment and are more commonly associated with the fouling of fur and feathers of exposed wildlife. Fuels vary by the relative percentage of these two types of chemicals.

Highly volatile fuels such as gasoline and aviation gasoline are relatively less persistent in the environment (as opposed to viscous oils), because they contain a higher percentage of small, "light end," volatile chemicals that are rapidly volatilized from the water column. Solubility of various compounds found in fuels is low in relation to volatility, so very little dissolves into the water column. What does dissolve tends to volatilize out of the water. Diesel fuel is slightly more persistent in the environment.

Before volatilization, ingestion of fuel could be toxic to birds and marine mammals. Dermal exposure to fuel can cause skin irritation as well. Tidal action keeps contact of fuel with the mollusks and aquatic plant life of the rocky shores short, but there could be some mortality. Extensive contact and damage could occur to mollusks and kelp growing on boat slips and the piers, particularly when contained behind a boom.

While the bulk of the fuel dissipates, "trace" contaminants, such as polycyclic aromatic hydrocarbons (PAHs), may persist in the environment. PAHs are chronically toxic and can be responsible for toxicity and environmental impacts for years after a spill. Very low levels can cause mortality to early life stages of fish.

Overall, the persistence of all oils stored at the Facility Name is minimal.

# Potential Effects of Oil on Marine Plants and Animals:

*Kelp Beds* - If oil contamination occurs during plant reproduction, this and other annuals rarely recover. Kelp loss would then affect those that depend upon this resource (e.g., many species of algae, invertebrates, fish, and marine mammals).

*Eelgrass Beds* - Small quantities of oil can weaken the beds, affecting potential habitat for many birds, fish, and invertebrates.

*Salt Marsh Vegetation*- Evidence indicates little long-term damage from light oil contamination. However, heavy pollution can damage growth potential and cause plant death. Loss of this habitat would adversely affect many species.

*Fish*- Direct or indirect toxicity may affect adult or juvenile fish, while eggs or larvae may be damaged by coating or direct toxicity. Crustaceans, shellfish, and benthic fish species may be affected by direct coating or by eating contaminated food.

*Birds*- Spilled oil can harm birds in a variety of ways. Direct contact is toxic and can oil their feathers. This may result in a loss of their thermo-regulating abilities, their ability to maintain the proper salt balance as well as their ability to fly or float. Ingestion may affect reproduction. Embryo and chick survival may be reduced as a result of oil-coated eggs.

*Marine Mammals*- Seals, sea lions, and otters may be poisoned by feeding on oil-contaminated marine organisms or from ingesting oil while cleaning their fur. They may survive with small amounts of oil on their fur; however, oil will reduce the insulation capabilities of the fur and hypothermia may result. Sea otters are the most susceptible to reduction in insulation due to oil spills since, unlike other marine mammals, they do not have a blubber layer for insulation. Instead, sea otters rely on their thick fur to trap air, providing insulation and buoyancy. Otters have a very high metabolic rate and must eat about 25% of their body weight in forage each day to survive. Oiled otters often groom rather than foraging, leading to internal oil toxicity and insufficient caloric uptake. Oiled otters must be rescued quickly, or they rapidly succumb to hypothermia, oil toxicity, and/or starvation.

Inhalation of hydrocarbon vapors is a primary concern for marine mammal exposure to spilled oil. Potential effects can include decreases to individual fitness and mortality. Oil can irritate the mucous membranes of cetaceans.

*Terrestrial Mammals*- Throughout the year, oil discharges affecting streams and beach fringe areas may affect terrestrial mammals, including furbearers, by contaminating habitat and/or food sources.

# Section 3.10.3 Identified ESAs for Saint Paul Island 18 AAC 75.425(e)(3)(J)(iii)

**Most Environmentally Sensitive Areas (MESAs):** MESA 27 Pribilof Islands was developed in 1997. The map shows sea lion rookeries, fur seal rookeries and haulouts, and seabird colonies. See Appendix C of this plan for a copy of MESA 27 (ADF&G 1997).

**Geographic Response Strategies (GRSs):** There are only candidate sites for GRSs surrounding the Pribilof Islands. Sites were selected based on environmental sensitivity, risk of being impacted from a waterborne spill, and feasibility of successfully protecting the site with existing technology. Currently, no GRSs have been developed for the candidate sites for this region (ADEC 2020a).

**Water Sources:** The nearest drinking water sources is a well located approximately one mile northwest of the tank farm. The well is located upgradient from the tank farm and a release from the facility could not impact the water source (ADEC 2020c).

The freshwater water source for the City of Saint Paul is basaltic aquifers located north of Telegraph Hill, approximately 3 miles east of tank farm. Contamination from facility operations is not a threat.

Trident Seafoods has the only seawater intake at the harbor. The intake is approximately 10 feet beneath the surface and is not likely to be impacted by a spill; however, Trident Seafoods should be immediately alerted of any discharge in order to minimize potential contamination.

Anadromous Waters: Anadromous waters have not been cataloged for the Pribilof Islands (ADF&G 2020a).

**Endangered Species and Critical Habitats:** Stellar sea lion haulouts and rookeries are present on Saint Paul Island. Stellar sea lions are classified as an endangered species under the Endangered Species Act. The critical habitat for Stellar sea lions overlaps with Saint Paul Island (ADF&G 2020d). The range of the Southwest Alaska Distinct Population Segment of the Northern sea otter, a species classified as threatened under the Endangered Species Act, overlaps with the Pribilof Islands (ADF&G 2020b). This area is not part of their designated critical habitat (ADF&G 2020c).

Steller's Eider is designated as threatened under the Endangered Species Act. The species range overlaps with Saint Paul, although the island is not a known breeding area and has not been designated as a critical habitat for the species. Steller's Eiders are known to breed in the arctic coastal plain of northern Alaska and Russia in the spring and summer, and they overwinter in the Alaska Peninsula and the Aleutian Islands. St. Paul Island is a stopover location during the bird's

migration. The birds have been observed in small to moderate numbers (USFWS 2020 and ADF&G 2020b).

The short-tailed albatross, an endangered species, has been seen in the waters off the Pribilof Islands, but the likelihood of the species being present is extremely low. The spectacled eider, a threatened species, may be present in small to moderate numbers during the winter and spring (ADEC 2014b). Critical habitats for these two species are either not designated or do not overlap with Saint Paul (USFWS 2020 and ADF&G 2020b).

The range of humpback whales overlaps with Saint Paul. The species can be found in the waters surrounding Alaska any time of year, but they are more commonly found in the spring and summer when they come to Alaska to feed. They are listed as an endangered species and a critical habitat has not been designated at this time (ADF&G 2020b).

**Seabird Colonies:** Seabird colonies in excess of 2.1 million birds are present on Saint Paul island (ADF&G 1997). The area has been designated as an important bird area by Audubon Alaska.

**Salt Lagoon:** The Salt Lagoon is the most environmentally sensitive area in the vicinity of facility operations. It is located immediately west of the tank farm, within 500 feet at its closest point, however it is separated by a natural dune area and Polovina Turnpike. It is extremely unlikely that any spill at the tank farm would impact the lagoon, however a large discharge at the fuel dock (during southwest winds and incoming tide) could reach the lagoon. In the event of such a discharge, boom should be deployed across the channel where the lagoon drains to the harbor (see Figure 1.6-3).

The lagoon covers about 120 acres. It is less than 6 feet deep and has a sandy bottom. The surrounding vegetation and benthic organisms in the lagoon support numerous avian species including sandpiper, mallard, pintail, common and king eider, gulls, and kittiwakes. Harlequin ducks, redfaced cormorants, and least auklets are also present on a seasonal basis.

If there is any threat of oil contamination to wildlife in the Salt Lagoon, protection strategies should be employed (see Section 1.6.4), and the U.S. Fish and Wildlife Service, AK. Dept. of Fish and Game, and the National Marine Fisheries Service should be alerted.

**Other Sensitive Areas:** The Saint Paul shoreline is exposed, rocky, and irregular. Isolated beaches are made up of gray cobbles. The harbor headlands are unprotected areas directly exposed to ocean-generated waves and storm surges. In such areas spilled oil will generally be held offshore by waves reflecting off the rocky shores and cliffs. Oil which does reach the shore will be dispersed by wave action. Shoreline cleanup would not be necessary or practical.

The tidal flats and stream drainage from the Salt Lagoon warrant the highest priority for shoreline protection. The tidal flats are highly susceptible to oil pollution because of their high retention characteristics. If contaminated, a cleanup plan would be developed in conjunction with Unified Command and trustee agencies. It is likely, cleanup would be limited to removal of contaminated debris, and passive cleanup with sorbent material. Cleanup would be conducted by members of the Facility Response Team.

Sensitive shorelines are further described in Table 3.10-2. See Figure 3.10-1 for the locations of sensitive areas in relation to the facility.

Shoreline	Description
Fine-grained	• Moderately sloping beach with at least 75% of the surface substrate made of sand
sand beaches	particles.
	• Most sand beaches are coarse-grained. Fine gravel may be a minor component.
	• During a small spill, oil will concentrate in a band along the high-tide line.
	• Under heavy accumulations, oil can cover the entire intertidal area.
	• Oil will penetrate into coarse-grained sand slightly more than fine-grained sand.
	• Sand beaches are relatively easy to clean because the hard substrate can support
	pedestrian and vehicle traffic.
	• Oiled debris should be removed.
	• Natural cleansing is the best option, especially during storm seasons, unless there is the potential for contamination of other resources using the beach.
Gravel	• Moderately sloping beach composed primarily of pebbles and cobbles. Pebbles form
Beaches	berms at the high-tide line and cobbles dominate the lower beachface.
	• Deep penetration and rapid burial of stranded oil is likely on exposed beaches.
	• Oil can be pushed over the high-tide and storm berms, pooling and persisting above
	normal zone of wave wash.
	Remove heavy accumulations of pooled oil from upper beachface
	• All oiled debris should be removed, and limit sediment removal.
	• Low- to moderate-pressure flushing can be used to float oil away from sediments and
	be recovered by skimmers.
Marshes	• Intertidal habitats colonized by perennial vascular plants able to tolerate waterlogged soil conditions.
	• Provide nursery and feeding habitat for many species of fish and wildlife.
	• Marshes are highly susceptible to oil spills because they occur at the high-tide line
	where oil tends to concentrate.
	• They are the most sensitive intertidal habitat because of their high biological utilization and value, difficulty of clean up, and potential for long-term impacts to both habitats
	and the species which rely upon it.
Sheltered Tidal Flats	• Flat and unvegetated intertidal habitats, sheltered from strong tidal currents or wave action.
	• Dominated by soft, muddy substrate.
	• Support a large population of benthic organisms and are important feeding and resting areas for birds and fish.
	• Oil penetration into this type of substrate will be limited, except where these water- saturated sediments are highly burrowed
	High biological utilization soft-substrate and low-energy setting make these areas
	highly sensitive to oil spills and almost impossible to clean.
Wave-cut	Highly variable width backed by steep rocky scarp.
platforms	• Surface is irregular and may have accumulations of sand- to boulder-sized material, but bedrock surface is dominant substrate
	• Oil will not adhere to the rock platform but would be transported across platform and
	accumulate along the high-tide line.
	• Oil can penetrate and persist in surficial sediments.
	• In areas of high exposure to waves and tidal flushing, no cleanup is necessary.

Table 3.10-2 Shoreline Type & Predicted Oil Behavior

	• In coarse sediments, where oil persists, the sediments can be relocated to the upper intertidal zone.
Source: (DOI 1983	) and (NOAA and USCG 1998)

# Table 3.10-2 Shoreline Type & Predicted Oil Behavior



**Protection of Areas of Public Concern:** The Arctic and Western Alaska Area Contingency Plan (ACP) provides ample details on areas of public concern on Saint Paul Island. See the ACP for details on each of the human uses with locations, contact information, and resources of concern information (ADEC 2019). Listed below are the human resources used on Saint Paul Island:

- airport/heliport
- marinas
- boat ramps
- national wildlife refuge
- historic properties
- subsistence and personal use harvests
- commercial fishing
- recreational sites and facilities
- State and Federal Parks
- commercial tourism
- fish processing
- sport fishing and hunting

**Historical or Archeological Sites:** The ACP contains information regarding known and unidentified archeological and historic sites. These sites are not identified here in order to protect them from scavenging. Oil spills and hazardous substance releases may result in direct and/or indirect impacts to those historic properties.

Caution will be used in cleanup operations to not disturb or impact any historical or archaeological sites during response. On-Scene Coordinators are responsible for ensuring that response actions take the protection of historic properties into account and that the statutory requirements for protecting them are met. Part 5 of the Alaska Regional Contingency Plan outlines federal and state responsibilities for protecting historic properties and provides an expedited process for compliance with Section 106 of the National Historic Preservation Act during the emergency phase of a response.

Part 5 of the Alaska Regional Contingency Plan outlines federal On-Scene Coordinator responsibilities for protecting cultural resources and provides an expedited process for compliance with Section 106 of the National Historic Preservation Act during the emergency response phase.

During the initial response to a spill from the facility, the City of Saint Paul will coordinate response actions with the federal and state On-Scene Coordinators (OSC), Alaska Department of Natural Resources Office of History and Archaeology (OHA), and other appropriate land managers. If previously undiscovered artifacts or areas of historic, prehistoric, or archaeological importance are encountered during response, the facility IC will notify OHA immediately at the number listed in Table 1.2-4.

OHA will take the lead in working with the state and federal OSCs and the City of Saint Paul to ensure that response activities do not inadvertently injure or destroy historic properties (which are also known as historic and prehistoric archaeological resources). For significant spills, the federal OSC will assign a Historic Properties Specialist (HPS) to also coordinate with other stakeholders, including any cultural resource specialists working for the City of Saint Paul.

Appendix A contains the application for an Alaska Cultural Resource Permit required from OHA for incident response actions that may affect known or suspected historic, prehistoric, or archaeological sites on Alaska State lands. This permit application must be submitted by the FOSC Historic Properties Specialist or other individual accepted as qualified by OHA. Similar actions on Federal lands may require an Archeological Resources Protection Act (ARPA) permit from the responsible agency

# Section 3.11 Additional Information

# Section 3.11.1 List of Acronyms

18 AAC 75.425(e)(3)(K)

AAC	Alaska Administrative Code
ACP	Area Contingency Plan
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
ARRT	Alaska Regional Response Team
ARPA	Archeological Resources Protection Act
AST	Aboveground Storage Tanks
ASTM	American Society for Testing Materials
BAT	Best Available Technology
bph	Barrels per hour
CDL	Commercial Driver License
CFM	Cubic feet per minute
CFR	Code of Federal Registration
CMDR	Commander
CUI	Corrosion Under Insulation
DIPAC	Douglas Island Pink and Chum, Inc.
DOT	Department of Transportation
DOI	Declaration of Inspection
DP&OR	Division of Parks and Outdoor Recreation
EA	Environmental Assessment
EDRC	Effective Daily Recovery Capacity
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FAA	Federal Aviation Administration
FEMA	
	Federal Emergency Management Agency
FM	Federal Emergency Management Agency           Frequency modulation
FM FOSC	Federal Emergency Management Agency         Frequency modulation         Federal On Scene Coordinator
FM FOSC FWS	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Service
FM FOSC FWS gph	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hour
FM FOSC FWS gph HP	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse Power
FM FOSC FWS gph HP HPS	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties Specialist
FM FOSC FWS gph HP HPS IAP	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action Plan
FM FOSC FWS gph HP HPS IAP IBR	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird Rescue
FM FOSC FWS gph HP HPS IAP IBR IC	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird RescueIncident Commander
FM FOSC FWS gph HP HPS IAP IBR IC ICS	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird RescueIncident CommanderIncident Command System
FM FOSC FWS gph HP HPS IAP IBR IC ICS IDLH	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird RescueIncident CommanderIncident Command SystemImmediate Danger to Life or Health
FMFMSFWSgphHPHPSIAPIBRICICSIDLHIMH	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird RescueIncident CommanderIncident CommanderImmediate Danger to Life or HealthIncident Management Handbook
FM FOSC FWS gph HP HPS IAP IBR IC ICS IDLH IMH IMT	Federal Emergency Management AgencyFrequency modulationFederal On Scene CoordinatorFish & Wildlife Servicegallons per hourHorse PowerHistoric Properties SpecialistIncident Action PlanInternational Bird RescueIncident CommanderIncident Command SystemImmediate Danger to Life or HealthIncident Management HandbookIncident Management Team

kt(s)	knot, (knots)
LEL	Lower Explosive Limit
MAWP	Maximum Allowable Working Pressure
MESA	Most Environmentally Sensitive Areas
MRO	Medical Review Officer
MSO	Marine Safety Office
NACE	National Association of Corrosion Engineers
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NOAA	National Oceans & Atmospheric Administration
NPREP	National Preparedness for Response Exercise Program
NRC	National Response Center
OB	Out board
ODPCP	Oil Discharge Prevention & Contingency Plan
OHA	Office of History & Archeology
OMM	Operations & Maintenance Manual
OPA	Oil Pollution Act
OSC	On Scene Commander
OSHA	Occupational Safety and Health Administration
OSRO	Oil Spill Removal Organization
PEL	Personal Exposure Limit
PIO	Public Information Officer
РРЕ	Personal Protective Equipment
ppm	parts per million
PRAC	Primary Response Action Contractor
PREP	Preparedness for Response Exercise Program
psi	pounds per square inch
QI	Qualified Individual
RCP	Regional Contingency Plan
RPS	Response Planning Standard
RR	Railroad
SCA	Secondary Containment Area
SCAT	Shoreline Cleanup Advisory Technique team
SCBA	Self-Contained Breathing Apparatus
SDS	Safety Data Sheets
SERC	State Emergency Response Commission
SMT	Spill Management Team
TERT	
TLV	Threshold Limit Value
TSC	Total Storage Capacity
TTLR	Tank Truck Loading Rack
UHF	Ultra high frequency
USCG	United States Coast Guard
USFWS	US Fish & Wildlife Service

USGS	United States Geologic Survey
UT	Ultrasonic Thickness
VHF	Very high frequency
WCD	Worst Case Discharge

# Section 3.12 Bibliography

18 AAC 75.425(e)(3)(L)

The American Psychological Association style guide was used as reference in the formatting of this bibliography and all in-text citations throughout this plan.

- ADEC (Alaska Department of Environmental Conservation). 2012. Decanting. Alaska Department of Environmental Conservation, Division of Spill Prevention and Response, Prevention and Emergency Response Program. <u>http://dec.alaska.gov/spar/ppr/permits/information/UC%20ADEC%20Decanting%20Gui</u> <u>dance.pdf</u>. (Accessed June 22, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2014a. Spill Tactics for Alaska Responders. NUKA Research & Planning Group, LLC, Seldovia, AK. <u>https://dec.alaska.gov/spar/PPR/star/docs.htm</u>. (Accessed June 22, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2014b. Sensitive Area Section Attachment 2, Wildlife protection guidelines: Pribilof Islands, Aleutians Subarea Contingency Plan for Oil and Hazardous Substance Spills and Release. <u>https://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/tools/</u>. (Accessed June 23, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2019. The Arctic & Western Alaska Area Contingency Plan. <u>https://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/arctic-western-area/</u>. (Accessed June 10, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2020a. Aleutians geographic response strategies: Pribilof Islands zone. <u>https://dec.alaska.gov/spar/ppr/response-resources/grs/aleutians/pribilof-islands/</u>. (Accessed June 11, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2020b. Area plan references and tools. <u>https://dec.alaska.gov/spar/ppr/contingency-plans/response-plans/tools/</u>. (Accessed June 22, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2020c. Drinking water source protection areas map. <u>https://dec.alaska.gov/eh/dw/dwp/protection-areas-map/</u>. (Accessed June 10, 2020).
- ADEC (Alaska Department of Environmental Conservation). 2020d. Wildlife Protection Guidelines for Oil Spill Response in Alaska. <u>https://dec.alaska.gov/spar/ppr/contingencyplans/response-plans/tools/#nogo</u>. (Accessed December 17, 2020).
- ADF&G (Alaska Department of Fish and Game). 1997. MESA27 Pribilof Islands. <u>http://www.adfg.alaska.gov/index.cfm%3Fadfg%3Dmaps.mesamaps</u>. (Accessed June 11, 2020).

- ADF&G (Alaska Department of Fish and Game). 2020a. Anadromous waters catalog. <u>https://www.adfg.alaska.gov/sf/SARR/AWC/</u>. (Accessed June 11, 2020).
- ADF&G (Alaska Department of Fish and Game). 2020b. Animals. <u>http://www.adfg.alaska.gov/index.cfm?adfg=species.main</u>. (Accessed June 11, 2020).
- ADF&G (Alaska Department of Fish and Game). 2020c. Northern sea otter (SW AK popn.) (*Enhydra lutris kenyoni*). <u>http://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.fedhabitat&species=northerns</u> <u>eaotter</u>. (Accessed November 3, 2020).
- ADF&G (Alaska Department of Fish and Game). 2020d. Steller sea lion (west of 144°) (*Eumetopias jubatus*). <u>http://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.fedsummary&species=stellerse</u> <u>alion</u>. (Accessed June 11, 2020).
- ADNR (Alaska Department of Natural Resources). 2020a. Alaska Mapper. http://dnr.alaska.gov/MapAK/. (Accessed June 11, 2020).
- ADNR (Alaska Department of Natural Resources). 2020b. Tsunami hazard map of St. Paul, Alaska. State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys and University of Alaska Fairbanks, Alaska Earthquake Center. Report of Investigations 2020-1, Suleimani and others, 2020, Sheet 4 of 6. <u>https://dggs.alaska.gov/webpubs/dggs/ri/oversized/ri2020\_001\_sh004.pdf</u>. (Accessed November 5, 2020).
- Audubon. 2020. Aleutian tern. <u>https://www.audubon.org/field-guide/bird/aleutian-tern</u>. (Accessed June 23, 2020).
- DOI (Department of the Interior). 1983. Pribilof Islands, Alaska. <u>https://response.restoration.noaa.gov/sites/default/files/esimaps/gisdata/NortonPrib\_1983</u> <u>PDFs.zip</u>. (Accessed June 11, 2020).
- ERMA (Environmental Response Management Application). 2020. Environmental response management application, Arctic. <u>https://erma.noaa.gov/arctic</u>. (Accessed June 10, 2020).
- FEMA (Federal Emergency Management Agency). 2016. National response framework. United States Department of Homeland Security, Federal Emergency Management Agency. http://www.fema.gov/national-response-framework. (Accessed June 15, 2020).
- NMFS (National Marine Fisheries Service). 2017. NMFS Arctic marine mammal disaster response guidelines. U.S. Department of Commerce, NOAA Technical Memorandum NMGS-F/AKR-16. 81 p. doi:10.7289/V5/TM-F/AKR-16. (Accessed November 10, 2020).

- NOAA (National Oceanic Atmospheric Administration). 2020a. Adios. <u>https://response.restoration.noaa.gov/adios</u>. (Accessed November 9, 2020).
- NOAA (National Oceanic Atmospheric Administration). 2020b. Tides & currents, Village Cove, St. Paul Island. <u>https://tidesandcurrents.noaa.gov/noaatidepredictions.html?id=9464212</u>. (Accessed June 10, 2020).
- NOAA (National Oceanic Atmospheric Administration). 2020c. United States Coast Pilot 9 Alaska: Cape Spencer to Beaufort Sea. National Oceanic Atmospheric Administration, Office of Coast Survey, 2020 (38th) Edition.
   <u>https://nauticalcharts.noaa.gov/publications/coast-pilot/index.html</u>. (Accessed November 10, 2020).
- NOAA (National Oceanic Atmospheric Administration). 2020d. WebGNOME. <u>https://gnome.orr.noaa.gov/#</u>. (Accessed November 5, 2020).
- NOAA and USCG (National Oceanic Atmospheric Association and United States Coast Guard). 1998. Pribilof Islands, Alaska, Environmentally sensitive areas (Seal Islands historic landmark and part of the Alaska Maritime National Wildlife Refuge). <u>http://www.asgdc.state.ak.us/maps/cplans/aleut/PDFS/ESI\_DATA/PRIBILOF.PDF</u>. (Accessed June 23, 2020).
- Ross, S. L. 1999. Testing at Ohmsett to determine optimum times to decant simple temporary storage devices. S. L. Ross Environmental Research Ltd., Ontario, Canada.
- Sunrise Sunset. 2020. St. Paul, Alaska Sunrise and sunset calendar. <u>https://sunrise-sunset.org/us/st-paul-ak/2020/9</u>. (Accessed June 10, 2020).
- UAF (University of Alaska Fairbanks). 2020. Alaska earthquake center. <u>https://earthquake.alaska.edu/earthquakes/about</u>. (Accessed December 29, 2020).
- USACE (United States Army Corp of Engineers). 1996. Harbor Improvements Interim Feasibility Study and Environmental Assessment, St. Paul, Alaska, August 1986 (Accessed June 17, 2020).
- USCG (United States Coast Guard). 2014. Incident management handbook. United States Department of Homeland Security, United States Coast Guard. <u>https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=21958</u>. (Accessed June 15, 2020).
- USFWS (United States Fish and Wildlife Service). 2020. Alaska region: Listing and endangered species. <u>https://www.fws.gov/alaska/pages/endangered-species-program/listing-endangered-species</u>. (Accessed December 29, 2020).
- Weather Spark. 2020. Average Weather in December at Saint Paul Island Airport, Alaska, United States. <u>https://weatherspark.com/m/144971/12/Average-Weather-in-December-at-Saint-Paul-Island-Airport-Alaska-United-States</u>. (Accessed June 16, 2020).

- Wesson, R. L., O. S. Boyd, C. S. Mueller, C. G. Bufe, A. D. Frankel, and M. D. Peterson. 2007. Revision of time-independent probabilistic seismic hazard maps for Alaska. U.S. Geological Survey Open-File Report 2007-1043. <u>https://pubs.usgs.gov/of/2007/1043/pdf/of07-1043\_508.pdf</u>. (Accessed December 29, 2020).
- Ziccardi, M. H., S. M. Wilkin, T. K., and S. Johnson. 2015. Pinniped and cetacean oil spill response guideline. National Oceanic Atmospheric Association. (Accessed November 10, 2020).

# Section 4.0 Best Available Technology Review

18 AAC 75.425(e)(4) 18 AAC 75.445(k)

Section 4.0 of this Plan provides a discussion on the use of best available technology (BAT) requirements of 18 AAC 75.425 (e)(4) and consistent with applicable criteria in 18 AAC 75.445. It identifies available technologies applicable to the City of Saint Paul Bulk Fuel Storage Facility operations and includes a written analysis and justification of each technology that the technology is the best available.

- 4.1 Field Communications
- 4.2 Source Control
- 4.3 Trajectory Analysis and Forecasts
- 4.4 Wildlife Capture, Treatment, and Release Methods
- 4.5 Corrosion Control System for Tanks
- 4.6 Leak Detection System for Tanks
- 4.7 Means of Immediately Determining Liquid Level of Tanks
- 4.8 Protective Coatings for Facility Piping
- 4.9 Maintenance of Buried Metallic Piping

18 AAC 75.425(e)(4)(A)(i) 18 AAC 75.425(e)(1)(D)

VHF radios (base, portables) intrinsically safe -with assigned frequencies, phones, fax, e-mail. The City of Saint Paul Public Works Dept. communicates on a VHF radio system. All key personnel carry handheld portable radios, and base stations are located in the Harbor Masters office and at the Fuel Dock office. Refer to Section 1.4 of this plan for a description of field communications.

Evaluation Criteria	Existing	Option 1	Option 2
Technology Options	VHF Radios & Cell	Portable VHF repeaters or	Mobile response
	Phones	UHF or FM system w	communication center (fly
		portable repeaters.	away)
AVAILABILITY: Is the technology	Above listed equipment	Repeaters are available.	Packages can be assembled.
available for use by the applicant? Is	currently in use.		
the technology the best in use in other			
similar situations?			
TRANSFERABILITY: Can the	Technology is	Requires constant power	Yes
technology be applied to the	transferable.	source which may not be	
applicant's operation?		available in remote repeater	
		locations	
EFFECTIVENESS: Is there a	Effective for projected	Repeaters would expand	Could extend
reasonable expectation that the	requirements - radio	coverage area, but range is	communications range,
technology will provide increased	transceiving range	limited to line of sight.	however mobilization and
spill prevention or other	exceeds the area which		logistical requirements
environmental benefits?	could be impacted by a		exceed capability necessary
	discharge from facility		for facility.
	operations.	D + 11	
COST: Cost of achieving BAT,	Cost has been incurred.	Portable repeaters range in	Alaska Clean Seas has
including consideration of cost	Replacement cost of	cost from \$2,500+.	approximately \$500,000
relative to remaining years of service	intrinsically safe hand-		invested in its MRC. Cost
of current technology in use by	held VHF radio varies to		dependent on amount of
applicant.	approximately \$350.		equipment.

# Table 4.1-1 BAT: Field Communications

<b>Evaluation Criteria</b>	Existing	Option 1	Option 2
AGE & CONDITION: Age and	Current equipment is 2-15	Port repeaters have been	N/A - custom package evolve
condition of current technology used	years old. Radios are used	available for decades.	
(and considering similar equipment in	and inspected daily.		
current or past use under similar	Equipment is maintained		
circumstances).	in good condition and		
	replaced as necessary		
COMPATIBILITY: Is the technology	Current use demonstrates	Existing radios would have to	Existing radios would have to
compatible with existing operations?	equipment is compatible	be re-crystalled.	be re-crystalled.
	with operations		
FEASIBILITY: Feasibility of this	Current equipment is	Feasible, but costly and not	Feasible, but costly and not
technology from an engineering and	feasible from engineering	necessary.	necessary.
operational view	and operations view.		
ENVIRONMENTAL IMPACTS:	No known significant	Access for remote	MRC transport, positioning
Does the use of this technology	environmental impacts.	positioning of repeaters and	and power source could
impact the environment in a manner		providing power source	impact designated sites.
that offsets the technology's benefits?		could impact designated	
		sites.	

 Table 4.1-1
 BAT: Field Communications

**BAT Summary -** Existing communication systems has the capability to provide reliable communications between the Command Center and all Section Chief during a spill incident. Existing technology is justified by all evaluation criteria.

# Section 4.2 Source Control

18 AAC 75.425(e)(4)(A)(i) 18 AAC 75.425(e)(1)(F)(i)

Described as procedures to stop a discharge at its source and prevent its spreading. The methods used include temporary patching pipelines, valve shutoff, transfer product from leaking tanks, blocking the flow of spilled oil, and containment booming of oil on water. Limitation of space and economic feasibility preclude the use of alternatives.

All tanks and piping equipped with manual shutdown/isolation valves. Tanks 1, 5, 6, 7, 8 and 9 equipped with automatic shutdown of a motor operated valve in bulk delivery pipeline tied to tank level gauges through tank farm main control panel. Plug and patch material maintained.

Evaluation Criteria	Existing	Existing	Existing	Option 1
Technology Options	Manual Tank Valves	Motor Operated Valve	Plug, Patch Materials	Automatic Control Pump(s) Used to Fill Tanks
AVAILABILITY: Is the technology available for use by the applicant? Is the technology the best in use in other similar situations?	Valves are installed as illustrated on Figure 1- 8-2. Valves are manually operated as described in Section 3.1.3.	Indelac (ICI) Model M Series rotary actuator valve closure device installed in delivery pipe.	Materials are maintained at facility.	Automatic control of pump(s) used to fill tanks. Technology exits. Not currently available on fuel barges.
TRANSFERABILITY: Can the technology be applied to the applicant's operation?	The technology is in place at the facility.	The technology is transferable. Motor actuated valves installed at many bulk fuel facilities in Alaska.	The technology is in place at the facility.	Difficult to transfer to delivery sources (various barges). Could apply to intra- facility tank transfers, however such transfer seldom occurs.
EFFECTIVENESS: Is there a reasonable expectation that the technology will provide	Existing technology and transfer procedures provide	ICI M series actuator is industrial grade with excellent	Plug and patch material and sleeves can be effective	Technology could be effective, however required interface

### Table 4.2-1 BAT: Source Control

Evaluation Criteria	Existing	Existing	Existing	Option 1
increased spill prevention or	effective capability to	reputation for	control in certain	with various types of
other environmental benefits?	stop and control a	reliability.	instances when	equipment (barges)
	discharge.		properly applied.	reduces reliability.
COST: Cost of achieving BAT,	Cost has been	Costs of actuator,	Cost has been	Difficult to estimate -
including consideration of cost	incurred. Costs of	engineering, and	incurred.	modifications would
relative to remaining years of	valves and installation	installation vary		be required on every
service of current technology in	vary significantly.	significantly.		delivery barge,
use by applicant.				storage tank, and
				facility pump.
AGE & CONDITION: Age and	Transfer equipment	ICI M series	Materials are	Automatic control
condition of current technology	maintained and	actuators have been	maintained at facility	technology has been
used (and considering similar	inspected in	manufactured and	and replaced as	available for
equipment in current or past use	accordance with	installed for over 50	necessary.	approximately 50
under simmar circumstances).	Values replaced as	years.		years. Technology
	valves replaced as			avolving
	inspections			evolving.
COMPATIBILITY: Is the	Technology is	Technology is	Technology is	Not compatible with
technology compatible with	compatible with	compatible with	compatible with	existing fuel delivery
existing operations?	facility operations	facility operations	facility operations	barges Compatible
existing operations.	raemty operations.	raemty operations.	idenity operations.	with facility transfer
				pumps.
FEASIBILITY: Feasibility of	The technology is	The technology is	The technology is	Not feasible to install
this technology from an	feasible.	feasible and in place	feasible.	on all fuel delivery
engineering and operational		at facilities		sources. Installation
view		worldwide.		on facility transfer
				pump is feasible, but
				not practical due to
				limited number of
				transfers, high costs,

 Table 4.2-1
 BAT: Source Control

Evaluation Criteria	Existing	Existing	Existing	Option 1
				and existing control /
				containment.
ENVIRONMENTAL	No environmental	No environmental	No environmental	Automatic shutdown
IMPACTS: Does the use of this	impact when operated	impact when operated	impact when properly	of pumps at high
technology impact the	and maintained	and maintained	applied.	liquid level is
environment in a manner that	properly.	properly.		beneficial, however
offsets the technology's				not practical because
benefits?				of variety of fuel
				sources

The combination of existing technology, transfer procedures, emergency training, and containment equipment provide for effective discharge control capability. Existing technology is justified by all evaluation criteria.

### Section 4.3 Trajectory Analysis and Forecasts

Movement of the oil slick is monitored by observers from aircraft. Forecasting the slick movement is done based on observed movement and tide and wind forecasts. The existing system is the most easily employed and provides the most accurate information most promptly.

<b>Evaluation</b> Criteria	Existing	Existing	Existing	Option 1
Technology Options	Visual monitoring	WebGNOME	Spill modeling	Hydrocarbon tracking
				buoy system (Orion)
AVAILABILITY: Is	All necessary resources	The WebGNOME	Adios spill model was	System is available -
the technology	are locally available.	application was used to	used to develop the spill	requires buoys and
available for use by the	Facility operators	develop the spill	scenario located in	receiver.
applicant? Is the	experienced and	scenario located in	Section 1.6SC.2. A link to	
technology the best in	knowledgeable of local	Section 1.6SC.2. A link	the website is available in	
use in other similar	environment and marine	to the website is	Section 3.12.	
situations?	conditions.	available in Section		
		3.12.		
TRANSFERABILITY:	The technology is in	The technology is	The technology is	Technology is
Can the technology be	place at the facility.	transferable and	transferable and available	transferable, but results
applied to the	Vessels and materials	available		are more effective with
applicant's operation?	are available.			heavy oils.
EFFECTIVENESS: Is	Based on products and	The spill model is most	Model developed by	Effective only in open-
there a reasonable	potential spill volumes,	effective for	NOAA Office of	water conditions.
expectation that the	visual tracking is most	determining the	Response. Based on input	Range is limited to 9
technology will	reliable and effective	trajectory of a release	model is effective	miles.
provide increased spill	technology for real-time	in open ocean. The	forecasting dispersion	
prevention or other	surveillance.	program does not	rates based on oil, volume	
environmental		include a location file	discharged, and	
benefits?		for Saint Paul Island so	conditions.	
		when the model is run.		

# Table 4.3-1 BAT: Trajectory Analysis and Forecasts

18 AAC 75.425(e)(4)(A)(i) 18 AAC 75.425(e)(1)(F)(iv)

<b>Evaluation Criteria</b>	Existing	Existing	Existing	Option 1
Technology Options	Visual monitoring	WebGNOME	Spill modeling	Hydrocarbon tracking
				buoy system (Orion)
		no shoreline impacts are displayed.		
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	City staff's hourly wage. Vessel maintenance are considered part of the City's annual budget.	Model is free. No costs incurred.	Model is free. No costs incurred.	Electronic tracking buoys costs approximately \$1,500 each, excluding receiver.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	Tracking vessels are part of response inventory which is maintained in good condition. Numerous additional vessels available	GNOME was originally released in 2002. The program is continually updated, and new location files are added occasionally.	Adios 2 became available in February 2015.	Tracking systems have been available since the 1970's.
COMPATIBILITY: Is the technology compatible with existing operations?	Technology is compatible with facility operations.	Technology is compatible with facility operations, but the program does not include a location file for Saint Paul Island so when the model is run, no shoreline impacts are displayed.	Technology is compatible with facility operations.	Technology is compatible, but system requires training and maintenance.

 Table 4.3-1
 BAT: Trajectory Analysis and Forecasts

<b>Evaluation Criteria</b>	Existing	Existing	Existing	Option 1
Technology Options	Visual monitoring	WebGNOME	Spill modeling	Hydrocarbon tracking
				buoy system (Orion)
FEASIBILITY:	Available technology is	Technology is feasible	Technology is feasible	No tracking systems are
Feasibility of this	most feasible and	for use with	and in use worldwide.	in used in rural Alaska
technology from an	reliable for this facility.	determining where a		for non-persistent oil
engineering and		release would travel in		facilities.
operational view		open water but does not		
		work for showing		
		shoreline impacts.		
ENVIRONMENTAL	Minimal impacts are	No impact	No impact	No impact, provided
IMPACTS: Does the	water pollution and			buoys operate properly
use of this technology	noise disturbances from			and are recoverable.
impact the	vessels. Distance is			
environment in a	maintained from all			
manner that offsets the	rookeries, haulouts, and			
technology's benefits?	seabird colonies.			

 Table 4.3-1
 BAT: Trajectory Analysis and Forecasts

The combination of the available surveillance, data and tracking methods is the best available for facility operations. The existing technology/capability is justified by consideration of all evaluation criteria.
Plans for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including: minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers, and capture, cleaning rehabilitation, and release of oiled wildlife, when appropriate. Refer to ODPCP Sections 1.6.4, 1.6.10, and 3.10.

1) Facility maintains equipment and materials suggested for bird and wildlife deterrence 2) Facility has a designated Wildlife Coordinator and spill team personnel that regularly participate in wildlife protection training and drills, 3) Facility personnel adhere to protection strategies described in this ODPCP and the *Wildlife Protection Guidelines: Pribilof Islands* section of the ACP and 4) on-island resources for capture, treatment and rehabilitation of both birds and marine mammals<sup>1</sup> exist and are maintained for immediate use in the event of a spill.

Evaluation	Existing	Existing	Existing	Existing	Option 1
Criteria					
Technology	Bird and wildlife	Wildlife coordinator	Aleut Community	Bird Responders	Contract professional
Options	hazing and	& facility spill team	of St. Paul Island	Unit	wildlife protection
	deterrence kit	training	Marine Mammal		group such as IBR or
			Responders Unit		Alaska Sea Life Center
AVAILABIL-ITY:	Facility maintains	Wildlife	Four qualified	Five qualified	These organizations
Is the technology	a deterrence kit.	Coordinator is	local resident	local resident	exist and are available,
available for use by	Refer to the	resident, available	responders are	responders are	however a response
the applicant? Is	Wildlife	24/7. USDA has	available 24/7 (see	available 24/7	within 72 hours is
the technology the	Protection	conducted	Section 1.6.10).	(see Section	possible – but unlikely
best in use in other	Guidelines for Oil	deterrence training		1.6.10)	due to remoteness of
similar situations?	Spill Response in	at facility.			the Pribilof Islands and
	Alaska.				the weather frequently
					preventing air
					transportation.

 Table 4.4-1
 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation	Existing	Existing	Existing	Existing	Option 1
Criteria					
TRANSFER-	Technology is	Technology is	Deterrence,	Deterrence,	Yes.
ABILITY: Can the	transferable. Use	transferable.	hazing, and	hazing, and	
technology be	requires trustee	Personnel will	collection actions	collection actions	
applied to the	agency approval,	participate in future	require agency	require agency	
applicant's	per Section 3.10 of	training when	approval prior to	approval prior to	
operation?	this ODPCP.	available.	action.	action.	
EFFECTIVE-	Standard	Trained local	Trained local	Trained local	Due to the the widely
NESS: Is there a	deterrence kits are	responders are	responders are	responders are	known logistics
reasonable	effective in	familiar with the	familiar with	familiar with	limitations this
expectation that the	preventing wildlife	wildlife and bird	marine mammal	local and	technology is not
technology will	and birds from	species, habits,	habits, behaviors,	migratory bird	reasonably considered
provide increased	interacting with a	behaviors, and	and ecosystems	habits, behaviors,	to be effective for the
spill prevention or	spill if used in	ecosystems that are	and are present in	and ecosystems	following reasons:
other	conjunction with	present in the	the Pribilof	and are present in	• Delay in response by
environmental	trained responders	Pribilof Islands.	Islands. This	the Pribilof	contractors is highly
benefits?	familiar with the	Coordinator and	group regularly	Islands. Trained	likely to be 48-72
	present species	team regularly drill	provides wildlife	responders	hours at a minimum
	and local	and can respond in	protection,	regularly drill and	and air delays of up to
	ecosystems.	minutes rather than	treatment, and	can respond in	two weeks are
		days. This is the	care as part of	minutes rather	common in the
		most effective and	marine debris	than days. This is	Pribilof Islands.
		beneficial	removal initiatives	the most effective	<ul> <li>Responders trained</li> </ul>
		technology to	through NOAA.	and beneficial	for marine mammals
		increase prevention.		technology to	are unlikely to have
			Trained	increase	specialized knowledge
			responders	prevention.	in fur seals or the
			regularly drill and		Pribilof Islands
			can respond in		ecosystems including
			minutes rather		knowledge of

 Table 4.4-1
 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation	Existing	Existing	Existing	Existing	Option 1
Criteria					
			than days. This is the most effective and beneficial technology to increase prevention.		<ul> <li>stampeding behaviors and pupping ground behaviors.</li> <li>Contracted wildlife response organizations rely heavily on fixed facilities, personnel, and resources located in Anchorage, Seward, and the Pacific Northwest which further reduces</li> </ul>
					<ul> <li>effectiveness.</li> <li>Transporting marine mammals off-island, especially adult sized fur seals is generally accepted to be detrimental and/or deadly and is not considered an effective option.</li> <li>Transporting migratory and local birds is feasible, however sufficient capacity exists on island and providing</li> </ul>

 Table 4.4-1
 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation Criteria	Existing	Existing	Existing	Existing	Option 1
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	Cost has been incurred. Replacement costs minimal.	Cost has been incurred. Training and drill costs vary, estimated at \$2,500 annually. Cost for wildlife response training varies.	Costs include periodic training, drill participation, and compensation in the event of spill response.	Costs include periodic training, drill participation, and compensation in the event of spill response.	treatment locally without the stress of transportation is considered the most effective option. Contracts with these organizations are: IBR – Annual \$16,000 Alaska Sea Life Center – Annual \$25,000 An annual contract is not feasible for the City of Saint Paul, but the organizations could be contracted on an as needed basis with coordination with NMFS, USFWS, and ADF&G.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	Facility maintains all required response equipment in good condition.	Coordinator and training program have been in place for more than 20 years. City of Saint Paul spill teams have always participated in this program.	Aleut Community of St. Paul Island staff are professionally trained and experienced in marine mammal response. Being community members, they are	Training is renewed every three years to stay in compliance with applicable permits.	Not applicable.

 Table 4.4-1
 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation Critoria	Existing	Existing	Existing	Existing	Option 1
			experts on local wildlife.		
COMPAT- IBILITY: Is the technology compatible with existing operations?	Yes, existing.	Yes, existing.	Yes, existing.	Yes, existing.	Compatible, but not considered as effective as local resources.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Technology is feasible. Use requires trustee agency approval, per Section 1.6.10 of this ODPCP.	Yes. Requires agency approval.	Yes. Requires agency approval.	Yes. Requires agency approval.	Feasible, but not practical or cost effective.
ENVIRON- MENTAL IMPACTS: Does the use of this technology impact the environment in a manner that offsets the technology's benefits?	Contents of hazing kits are generally accepted as having low environmental impacts.	Commonly drilled response strategies for hazing, deterrence, capture, treatment and rehab are generally accepted as being beneficial and having low environmental impacts.	Commonly drilled response strategies for hazing, deterrence, capture, treatment and rehab are generally accepted as being beneficial and having low environmental impacts.	Commonly drilled response strategies for hazing, deterrence, capture, treatment and rehab are generally accepted as being beneficial and having low environmental impacts.	Transporting injured and/or oiled wildlife to the nearest rehabilitation center (Anchorage for birds, Seward for marine mammals and birds) requires at a minimum a 5 to 8 hour charter flight, and an additional 3 hours for trucking animals to Seward. This estimate does not account for weather delays in St. Paul, or at

Table 4.4-1 BA	AT: Wildlife Capture,	Treatment, &	<b>Release Methods</b>
----------------	-----------------------	--------------	------------------------

Evaluation Criteria	Existing	Existing	Existing	Existing	Option 1
					Cold Bay, which is a required refueling stop.
					This transportation time, along with current technology for transporting live animals that would fit aboard a charter plane (modified dog kennels) would limit transportation to animals less than 100 pounds and would certainly result in increased death and injury due to stress and fatigue. These potential impacts make this technology a detrimental environmental impact
					It is also worth noting that adult fur seals weigh on average of 110 to 220 pounds for females and 400 to 550

 Table 4.4-1
 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation Criteria	Existing	Existing	Existing	Existing	Option 1
					pounds for males.
					Adult harbor seals
					weigh an average of
					130 pounds. Adult
					Steller's Sea Lions
					weigh on average 800
					pounds for females and
					up to 2,500 pounds for
					males. It is unlikely
					that anything but a
					pinniped pup would be
					able to be transported
					by air. All pinniped
					response resources
					available at the Alaska
					Sea Life Center are
					either part of their fixed
					facility or within a 20'
					conex unit that poses
					logistical challenges in
					flying aboard a
					chartered plane to Saint
					Paul due to frequent
					inclement weather and
					potential difficulties in
					landing. Barging these
					units is estimated to
					take between 10 and 14
					days, assuming a barge

Table 4.4-1 BAT: Wildlife Capture, Treatment, & Release Methods

Evaluation Criteria	Existing	Existing	Existing	Existing	Option 1
Criteria					is available for charter out of Seward. These organizations do provide trained wildlife and bird hazing responders, and these would not likely be a negative impact to the environment – however their mobilization time would be 48-72 hours <u>at best</u> which is past the most effective time to perform hazing and other prevention
					methods.

Table 4.4-1 BAT: Wildlife Capture, Treatment, & Release Methods

<sup>1</sup>See Section 1.6.10 for locations of wildlife triage facilities.

Existing technology/capability is considered the best available by consideration of all evaluation criteria and in accordance with the *Wildlife Protection Guidelines: Pribilof Islands* section of the ACP.

18 AAC 75.425(e)(4)(A)(ii) 18 AAC 75.065(i)(3)

Impressed current system with rectifier and test stations. System was designed by a corrosion expert who monitored installation and startup. System is operated and maintained in accordance with NACE SP0193.

System complies with ADEC standards / requirements. In consideration of AS 46.04.030(e), no further "alternative" analysis for this BAT is necessary.

#### Section 4.6 Leak Detection Systems for Tanks

18 AAC 75.425(e)(4)(A(ii) 18 AAC 75.065(h)(1)(B), (2)

Tanks 1-9 are underlain by an impermeable bentonite liner. The bentonite liner extends up all main dikes within the tank farm SCA and is keyed into the top of each to provide a water-tight, leak-proof liner throughout the storage area. Should there be a release from Tanks 1-9, product would accumulate around the tanks and would be discovered during facility inspections. Each tank within this containment is equipped with cathodic protection installed in accordance with API RP 651. The CP system on each tank is operated and maintained in accordance with NACE SP 0193. See Section 2.5.3 of this plan for more information.

System complies with ADEC standards / requirements. In consideration of AS 46.04.030(e) no further "alternative" analysis for this BAT is necessary.

#### Section 4.7 Means of Immediately Determining Liquid Level of Tanks

18 AAC 75.425(e)(4)(A)(ii) 18 AAC 75.065(k)(3) and (4)

Tanks 1, 5, 6, 7, 8 and 9 tanks are equipped with Senix ToughSonic CHEM 20 system ultrasonic liquid level gauges tied to a control panel with high/low level alarms. Liquid level determination and overfill prevention is provided to gasoline service tanks (4 and 7) with floating roofs by the APG, model PT-500 submersible level transmitter that continuously measures the liquid level in the tanks. Tanks 2 and 3 are currently kept empty for oil spill response and are not equipped with ultrasonic level gauges.

#### Table 4.7-1 BAT: Means of Immediately Determining Liquid Level of Tanks

<b>Evaluation Criteria</b>	Existing	Existing	Option
Technology Options	Senix ultrasonic level controller	Tank transfer and monitoring	Float type liquid level gauges
	system with alarms installed	procedures are in place.	with external level tape
			monitors and contact switch <i>h/l alarms</i> .
AVAILABILITY: Is the	Senix ultrasonic level controller	Tank transfer and monitoring	Float type liquid level gauges
technology available for use	system with alarms installed.	procedures are in place.	with external level tape
by the applicant? Is the	High level motor actuated valve	Procedures listed in Section	monitors and contact switch
technology the best in use in	shutdown per Section 4.2.	3.1.4.	high level alarms.
other similar situations?			
TRANSFERABILITY: Can	Level gauges installed. Alarms	Technology is transferable and	Technology is transferable,
the technology be applied to	technology is transferable.	complies with USCG and	however VAREC system
the applicant's operation?		ADEC requirements.	previously used at facility was
			not reliable due to extreme
			weather exposure.
EFFECTIVENESS: Is there a	Liquid level continuously	Procedures have been effective	VAREC system previously
reasonable expectation that	monitored. Sensing is non-	at prevention tank overfill.	used at facility was not
the technology will provide	contact; transducers amounted		reliable due to extreme
increased spill prevention or	above highest level in tank.		weather exposure.
other environmental benefits?	Monitor transmits ultrasonic		
	signal direct toward the fuel		
	level in tank and measures time		

Evaluation Criteria	Existing	Existing	Option
	to receive reflected echo. Time is converted to level of liquid in tank.		
COST: Cost of achieving BAT, including consideration of cost relative to remaining years of service of current technology in use by applicant.	Cost varies significantly. Weather protected components reduce maintenance and replacement costs when compared to external devices.	Cost incurred. Training and drill costs vary.	Maintenance and replace costs high due to exposure.
AGE & CONDITION: Age and condition of current technology used (and considering similar equipment in current or past use under similar circumstances).	Ultrasonic level sensing technology has been in use for decades. Sensors are heavy duty, designed for industrial environments. Transducers are hermetically sealed, non- corrosive in PVC or stainless- steel housing.	Written procedures have in place since start up. Procedures are review annually, updated as necessary.	Float type liquid level gauges have in service for decades.
COMPATIBILITY: Is the technology compatible with existing operations?	System is compatible with facility operations and more reliable than other external devices that subject to extreme weather conditions.	Monitoring technology and procedures are compatible with facility operations.	System is compatible, but high maintenance costs and not reliable.
FEASIBILITY: Feasibility of this technology from an engineering and operational view	Technology is feasible. Gauge system operates accurately in tanks.	Monitoring technology and procedures are compatible with facility operations.	System is feasible, but high maintenance costs and not reliable.
ENVIRONMENTAL IMPACTS: Does the use of this technology impact the environment in a manner that	No known environmental impacts.	No known environmental impacts.	No known environmental impacts.

<b>Table 4.7-1</b>	<b>BAT: Means</b>	of Immediately	Determining	Liquid Leve	l of Tanks
--------------------	-------------------	----------------	-------------	-------------	------------

$1 a V V \tau_{1} / 1 D T I_{1} V V I I I I I I I I U U U U U U U U U U$
--

Evaluation Criteria	Existing	Existing	Option
offsets the technology's			
benefits?			

#### Section 4.8 Protective Coatings & Corrosion Control Program for Facility Piping

18 AAC 75.425(e)(4)(A)(ii) 18 AAC 75.080(d), (k), (l) and (m)

Exposed pipe is protected from atmospheric corrosion by application and maintenance of protective coatings that meet current industry standards, including alkyd enamel, epoxy, and/or inorganic zinc primer and paint. Exposed pipe is visually inspected on a monthly basis. Where existing coatings are failing or questionable, the areas are wire brushed to bare metal and recoated as weather permits in accordance with product manufacturer's instructions. Pipe supports are designed to minimize abrasion and corrosion.

Below grade piping is protected by an impressed current system with rectifier and test stations. System was designed by a corrosion expert who monitored installation and startup. System is operated and maintained in accordance with NACE SP0169. All piping at the City of Saint Paul Facility is part of the corrosion control program described in Section 2.5.4 of this plan, which adheres to best management practices as well as API 570 inspection and maintenance standards.

System complies with ADEC standards / requirements. In consideration of AS 46.04.030(e) no further "alternative" analysis for this BAT is necessary.

#### Section 4.9 Maintenance Practices for Buried Metallic Piping

18 AAC 75.425(e)(4)(A)(ii) 18 AAC 75.080(b)

Buried steel pipes are pressure tested at least once annually. Whenever the pipe is exposed it is inspected. Damaged or deteriorated sections are repaired or replaced. If there is corrosion damage, appropriate corrective steps are taken. All piping at the City of Saint Paul Facility is part of the corrosion control program described in Section 2.5.4 of this plan, which adheres to best management practices as well as API 570 inspection and maintenance standards.

System complies with ADEC standards / requirements. In consideration of AS 46.04.030(e) no further "alternative" analysis for this BAT is necessary.

#### Section 5.0 Response Planning Standard

18 AAC 75.425(e)(5) 18 AAC 75.432(d)

#### Section 5.1 ADEC Adjusted Response Planning Standard

The largest tank at the City of Saint Paul Bulk Fuel Facility is diesel Tank #8. A calculation of the applicable response planning standards is displayed in the table below. See Section 3.2.2 of this plan for a discussion of the estimated volume to reach open water.

		% Reduction V		(gallons)
18 AAC 75.425(e)(5) 18 AAC 75.432(b)	Volume of the largest oil storage tank (Tank #8)			600,000
18 AAC 75.432(d)(4)	A sufficiently impermeable secondary containment area with a dike capable of holding the contents of the largest tank plus precipitation:	60	-360,000	240,000
18 AAC 75.432(d)(5)(C)	Impervious containment area extending under the full area of each storage tank or double bottoms with leak detection:	25	-60,000	180,000

Adjusted Response Planning Standard:

180,000 gallons / 4,286 barrels

## Section 5.2 EPA Response Planning Volumes

Table 5.2-1 EFA worksheet to Flair volume of Response Resources for we	<b>Table 5.2-1</b>	EPA	Worksheet to	Plan	Volume o	f Respons	se Resources	for	WCI
--	--------------------	-----	--------------	------	----------	-----------	--------------	-----	-----

Part I	<b>Background Inform</b>	ation							
Step (A)	Calculate Worst Case Discharge in barrels (Appendix D) 14,286 bbl								
Step (B)	Oil Group (Table 3 and Section 1.2 of Appendix D)								
Step (C)	Operating Area (choo	ose one)	X Near or rivers						
	Great Lakes								
Step (D)									
Percentage Lost to Natural Percent Recovered Floating Oil Percent Oil O									
I	10								
	20 (D1) (D2) (D2)								
Sten (E1)	On-Water O	il Recovery Sten	$(D2) \times Step(A)$ 2 857						
Step (E1)		in Recovery <u>step</u>	100						
Step (E2)	Shoreline	Recovery <u>Step</u>	$\frac{\text{(D3) x Step (A)}}{1,429}$						
Step (F)	100								
Step (f)	(C) Cr Write Cil Decemer Decemer Deliver Frater (Table 4 of American D)								
Tior I									
	0.15	0.25	0.40						
	(G1)	(62)	(G3)						
Part II On-Wa	(OI) ter Oil Recovery Canac	ity (harrels/day)	(05)						
	Tier I	Tier II	Tier III						
	429	714	1,143						
Step (E	E1) x Step (F) x	Step (E1) x Step (F) x	Step (E1) x Step (F) x						
	Step (G1)	Step (G2)	Step (G3)						
Part III	Shoreline Cleanup V	olume (barrels)	1,429						
			Step (E2) x Step						
Part IV	On-Wate	r Response Capacity by Operating A	rea (Table V of Appendix D)						
	Tier III								
	12,500	25,000	50,000						
(J1) (J2) (J3)									
Part V	On-Water Amount N	Needed to be Identified, but not Cont	racted for in Advance (barrels/day)						
	Tier I	Tier II	Tier III						
	0	0	0						
Part II Tier 1 – Step (J1)Part II Tier 1 – Step (J2)Part II Tier 1 – Step (J3)									

#### Section 5.3 USCG Response Planning Volumes

		Volume (bbl)	Volume (gal)
Worse Case Discharge			
Time to discover spill and shut down	Max Flow Rate		
3 minutes at	1,100 gpm	79	3,300
Volume of pipelines:	482	20,258	
WCD Planning Volume:	:	561	23,558
Maximum Most Probable Discharge			
Lesser of 10% or 1,200 bb	ls:	56	2,356
Average Most Probable Discharge			
Lesser of 1% or 50 bbls:	:	5.6	236

#### Table 5.3-2 USCG Worst Case Discharge Volume

#### **USCG Average Most Probable Spill Mitigation**

The equipment and personnel for mitigation of the average most probable spill (5.6 bbls/236 gallons) are as follows. The personnel and their responsibilities are listed in Table 1.2-3 The equipment for mitigating the spill is listed below:

- Containment & sorbent boom
- Deployment skiff
- Sorbent pads & sweeps
- Plastic bags

## APPENDIX A

## FORMS

-1

# CITY OF ST. PAUL - BULK FUEL STORAGE FACILITY VISUAL INSPECTION

DATE:		
INSPECTED BY:	INSPECTED / OK (✓)	REQUIRES ATTENTION (attach comments)
TANKYARD		
<ul> <li>EACH TANK INSPECTED FOR:</li> <li>Leakage - damage</li> <li>Corrosion - paint</li> <li>Tank valves - good condition / locked</li> <li>Level Gauges - good condition / operable</li> <li>Overfill Alarms - good condition / operable</li> <li>Foundation(s) sound</li> </ul> PIPELINES <ul> <li>In good condition - free of leakage</li> <li>Corrosion - paint</li> </ul>		
Supports - good condition		
<ul> <li>Valves - good condition / locked</li> </ul>		
<ul> <li>METERS, VENTS</li> <li>In good condition - free of leakage</li> <li>IMPOUNDMENT AREA</li> <li>Dike, berm, liner in good condition</li> <li>Free of debris</li> </ul>		
Retained stormwater clean		
TRUCK RACK & DISPENSING STATION		
<ul> <li>In good condition - free of leakage</li> <li>Corrosion / paint - good condition</li> <li>Supports - good condition</li> <li>Valves - good condition / locked</li> </ul>		
MARINE HEADER & SUPPLY PIPELINES		
<ul> <li>In good condition - free of leakage</li> <li>Blank flanged &amp; locked</li> <li>Drip pan in place - retained water clean</li> <li>Corrosion / paint - good condition</li> <li>Supports - good condition</li> </ul>		
<u>SECURITY</u>		
<ul> <li>Fences in good condition</li> <li>Locks on gates</li> <li>All lights operable</li> <li>Emergency notification posted</li> <li>Fire extinguishers in place</li> </ul>		
<b>OFFICE / STORAGE VANS</b>		
<ul> <li>General condition (housekeeping)</li> <li>Response Plan, Operations Manual, &amp; SPCC Plan in place</li> </ul>		

#### **Declaration of Inspection Prior to Bulk Cargo Transfer**

Date \_\_\_\_\_

Time \_\_\_\_\_

#### Receiving Unit (Name and Address)

#### Delivering Unit (Name and Address)

The following list refers to requirements set forth in detail in 33 CFR 156.120, 156.150, and 46 CFR 35.35-30. The spaces adjacent to items on the list are provided to indicate that the detailed requirement has been met. Retain on file for one month from date of completion.

		DELIVERER	RECEIVER
1.	Safe smoking spaces. (35.35-30)		
2.	Repair work authorization. (35.35—30)		
3.	Boiler and galley fires safety. (35.35-30)		
4.	Fires or open flames. (35.35-30)		
5.	Warning signs and red warning signals. (35.35-30)		
6.	Vessels moorings. 156.120 (a)		
7.	Hoses and loading arms, length and support. 156.120 (b)(c)		
8.	Transfer system alignment. 156.120 (d)		
9.	Transfer system; used components. 156.120 (e)		
10.	Unused hoses and loading arms blanked. 156.120 (f)		
11.	Transfer system; fixed piping. 156.120 (g)		
12.	Overboard discharges/sea suction valves. 156.120 (h)		
13.	Transfer hose condition. 156.120 (i)		
14.	Hose and loading arm; test markings. 156.120 (j)		
15.	Connections; gaskets, bolts. 156.120 (k)		
16.	Monitoring devices (where required). 156.120 (I)		
17.	Discharge containment system. 156.120 (m)(n)		
18.	Scuppers and drains. 156.120 (o)		
19.	Connections and glands tight. 156.120 (p)		
20.	Communications; established and operable. 156.120 (q)		
21.	Emergency shutdown. 156.120 (r)		
22.	Person-in-charge. 156.120 (s)(t)		
23.	Sufficient personnel. 156.120 (u)		
24.	Language to be used156.120 (v)		
	Interpreter (if any)		
25.	Lighting (sunset to sunrise). 156.120 (y)(z)		
26.	Agreement to begin transfer. 156.120 (x)		
27.	Transfer conference. 156.120 (w)		

Sequence	Product Name	Quantity (Gal.)	Rate of Pressure (PSI)

Person-in-Charge of Receiving Unit	Title	Time and Date
Person-in-Charge of Delivering Unit	Title	Time and Date

#### §156.120 Requirements for oil transfer

#### No person may conduct an oil transfer operation unless -

- (a) the vessel's moorings are strong enough to hold during all expected conditions of surge, current, and weather and are long enough to allow adjustment for changes in draft, drift, and tide during the transfer operation;
- (b) Oil transfer hoses and loading arms are long enough to allow the vessel to move to the limits of its moorings without placing strain on the hose, loading arm, or oil transfer piping system;
- (c) each hose is supported to prevent kinking or other damage to the hose and strain on its couplings;
- (d) each part of the oil transfer system is aligned to allow the flow of oil;
- (e) each part of the oil transfer system not necessary for the transfer operation is securely blanked or shut off;
- (f) the end of each hose and loading arm that is not connected for the transfer of oil is blanked off using the closure devices required in §§ 154.120 and 155.805 of this chapter.
- (g) the transfer system is attached to a fixed connection on the vessel and the facility except that when a vessel is receiving fuel, an automatic back pressure shutoff nozzle may be used;
- (h) each overboard discharge or sea suction valve that is connected to the vessel's oil transfer or cargo tank system is sealed or lashed in the closed position; except when used to receive or discharge ballast in compliance with 33 CFR 157;
- (i) each oil transfer hose has no unrepaired loose covers, kinks, bulges, soft spots, or any other defect which would permit the discharge of oil through the hose material and no gouges, cuts, or slashes that penetrate the first layer of hose reinforcement ("reinforcement" means the strength members of the hose, consisting of fabric, cord and/or metal);
- (j) each hose or loading arm used meets §§ 154.500 and 154.510 of this chapter, respectively;
- (k) each connection meets § 156.130;
- (I) any monitoring devices required by § 154.525 of this chapter are installed and operating properly;
- (m) the discharge containment equipment required by § 154.545 of this chapter is readily accessible or deployed as applicable;
- (n) the discharge containment required by §§ 154.530, 155.310, and 155.320 of this chapter, as applicable, is in place and periodically drained to provide the required capacity;
- (o) each drain and scupper is closed by the mechanical means required by § 155.310;
- (p) all connections in the oil transfer system are leak free except that a component in an oil transfer system, such as the packing glands of a pump, may leak at a rate that does not exceed the capacity of the discharge containment provided during the transfer operation;
- (q) the communications required by §§ 154.560 and 155.785 of this chapter are operable for the transfer operation;
- (r) the emergency means of shutdown required by §§ 154.550 and 155.780 of this chapter, as applicable, is in position and operable;
- (s) there is a person-in-charge on the transferring vessel or facility and the receiving vessel or facility except as otherwise authorized under § 156.115;
- (t) each person-in-charge required by paragraph (s) of this section-
  - (1) is at the site of the oil transfer operation and immediately available to the oil transfer personnel;
  - (2) has in his or her possession a copy of the facility operations manual or vessel oil transfer procedures, as appropriate; and
  - (3) conducts the transfer operation in accordance with the facility operations manual or vessel oil transfer procedures, as appropriate;
- (u) the personnel required, under the facility operations manual and the vessel oil transfer procedures, to conduct the oil transfer operations—
  - (1) are on duty; and
  - (2) conduct the transfer operation in accordance with the facility operations manual or vessel oil transfer procedures, as appropriate;
- (v) at least one person is at the site of the oil transfer operation who fluently speaks the language or languages spoken by both persons-in-charge;
- (w) the person-in-charge of oil transfer operations on the transferring vessel or facility and the person-in-charge of oil transfer operations on the receiving vessel or facility have held a conference, to ensure that each person-in-charge understands the following details of the transfer operation—
  - (1) the identity of the product to be transferred;
  - (2) the sequence of transfer operations;
  - (3) the transfer rate;
  - (4) the name or title and location of each person participating in the transfer operation;
  - (5) details of the transferring and receiving systems;
  - (6) critical stages of the transfer operation;
  - (7) federal, state, and local rules that apply to the transfer of oil;
  - (8) emergency procedures;
  - (9) discharge containment procedures;
  - (10) discharge reporting procedures;
  - (11) watch or shift arrangement;
  - (12) transfer shutdown procedures;
- (x) the person-in-charge of oil transfer operations on the transferring vessel or facility and the person-in-charge of oil transfer operations on the receiving vessel or facility agree to begin the transfer operation;
- (y) between sunset and sunrise the lighting required by §§ 154.570 and 155.790 of this chapter is provided; and
- (z) for transfer operations between tank barges from sunset to sunrise, lighting is provided as described in § 155.790 of this chapter.

#### §156.150 Declaration of inspection

- (a) No person may transfer oil to or from a vessel unless each person-in-charge, designated under §§ 154.710 and 155.700 of this chapter, has filled out and signed the declaration of inspection form described in paragraph (c) of this section.
- (b) No person-in-charge may sign the declaration of inspection unless he or she has determined by inspection, and indicated by initialling in the appropriate space on the declaration of inspection form, that the facility or vessel, as appropriate, meet § 156.120.
- (c) The declaration of inspection may be in any form but must contain at least—
  - (1) the name or other identification of the transferring vessel or facility and the receiving vessel or facility'
  - (2) the address of the facility or location of the transfer operation if not a facility;
  - (3) the date the transfer operation is started;
  - (4) a list of the requirements in § 156.120 with spaces on the form following each requirement for the person-in-charge of the vessel or facility to indicate by initialling that the requirement is met for the transfer operation; and
  - (5) a space for the date, time of signing, signature, and title of each person-in-charge during oil transfer operations on the transferring vessel or facility and space for the date, time of signing, signature, and title of each person-in-charge during oil transfer operations on the receiving facility or vessel.
- (d) The form for the declaration of inspection may incorporate the declaration of inspection requirements under 46 CFR 35.35•30.
- (e) The vessel and facility persons in charge shall each have a signed copy of the declaration of inspection available for inspection by the COTP during the oil transfer operation.
- (f) The operators of each vessel and facility engaged in an oil transfer operation shall retain a signed copy of the declaration of inspection on board the vessel or at the facility for at least 1 month from the date of signature.

#### The following is for information purposes only:

#### § 35.35•30 "Declaration of Inspection" for tankships—T/ALL.

After completing the inspection required by § 35.35•20 and prior to giving his approval to start the cargo transfer operation, the master or senior deck officer on duty shall fill in the following Declaration of Inspection in duplicate. The original of the Declaration of Inspection shall be kept aboard for the information of authorized persons. The duplicate, where required, shall be handed to the terminal superintendent or his representative, who shall on demand be give the opportunity to satisfy himself that the condition of the vessel is as stated in the Declaration of Inspection.

#### Declaration of Inspection Prior to Bulk Cargo Transfer

S \_\_\_\_\_ Port of

I, \_\_\_\_\_\_, being the master or senior deck officer in charge of the transfer of bulk flammable and combustible cargo about to be undertaken, do certify that I have personally inspected this vessel with reference to the following requirements et forth in § 35.35•20 and that opposite each of them I have indicated that the regulations have been complied with.

- (1) Are warnings displayed as required?
- (2) Is there any repair work in way of cargo spaces being carried on for which permission has not been giver?
- (3) Have cargo connections been properly made and are cargo valves properly set?
- (4) Have all cargo connections for loading Grades A, B, and C cargoes been made to vessel's pipeline?
- (5) Are there any fires or open flames present on the deck or in any compartment which is located on facing, open and adjacent to the main deck of the vessels on which the cargo connections have been made?
- (6) Has the shore terminal or other tank vessel concerned reported itself in readiness for transfer of cargo?
- (7) Are sea valves connected to the cargo system closed?
- (8) If Grades A, B, and C cargoes are to be loaded and boiler fires are lighted, has an inspection been made to determine that they may be operating with reasonable safety?
- (9) If Grades A, B, and C cargoes are to be loaded and galley fires are lighted, has an inspection been made to determine that they may be operating with reasonable safety?
- (10) If Grades A, B, and C cargoes are to be loaded, has an inspection been made to determine whether smoking is to be permitted?
- (11) If smoking is to be permitted, have spaces been designated for this purpose?

#### CITY OF ST. PAUL FUEL PIPELINE HYDROSTATIC PRESSURE TEST

DATE: **TEST LOCATION:** PIPE SELECTION: FROM VALVE 50 TO VALVE 52 TEST PRESSURE GUAGE #1 S.N. GUAGE #2 S.N.

PSI 

			PRESSURE	E GUAGE	FUEL	AIR	
ENTRY	TIME	ACTION	#1	#2	TEMP	TEMP	COMMENTS
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

TEST PERSON (Print Name)

WITNESS (Print Name)

SIGNATURE

SIGNATURE

# FUEL HOSE TESTING RECORD 50' X 3"

Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:

## STATIC LIQUID PRESSURE TEST MARINE TRANSFER HOSES

## FUEL HOSE TESTING RECORD 100' X 2"

Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
· · · · ·		
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:
, , , , , , , , , , , , , , , , , , ,		
Hose #:	Hose #:	Hose #:
Date Tested:	Date Tested:	Date Tested:
Tested At:	Tested At:	Tested At:
Tested By:	Tested By:	Tested By:

## STATIC LIQUID PRESSURE TEST MARINE TRANSFER HOSES

# **CITY OF SAINT PAUL** MONTHLY PHYSICAL DIP CONVERSIONS

	TANK #1	TANK #2	TANK #3	TANK #4	TANK #5
	80,000 GAL. CAPACITY	80,000 GAL. CAPACITY	80,000 GAL. CAPACITY	120,000 GAL CAPACITY	80,000 GAL. CAPACITY
	GASOLINE	DIESEL BLEND	DIESEL BLEND	DIESEL BLEND	DIESEL BLEND
DIP MEASURED					
GALLONS					
TEMPERATURE					
API					
CONV.FACTOR					
TOT.GALLONS					
	TANK #6	TANK #7	TANK #8	TANK #9	DAY TANKS
	80,000 GAL. CAPACITY	80,000 GAL. CAPACITY	600,000 GAL. CAPACITY	600,000 GAL. CAPACITY	20,000 GAL. CAPACITY
	DIESEL BLEND	DIESEL BLEND	DIESEL BLEND	DIESEL BLEND	DIESEL BLEND
DIP MEASURED					EMPTY
GALLONS					NO LONGER USED
TEMPERATURE					USED
API					UNTIL
CONV.FACTOR					FURTHER
TOT.GALLONS					NOTICE
	TANK #10	<b>TANK #11</b>	TANKER	TANKER	TOTAL
	3,600 GAL. CAPACITY	3,600 GAL. CAPACITY	TRUCK	TRUCK	GALLONS
	DISPENSING STATION	DISPENSING STATION	# 551	# 492	GASOLINE
	DIESEL BLEND	GASOLINE	4,000 GALLON	500 GALLON	
DIP MEASURED					
GALLONS					TOTAL
TEMPERATURE					GALLONS
API					DIESEL
CONV.FACTOR					
TOT.GALLONS					

MONTH/DATE/YEAR

PHYSICAL DIPS DONE BY: Start\_\_\_\_\_

Stop\_\_\_\_\_

## CITY OF ST. PAUL - BULK FUEL STORAGE FACILITY TANK FARM IMPOUND AREA - STORMWATER DRAIN LOG

Data <sup>8</sup>	Time	Time	<b>A</b> my	
of Draining	Draining Started	Draining Finished	Sheen Y / N	Operator's Signature

\* Operator's signature confirms that no oil or sheen was discharged during draining.

This form (or similar documentation) is required by 40 CFR, Part 112.8(c)(3).

## City of St. Paul Spill Response Equipment Inventory

This form is to be completed semi-annually, and retained for 5 years

Class	Product	Amount	Location	# of Items in Stock	Inventory by	Date
Sorbent Material	Sorbent pads (18"x18")	4 bales	Fuel Dock Vans	Stock		
	Sorbent rolls (36"x150')	3 rolls	Fuel Dock Vans and Tank Farm Building			
	Sorbent boom (8"x10')	400 ft	Fuel Dock Vans			
	Sorbent boom (8"x10')	80 ft	Tank Farm Building			
	Sweeps (18"x100')	5	Tank Farm Building			
	Sorbent wringer	1	Tank Farm Building			
Boom	Contractor Boom (8" x 12")	1,080 ft.	Fuel Dock Vans			
	Outer-Harbor/Ocean Boom (14"x22")	600 ft	Fuel Dock Vans			
	Harbor Boom (14"x16")	700 ft	Fuel Dock Vans			
	Harbor Boom (11"x10")	1,000 ft	Fuel Dock Vans			
	Anchor / buoy systems	10 each	Fuel Dock Vans			
Skimmer	Slickbar Slurp weir skimmer with Diesel pump - 100 gpm	1	Fuel Dock Vans			
Pumps & Hose	3" Honda trash pump – (mfg rating 290 gpm)	3 each	Machine Shop at Tank Farm			
	1 <sup>1</sup> / <sub>2</sub> ", 2" & 3" service w fittings/reducers	500 ft	Fuel Dock & Public Works			
Tank Truck w/ Suction*	International - 6,000 gal. with Honda trash pump	1 each	Public Works			
Vehicles/Heavy Equipment*	Pickup trucks	4	Public Works			
	Crew cab - carry-alls	4	Public Works			
	Drop box flatbed trucks	2	Public Works			
	Tractors	1	Public Works			
	Dozers	2	Public Works			
	12 yd. dump truck	1	Public Works			
	Front end loaders	3	Public Works			
	Backhoe	1	Public Works			
	Road grader	2	Public Works			

Class Product		Amount	Location	# of Items in	Inventory by	Date
				Stock		
	Uni-loader	1	Public Works			
	Bobcat loader	1	Public Works			
Storage Containers	55-gal. salvage drums	20	Fuel Dock & Tank Farm			
	Bladder Tank - 250 gal	1	Fuel Dock			
	Tanks-not in service (total volume 40,000 gal)	6	Tank Farm			
Communications	VHF Radios - Portable & Base Stat.	16 each	Office & various			
Support Equipment	LEL/02 meter	1	Harbor office			
	Pipeline, tank patch materials	Assorted	Tank Farm			
	Rakes/shovels	5 sets	Dock, Tank Farm, Public Works			
	Damming materials	Assorted	Dock, Tank Farm, Public Works			
	Protective clothing & PFD's	10 sets	Dock, Tank Farm, Public Works			
	Fire extinguishers	10 each	Dock, Tank Farm, Public Works			
	Oily waste storage/disposal bags – 33'x46" – 4 mil	3 cases 100 bags each	Public Works			

I certify that the above equipment was inspected for condition and operability. Any maintenance or replacement requirements are noted above.

Inspector

Date

## Facility Transfer Procedures - Training Outline

- 1. System Overview and piping schematic
  - Figure 1-8-1 and Figure 1-8-2 Review fuel tank and fuel locations with special emphasis on Primary shut off valves.
  - Identify primary system shut off valves.
- 2. Marine Transfers Barge and Vessel Loading from Dock Fueling Stations.
  - Review written fuel transfer procedures on page 2-1-5.
  - Identify fuel line and tank valve configurations for operation on Figure 1-8-1 and 2.
  - Review equipment, forms and operations required for transfer.
  - Identify primary system shut off valves.
  - Test on transfer procedure.
- 3. Tanker Truck Loading Gas Offload From Barges
  - Review written fuel transfer procedures on page 2-1-6.
  - Identify fuel line and tank valve configurations for operation on Figure 1-8-1 and 2.
  - Review equipment, forms and operations required for transfer.
  - Identify primary system shut off valves.
  - Test on transfer procedure.
- 4. Tanker Truck Loading Terminal Truck Loading
  - Review written fuel transfer procedures on page 2-1-7.
  - Identify fuel line and tank valve configurations for operation on Figure 1-8-1 and 2.
  - Review equipment, forms and operations required for transfer.
  - Identify primary system shut off valves.
  - Test on transfer procedure for Tanker Operators
- 5. Tanker Truck Operations Stationary Tank Filling From Truck
  - Review fuel tank truck delivery procedures.
  - Identify truck and valve configurations for delivery.
  - Review equipment, forms and operations required for delivery.
  - Test on transfer procedure for Tanker Operators.
- 6. Stationary Tank Loading Power Plant Tanks
  - Review written fuel transfer procedures on page 2-1-7.
  - Identify fuel line and tank valve configurations for operation on Figure 1-8-1 and 2.
  - Review equipment, forms and operations required for transfer.
  - Identify primary system shut off valves.

- Test on transfer procedure.
- 7. Stationary Tank Transfer Bulk Fuel Tank-to-Tank Transfers
  - Review written fuel transfer procedures on page 2-1-7B.
  - Identify fuel line and tank valve configurations for operation on Figure 1-8-1 and 2.
  - Review equipment, forms and operations required for transfer.
  - Identify primary system shut off valves.
  - Test on transfer procedure.
- 8. Field Exercises
  - Complete tour of facilities and complete monthly facility inspection check list. Identify locations of valves and emergency shut off locations.
    - a. Transfer of fuel to Power Plant.
      - Complete inspection of source tank in tank farm, transfer pipe and valves, transfer pumps and valves, metering and valves, and receiving tank at power plant.
      - Identify correct configuration of valves and pumping controls.
      - Identify emergency stop controls and procedures.
      - Identify required communications protocol.
      - Locate and inspect emergency response equipment for spill at power plant tank.
      - Review metering and recording procedures for transfer.
      - Complete transfer of fuel to Power Plant following written procedures on page 2-1-7 of plan.

a.Fill Tanker Truck.

- Complete inspection of source tank in tank farm, transfer pipe and valves, transfer pumps and valves, metering and valves, and receiving tank on Tanker Truck.
- Identify correct configuration of valves and pumping controls.
- Identify emergency stop controls and procedures.
- Identify required communications protocol.
- Locate and inspect emergency response equipment for spill at tanker truck.
- Review metering and recording procedures for transfer.
- Complete transfer of fuel to Tanker Truck following written procedures on page 2-1-7 of plan.
- 9. Office Summary
  - Discuss field exercise and identify any trouble encountered in operations
  - Review procedures for other operations.
  - Review recording and submittal requirements for transfer tickets. Record and submit transfer tickets for field exercise operations.
  - Identify transfer procedures that may require modification.

# CITY OF ST. PAUL BULK FUEL STORAGE FACILITY TANK FARM SECONDARY CONTAINMENT AREA

### WEEKLY INSPECTION FORM

DATE:	INSPECTED BY:	ITEMS LISTED BELOW * VISUALLY CHECKED:	COMMENTS IF NECESSARY

\* ADEC regulations (18 AAC 75.075(c)) require facility personnel to conduct a documented weekly inspection of secondary containment areas for aboveground storage tanks, including checking for

- (1) debris and vegetation;
- (2) proper alignment and operations of drain valves;
- (3) visible signs of oil leaks or spills;
- (4) defects or failures of the secondary containment system.

This form is to be maintained in retrievable form for five years. (18 AAC 75.020(c))

## Rectifier Log

## Owner: <u>City of St. Paul, Ak Tank Farm Cathodic Protection System</u> Structure: <u>On-grade Storage Tank bottoms and piping</u> Recommended Current Output: <u>20 Amps</u>

Date	Volts	Amps	Taps	Comments

#### ANNUAL NPREP TRAINING & DRILLS DOCUMENTATION

This form must be retained for five years.

#### 1. QUALIFIED INDIVIDUAL NOTIFICATION DRILL (QUARTERLY)

Contact made with Q.I. or Alternate Q.I.

Date	Time	Person Initiating Call	QI Contacted

#### 2. MANAGEMENT TEAM TABLETOP EXERCISE (ANNUAL)

Brief Description of Spill Response Exercise:

Date	Time	Participants

#### 3. EQUIPMENT DEPLOYMENT EXERCISE (SEMI-ANNUAL)

Date:	Date:
Equipment/Personnel Deployed:	Equipment/Personnel Deployed:

#### 4. UNANNOUNCED EXERCISE (ANNUAL)

Was one of the above exercises unannounced?

- \_\_\_\_\_ Yes, date unannounced exercise performed: \_\_\_\_\_\_
- \_\_\_\_\_ No, describe your unannounced drill and date performed here:

## **SITE SAFETY PLAN**

MINI SITE SAFETY PLAN FOR: _		DATE:
PROJECT MANAGER:	SITE SAFE	TY OFFICER:
FOREMAN:	CREW:	
SITE CHARACTERIZATION:	SAFETY HAZARD(S	);
PRODUCT(S):	CONCENTRATIO	N: PEL:
CHEMICAL(S):	CONCENTRATIO	N: PEL:
WORK PLAN/SITE ACTIVITIES F	PLANNED:	
HEALTH EFFECTS & SYMPTOM	S:	
PERSONAL PROTECTION REQU	IRED?:	LEVEL:
SITE ZONES ESTABLISHED (ATT	TACH SITE MAP)? WHY?	
DECONTAMINATION REQUIRE	D? WHY?	
TRAINING REQUIRED:		
PHYSICAL EXAMS REQUIRED: _		
CONTINGENCY PLAN:		
EMERGENCY NUMBERS: AMBU	LANCE:	HOSPITAL:
AIR MONITORING TO BE DONE:	:	INTERVAL:
SAFETY RULES AND SAFETY PL	AN READY:	
DATE PREPARED:	PLA	N EXPIRES:


## ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION OIL & HAZARDOUS SUBSTANCES SPILL NOTIFICATION FORM

ADEC USE ONLY												
ADEC SPILL #: ADEC FILE #: ADEC LC:												
PERSON REPORTING				PHONE N				REPORTED	HOW	(ADEC USE ONLY)		
				THOMEN	OWDEN.				еГ	$e \square Fax \square PFRS \square F-mail$		
DATE/TIME OF SPILL	•			DATE/TIM		D:						
				27.12,111				27.12,1112				
INCIDENT LOCATION/ADDRESS: DATUM: NAD27 NAD83 PRODUCT SPILLED:												
					WGS84	U Otl	her					
					LAT.							
					LONG.							
QUANTITY SPILLED:			QUANTITY C	ONTAINED:			QUANTITY RECOVERED:		QU	ANTITY DISPOSED:		
	🗆 g	gallons			🗌 galloi	ns		gallons			☐ gallons	
	p	oounds			D pound	ds		pounds			pounds	
	POTENTIAL	RESPON	SIBLE PARTY:			OTHER	PRP, IF ANY:			VESSEL NAME:		
Name/Business:												
Mailing Address:										VESSEL NUMBER:		
Contact Name:										> 400 GROSS TON VES	SSEL:	
Contact Number:	Yes No											
SOURCE OF SPILL:										CAUSE CLASSIFICATIO	ON:	
										Accident		
CAUSE OF SPILL:						rs						
Structural/Mechanical												
DISPOSAL METHODS AND LOCATION:												
AFFECTED AREA SIZ	Έ:	SURFACE	TYPE: (gra	vel, asphalt, i	name of river et	c.)	RESOURCES AFFECTED/	THREATENED:		(Water sources, wildlife,	wells, etc.)	
COMMENTS:												
					ADEC	UJE						

SPILL NAME:			NAME OF DEC STAFF R	ESPONDING:	C-PLAN MGR NOTIFIED?	
					🗌 Yes 🗌 No	
DEC RESPONSE:		CASELOAD CODE:		CLEANUP CLOSURE A	ACTION:	
Phone follow-up Field visit	Took Report	First and Final Open/No I	LC 🗌 LC Assigned	NFA Monitor	ring Transferred to CS or STP	
COMMENTS:	Status of Case	: 🗌 Open 🗌 Closed	DATE CA	ASE CLOSED:		
REPORT PREPARED BY:				DATE:		

# IT'S THE LAW!

AS 46.03.755, 18 AAC 75.300, 75.325 and 18 AAC 78.200

# REPORT OIL AND HAZARDOUS SUBSTANCE SPILLS

# **During Normal Business Hours**

call the nearest response team office:

<b>Central Alaska:</b>
Anchorage

Northern Alaska: Fairbanks (907) 451-2121 Fax: (907) 451-2362

**(907) 269-3063** Fax: (907) 269-7648

Southeast Alaska: Juneau

(907) 465-5340 Fax: (907) 465-5245

Alaska Pipeline: Fairbanks (907) 451-2121 Fax: (907) 451-2362

# **Outside Normal Business Hours**

Toll Free	1-800-478-9300
International	1-907-269-0667
Central Alaska Central Alaska	n Southeast Alaska
Alaska Du Environm Division of www.dec.	epartment of ental Conservation f Spill Prevention and Response alaska.gov/spar/spillreport.htm

# **Hazardous Substance**

Any hazardous substance spill, other than oil, must be reported immediately.

# **Oil – Petroleum Products**

#### **To Water**

 Any amount spilled to water must be reported immediately.

#### To Land

- Spills in excess of 55 gallons must be reported immediately.
- Spills in excess of 10 gallons, but 55 gallons or less, must be reported within 48 hours after the person has knowledge of the spill.
- Spills of 1 to 10 gallons must be recorded in a spill reporting log submitted to ADEC each month.

#### To Impermeable Secondary Containment Areas

Any spills in excess of 55 gallons must be reported within 48 hours.

### **Underground Storage Tank Spill Reporting**

- Regulated Underground Storage Tank (UST) systems are defined at 18 AAC 78.005. Releases at heating oil tanks must be reported.
- You must report a *suspected* belowground release from a UST system, in any amount, <u>within 24 hours</u> (18 AAC 78.220(c)).
- You must report if your release detection system indicates two consecutive months of invalid or inconclusive results.
- If you observe unusual operating conditions, sudden loss, erratic dispensing (slow flow/no flow) or discharge to soil or water, **report it to the UST Unit**:

#### 907-269-3055 or 269-7679

### Alaska Cultural Resource Permit Application

Office of History and Archaeology 5550 West 7<sup>th</sup> Avenue, Suite 1310 Anchorage, AK 99501-3565

(907) 269-8721 (907) 269-8908 (FAX) richard.vanderhoek@alaska.gov



Refer to instructions before comple	eting form	Date Recvd. (OHA use)		
Name & Institutional Affiliation of Applicant	Downit Number (Accimed			
Name & Insututional Annuation of Applicant	Permit Number (Assigned	<u>by OHA)</u>		
Project Name	Location (1:250,000 Quad	and mapsheets)		
Dates of Proposed Work	Location (MTRS)			
Contact Information: Mail, Phone, Fax, E-mail	Proposed Repository of C	ollected Items		
	<b>Collection is prohibited unless</b> approved by OHA and (2) a Pr signed by the accepting reposite	s:(1) the repository is rovisional Curation Request or letter ory is attached.		
Separate Attachments:	Type of Permit <u>Requested</u>	1: Survey, Testing, Excavation,		
- Research Design	Removal			
- Purpose and Character of Proposed Work				
- Specific Location or Area of Proposed Work on				
USGS 1:63,360 map	Number of acres			
- List of Known AHRS Sites Affected	to be investigated:			
may be applied by the land manager or director. A preliminary completion of the project. For multi-year projects, a prelimin September 1 of each year in which the permit is valid. Rep reference a permit number. New permits may be withheld perce	report of findings must be su nary report must be submitte orts must be directed to the ding the receiptof delinquent	bmitted within 6 months after ed within six months after OHA permit program and must reports.		
Signature of Applicant	<u>Date:</u>			
Signature of Field Supervisor	Date:			
Authorization of Land Manager	Date:			
Authorization of Land Manager	<u>Date:</u>			
Authorization of DPOR Director	Date:			
Expiration Date of Permit (Assigned by OHA)	Stipulations Attached?	<u>? (for OHA Use)</u> Y N		
Land-Use Stipulations	for State General Lands:			
(1) OutCamp Use: Outcamps on state owned land must be portable. Camps, including all gear and equipment, must be relocated a minimum of 2 miles at least every 14 days. Sites must be left in clean, safe condition. All trash, food and litter should be removed from the site and disposed of properly. Establishment and use of any camp requiring occupancy for more than 14 consecutive days requires authorization of the Division of Mining, Land and Water, and may require a permit from the Division of Environmental Conservation.				
(2) Human Waste Disposal: Solid human waste should be deposited in cat-holes dug 6 to 8 inches deep and located at least 200 feet from water, a camp, and trails. Pack out toilet paper and hygiene products.				
(3) Motorized Travel Across State Land with no roads: Vehicle use is limited to ATVs that can be operated without killing or				

breaking through the vegetative mat and exposing the soil to erosion.

Authorization for Alaska Cultural Resource Permits: AS 41.35 and 11 AAC 16

#### UNIFIED COMMAND

### **Oil Spill Decanting Application/Authorization Form**

ncident Name:
Responsible Party:
Date(s) of Approval Requested:
Demonstration of Need for Decanting:

Location and Description of Proposed Decanting Operation:

#### **RP IC Signature**

DATE

Decanting is authorized with the intent to maximize storage capacity for recovered oil and expedite cleanup. If recovered fluids can be adequately managed using available storage, on-site treatment, or transport to a treatment facility without impeding ongoing oil recovery, recovered water shall not be decanted.

The decanting operation must meet the following conditions:

- 1. Decanted water must not cause a film, sheen or discoloration on the surface or floor of the waterbody or adjoining shorelines. Decanting must cease if oil is observed in water being discharged.
- 2. Operators must maintain continuous control over the decanting process to prevent discharge of concentrated oil.
- 3. Decanted water must be discharged within the collection boom or area, vessel collection well, recovery belt, weir area, or directly in front of a recovery system, unless approved otherwise.
- 4. Where decanted water will not pass through an oil/water separator prior to discharge, tanks must be allowed to settle without addition of fluids for a minimum time of \_\_\_\_\_\_ to allow separation before decanting commences.
- 5. The RP shall record the following data for all decanting operations: location of the decanting, time decanting started, time decanting stopped and decanting pump rates.
- 6. DEC staff shall have access to decanting operations in order to evaluate effectiveness and collect samples if needed.
- 7. Additional conditions (continued on reverse, if necessary):

SOSC Signature

DATE

FOSC Signature

DATE

**Note**: The RP may make a verbal request and receive verbal approval for decanting from the OSC or their designee, but a written application must follow as soon as possible.

### APPENDIX B

### INCIDENT COMMAND SYSTEM

**Incident Commander (IC):** The IC is the general manager of the oil spill response activities. These management functions include coordination and co-development of overall strategic goals with the Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC) in the Unified Command. The IC assigns Command Staff personnel to account for safety, legal, public information (media), governmental liaison, and administrative support activities, as required.

The following is a task checklist for the Incident Commander:

- Refer to the Immediate Actions Checklist in Section 1.1.
- Obtain the initial oil spill incident briefing from the Operations Chief (Plant Manager). Review the initial actions and advise the Operations Chief of additional actions to be taken.
- ☐ Activate additional management personnel and instruct to report to the Operational Command Center.
- □ Notify the Tier II response contractor, the Primary Response Action Contractor.
- Take control of the oil spill activities and assume responsibility for overall management. Notify
- appropriate government officials (See Section 1.2).
- Assess the oil spill and, with the FOSC and SOSC, develop overall strategic goals for the response.
- Brief government officials on status of oil spill response activities. Approve
- □ safety plans developed by the Safety Officer.
- Conduct the initial briefing with the ICS and assign duties to personnel. Activate
- □ additional elements of the ICS, as needed, through the Section Chiefs.
- Establish and maintain a firm schedule of communications with the Forward Command Center at the Fuel Facility.
- □ Verify that planning meetings are conducted for each planning period.
- Review and authorize Incident Action Plans (See Section 3.3-3).
- Assist in the development of press releases and authorize as appropriate. Serve as City of St. Paul's representative during major press briefings and public meetings.
- Delegate spending authorities and approve major expenditures.
- □ Coordinate with the FOSC and SOSC to declare response completion dates.
- Prepare summary reports, coordinate follow-up documentation, and participate in evaluations and critiques.

**Deputy Incident Commander:** A Deputy IC may be assigned in a large event to assist the IC in performing the necessary duties. The IC should identify and delegate as many of the operational and support management tasks to the Deputy IC as is possible.

The Deputy IC's specific duties are delegated to him directly by the IC. The Deputy IC may be requested to manage any of the IC's duties, including, but not limited to, direct oversight of the Section Chiefs and activities. A checklist for the Deputy IC is as follows:

- Obtain briefings from the IC.
- Ensure that Section Chiefs and the Command Staff have been notified and are assembled at the Emergency Operations Center.
- Review the Incident Commander's responsibilities.
- Assume responsibility and control for those components of the oil spill incident management as directed or authorized by the IC.
- Ensure that Section Chiefs and Command Staff understand their responsibilities and accomplish tasks in a timely manner.
- Lead manager for critical elements of the response.

**Safety Officer:** Responsible for establishing the appropriate and required safety standards for the response operations. He is also responsible for the development of safety plans and for ensuring that standards and plans are being followed through on-site inspections. A checklist for the Safety Officer is as follows:

- Obtain briefing from the Operations Chief.
- Identify hazardous situations associated with the incident and recommend appropriate safety equipment.
- Develop the general safety plan for response operations (See Section 1.3).
- Ensure that all personnel are informed of safety requirements in accordance with the safety plan.
- ☐ Maintain safety surveillance of all activities through on-site inspections and recommend measures to mitigate unsafe conditions.
- Exercise authority to stop and prevent unsafe acts.
- ☐ Investigate accidents that have occurred within the incident area. Coordinate activities and capabilities with Medical staff.

**Public Information Officer:** Responsible for the formulation and release of information about the oil spill incident to the news media, non-governmental organizations, and other interested parties. The Public Information Officer reports directly to the Incident Commander. A checklist for the Public Information Officer is as follows:

- Obtain briefing from the IC.
- Establish a single authorized source of information for the media.
- Arrange for necessary media briefing facilities and establish a Press Room at the Command Center.
- □ Obtain ongoing status of spill response activities and status of efforts. Develop plans and procedures for advising the public on the progress of the cleanup.
- □ Prepare an initial press release as soon as possible and submit to the Incident Commander for approval. Develop, organize and schedule regular press briefings at the Press Room. Prepare periodic press releases for approval and release by the Incident Commander.
- ☐ Maintain a close working relationship with all news media, governmental agencies, conservation groups, and civic public organizations.
- Attend meetings to update information released.
- Respond to special requests for information.
- Assess published media information (radio, television, and newspaper articles) and brief the Incident Commander.

**Legal Advisor/Counsel:** Responsible for providing legal advice to the Incident Commander on all aspects of the oil spill. The Legal Advisor is also responsible for monitoring the spill, notifying the appropriate insurance representatives, investigating potential claims, and settling claims. The legal officer must be familiar with the Oil Spill Contingency Plan. The Legal Advisor's checklist is as follows:

- Obtain a briefing from the IC.
- Be familiar with all aspects of the spill in anticipation of legal actions and take actions to protect City of St. Paul's interests.
- Provide and give legal approval of oil spill reports for the government agencies prepared by the IC or his designee.
- □ Determine the legal responsibility for the incident as quickly as possible. If City of St. Paul is found to be not responsible for the spill, notify the responsible party of the spill and obtain authorization to act as the agent for the responsible party. In this case, act as liaison between City of St. Paul and the responsible party.
- Ensure that the incident cause and amount of oil spilled is adequately investigated. Collect and maintain legally defensible investigative data and information.
- Ensure information that may be relevant to the defense and/or settlement of future claims is gathered and preserved. Advise the IC of the necessary documentation.
- Provide legal advice in matters related to insurance liabilities.
- Ensure that cleanup contracts and agreements are in sound legal form and in compliance with law, rules, and regulations.
- ☐ Maintain contact with insurers and develop plans for effective investigation and handling of insurance claims.
- Approve legal format of contracts and agreements established during the response not executed in accordance with the standard City of St. Paul format.
- Consult with the Incident Commander on matters related to labor disputes, sabotage, arson, and any illegal acts against City of St. Paul.
- Assist in obtaining permits and resolving permit issues such as right-of-way access, dispersant use, in-situ burning, and waste disposal.
- Review and approve press releases.
- ☐ Retain outside counsel, if necessary.
- Advise the Environmental Unit Leader concerning compliance with environmental laws, rules, and regulations.

**Operations Section Chief:** Develops, activates, and supervises operational elements of the oil spill response effort. The Plant Manager is assigned as the initial Operations Chief. The Operations Section Chief provides on scene coordination for source control and repair and directs containment, control, recovery, and protection operations. The Operations Section Chief also advises the IC, oversees all cleanup activities, and ensures that these activities are carried out safely and effectively.

- Initial Actions See Checklist in Section 1.1. Develop immediate tactical plans.
- Organize arriving personnel into teams assign group leaders.
- Assign deployment and operations tasks to operations groups.
- Supervise Operations.
- Evaluate the effectiveness of operations. Adjust tactical plans as appropriate and necessary.
- Monitor contractors' work and review daily performance reports to ensure accuracy.
- Ensure that appropriate government approvals have been obtained by the Environmental Group prior to any non-mechanical response operations that may be instituted.
- ☐ Maintain the highest level of safety awareness in all operations.
- ☐ Establish staging areas at the Operational Facility for any arriving Tier II equipment and provide transportation equipment and personnel for moving the equipment to the deployment location. Determine additional resource needs for oil spill containment, exclusion, and cleanup operations and request additional resources from the Command Center, as needed. Report information about activities, events, and actions to the Incident Commander.
- ☐ Identify resources not needed for operations so that they may be demobilized.
- Coordinate temporary storage for recovered oil and oily solid wastes.
- Provide a shoreline cleanup operations team member as representative on the SCAT Team.
- □ Conduct shoreline cleanup operations.

**Onshore Operations and Support Unit Leader:** Responsible for supervising onshore response activities. A checklist for the Onshore Operations and Support Unit Leader is as follows:

- □ Obtain briefing and instructions from the Operations Chief (Lead Fuels Operator).
- Outfit personnel with proper safety gear and personnel protective equipment.
- Identify and collect transportation equipment (trucks, cranes, forklifts, etc.).
- Obtain immediate response equipment in accordance with immediate tactical plan and transport from storage location to deployment location.
- □ With the Offshore Group, deploy equipment to water.
- ☐ Maintain shoreside aspect of entrapment and recovery operations.
- Transport arriving Tier II equipment to deployment locations and deploy with Offshore Group.
- ☐ Prepare and operate recovered oil transfer operations from temporary storage containers. Transport recovered oil to temporary storage tankage as necessary with tank trucks or through facility pipe systems.
- Ensure the safety of field personnel involved in onshore response activities.
- ☐ Work with the Environmental Unit to conduct shoreline cleanup assessment team surveys and to develop detailed shoreline cleanup plans.
- Provide the Operations Chief with information on the services, resources, and manpower required to support onshore response operations.
- Conduct shoreline cleanup operations.
- At conclusion of spill response, establish decontamination group.

**Offshore Cleanup Unit Leader:** Responsible for on-water activities including operation of offshore containment, control and recovery operations and on-water support of nearshore protection and entrapment operations. A checklist for the Offshore Cleanup Unit Leader is as follows:

- Obtain briefing and instructions from the Operations Chief (Plant Manager). Outfit
  - personnel with proper safety gear and personnel protective equipment.
- Transport and deploy offshore response equipment.
- Operate vessels and conduct anchor and offshore boom leg deployment operations during the establishment of entrapment and nearshore protection tactics.
- Deploy towable on-water storage devices and operate skimming systems, boom towing vessels, and concentration boom associated with offshore containment and recovery operations.
- Ensure the safety of all field personnel involved in offshore response activities.
- Coordinate activities with arriving Tier II contractor personnel and equipment.
- Provide the Operations Chief with information on the services, resources, and manpower that is required to support long-term offshore response operations.

**Tier II Response Contractor (if applicable):** The Tier II response contractor will be provided with a list of additional response equipment, personnel, and materials that may be required to support a large oil spill response effort. For the full contract with the Tier II state registered primary response action contractor (PRAC) please refer to Section 3.8.

A checklist for the Tier II Response Contractor is as follows:

- Assist City of St. Paul in identifying and prioritizing equipment and personnel to be utilized.
- Maintain list of resources (personnel and equipment) available in local area.
- Callout personnel, subcontractors, transportation services, and air lift capabilities as required. Arrange for air cargo flight(s) from Anchorage and other locations to local area as necessary.
- Prepare necessary equipment, personnel, and materials from storage as necessary and required.
- Transport equipment to Air Transportation Staging area.
- Assist in loading aircraft.
- □ Notify City of St. Paul of time of arrival of air cargo flights at local area. Receive safety briefing and tactical instructions from Operations Chief.
- Assist in offloading aircraft and transportation of equipment to deployment location. Assist in deployment of equipment to water.
- Provide additional support to City of St. Paul personnel as directed.
- Operate vessels and response equipment as necessary to meet tactical plans.

**Decontamination & Waste Management Unit Leader:** Responsible of conducting onshore decontamination of equipment and materials, as well as management of liquid and solid wastes. This group will be formed after the offshore and onshore equipment is deployed and fully operational. A checklist for the Decontamination and Waste Management Unit Leader is as follows:

- Plan and obtain necessary equipment and materials needed for decontamination of response resources.
- Prepare decontamination locations for equipment and personnel.
- Decontaminate and return equipment to storage areas.
- Prepare post-incident inventory of response equipment and supply resources. Establish waste management segregation practices and procedures.
- Establish temporary waste management locations for liquid and solid wastes. Permits for temporary waste management to be obtained by Environmental Group.
- Arrange for transportation of wastes to disposal/treatment location (disposal and treatment permits to be obtained by Environmental Group).

**Planning Section Chief:** Responsible for management of short-term and long-term planning for the oil spill response; tracking, organizing, and posting information and data on the spill response effort, and support of operations in regards to environmental issues and permits. The checklist for the Planning Chief is as follows:

- Obtain a briefing from the IC.
- Alert and brief Unit leaders on the spill and activate additional personnel and specialists as needed to support the operational needs. Organize the planning section at the Emergency Operations Center.
- ☐ Ascertain the nature of the spill. Work to develop trajectory and mass balance projections. Periodically revise trajectory analysis based on actual observed oil spill location and nature.
- Provide regular predictions on oil spill potential, resources at risk, possible hazards, and weather information.
- Establish the planning cycle with strict planning timelines for strategy, planning, and team meetings to facilitate the development of Incident Action Plans for each operational period.
- Supervise the preparation of the Incident Action Plan.
- ☐ Identify regulatory permits necessary for operations; develop and submit applications to agencies.
- □ Supervise collection, dissemination, and documentation of information and data by the Situation Status/Documentation Group, as well as the development and maintenance of situation status boards at the command post.
- □ Prepare, distribute, and document Incident Commander orders and identify organizational elements responsible for executing those orders.
- Ensure that the Oil Spill Contingency Plan and Incident Action Plan are available and utilized throughout the incident.
- Plan for demobilization through the Demobilization Unit.
- Develop waste management and disposal plans.

**Situation Status/Documentation Unit Leader:** Responsible for collection, dissemination, and documentation of information and data on the oil spill and response efforts. The Situation Unit Leader assembles and disseminates maps detailing the size and location of the spill and other relevant features or components of the oil spill incident response. A checklist for the Situation Status/Documentation Unit Leader is as follows:

- Obtain briefing and special instructions from Planning Section Chief.
- Collect, maintain, and distribute oil spill related trajectory, surveillance, and fate data for the duration of the incident.
- Provide photographic services, maps, and situation status information as requested.
- Prepare Situation Status Reports and Emergency Operations Center status boards.
- Provide situation status information as requested by Section Chiefs.
- Establish a filing system for the incident files. Organize, maintain and store oil spill incident files in a convenient, secure location.
- Distribute copies of the file index to appropriate response personnel. Ensure that all response personnel are familiar with documentation guidelines.
- □ Work with Planning Section Chief to prepare the Incident Action Plan.
- Establish file duplication services for the incident and respond to file duplication requests. Obtain approval from Planning Section Chief prior to release of documentation.
- Duplicate and file all official forms and reports.
- □ Check records for completeness and accuracy prior to filing.

**Resource Unit Leader:** Maintains a record of the location and status of all equipment and personnel involved in the oil spill incident. The Resource Unit Leader is responsible for (1) verification that spill response resources (equipment and personnel) are properly checked in as they arrive in the local area from the Tier II contractor(s); (2) preparation and processing of response resource status change information including location of operations as the equipment and personnel is deployed and demobilized; and (3) preparation and maintenance of displays, graphs, and charts that reflect the current status of resources. A checklist for the Resource Unit Leader is as follows:

- Obtain briefing and special instructions from Planning Section Chief.
- Obtain list of equipment, supplies, and personnel ordered from Tier II contractors and other sources from Logistics Section.
- ☐ Monitor status of acquisition and mobilization of resources to local area.
- Assist in the maintenance of the Situation Status Boards in regards to resource status. Document the arrival of resources at the staging area.
- □ Receive status updates from Operations Section in regards to deployment and location of resource operations.
- ☐ Maintain master list of all resources and monitor demobilization of resources including information on resources that are decontaminated and stored at the staging area and those resources returned to Anchorage.
- Provide situation status information as requested by Section Chiefs.

**Environmental Unit Leader:** Responsible for environmental issues associated with the oil spill. The Environmental Unit provides advice and recommendations on environmental aspects of the spill including mechanical response, non-mechanical response, wildlife protection, shoreline cleanup, and oily waste disposal. The Environmental Unit also identifies environmentally sensitive areas including location and nature of the sensitivity. The Environmental Unit specialists may include a wildlife specialist, spill impact and modeling personnel, trajectory specialists, permit specialists, and technical advisors.

The Environmental Unit Leader participates in planning session activities, collects area environmental information and prioritizes mitigation measures. A checklist for the Environmental Unit Leader is as follows:

- Obtain briefing and special instructions from Planning Section Chief.
- $\overline{}$  Establish staffing requirements for the Unit and assign duties to personnel.
- Collect and maintain existing and relevant environmental baseline data from the incident and potentially affected areas.
- ☐ With resource agencies (ADEC, ADFG, USFW, etc.), identify and prioritize environmentally sensitive areas for protection. Advise the operations section on these areas and priorities.
- Prepare Environmental Operations component of the Incident Action Plan.
- Coordinate with government agencies in regards to obtaining the necessary permits, applications, and approvals. Ensure compliance with permit stipulations through inspections.
- Liaise with resource agencies in regards to wildlife protection (hazing or pre-emptive capture), cleaning, and rehabilitation requirements and operations.
- Perform surveys of contaminated areas through Shoreline Cleanup and Assessment Technique (SCAT) Team surveys. Assist in preparing shoreline cleanup plans with the Onshore Cleanup Group.
- Assess the environmental damage to contaminated areas and potential impact of cleanup activities to support recommendation on cleanup methods through the Net Environmental Benefit Analysis (NEBA) process.
- Develop recommendations on mitigation and protection of key environmental areas and appropriate cleanup methodologies.
- Coordinate oversight of environmental monitoring activities and coordinate.
- Coordinate all materials and wastes analyses.
- Obtain briefings on the status of and the nature and quantity of liquid and solid waste being generated by the response operations.
- Develop and implement plans for the temporary storage and disposal of recovered oily waste and debris.

**Demobilization Planning Unit Leader:** Responsible for planning an orderly, safe and costeffective demobilization of personnel and equipment. The Demobilization Planning Unit Leader will need to coordinate closely with the other incident response personnel. A checklist for the Demobilization Planning Unit Leader is as follows:

- □ Obtain briefing and special instructions from Planning Section Chief.
- Develop and obtain work space, equipment, and supplies required for demobilization. Maintain
- contact with Section Chiefs to ascertain the timing for the release of personnel and equipment involved in the response effort.
- Coordinate with other response personnel to develop and identify demobilization personnel responsibilities, resource release priority/procedures and travel instructions.
- Coordinate and supervise the decontamination and demobilization operations and keep Planning Section Chief informed of the status.
- ☐ Maintain personal notes of all relevant actions and decisions. Maintain status reports on demobilization resources.
- Document condition of equipment prior to release.
- □ Notify financial group of date of release of equipment components.

**Logistics Section Chief:** Responsible for ensuring that the response effort is provided with support in regards to resources. The Logistics Section receives information about required resources from the other sections including the equipment, materials, supplies, and personnel. The Logistics section sources, procures, orders, and transports the resources. A checklist for the Logistics Section Chief is as follows:

- Obtain a briefing from the IC.
- Notify and activate Logistics Section individuals as needed to fulfill tasks to be performed by the Section.
- ☐ Alert major service contractors () of the oil spill emergency and activate them as necessary to support i.e. the Primary Response Action Contractor's operational needs (i.e., facilities, food, vessels, equipment, aircraft, sanitation, transportation services and materials, etc.).
- Assemble and hold periodic briefings with the Unit Leaders. Coordinate information with Resources Unit Leader in Planning Section.
- Participate in the preparation of the logistical components of the Incident Action Plan.
- Coordinate with other Section Chiefs to identify service and support requirements for planned operations.
- Coordinate and process response personnel requests for additional resources.
- Analyze resources planned and ensure that support (i.e. housing, food, water, sanitary facilities) is planned and provided.
- Source, acquire and transport equipment, personnel, and other resources to the appropriate locations as requested by the Operations Section.
- Review the Incident Action Plan and estimate section needs for next operational period.
- Estimate future service and support requirements.
- ☐ Identify the resources within the Logistics Section that are not needed or being utilized and reassign or release to decontamination/demobilization.

**Procurement/Transportation Unit Leader:** Responsible for sourcing and ordering resources and delivery of those resources to the spill work site. The Procurement/Transportation Unit Leader, with the Finance Section, negotiates prices with vendors and contracts with contractors; maintains time records for leased resources and for personnel; and provides ground, water, and air transportation to support response. The Procurement/Transportation Unit Leader reports to the Logistics Section Chief. A checklist for the Procurement/Transportation Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from the Logistics Section Chief.
- Obtain list of spill response vendors and contractors and prepare appropriate agreements as necessary to support the incident response effort, and/or as requested by the Section Chiefs.
- Coordinate with the Tier II Contractor, the Primary Response Action Contractor, and assist when possible with the transportation requirements.
- Obtain equipment and services requested by Section Chiefs.
- Process all purchase orders and work orders for oil spill response vendors/service contractors.
- Order and coordinate aircraft services for Tier II personnel from Anchorage to local area.
- Mobilize transportation resources in local area in a timely manner in order to meet incoming air cargo Flights. Oversee transport of equipment.
- ☐ Mobilize personnel transportation resources to the airport to meet incoming personnel transport aircraft.
- Coordinate with Facilities Unit to ensure adequate warehouse space is available for equipment being ordered and that adequate housing is available and reserved for Tier II personnel.
- Ensure that an adequate cash account is established and maintained.
- ☐ Maintain the time records for leased/rented resources.
- Determine the availability of transportation services and maintain a list of available services, schedules, etc.
- Assess the feasibility of using alternative transportation modes (i.e. fishing vessels, other companies' vessels, charters, etc.) and organize their involvement/assistance if feasible.
- Ensure that a sufficient number of aircraft are available to support the response effort and activate additional aircraft contracts as necessary.
- Participate in the preparation of the Air Operations component of the Incident Action Plan.
- Arrange transportation to get response personnel, equipment, supplies, and materials to the incident area or other response facilities.
- Coordinate and schedule vessel, vehicle, and aircraft schedules for operations.
- ☐ Request declaration or cancellation of restricted air and sea space through local or regional officials, as necessary. Coordinate with governmental agencies.

**Facilities Unit Leader:** Responsible for providing the facilities to support the oil spill response effort. This Facilities Unit Leader reports to the Logistics Section Chief. A checklist for the Facilities Unit Leader is as follows:

- ☐ Obtain briefing and special instructions from the Logistics Section Chief.
- Coordinate with the Logistics Chief to understand the quantity of resources to be transported to local area.
- ☐ Make arrangements for adequate personnel housing, and sanitation facilities for incident response personnel.
- □ Provide for maintenance and housekeeping services.
- Ensure adequate personnel are available to operate and maintain the facilities.
- Provide security services for all facilities and limit access to authorized personnel only.
- Work closely with the Food Unit Leader to coordinate activities.

**Medical Unit Leader:** Responsible for providing medevac and medical care contingencies for response personnel. This includes first aid stations, emergency medical technicians, emergency transportation capabilities, and hospitalization capabilities as needed. The Medical Unit Leader reports to the Logistics Section Chief. A checklist for the Medical Unit Leader is as follows:

- Obtain briefing from Operations Chief and Safety Officer maintain contact with the Logistics Section Chief.
- Assess current level of medical services available and activate additional facilities as necessary to provide adequate services for increased risks.
- Establish first aid stations and ensure that all first aid equipment is functional and that supplies are adequate and readily available.
- Ensure that medevac capabilities are ready to transport injured personnel to a facility for treatment.
- Respond to requests for medical aid, transportation or supplies.
- Establish procedures for major medical emergencies.
- Attend regular briefings with the Operations Chief and Safety Officer.

**Food Unit Leader:** Responsible for ensuring that personnel involved in the response are provided adequate food, water and sanitation areas. The Food Unit Leader reports to the Logistics Section Chief. A checklist for the Food Unit Leader is as follows:

- Obtain briefing and special instructions from Operations Section Chief and maintain contact with Logistics Section Chief.
- ☐ Maintain list of numbers of response personnel at each work location.
- Determine the food, potable water, and sanitation requirements for the response effort, both at the Operational Facility and in the field.
- Assess the conditions at each location needing food services and determine the most appropriate service method (i.e., restaurant, catering, mess hall).
- Establish meals schedules. Provide field lunches for field crews.
- Coordinate with Procurement/Transportation Unit Leader to ensure that contracts are activated to obtain necessary additional resources for increased food services.
- ☐ Verify that potable water and well-balanced meals are being served at each location under adequate health conditions.
- ☐ Increase or decrease food services as necessary.

**Finance Section Chief:** Responsible for ensuring that adequate financial processes are established to support the oil spill response activities; compensation, claims and insurance issues related to the oil spill and response activities; and cost tracking. The Finance Section is responsible for financial and cost analysis of the response including invoicing, auditing, billings, payments, and services used. A checklist for the Finance Section Chief is as follows:

- $\Box$  Obtain a briefing from the IC.
- Establish and obtain approval of spending authorities for personnel.
- □ Participate in the preparation of the financial aspects and section assignments of the Incident Action Plan.
- Develop and administer a cash account.
- □ Work with Procurement/Transportation Unit Leader to administer contracts and service agreements for necessary supplies, services, and consultants.
- Predict spill costs on a daily basis and provide to Incident Commander. Document incremental costs and revise predictions as appropriate.
- □ Provide accounting functions including auditing, billing, and invoice payments. Document labor, material, and services used during spill response operations.
- □ Verify that obligation documents initiated during the spill response are properly prepared.
- ☐ Monitor and record reimbursable expenditures.

**Time/Cost Unit Leader:** Responsible for personnel time records and for estimating the cost of the response. The Time/Cost Unit Leader establishes a procedure for recording personnel and equipment time and charge rates at each of the response locations. A checklist for the Time Unit Leader is as follows:

- Obtain briefing and special instructions from Finance Section Chief.
- Establish procedures for recording the time that response personnel and equipment utilized at each response location and implement.
- Establish procedures to periodically collect and review time reports from contractors and consultants.
- Establish procedures for generating, verifying, and adjusting costs of personnel, contractors, consultants, supplies, and other services.
- ☐ Maintain cost data and cost summaries and analyze for cost savings possibilities.
- Ensure that all cost records and documents are prepared accurately and maintain a cumulative cost/financial record.
- Develop and implement an auditing program.

**Compensation/Claims/Insurance Unit:** Responsible for claims resulting from a serious injury or death during the response effort and of claims for damages attributable to the spill, spill containment and spill cleanup operations. The Compensation/Claims/Insurance Unit Leader works closely with the Legal Advisor as to laws on damage compensation. A checklist for this Unit Leader is as follows:

- Obtain briefing and special instructions from Finance Section Chief.
- Establish and maintain contact with Safety Officer, Legal Advisor, and Medical Unit as required to prepare and process reports on injuries/deaths of incident response personnel.
- Follow the status of hospitalized personnel and coordinate/prepare required administrative paperwork for injuries or deaths.
- Oversee or conduct the administration, investigation and documentation required for all injury, death, or property damage claims.
- Consult with insurance representative, corporate insurance brokers, and underwriters to determine documentation required for insurance purposes. Liaison with insurance representatives during the response.
- Consult with Legal Advisor on potential and actual natural resource damage claims.



National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet

September 2010



# NATIONAL INCIDENT MANAGEMENT SYSTEM INCIDENT COMMAND SYSTEM

ICS FORMS BOOKLET FEMA 502-2

September 2010

### INTRODUCTION TO ICS FORMS

The National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet, FEMA 502-2, is designed to assist emergency response personnel in the use of ICS and corresponding documentation during incident operations. This booklet is a companion document to the NIMS ICS Field Operations Guide (FOG), FEMA 502-1, which provides general guidance to emergency responders on implementing ICS. This booklet is meant to complement existing incident management programs and does not replace relevant emergency operations plans, laws, and ordinances. These forms are designed for use within the Incident Command System, and are not targeted for use in Area Command or in multiagency coordination systems.

These forms are intended for use as tools for the creation of Incident Action Plans (IAPs), for other incident management activities, and for support and documentation of ICS activities. Personnel using the forms should have a basic understanding of NIMS, including ICS, through training and/or experience to ensure they can effectively use and understand these forms. These ICS Forms represent an all-hazards approach and update to previously used ICS Forms. While the layout and specific blocks may have been updated, the functionality of the forms remains the same. It is recommended that all users familiarize themselves with the updated forms and instructions.

A general description of each ICS Form's purpose, suggested preparation, and distribution are included immediately after the form, including block-by-block completion instructions to ensure maximum clarity on specifics, or for those personnel who may be unfamiliar with the forms.

The ICS organizational charts contained in these forms are examples of how an ICS organization is typically developed for incident response. However, the flexibility and scalability of ICS allow modifications, as needed, based on experience and particular incident requirements.

These forms are designed to include the essential data elements for the ICS process they address. The use of these standardized ICS Forms is encouraged to promote consistency in the management and documentation of incidents in the spirit of NIMS, and to facilitate effective use of mutual aid. In many cases, additional pages can be added to the existing ICS Forms when needed, and several forms are set up with this specific provision. The section after the ICS Forms List provides details on adding appendixes or fields to the forms for jurisdiction- or discipline-specific needs.

It may be appropriate to compile and maintain other NIMS-related forms with these ICS Forms, such as resource management and/or ordering forms that are used to support incidents. Examples of these include the following Emergency Management Assistance Compact (EMAC) forms: REQ-A (Interstate Mutual Aid Request), Reimbursement Form R-1 (Interstate Reimbursement Form), and Reimbursement Form R-2 (Intrastate Reimbursement Form).

### **ICS FORMS LIST**

This table lists all of the ICS Forms included in this publication.

#### Notes:

- In the following table, the ICS Forms identified with an asterisk (\*) are typically included in an IAP.
- Forms identified with two asterisks (\*\*) are additional forms that could be used in the IAP.
- The other ICS Forms are used in the ICS process for incident management activities, but are not typically included in the IAP.
- The date and time entered in the form blocks should be determined by the Incident Command or Unified Command. Local time is typically used.

ICS Form #:	Form Title:	Typically Prepared by:		
ICS 201	Incident Briefing	Initial Incident Commander		
*ICS 202	Incident Objectives	Planning Section Chief		
*ICS 203	Organization Assignment List	Resources Unit Leader		
*ICS 204	Assignment List	Resources Unit Leader and Operations Section Chief		
*ICS 205	Incident Radio Communications Plan	Communications Unit Leader		
**ICS 205A	Communications List	Communications Unit Leader		
*ICS 206	Medical Plan	Medical Unit Leader (reviewed by Safety Officer)		
ICS 207	Incident Organization Chart (wall-mount size, optional 8½" x 14")	Resources Unit Leader		
**ICS 208	Safety Message/Plan	Safety Officer		
ICS 209	Incident Status Summary	Situation Unit Leader		
ICS 210	Resource Status Change	Communications Unit Leader		
ICS 211	Incident Check-In List (optional 8½" x 14" and 11" x 17")	Resources Unit/Check-In Recorder		
ICS 213	General Message (3-part form)	Any Message Originator		
ICS 214	Activity Log (optional 2-sided form)	All Sections and Units		
ICS 215	<b>Operational Planning Worksheet</b> (optional 8½" x 14" and 11" x 17")	Operations Section Chief		
ICS 215A	Incident Action Plan Safety Analysis	Safety Officer		
ICS 218	Support Vehicle/Equipment Inventory (optional 8½" x 14" and 11" x 17")	Ground Support Unit		
ICS 219-1 to ICS 219-8, ICS 219-10 <i>(Cards)</i>	Resource Status Card (T-Card) (may be printed on cardstock)	Resources Unit		
ICS 220	Air Operations Summary Worksheet	Operations Section Chief or Air Branch Director		
ICS 221	Demobilization Check-Out	Demobilization Unit Leader		
ICS 225	Incident Personnel Performance Rating	Supervisor at the incident		

### **ICS FORM ADAPTION, EXTENSION, AND APPENDIXES**

The ICS Forms in this booklet are designed to serve all-hazards, cross-discipline needs for incident management across the Nation. These forms include the essential data elements for the ICS process they address, and create a foundation within ICS for complex incident management activities. However, the flexibility and scalability of NIMS should allow for needs outside this foundation, so the following are possible mechanisms to add to, extend, or adapt ICS Forms when needed.

Because the goal of NIMS is to have a consistent nationwide approach to incident management, jurisdictions and disciplines are encouraged to use the ICS Forms as they are presented here – unless these forms do not meet an organization's particular incident management needs for some unique reason. If changes are needed, the focus on essential information elements should remain, and as such the spirit and intent of particular fields or "information elements" on the ICS Forms should remain intact to maintain consistency if the forms are altered. Modifications should be clearly indicated as deviations from or additions to the ICS Forms. The following approaches may be used to meet any unique needs.

#### **ICS Form Adaptation**

When agencies and organizations require specialized forms or information for particular kinds of incidents, events, or disciplines, it may be beneficial to utilize the essential data elements from a particular ICS Form to create a more localized or field-specific form. When this occurs, organizations are encouraged to use the relevant essential data elements and ICS Form number, but to clarify that the altered form is a specific organizational adaptation of the form. For example, an altered form should clearly indicate in the title that it has been changed to meet a specific need, such as "ICS 215A, Hazard Risk Analysis Worksheet, Adapted for Story County Hazmat Program."

#### **Extending ICS Form Fields**

Particular fields on an ICS Form may need to include further breakouts or additional related elements. If such additions are needed, the form itself should be clearly labeled as an adapted form (see above), and the additional sub-field numbers should be clearly labeled as unique to the adapted form. Letters or other indicators may be used to label the new sub-fields (if the block does not already include sub-fields).

Examples of possible field additions are shown below for the ICS 209:

- Block 2: Incident Number.
  - Block 2A (adapted): Full agency accounting cost charge number for primary authority having jurisdiction.
- Block 29: Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.).
  - Block 29A (adapted): Indicate specific wildland fire fuel model number.

#### **Creating ICS Form Appendixes**

Certain ICS Forms may require appendixes to include additional information elements needed by a particular jurisdiction or discipline. When an appendix is needed for a given form, it is expected that the jurisdiction or discipline will determine standardized fields for such an appendix and make the form available as needed.

Any ICS Form appendixes should be clearly labeled with the form name and an indicator that it is a discipline- or jurisdiction-specific appendix. Appendix field numbering should begin following the last identified block in the corresponding ICS Form.

# **INCIDENT BRIEFING (ICS 201)**

<ul> <li>4. Map/Sketch (include sketch, showing the total area of operations, the incident ste/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment):</li> <li>5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.</li> </ul>	1. Incident Name:	2. Incident Number:	3. Date/Time Initiated:
<ol> <li>Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.</li> </ol>	<b>4. Map/Sketch</b> (include sketch, showir areas, overflight results, trajectories, in assignment):	ng the total area of operations, the npacted shorelines, or other graph	e incident site/area, impacted and threatened nics depicting situational status and resource
<ol> <li>Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.</li> </ol>			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
<ol> <li>Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.</li> </ol>			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.			
	5. Situation Summary and Health an incident Health and Safety Hazards equipment, warn people of the haza	d Safety Briefing (for briefings o and develop necessary measures rd) to protect responders from tho	r transfer of command): Recognize potential s (remove hazard, provide personal protective ose hazards.
6. Prepared by: Name: Position/Title:Signature:	6. Prepared by: Name:	Position/Title:	Signature:

# **INCIDENT BRIEFING (ICS 201)**

1. Incident Name: 2. Incide			ent Number:	<b>3. Date/Time Initiated:</b> Date: Time:
7. Current and Planned Objectives:				
8. Current and	Planned Actions, Strat	tegies, ar	nd Tactics:	
Time:	Actions:			
6. Prepared by	: Name:		Position/Title:	Signature:
ICS 201, Page 2			Date/Time:	

11	ICIDENT BRIEFI	NG (ICS 20 <sup>-</sup>	1)		
1. Incident Name:	2. Incident Number:		3. Date/Time Initiated: Date: Time:		
9. Current Organization (fill in addition	al organization as appro	priate):			
	Incident Comma	inder(s)	Liaison Officer		
			Safe	ty Officer	
			Public Info	ormation Officer	
					Object
Planning Section Chier		Section Chie	ef	Logistics Section	

6. Prepared by: Name:	Position/Title:	Signature:
ICS 201, Page 3	Date/Time:	
# **INCIDENT BRIEFING (ICS 201)**

1. Incident Name: 2. I		2. Incident N	Incident Number:		3. Date/Time Initiated: Date: Time:
10. Resource Summary:	10. Resource Summary:				
Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
6. Prepared by: Name:		Positio	on/Title:		Signature:
ICS 201, Page 4		Date/1	Time:		

# ICS 201 Incident Briefing

**Purpose.** The Incident Briefing (ICS 201) provides the Incident Commander (and the Command and General Staffs) with basic information regarding the incident situation and the resources allocated to the incident. In addition to a briefing document, the ICS 201 also serves as an initial action worksheet. It serves as a permanent record of the initial response to the incident.

**Preparation.** The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing.

**Distribution.** Ideally, the ICS 201 is duplicated and distributed before the initial briefing of the Command and General Staffs or other responders as appropriate. The "Map/Sketch" and "Current and Planned Actions, Strategies, and Tactics" sections (pages 1–2) of the briefing form are given to the Situation Unit, while the "Current Organization" and "Resource Summary" sections (pages 3–4) are given to the Resources Unit.

- The ICS 201 can serve as part of the initial Incident Action Plan (IAP).
- If additional pages are needed for any form page, use a blank ICS 201 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	Incident Number	Enter the number assigned to the incident.
3	<ul><li>Date/Time Initiated</li><li>Date, Time</li></ul>	Enter date initiated (month/day/year) and time initiated (using the 24-hour clock).
4	<b>Map/Sketch</b> (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)	Show perimeter and other graphics depicting situational status, resource assignments, incident facilities, and other special information on a map/sketch or with attached maps. Utilize commonly accepted ICS map symbology. If specific geospatial reference points are needed about the incident's location or area outside the ICS organization at the incident, that information should be submitted on the Incident Status Summary (ICS 209). North should be at the top of page unless noted otherwise.
5	Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.	Self-explanatory.
6	Prepared by • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
7	Current and Planned Objectives	Enter the objectives used on the incident and note any specific problem areas.

Block Number	Block Title	Instructions
8	<ul> <li>Current and Planned Actions, Strategies, and Tactics</li> <li>Time</li> <li>Actions</li> </ul>	Enter the current and planned actions, strategies, and tactics and time they may or did occur to attain the objectives. If additional pages are needed, use a blank sheet or another ICS 201 (Page 2), and adjust page numbers accordingly.
9	Current Organization (fill in additional organization as appropriate) Incident Commander(s) Liaison Officer Safety Officer Public Information Officer Planning Section Chief Operations Section Chief Finance/Administration Section Chief Logistics Section Chief	<ul> <li>Enter on the organization chart the names of the individuals assigned to each position.</li> <li>Modify the chart as necessary, and add any lines/spaces needed for Command Staff Assistants, Agency Representatives, and the organization of each of the General Staff Sections.</li> <li>If Unified Command is being used, split the Incident Commander box.</li> <li>Indicate agency for each of the Incident Commanders listed if Unified Command is being used.</li> </ul>
10	Resource Summary	Enter the following information about the resources allocated to the incident. If additional pages are needed, use a blank sheet or another ICS 201 (Page 4), and adjust page numbers accordingly.
	Resource	Enter the number and appropriate category, kind, or type of resource ordered.
	Resource Identifier	Enter the relevant agency designator and/or resource designator (if any).
	Date/Time Ordered	Enter the date (month/day/year) and time (24-hour clock) the resource was ordered.
	• ETA	Enter the estimated time of arrival (ETA) to the incident (use 24-hour clock).
	Arrived	Enter an "X" or a checkmark upon arrival to the incident.
	<ul> <li>Notes (location/ assignment/status)</li> </ul>	Enter notes such as the assigned location of the resource and/or the actual assignment and status.

# **INCIDENT OBJECTIVES (ICS 202)**

1. Incident Name:		2. Operational Period	: Date From: Time From:	Date To: Time To:
3. Objective(s):				
4. Operational Period	Command Emphas	is:		
General Situational Aw	areness			
5. Site Safety Plan Re	quired? Yes 🗌 No			
Approved Site Safe	ty Plan(s) Located a	at:		
6. Incident Action Pla	n (the items checked	below are included in t	nis Incident Action Pla	an):
☐ ICS 203	□ ICS 207		Other Attachments:	
		ot/Tidoo/Currosta		
7 Prepared by: Nom	<b>.</b>	Position/Title		inature:
			Sig	וומנעוש
o. Approved by Inclde			Signatul	е
103 202	IAF Faye	Date/Time.		

### ICS 202 Incident Objectives

**Purpose.** The Incident Objectives (ICS 202) describes the basic incident strategy, incident objectives, command emphasis/priorities, and safety considerations for use during the next operational period.

**Preparation.** The ICS 202 is completed by the Planning Section following each Command and General Staff meeting conducted to prepare the Incident Action Plan (IAP). In case of a Unified Command, one Incident Commander (IC) may approve the ICS 202. If additional IC signatures are used, attach a blank page.

**Distribution.** The ICS 202 may be reproduced with the IAP and may be part of the IAP and given to all supervisory personnel at the Section, Branch, Division/Group, and Unit levels. All completed original forms must be given to the Documentation Unit.

- The ICS 202 is part of the IAP and can be used as the opening or cover page.
- If additional pages are needed, use a blank ICS 202 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident. If needed, an incident number can be added.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Objective(s)	Enter clear, concise statements of the objectives for managing the response. Ideally, these objectives will be listed in priority order. These objectives are for the incident response for this operational period as well as for the duration of the incident. Include alternative and/or specific tactical objectives as applicable.
		Objectives should follow the SMART model or a similar approach:
		<u>Specific</u> – Is the wording precise and unambiguous?
		Measurable – How will achievements be measured?
		<u>A</u> ction-oriented – Is an action verb used to describe expected accomplishments?
		Realistic – Is the outcome achievable with given available resources?
		<u><b>T</b></u> ime-sensitive – What is the timeframe?
4	Operational Period Command Emphasis	Enter command emphasis for the operational period, which may include tactical priorities or a general weather forecast for the operational period. It may be a sequence of events or order of events to address. This is not a narrative on the objectives, but a discussion about where to place emphasis if there are needs to prioritize based on the Incident Commander's or Unified Command's direction. Examples: Be aware of falling debris, secondary explosions, etc.
	General Situational Awareness	General situational awareness may include a weather forecast, incident conditions, and/or a general safety message. If a safety message is included here, it should be reviewed by the Safety Officer to ensure it is in alignment with the Safety Message/Plan (ICS 208).
5	Site Safety Plan Required? Yes 🗌 No 🗌	Safety Officer should check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter the location of the approved Site Safety Plan(s).

Block Number	Block Title	Instructions
6	Incident Action Plan (the items checked below are included in this Incident Action Plan): ICS 203 ICS 204 ICS 204 ICS 205 ICS 205A ICS 206 ICS 206 ICS 207 ICS 208 Map/Chart Weather Forecast/ Tides/Currents Other Attachments:	Check appropriate forms and list other relevant documents that are included in the IAP. ICS 203 – Organization Assignment List ICS 204 – Assignment List ICS 205 – Incident Radio Communications Plan ICS 205A – Communications List ICS 206 – Medical Plan ICS 207 – Incident Organization Chart ICS 208 – Safety Message/Plan
7	<ul><li>Prepared by</li><li>Name</li><li>Position/Title</li><li>Signature</li></ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
8	Approved by Incident Commander Name Signature Date/Time	In the case of a Unified Command, one IC may approve the ICS 202. If additional IC signatures are used, attach a blank page.

# ORGANIZATION ASSIGNMENT LIST (ICS 203)

1. Incident Name:		2. Op	erational Period: Date Fr Time Fi	rom: Date To: rom: Time To:
3. Incident Comma	ander(s) and Co	mmand Staff:	7. Operations Sec	tion:
IC/UCs			Chief	
			Deputy	
Deputy			Staging Area	
Safety Officer			Branch	
Public Info. Officer			Branch Director	
Liaison Officer			Deputy	
4. Agency/Organiz	ation Represen	tatives:	Division/Group	
Agency/Organization	Name		Division/Group	
			Branch	
			Branch Director	
			Deputy	
5. Planning Sectio	n:		Division/Group	
Ch	ief		Division/Group	
Depu	uty		Division/Group	
Resources U	nit		Division/Group	
Situation U	nit		Division/Group	
Documentation U	nit		Branch	
Demobilization U	nit		Branch Director	
Technical Specialis	sts		Deputy	
			Division/Group	
			Division/Group	
			Division/Group	
6. Logistics Section	on:		Division/Group	
Ch	ief		Division/Group	
Depu	uty		Air Operations Bran	ch
Support Bran	ch		Air Ops Branch Dir.	
Direc	tor			
Supply U	nit			
Facilities U	nit		8. Finance/Admini	stration Section:
Ground Support U	nit		Chief	
Service Bran	ch		Deputy	
Direc	tor		Time Unit	
Communications U	nit		Procurement Unit	
Medical U	nit		Comp/Claims Unit	
Food U	nit		Cost Unit	
9. Prepared by: Na	ame:	Pc	sition/Title:	Signature:
ICS 203	IAP Page _	Da	ate/Time:	

# ICS 203 Organization Assignment List

**Purpose.** The Organization Assignment List (ICS 203) provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the Incident Organization Chart (ICS 207) which is posted on the Incident Command Post display. An actual organization will be incident or event-specific. **Not all positions need to be filled.** Some blocks may contain more than one name. The size of the organization is dependent on the magnitude of the incident, and can be expanded or contracted as necessary.

**Preparation.** The Resources Unit prepares and maintains this list under the direction of the Planning Section Chief. Complete only the blocks for the positions that are being used for the incident. If a trainee is assigned to a position, indicate this with a "T" in parentheses behind the name (e.g., "A. Smith (T)").

**Distribution.** The ICS 203 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

- The ICS 203 serves as part of the IAP.
- If needed, more than one name can be put in each block by inserting a slash.
- If additional pages are needed, use a blank ICS 203 and repaginate as needed.
- ICS allows for organizational flexibility, so the Intelligence/Investigations Function can be embedded in several different places within the organizational structure.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Incident Commander(s) and Command Staff IC/UCs Deputy Safety Officer Public Information Officer Liaison Officer	Enter the names of the Incident Commander(s) and Command Staff. Label Assistants to Command Staff as such (for example, "Assistant Safety Officer"). For all individuals, use at least the first initial and last name. For Unified Command, also include agency names.
4	Agency/Organization Representatives <ul> <li>Agency/Organization</li> <li>Name</li> </ul>	Enter the agency/organization names and the names of their representatives. For all individuals, use at least the first initial and last name.
5	Planning SectionChiefDeputyResources UnitSituation UnitDocumentation UnitDemobilization UnitTechnical Specialists	Enter the name of the Planning Section Chief, Deputy, and Unit Leaders after each position title. List Technical Specialists with an indication of specialty. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.

Block Number	Block Title	Instructions
6	Logistics Section Chief Deputy Support Branch Director Supply Unit Facilities Unit Ground Support Unit Service Branch Director Communications Unit Medical Unit Food Unit	Enter the name of the Logistics Section Chief, Deputy, Branch Directors, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
7	<ul> <li>Operations Section</li> <li>Chief</li> <li>Deputy</li> <li>Staging Area</li> <li>Branch</li> <li>Branch Director</li> <li>Deputy</li> <li>Division/Group</li> <li>Air Operations Branch</li> <li>Air Operations Branch</li> <li>Director</li> </ul>	<ul> <li>Enter the name of the Operations Section Chief, Deputy, Branch Director(s), Deputies, and personnel staffing each of the listed positions.</li> <li>For Divisions/Groups, enter the Division/Group identifier in the left column and the individual's name in the right column.</li> <li>Branches and Divisions/Groups may be named for functionality or by geography. For Divisions/Groups, indicate Division/Group Supervisor. Use an additional page if more than three Branches are activated.</li> <li>If there is a shift change during the specified operational period, list both names, separated by a slash.</li> <li>For all individuals, use at least the first initial and last name.</li> </ul>
8	Finance/Administration Section Chief Deputy Time Unit Procurement Unit Compensation/Claims Unit Cost Unit	Enter the name of the Finance/Administration Section Chief, Deputy, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
9	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

# ASSIGNMENT LIST (ICS 204)

1. Incident Name:		2. Operat	tional Pe	eriod:	3.
	Time From: Date To: Time To:		Date To: Time To:	Branch:	
4. Operations Person	nel: <u>Name</u>			Contact Number(s)	Division:
Operations Section Ch	nief:				0
Branch Direc	tor:				Group:
					Staging Area:
Division/Group Supervi	sor:				Reporting Location
Resource Identifier	Leader		# of Persons	Contact (e.g., phone, pager, radio frequency, etc.)	Special Equipment and Supplies, Remarks, Notes, Information
	_				
	- -				
7. Special Instruction	s:				
8. Communications (r	adio and/or	phone cor	ntact nun	nbers needed for this assignment):	
Name/Function Primary Contact: indicate cell, pager, or radio (frequency/system			requency/system/channel)		
/					
/					
/					
9. Prepared by: Name	ə:		Posit	tion/Title:Signa	ature:
ICS 204	IAP Page		Date	e/Time:	

# ICS 204 Assignment List

**Purpose.** The Assignment List(s) (ICS 204) informs Division and Group supervisors of incident assignments. Once the Command and General Staffs agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

**Preparation.** The ICS 204 is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202), Operational Planning Worksheet (ICS 215), and the Operations Section Chief. It must be approved by the Incident Commander, but may be reviewed and initialed by the Planning Section Chief and Operations Section Chief as well.

**Distribution.** The ICS 204 is duplicated and attached to the ICS 202 and given to all recipients as part of the Incident Action Plan (IAP). In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms must be given to the Documentation Unit.

- The ICS 204 details assignments at Division and Group levels and is part of the IAP.
- Multiple pages/copies can be used if needed.
- If additional pages are needed, use a blank ICS 204 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Branch Division Group Staging Area	This block is for use in a large IAP for reference only. Write the alphanumeric abbreviation for the Branch, Division, Group, and Staging Area (e.g., "Branch 1," "Division D," "Group 1A") in large letters for easy referencing.
4	Operations Personnel     Name, Contact Number(s)     Operations Section Chief     Branch Director     Division/Group Supervisor	Enter the name and contact numbers of the Operations Section Chief, applicable Branch Director(s), and Division/Group Supervisor(s).
5	Resources Assigned	Enter the following information about the resources assigned to the Division or Group for this period:
	Resource Identifier	The identifier is a unique way to identify a resource (e.g., ENG-13, IA-SCC-413). If the resource has been ordered but no identification has been received, use TBD (to be determined).
	Leader	Enter resource leader's name.
	# of Persons	Enter total number of persons for the resource assigned, including the leader.
	• Contact (e.g., phone, pager, radio frequency, etc.)	Enter primary means of contacting the leader or contact person (e.g., radio, phone, pager, etc.). Be sure to include the area code when listing a phone number.
5 (continued)	<ul> <li>Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information</li> </ul>	Provide special notes or directions specific to this resource. If required, add notes to indicate: (1) specific location/time where the resource should report or be dropped off/picked up; (2) special equipment and supplies that will be used or needed; (3) whether or not the resource received briefings; (4) transportation needs; or (5) other information.

Block Number	Block Title	Instructions
6	Work Assignments	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
7	Special Instructions	Enter a statement noting any safety problems, specific precautions to be exercised, dropoff or pickup points, or other important information.
8	<ul> <li>Communications (radio and/or phone contact numbers needed for this assignment)</li> <li>Name/Function</li> <li>Primary Contact: indicate cell, pager, or radio (frequency/system/channel)</li> </ul>	<ul> <li>Enter specific communications information (including emergency numbers) for this Branch/Division/Group.</li> <li>If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).</li> <li>Phone and pager numbers should include the area code and any satellite phone specifics.</li> <li>In light of potential IAP distribution, use sensitivity when including cell phone number.</li> <li>Add a secondary contact (phone number or radio) if needed.</li> </ul>
9	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

# INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name: 2. Date/T Date: Time:			<b>2. Date/Time I</b> Date: Time:	Prepared:			3. C Date Tim	<b>perational Pe</b> e From: e From:	r <b>iod:</b> Date To: Time To <sup>:</sup>	
4. Ba	sic R	adio Channel Use	I	11110.						
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks
5. Sp										
6. Pre	epare	d by (Communicati	ons Unit Leader): Na	ame:				Signatu	ure:	
ICS 2	05		IAP Page		Date/Time	):				

### ICS 205 Incident Radio Communications Plan

**Purpose.** The Incident Radio Communications Plan (ICS 205) provides information on all radio frequency or trunked radio system talkgroup assignments for each operational period. The plan is a summary of information obtained about available radio frequencies or talkgroups and the assignments of those resources by the Communications Unit Leader for use by incident responders. Information from the Incident Radio Communications Plan on frequency or talkgroup assignments is normally placed on the Assignment List (ICS 204).

**Preparation.** The ICS 205 is prepared by the Communications Unit Leader and given to the Planning Section Chief for inclusion in the Incident Action Plan.

**Distribution.** The ICS 205 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit. Information from the ICS 205 is placed on Assignment Lists.

- The ICS 205 is used to provide, in one location, information on all radio frequency assignments down to the Division/Group level for each operational period.
- The ICS 205 serves as part of the IAP.

Block Number	Block Block Title Instructions			
1	Incident Name	Enter the name assigned to the incident.		
2	Date/Time Prepared	Enter date prepared (month/day/year) and time prepared (using the 24-hour clock).		
3	<ul> <li>Operational Period</li> <li>Date and Time From</li> <li>Date and Time To</li> </ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.		
4	Basic Radio Channel Use	Enter the following information about radio channel use:		
	Zone Group			
	Channel Number	Use at the Communications Unit Leader's discretion. Channel Number (Ch #) may equate to the channel number for incident radios that are programmed or cloned for a specific Communications Plan, or it may be used just as a reference line number on the ICS 205 document.		
	Function	Enter the Net function each channel or talkgroup will be used for (Command, Tactical, Ground-to-Air, Air-to-Air, Support, Dispatch).		
	Channel Name/Trunked Radio System Talkgroup	Enter the nomenclature or commonly used name for the channel or talk group such as the National Interoperability Channels which follow DHS frequency Field Operations Guide (FOG).		
	Assignment	Enter the name of the ICS Branch/Division/Group/Section to which this channel/talkgroup will be assigned.		
	RX (Receive) Frequency (N or W)	Enter the Receive Frequency (RX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions.		
		The name of the specific trunked radio system with which the talkgroup is associated may be entered across all fields on the ICS 205 normally used for conventional channel programming information.		
	RX Tone/NAC	Enter the Receive Continuous Tone Coded Squelch System (CTCSS) subaudible tone (RX Tone) or Network Access Code (RX NAC) for the receive frequency as the mobile or portable subscriber would be programmed.		

Block Number	Block Title	Instructions
<b>4</b> (continued)	TX (Transmit) Frequency (N or W)	Enter the Transmit Frequency (TX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions.
	TX Tone/NAC	Enter the Transmit Continuous Tone Coded Squelch System (CTCSS) subaudible tone (TX Tone) or Network Access Code (TX NAC) for the transmit frequency as the mobile or portable subscriber would be programmed.
	Mode (A, D, or M)	Enter "A" for analog operation, "D" for digital operation, or "M" for mixed mode operation.
	Remarks	Enter miscellaneous information concerning repeater locations, information concerning patched channels or talkgroups using links or gateways, etc.
5	Special Instructions	Enter any special instructions (e.g., using cross-band repeaters, secure- voice, encoders, private line (PL) tones, etc.) or other emergency communications needs). If needed, also include any special instructions for handling an incident within an incident.
6	Prepared by (Communications Unit Leader) • Name • Signature • Date/Time	Enter the name and signature of the person preparing the form, typically the Communications Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).

# COMMUNICATIONS LIST (ICS 205A)

1. Incident Name:			2. Operational I	Period: Date From: Time From	Date To: Time To	
3. Basic Local Commu	unication	s Informati	on:			·
			-	Ν	Method(s) of Contact	
Incident Assigned Po	sition	Name (A	Alphabetized)	(pl	hone, pager, cell, etc.)	
					Olivert	
4. Prepared by: Name					Signature:	
ICS 205A	IAP Pag	e	Date/Time:			

### ICS 205A Communications List

**Purpose.** The Communications List (ICS 205A) records methods of contact for incident personnel. While the Incident Radio Communications Plan (ICS 205) is used to provide information on all radio frequencies down to the Division/Group level, the ICS 205A indicates all methods of contact for personnel assigned to the incident (radio frequencies, phone numbers, pager numbers, etc.), and functions as an incident directory.

**Preparation.** The ICS 205A can be filled out during check-in and is maintained and distributed by Communications Unit personnel. This form should be updated each operational period.

**Distribution.** The ICS 205A is distributed within the ICS organization by the Communications Unit, and posted as necessary. All completed original forms must be given to the Documentation Unit. If this form contains sensitive information such as cell phone numbers, it should be clearly marked in the header that it contains sensitive information and is not for public release.

- The ICS 205A is an optional part of the Incident Action Plan (IAP).
- This optional form is used in conjunction with the ICS 205.
- If additional pages are needed, use a blank ICS 205A and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Basic Local Communications Information	Enter the communications methods assigned and used for personnel by their assigned ICS position.
	Incident Assigned Position	Enter the ICS organizational assignment.
	Name	Enter the name of the assigned person.
	<ul> <li>Method(s) of Contact (phone, pager, cell, etc.)</li> </ul>	For each assignment, enter the radio frequency and contact number(s) to include area code, etc. If applicable, include the vehicle license or ID number assigned to the vehicle for the incident (e.g., HAZMAT 1, etc.).
4	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

# MEDICAL PLAN (ICS 206)

1. Incident Name:			2. Operational P	eriod:	Date From: Time From:	C T	)ate To: ïme To:	
3. Medical Aid S	tations:							
Nierre			L C		Co	ontact	Para	medics
Name			Location	ocation		s)/Frequency	on	
								3 🗌 NO
								3 🗌 No
								3 🗌 No
								3 ∐ No —
								s 🗌 No
4. Transportatio	n (indica	ate air or ground):				1 1		
Ambulance S	ervice		Location		Number(s	ontact s)/Frequency	Level o	f Service
						- <u>//</u>		
5. Hospitals:								
		Address,	Contact	Tra	vel Time			
	Latitu	ude & Longitude	Number(s)/			Trauma	Burn	
Hospital Name		If Helipad	Frequency	Air	Ground	Center	Center	Helipad
						Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No
						Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No
						Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No
						Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No
						Yes Level:	☐ Yes ☐ No	☐ Yes ☐ No
6. Special Medic	6. Special Medical Emergency Procedures:							
Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.								
7. Prepared by (	Medical	Unit Leader): Name	):		Signa	ature:		
8. Approved by	(Safety (	Officer): Name: _			Signatu	re:		
ICS 206	ICS 206         IAP Page         Date/Time:							

# ICS 206 Medical Plan

**Purpose.** The Medical Plan (ICS 206) provides information on incident medical aid stations, transportation services, hospitals, and medical emergency procedures.

**Preparation.** The ICS 206 is prepared by the Medical Unit Leader and reviewed by the Safety Officer to ensure ICS coordination. If aviation assets are utilized for rescue, coordinate with Air Operations.

**Distribution.** The ICS 206 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). Information from the plan pertaining to incident medical aid stations and medical emergency procedures may be noted on the Assignment List (ICS 204). All completed original forms must be given to the Documentation Unit.

- The ICS 206 serves as part of the IAP.
- This form can include multiple pages.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Medical Aid Stations	Enter the following information on the incident medical aid station(s):
	Name	Enter name of the medical aid station.
	Location	Enter the location of the medical aid station (e.g., Staging Area, Camp Ground).
	<ul> <li>Contact Number(s)/Frequency</li> </ul>	Enter the contact number(s) and frequency for the medical aid station(s).
	<ul> <li>Paramedics on Site?</li> <li>Yes No</li> </ul>	Indicate (yes or no) if paramedics are at the site indicated.
4	<b>Transportation</b> (indicate air or ground)	Enter the following information for ambulance services available to the incident:
	Ambulance Service	Enter name of ambulance service.
	Location	Enter the location of the ambulance service.
	Contact     Number(s)/Frequency	Enter the contact number(s) and frequency for the ambulance service.
	Level of Service     ALS BLS	Indicate the level of service available for each ambulance, either ALS (Advanced Life Support) or BLS (Basic Life Support).

Block Number	Block Title	Instructions
5	Hospitals	Enter the following information for hospital(s) that could serve this incident:
	Hospital Name	Enter hospital name and identify any predesignated medivac aircraft by name a frequency.
	<ul> <li>Address, Latitude &amp; Longitude if Helipad</li> </ul>	Enter the physical address of the hospital and the latitude and longitude if the hospital has a helipad.
	<ul> <li>Contact Number(s)/ Frequency</li> </ul>	Enter the contact number(s) and/or communications frequency(s) for the hospital.
	<ul> <li>Travel Time</li> <li>Air</li> <li>Ground</li> </ul>	Enter the travel time by air and ground from the incident to the hospital.
	Trauma Center     Trauma Level:	Indicate yes and the trauma level if the hospital has a trauma center.
	Burn Center     Yes      No	Indicate (yes or no) if the hospital has a burn center.
	Helipad	Indicate (yes or no) if the hospital has a helipad.
	☐ Yes ☐ No	Latitude and Longitude data format need to compliment Medical Evacuation Helicopters and Medical Air Resources
6	Special Medical Emergency Procedures	Note any special emergency instructions for use by incident personnel, including (1) who should be contacted, (2) how should they be contacted; and (3) who manages an incident within an incident due to a rescue, accident, etc. Include procedures for how to report medical emergencies.
	Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.	Self explanatory. Incident assigned aviation assets should be included in ICS 220.
7	<ul> <li>Prepared by (Medical Unit Leader)</li> <li>Name</li> <li>Signature</li> </ul>	Enter the name and signature of the person preparing the form, typically the Medical Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).
8	<ul> <li>Approved by (Safety Officer)</li> <li>Name</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name of the person who approved the plan, typically the Safety Officer. Enter date (month/day/year) and time reviewed (24-hour clock).

# **INCIDENT ORGANIZATION CHART (ICS 207)**

1. Incident Name:	2. 0	perational Period: Date Fro	om: Date	To:	
1. Incident Name:         3. Organization Chart	2. O	perational Period: Date Fro Time Fro Incident Comman	Demobilization Unit Ldr.	To: To: Liaison Officer Safety Officer ic Information Officer Logistics Section Chief Support Branch Dir. Supply Unit Ldr. Facilities Unit Ldr. Ground Spt. Unit Ldr. Service Branch Dir. Comms Unit Ldr.	Finance/Admin Section Chief Time Unit Ldr. Procurement Unit Ldr. Comp./Claims Unit Ldr.
				Comms Unit Ldr. Medical Unit Ldr. Food Unit Ldr.	
ICS 207 IAP Page	4. Prepared by: Name:	Position/Title:	Signatu	re: Date/	Time:

### ICS 207 Incident Organization Chart

**Purpose.** The Incident Organization Chart (ICS 207) provides a **visual wall chart** depicting the ICS organization position assignments for the incident. The ICS 207 is used to indicate what ICS organizational elements are currently activated and the names of personnel staffing each element. An actual organization will be event-specific. The size of the organization is dependent on the specifics and magnitude of the incident and is scalable and flexible. Personnel responsible for managing organizational positions are listed in each box as appropriate.

**Preparation.** The ICS 207 is prepared by the Resources Unit Leader and reviewed by the Incident Commander. Complete only the blocks where positions have been activated, and add additional blocks as needed, especially for Agency Representatives and all Operations Section organizational elements. For detailed information about positions, consult the NIMS ICS Field Operations Guide. The ICS 207 is intended to be used as a wall-size chart and printed on a plotter for better visibility. A chart is completed for each operational period, and updated when organizational changes occur.

**Distribution.** The ICS 207 is intended to be **wall mounted** at Incident Command Posts and other incident locations as needed, and is not intended to be part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

- The ICS 207 is intended to be **wall mounted** (printed on a plotter). Document size can be modified based on individual needs.
- Also available as 81/2 x 14 (legal size) chart.
- ICS allows for organizational flexibility, so the Intelligence/Investigative Function can be embedded in several different places within the organizational structure.
- Use additional pages if more than three branches are activated. Additional pages can be added based on individual need (such as to distinguish more Division/Groups and Branches as they are activated).

Block Number	Block Title	Instructions
1	Incident Name	Print the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Organization Chart	<ul> <li>Complete the incident organization chart.</li> <li>For all individuals, use at least the first initial and last name.</li> <li>List agency where it is appropriate, such as for Unified Commanders.</li> <li>If there is a shift change during the specified operational period, list both names, separated by a slash.</li> </ul>
4	Prepared by <ul> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

SAFETY MESSAGE/PLAN (ICS 208)			
1. Incident Name:	2.	Operational Period: Date From	: Date To:
1. Incident Name: 3. Safety Message/Ex	2. panded Safety Messag	Operational Period: Date From Time From e, Safety Plan, Site Safety Plan	: Date To: Time To: :
<ul> <li>4. Site Safety Plan Rea</li> <li>Approved Site Safe</li> <li>5. Prepared by: Name</li> </ul>	quired? Yes  No ty Plan(s) Located At:	_ Position/Title:	Signature:

### ICS 208 Safety Message/Plan

Purpose. The Safety Message/Plan (ICS 208) expands on the Safety Message and Site Safety Plan.

**Preparation.** The ICS 208 is an optional form that may be included and completed by the Safety Officer for the Incident Action Plan (IAP).

**Distribution.** The ICS 208, if developed, will be reproduced with the IAP and given to all recipients as part of the IAP. All completed original forms must be given to the Documentation Unit.

- The ICS 208 may serve (optionally) as part of the IAP.
- Use additional copies for continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan	Enter clear, concise statements for safety message(s), priorities, and key command emphasis/decisions/directions. Enter information such as known safety hazards and specific precautions to be observed during this operational period. If needed, additional safety message(s) should be referenced and attached.
4	Site Safety Plan Required? Yes 🗌 No 🗌	Check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter where the approved Site Safety Plan(s) is located.
5	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

# **INCIDENT STATUS SUMMARY (ICS 209)**

*1. Incident Name:			2. Incident Number:			
*3. Report Version (check one box on left):	*4. Incident Comr Agency or Organ	mander(s) & lization:	5. Incident Management Organization:	*6. Incident Start Date/Time: Date:		
☐ Initial Rpt # ☐ Update (if used): ☐ Final				Time: Time Zone:		
7. Current Incident Size or Area Involved (use unit label – e.g., "sq mi," "city block"):	8. Percent (%) Contained Completed	*9. Incident Definition:	10. Incident Complexity Level:	*11. For Time Period: From Date/Time: To Date/Time:		

### Approval & Routing Information

*12. Prepared By:		*13. Date/Time Submitted:
Print Name:	ICS Position:	
Date/Time Prepared:		Time Zone:
*14. Approved By:		*15. Primary Location, Organization, or
Print Name:	ICS Position:	Agency Sent To:
Signature:		

#### Incident Location Information

*16. State:	*17. County/Parish/Borough:	*18. City:			
19. Unit or Other:	*20. Incident Jurisdiction:	<b>21. Incident Location Ownership</b> (if different than jurisdiction):			
22. Longitude (indicate format): Latitude (indicate format):	23. US National Grid Reference:	<b>24. Legal Description</b> (township, section, range):			
*25. Short Location or Area Description	26. UTM Coordinates:				
27. Note any electronic geospatial data included or attached (indicate data format, content, and collection time information and labels):					

### Incident Summary

*28. Significant Events for the Time Period Reported (summarize significant progress made, evacuations, incident growth, etc.):							
29. Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.):							
<b>30. Damage Assessment Information</b> (summarize damage and/or restriction of use or availability to		A. Structural B. # Threatened Summary (72 hrs)		C. # Damaged	D. # Destroyed		
residential or commercial property, natural resources, critical infrastructure and key resources, etc.):	,	E. Single Residences					
chucar infrastructure and key resources, etc.):		F. Nonresidential Commercial Property					
		Other Minor Structures					
		Other					
ICS 209, Page 1 of	* Req	* Required when applicable.					

# **INCIDENT STATUS SUMMARY (ICS 209)**

\*1. Incident Name:

2. Incident Number:

Additional Incident Decision Support Info	ormation					
	A. # This	D. Tetal #		A. # This	D. Tatal #	
*31. Public Status Summary:	Period	B. Total # to Date	*32. Responder Status Summary:	Period	B. Total # to Date	
C. Indicate Number of Civilians (Public) Be	low:		C. Indicate Number of Responders Below:			
D. Fatalities			D. Fatalities			
E. With Injuries/Illness			E. With Injuries/Illness			
F. Trapped/In Need of Rescue	 		F. Trapped/In Need of Rescue			
G. Missing (note if estimated)	 		G. Missing			
H. Evacuated (note if estimated)			H. Sheltering in Place			
I. Sheltering in Place (note if estimated)			I. Have Received Immunizations			
J. In Temporary Shelters (note if est.)			J. Require Immunizations			
K. Have Received Mass Immunizations			K. In Quarantine			
L. Require Immunizations (note if est.)						
M. In Quarantine						
N. Total # Civilians (Public) Affected:			N. Total # Responders Affected:			
33. Life, Safety, and Health Status/Threa	it Remarks	:	*34. Life, Safety, and Health Threat Management:	A. Checł	k if Active	
			A. No Likely Threat	Г	7	
			B Potential Future Threat	Γ	<u></u>	
			C Mass Notifications in Progress		=	
			D. Mass Notifications Completed			
			D. Mass Notifications Completed			
			E. No Evacuation(s) Infinitent			
			F. Planning for Evacuation			
			G. Planning for Shelter-in-Place			
35. Weather Concerns (synopsis of current	nt and predi	icted	H. Evacuation(s) in Progress		<u>_</u>	
weather; discuss related factors that may o	ause conce	ern):	I. Shelter-in-Place in Progress			
			J. Repopulation in Progress			
			K. Mass Immunization in Progress			
			L. Mass Immunization Complete			
			M. Quarantine in Progress	Ľ		
			N. Area Restriction in Effect	E		
				Ľ		
				[	]	
				Г		
				Γ	1	
<ul> <li>36. Projected incident Activity, Potential, Movement, Escalation, or Spread and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes:</li> <li>12 hours:</li> <li>24 hours:</li> <li>48 hours:</li> <li>72 hours:</li> <li>Anticipated after 72 hours:</li> </ul>						
37. Strategic Objectives (define planned	37. Strategic Objectives (define planned end-state for incident):					
ICS 209, Page 2 of		* Required	when applicable.			

# INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:							
Additional Incident Decision Support Information	(continued)							
<b>38. Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond.</b> Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts.								
12 hours:	12 hours:							
24 hours:	24 hours:							
48 hours:								
72 hours:								
Anticipated after 72 hours:								
<b>39. Critical Resource Needs</b> in 12-, 24-, 48-, and 72 category, kind, and/or type, and amount needed, in p	2-hour timeframes and beyond to meet critical incident objectives. List resource riority order:							
12 hours:								
24 hours:								
48 hours:								
72 hours:								
Anticipated after 72 hours:								
<ul> <li>40. Strategic Discussion: Explain the relation of of a 1) critical resource needs identified above,</li> <li>2) the Incident Action Plan and management object 3) anticipated results.</li> <li>Explain major problems and concerns such as oppolitical, economic, or environmental concerns of a second seco</li></ul>	overall strategy, constraints, and current available information to: ctives and targets, perational challenges, incident management problems, and social, r impacts.							
41. Planned Actions for Next Operational Period:								
42. Projected Final Incident Size/Area (use unit lab	el – e.g., "sq mi"):							
43. Anticipated Incident Management Completion	Date:							
44. Projected Significant Resource Demobilization	n Start Date:							
45. Estimated Incident Costs to Date:								
46. Projected Final Incident Cost Estimate:	46. Projected Final Incident Cost Estimate:							
47. Remarks (or continuation of any blocks above –	list block number in notation):							
ICS 209, Page 3 of	* Required when applicable.							

1. Incident Name:

INCIDENT STATUS SUMMARY (ICS 209)					
	2. Incident Number:				
0					

Incident Resource Commitment Summary																				
	49. Resources (summarize resources by category, kind, and/or type; show # of																			
	resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box):									51. Total Personnel										
																			Per a	(includes those
																			ed to	associated
																			<b>ditic</b> igne :e:	– e.g., aircraft
48 Agency or																			<b>Ad</b> ass ourc	or engines –
Organization:																			50. not res	overhead):
												<u> </u>								
52. Total Resources																				
53. Additional Cooperating and Assisting Organizations Not Listed Above:																				
ICS 209. Page of					*	* Red	auire	ed w	hen	ann	licat	ole								

### ICS 209 Incident Status Summary

**Purpose.** The ICS 209 is used for reporting information on significant incidents. It is not intended for every incident, as most incidents are of short duration and do not require scarce resources, significant mutual aid, or additional support and attention. The ICS 209 contains basic information elements needed to support decisionmaking at all levels above the incident to support the incident. Decisionmakers may include the agency having jurisdiction, but also all multiagency coordination system (MACS) elements and parties, such as cooperating and assisting agencies/organizations, dispatch centers, emergency operations centers, administrators, elected officials, and local, tribal, county, State, and Federal agencies. Once ICS 209 information has been submitted from the incident, decisionmakers and others at all incident support and coordination points may transmit and share the information (based on its sensitivity and appropriateness) for access and use at local, regional, State, and national levels as it is needed to facilitate support.

Accurate and timely completion of the ICS 209 is necessary to identify appropriate resource needs, determine allocation of limited resources when multiple incidents occur, and secure additional capability when there are limited resources due to constraints of time, distance, or other factors. The information included on the ICS 209 influences the priority of the incident, and thus its share of available resources and incident support.

The ICS 209 is designed to provide a "snapshot in time" to effectively move incident decision support information where it is needed. It should contain the most accurate and up-to-date information available at the time it is prepared. However, readers of the ICS 209 may have access to more up-to-date or real-time information in reference to certain information elements on the ICS 209. Coordination among communications and information management elements within ICS and among MACS should delineate authoritative sources for more up-to-date and/or real-time information when ICS 209 information becomes outdated in a quickly evolving incident.

**Reporting Requirements.** The ICS 209 is intended to be used when an incident reaches a certain threshold where it becomes significant enough to merit special attention, require additional resource support needs, or cause media attention, increased public safety threat, etc. Agencies or organizations may set reporting requirements and, therefore, ICS 209s should be completed according to each jurisdiction or discipline's policies, mobilization guide, or preparedness plans. It is recommended that consistent ICS 209 reporting parameters be adopted and used by jurisdictions or disciplines for consistency over time, documentation, efficiency, trend monitoring, incident tracking, etc.

For example, an agency or MAC (Multiagency Coordination) Group may require the submission of an initial ICS 209 when a new incident has reached a certain predesignated level of significance, such as when a given number of resources are committed to the incident, when a new incident is not completed within a certain timeframe, or when impacts/threats to life and safety reach a given level.

Typically, ICS 209 forms are completed either once daily or for each operational period – in addition to the initial submission. Jurisdictional or organizational guidance may indicate frequency of ICS 209 submission for particular definitions of incidents or for all incidents. This specific guidance may help determine submission timelines when operational periods are extremely short (e.g., 2 hours) and it is not necessary to submit new ICS 209 forms for all operational periods.

Any plans or guidelines should also indicate parameters for when it is appropriate to stop submitting ICS 209s for an incident, based upon incident activity and support levels.

**Preparation.** When an Incident Management Organization (such as an Incident Management Team) is in place, the Situation Unit Leader or Planning Section Chief prepares the ICS 209 at the incident. On other incidents, the ICS 209 may be completed by a dispatcher in the local communications center, or by another staff person or manager. This form should be completed at the incident or at the closest level to the incident.

The ICS 209 should be completed with the best possible, currently available, and verifiable information at the time it is completed and signed.

This form is designed to serve incidents impacting specific geographic areas that can easily be defined. It also has the flexibility for use on ubiquitous events, or those events that cover extremely large areas and that may involve many jurisdictions and ICS organizations. For these incidents, it will be useful to clarify on the form exactly which portion of the larger incident the ICS 209 is meant to address. For example, a particular ICS 209 submitted during a statewide outbreak of mumps may be relevant only to mumps-related activities in Story County, Iowa. This can be indicated in both the incident name, Block 1, and in the Incident Location Information section in Blocks 16–26.

While most of the "Incident Location Information" in Blocks 16–26 is optional, the more information that can be submitted, the better. Submission of multiple location indicators increases accuracy, improves interoperability, and increases information sharing between disparate systems. Preparers should be certain to follow accepted protocols or standards when entering location information, and clearly label all location information. As with other ICS 209 data, geospatial information may be widely shared and utilized, so accuracy is essential.

If electronic data is submitted with the ICS 209, do not attach or send extremely large data files. Incident geospatial data that is distributed with the ICS 209 should be in simple incident geospatial basics, such as the incident perimeter, point of origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. Any attached data should be clearly labeled as to format content and collection time, and should follow existing naming conventions and standards.

**Distribution.** ICS 209 information is meant to be completed at the level as close to the incident as possible, preferably at the incident. Once the ICS 209 has been submitted outside the incident to a dispatch center or MACS element, it may subsequently be transmitted to various incident supports and coordination entities based on the support needs and the decisions made within the MACS in which the incident occurs.

Coordination with public information system elements and investigative/intelligence information organizations at the incident and within MACS is essential to protect information security and to ensure optimal information sharing and coordination. There may be times in which particular ICS 209s contain sensitive information that should not be released to the public (such as information regarding active investigations, fatalities, etc.). When this occurs, the ICS 209 (or relevant sections of it) should be labeled appropriately, and care should be taken in distributing the information within MACS.

All completed and signed original ICS 209 forms MUST be given to the incident's Documentation Unit and/or maintained as part of the official incident record.

- To promote flexibility, only a limited number of ICS 209 blocks are typically required, and most of those are required only when applicable.
- Most fields are optional, to allow responders to use the form as best fits their needs and protocols for information collection.
- For the purposes of the ICS 209, responders are those personnel who are assigned to an incident or who are a part of the response community as defined by NIMS. This may include critical infrastructure owners and operators, nongovernmental and nonprofit organizational personnel, and contract employees (such as caterers), depending on local/jurisdictional/discipline practices.
- For additional flexibility only pages 1–3 are numbered, for two reasons:
- Possible submission of additional pages for the Remarks Section (Block 47), and
- Possible submission of additional copies of the fourth/last page (the "Incident Resource Commitment Summary") to provide a more detailed resource summary.

Block Number	Block Title	Instructions
*1	Incident Name	<ul> <li>REQUIRED BLOCK.</li> <li>Enter the full name assigned to the incident.</li> <li>Check spelling of the full incident name.</li> <li>For an incident that is a Complex, use the word "Complex" at the end of the incident name.</li> <li>If the name changes, explain comments in Remarks, Block 47.</li> <li>Do not use the same incident name for different incidents in the same calendar year.</li> </ul>

Block Number	Block Title	Instructions
2	Incident Number	<ul> <li>Enter the appropriate number based on current guidance. The incident number may vary by jurisdiction and discipline.</li> <li>Examples include: <ul> <li>A computer-aided dispatch (CAD) number.</li> <li>An accounting number.</li> <li>A county number.</li> <li>A combination of the State, unit/agency ID, and a dispatch system number.</li> <li>A mission number.</li> <li>A mission number.</li> <li>Any other unique number assigned to the incident and derived by means other than those above.</li> </ul> </li> <li>Make sure the number entered is correct.</li> <li>Do not use the same incident number for two different incidents in the same calendar year.</li> <li>Incident numbers assigned by agencies represented in Unified Command should be listed, or indicated in Remarks, Block 47.</li> </ul>
*3	Report Version (check one box on left)	<ul> <li>REQUIRED BLOCK.</li> <li>This indicates the current version of the ICS 209 form being submitted.</li> <li>If only one ICS 209 will be submitted, check BOTH "Initial" and "Final" (or check only "Final").</li> </ul>
	🔲 Initial	Check "Initial" if this is the first ICS 209 for this incident.
	Update	Check "Update" if this is a subsequent report for the same incident. These can be submitted at various time intervals (see "Reporting Requirements" above).
	Final	<ul> <li>Check "Final" if this is the last ICS 209 to be submitted for this incident (usually when the incident requires only minor support that can be supplied by the organization having jurisdiction).</li> <li>Incidents may also be marked as "Final" if they become part of a new Complex (when this occurs, it can be indicated in Remarks, Block 47).</li> </ul>
	Report # (if used)	Use this optional field if your agency or organization requires the tracking of ICS 209 report numbers. Agencies may also track the ICS 209 by the date/time submitted.
*4	Incident Commander(s) & Agency or Organization	<ul> <li>REQUIRED BLOCK.</li> <li>Enter both the first and last name of the Incident Commander.</li> <li>If the incident is under a Unified Command, list all Incident Commanders by first initial and last name separated by a comma, including their organization. For example: <ul> <li>L. Burnett – Minneapolis FD, R. Domanski – Minneapolis PD,</li> </ul> </li> </ul>
		C. Taylor – St. Paul PD, Y. Martin – St. Paul FD, S. McIntyre – U.S. Army Corps, J. Hartl – NTSB
5	Incident Management Organization	Indicate the incident management organization for the incident, which may be a Type 1, 2, or 3 Incident Management Team (IMT), a Unified Command, a Unified Command with an IMT, etc. This block should not be completed unless a recognized incident management organization is assigned to the incident.

Block Number	Block Title	Instructions
*6	Incident Start Date/Time	<b>REQUIRED.</b> This is always the start date and time of the incident (not the report date and time or operational period).
	Date	Enter the start date (month/day/year).
	Time	Enter the start time (using the 24-hour clock).
	Time Zone	Enter the time zone of the incident (e.g., EDT, PST).
7	Current Incident Size or Area Involved (use unit label – e.g., "sq mi," "city block")	<ul> <li>Enter the appropriate incident descriptive size or area involved (acres, number of buildings, square miles, hectares, square kilometers, etc.).</li> <li>Enter the total area involved for incident Complexes in this block, and list each sub-incident and size in Remarks (Block 47).</li> <li>Indicate that the size is an estimate, if a more specific figure is not available.</li> <li>Incident size may be a population figure rather than a geographic figure, depending on the incident definition and objectives.</li> <li>If the incident involves more than one jurisdiction or mixed ownership, agencies/organizations may require listing a size breakdown by organization, or including this information in Remarks (Block 47).</li> <li>The incident may be one part of a much larger event (refer to introductory instructions under "Preparation). Incident size/area depends on the area actively managed within the incident objectives and incident operations, and may also be defined by a delegation of authority or letter of expectation outlining management bounds.</li> </ul>
8	Percent (%) Contained or Completed (circle one)	<ul> <li>Enter the percent that this incident is completed or contained (e.g., 50%), with a % label.</li> <li>For example, a spill may be 65% contained, or flood response objectives may be 50% met.</li> </ul>
*9	Incident Definition	REQUIRED BLOCK.
		Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire," "bridge collapse," "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	Incident Complexity Level	Identify the incident complexity level as determined by Unified/Incident Commanders, if available or used.
*11	For Time Period	<ul> <li>REQUIRED BLOCK.</li> <li>Enter the time interval for which the form applies. This period should include all of the time since the last ICS 209 was submitted, or if it is the initial ICS 209, it should cover the time lapsed since the incident started.</li> <li>The time period may include one or more operational periods, based on agency/organizational reporting requirements.</li> </ul>
	From Date/Time	<ul> <li>Enter the start date (month/day/year).</li> <li>Enter the start time (using the 24-hour clock).</li> </ul>
	To Date/Time	<ul><li>Enter the end date (month/day/year).</li><li>Enter the end time (using the 24-hour clock).</li></ul>

Block Number	Block Title	Instructions						
APPROVAL	& ROUTING INFORMATION	N						
*12	Prepared By	REQUIRED BLOCK.						
		When an incident management organization is in place, this would be the Situation Unit Leader or Planning Section Chief at the incident. On other incidents, it could be a dispatcher in the local emergency communications center, or another staff person or manager.						
	Print Name	Print the name of the person preparing the form.						
	ICS Position	The ICS title of the person preparing the form (e.g., "Situation Unit Leader").						
	Date/Time Prepared	Enter the date (month/day/year) and time (using the 24-hour clock) the form was prepared. Enter the time zone if appropriate.						
*13	Date/Time Submitted	REQUIRED.						
		Enter the submission date (month/day/year) and time (using the 24-hour clock).						
	Time Zone	Enter the time zone from which the ICS 209 was submitted (e.g., EDT, PST).						
*14	Approved By	REQUIRED.						
		When an incident management organization is in place, this would be the Planning Section Chief or Incident Commander at the incident. On other incidents, it could be the jurisdiction's dispatch center manager, organizational administrator, or other manager.						
	Print Name	Print the name of the person approving the form.						
	ICS Position	The position of the person signing the ICS 209 should be entered (e.g., "Incident Commander").						
	Signature	Signature of the person approving the ICS 209, typically the Incident Commander. The original signed ICS 209 should be maintained with other incident documents.						
*15	Primary Location,	REQUIRED BLOCK.						
	Organization, or Agency Sent To	Enter the appropriate primary location or office the ICS 209 was sent to apart from the incident. This most likely is the entity or office that ordered the incident management organization that is managing the incident. This may be a dispatch center or a MACS element such as an emergency operations center. If a dispatch center or other emergency center prepared the ICS 209 for the incident, indicate where it was submitted initially.						
INCIDENT L	OCATION INFORMATION							
<ul> <li>Much of increases</li> <li>As with a a variety parties o</li> <li>Be certai informati</li> <li>Incident I where the second s</li></ul>	the "Incident Location Informa s accuracy, and improves inte of systems. Location and/or utside the incident. n to follow accepted protocols on, and clearly label all location ocation information is usually e incident jurisdiction is.	ation" in Blocks 16–26 is optional, but completing as many fields as possible properability and information sharing between disparate systems. acy is essential because the information may be widely distributed and used in geospatial data may be used for maps, reports, and analysis by multiple s, conventions, or standards where appropriate when submitting location on information. based on the point of origin of the incident, and the majority of the area						
*16	State	REQUIRED BLOCK WHEN APPLICABLE.						
		<ul> <li>Enter the State where the incident originated.</li> <li>If other States or jurisdictions are involved, enter them in Block 25 or Block 44.</li> </ul>						

Block Number	Block Title	Instructions
*17	County / Parish / Borough	<ul> <li>REQUIRED BLOCK WHEN APPLICABLE.</li> <li>Enter the county, parish, or borough where the incident originated.</li> <li>If other counties or jurisdictions are involved, enter them in Block 25 or Block 47.</li> </ul>
*18	City	REQUIRED BLOCK WHEN APPLICABLE.
		<ul> <li>Enter the city where the incident originated.</li> <li>If other cities or jurisdictions are involved, enter them in Block 25 or Block 47.</li> </ul>
19	Unit or Other	Enter the unit, sub-unit, unit identification (ID) number or code (if used), or other information about where the incident originated. This may be a local identifier that indicates primary incident jurisdiction or responsibility (e.g., police, fire, public works, etc.) or another type of organization. Enter specifics in Block 25.
*20	Incident Jurisdiction	REQUIRED BLOCK WHEN APPLICABLE.
		Enter the jurisdiction where the incident originated (the entry may be general, such as Federal, city, or State, or may specifically identify agency names such as Warren County, U.S. Coast Guard, Panama City, NYPD).
21	Incident Location Ownership (if different than jurisdiction)	<ul> <li>When relevant, indicate the ownership of the area where the incident originated, especially if it is different than the agency having jurisdiction.</li> <li>This may include situations where jurisdictions contract for emergency services, or where it is relevant to include ownership by private entities, such as a large industrial site.</li> </ul>
22	<ul> <li>22. Longitude (indicate format):</li> <li>Latitude (indicate format):</li> </ul>	<ul> <li>Enter the longitude and latitude where the incident originated, if available and normally used by the authority having jurisdiction for the incident.</li> <li>Clearly label the data, as longitude and latitude can be derived from various sources. For example, if degrees, minutes, and seconds are used, label as "33 degrees, 45 minutes, 01 seconds."</li> </ul>
23	US National Grid Reference	<ul> <li>Enter the US National Grid (USNG) reference where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident.</li> <li>Clearly label the data.</li> </ul>
24	Legal Description (township, section, range)	<ul> <li>Enter the legal description where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident.</li> <li>Clearly label the data (e.g., N 1/2 SE 1/4, SW 1/4, S24, T32N, R18E).</li> </ul>
*25	Short Location or Area Description (list all affected areas or a reference point)	<ul> <li>REQUIRED BLOCK.</li> <li>List all affected areas as described in instructions for Blocks 16–24 above, OR summarize a general location, OR list a reference point for the incident (e.g., "the southern third of Florida," "in ocean 20 miles west of Catalina Island, CA," or "within a 5 mile radius of Walden, CO").</li> <li>This information is important for readers unfamiliar with the area (or with other location identification systems) to be able to quickly identify the general location of the incident on a map.</li> <li>Other location information may also be listed here if needed or relevant for incident support (e.g., base meridian).</li> </ul>
26	UTM Coordinates	Indicate Universal Transverse Mercator reference coordinates if used by the discipline or jurisdiction.

Block Number	Block Title	Instructions
27	Note any electronic geospatial data included or attached (indicate data format, content, and collection time information and labels)	<ul> <li>Indicate whether and how geospatial data is included or attached.</li> <li>Utilize common and open geospatial data standards.</li> <li>WARNING: Do not attach or send extremely large data files with the ICS 209. Incident geospatial data that is distributed with the ICS 209 should be simple incident geospatial basics, such as the incident perimeter, origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically.</li> <li>NOTE: Clearly indicate data content. For example, data may be about an incident perimeter (such as a shape file), the incident origin (a point), a point and radius (such as an evacuation zone), or a line or lines (such as a pipeline).</li> <li>NOTE: Indicate the data format (e.g., .shp, .kml, .kmz, or .gml file) and any relevant information about projection, etc.</li> <li>NOTE: Include a hyperlink or other access information if incident map data is posted online or on an FTP (file transfer protocol) site to facilitate downloading and minimize information requests.</li> <li>NOTE: Include a point of contact for getting geospatial incident information, if included in the ICS 209 or available and supporting the incident.</li> </ul>
INCIDENT S	SUMMARY	
*28	Significant Events for the Time Period Reported (summarize significant progress made, evacuations, incident growth, etc.)	<ul> <li>REQUIRED BLOCK.</li> <li>Describe significant events that occurred during the period being reported in Block 6. Examples include: <ul> <li>Road closures.</li> <li>Evacuations.</li> <li>Progress made and accomplishments.</li> <li>Incident command transitions.</li> <li>Repopulation of formerly evacuated areas and specifics.</li> <li>Containment.</li> </ul> </li> <li>Refer to other blocks in the ICS 209 when relevant for additional information (e.g., "Details on evacuations may be found in Block 33"), or in Remarks, Block 47.</li> <li>Be specific and detailed in reference to events. For example, references to road closures should include road number and duration of closure (or include further detail in Block 33). Use specific metrics if needed, such as the number of people or animals evacuated, or the amount of a material spilled and/or recovered.</li> <li>This block may be used for a single-paragraph synopsis of overall incident status.</li> </ul>
29	Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.)	<ul> <li>When relevant, enter the appropriate primary materials, fuels, or other hazards involved in the incident that are leaking, burning, infecting, or otherwise influencing the incident.</li> <li>Examples include hazardous chemicals, wildland fuel models, biohazards, explosive materials, oil, gas, structural collapse, avalanche activity, criminal activity, etc.</li> </ul>
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.

Block Number	Block Title	Instructions				
30	Damage Assessment Information (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.)	<ul> <li>Include a short summary of damage or use/access restrictions/ limitations caused by the incident for the reporting period, and cumulatively.</li> <li>Include if needed any information on the facility status, such as operational status, if it is evacuated, etc. when needed.</li> <li>Include any critical infrastructure or key resources damaged/destroyed/ impacted by the incident, the kind of infrastructure, and the extent of damage and/or impact and any known cascading impacts.</li> <li>Refer to more specific or detailed damage assessment forms and packages when they are used and/or relevant.</li> </ul>				
	A. Structural Summary	Complete this table as needed based on the definitions for 30B–F below. Note in table or in text block if numbers entered are estimates or are confirmed. Summaries may also include impact to Shoreline and Wildlife, etc.				
	B. # Threatened (72 hrs)	Enter the number of structures potentially threatened by the incident within the next 72 hours, based on currently available information.				
	C. # Damaged	Enter the number of structures damaged by the incident.				
	D. # Destroyed	Enter the number of structures destroyed beyond repair by the incident.				
	E. Single Residences	Enter the number of single dwellings/homes/units impacted in Columns 30B–D. Note any specifics in the text block if needed, such as type of residence (apartments, condominiums, single-family homes, etc.).				
	F. Nonresidential Commercial Properties	Enter the number of buildings or units impacted in Columns 30B–D. This includes any primary structure used for nonresidential purposes, excluding Other Minor Structures (Block 30G). Note any specifics regarding building or unit types in the text block.				
	Other Minor Structures	Enter any miscellaneous structures impacted in Columns 30B–D not covered in 30E–F above, including any minor structures such as booths, sheds, or outbuildings.				
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.				
Block Number	Block Title	Instructions				
-----------------	---	--	--	--	--	--
ADDITIONA	ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (PAGE 2)					
*31	Public Status Summary	<ul> <li>This section is for summary information regarding incident-related injuries, illness, and fatalities for civilians (or members of the public); see 31C–N below.</li> <li>Explain or describe the nature of any reported injuries, illness, or other activities in Life, Safety, and Health Status/Threat Remarks (Block 33).</li> <li>Illnesses include those that may be caused through a biological event such as an epidemic or an exposure to toxic or radiological substances.</li> <li><u>NOTE</u>: Do not estimate any fatality information.</li> <li><u>NOTE</u>: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change.</li> <li><u>NOTE</u>: Do not complete this block if the incident covered by the ICS 209 is <i>not directly responsible</i> for these actions (such as evacuations, sheltering, immunizations, etc.) <i>even if they are related to the incident</i>.</li> <li>Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports.</li> <li>For example, if managing evacuation shelters is part of the incident operation itself, do include these numbers in Block 31J with any notes in Block 33.</li> <li><u>NOTE</u>: When providing an estimated value, denote in parenthesis: "est."</li> </ul>				
		<ul> <li>Handling Sensitive Information</li> <li>Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions.</li> <li>Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.</li> </ul>				
	A. # This Reporting Period	Enter the total number of individuals impacted in each category for this reporting period (since the previous ICS 209 was submitted).				
	B. Total # to Date	<ul> <li>Enter the total number of individuals impacted in each category for the entire duration of the incident.</li> <li>This is a cumulative total number that should be adjusted each reporting period.</li> </ul>				
	C. Indicate Number of Civilians (Public) Below	<ul> <li>For lines 31D–M below, enter the number of civilians affected for each category.</li> <li>Indicate if numbers are estimates, for those blocks where this is an option.</li> <li>Civilians are those members of the public who are affected by the incident, but who are not included as part of the response effort through Unified Command partnerships and those organizations and agencies assisting and cooperating with response efforts.</li> </ul>				
	D. Fatalities	<ul> <li>Enter the number of <i>confirmed</i> civilian/public fatalities.</li> <li>See information in introductory instructions ("Distribution") and in Block 31 instructions regarding sensitive handling of fatality information.</li> </ul>				

Block Number	Block Title	Instructions				
	E. With Injuries/Illness	Enter the number of civilian/public injuries or illnesses directly related to the incident. Injury or illness is defined by the incident or jurisdiction(s).				
* <b>31</b> (continued)	F. Trapped/In Need of Rescue	Enter the number of civilians who are trapped or in need of rescue due to the incident.				
	G. Missing (note if estimated)	Enter the number of civilians who are missing due to the incident. Indicate if an estimate is used.				
	H. Evacuated (note if estimated)	Enter the number of civilians who are evacuated due to the incident. These are likely to be best estimates, but indicate if they are estimated.				
	I. Sheltering-in-Place (note if estimated)	Enter the number of civilians who are sheltering in place due to the incident. Indicate if estimates are used.				
	J. In Temporary Shelters (note if estimated)	Enter the number of civilians who are in temporary shelters as a direct result of the incident, noting if the number is an estimate.				
	K. Have Received Mass Immunizations	Enter the number of civilians who have received mass immunizations due to the incident and/or as part of incident operations. Do not estimate.				
	L. Require Mass Immunizations (note if estimated)	Enter the number of civilians who require mass immunizations due to the incident and/or as part of incident operations. Indicate if it is an estimate.				
	M. In Quarantine	Enter the number of civilians who are in quarantine due to the incident and/or as part of incident operations. Do not estimate.				
	N. Total # Civilians (Public) Affected	Enter sum totals for Columns 31A and 31B for Rows 31D–M.				
*32	Responder Status Summary	<ul> <li>This section is for summary information regarding incident-related injuries, illness, and fatalities for responders; see 32C–N.</li> <li>Illnesses include those that may be related to a biological event such as an epidemic or an exposure to toxic or radiological substances directly in relation to the incident.</li> <li>Explain or describe the nature of any reported injuries, illness, or other activities in Block 33.</li> <li><u>NOTE</u>: Do not estimate any fatality information or responder status information.</li> <li><u>NOTE</u>: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change.</li> <li>NOTE: Do not complete this block if the incident covered by the ICS 209 is not directly responsible for these actions (such as evacuations, sheltering, immunizations, etc.) even if they are related to the incident. Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports.</li> </ul>				
		<ul> <li>Handling Sensitive Information</li> <li>Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions.</li> <li>Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.</li> </ul>				

Block Number	Block Title	Instructions				
* <b>32</b> (continued)	A. # This Reporting Period	Enter the total number of responders impacted in each category for this reporting period (since the previous ICS 209 was submitted).				
	B. Total # to Date	<ul> <li>Enter the total number of individuals impacted in each category for the <i>entire duration</i> of the incident.</li> <li>This is a <i>cumulative</i> total number that should be adjusted each reporting period.</li> </ul>				
	C. Indicate Number of Responders Below	<ul> <li>For lines 32D–M below, enter the number of responders relevant for each category.</li> <li>Responders are those personnel included as part of Unified Command partnerships and those organizations and agencies assisting and cooperating with response efforts.</li> </ul>				
	D. Fatalities	<ul> <li>Enter the number of <i>confirmed</i> responder fatalities.</li> <li>See information in introductory instructions ("Distribution") and for Block 32 regarding sensitive handling of fatality information.</li> </ul>				
	E. With Injuries/Illness	<ul> <li>Enter the number of incident responders with serious injuries or illnesses due to the incident.</li> <li>For responders, serious injuries or illness are typically those in which the person is unable to continue to perform in his or her incident assignment, but the authority having jurisdiction may have additional guidelines on reporting requirements in this area.</li> </ul>				
	F. Trapped/In Need Of Rescue	Enter the number of incident responders who are in trapped or in need of rescue due to the incident.				
	G. Missing	Enter the number of incident responders who are missing due to incident conditions.				
	Н.	(BLANK; use however is appropriate.)				
	I. Sheltering in Place	Enter the number of responders who are sheltering in place due to the incident. Once responders become the victims, this needs to be noted in Block 33 or Block 47 and handled accordingly.				
	J.	(BLANK; use however is appropriate.)				
	L. Require Immunizations	Enter the number of responders who require immunizations due to the incident and/or as part of incident operations.				
	M. In Quarantine	Enter the number of responders who are in quarantine as a direct result of the incident and/or related to incident operations.				
	N. Total # Responders Affected	Enter sum totals for Columns 32A and 32B for Rows 32D–M.				
33	Life, Safety, and Health Status/Threat Remarks	<ul> <li>Enter any details needed for Blocks 31, 32, and 34. Enter any specific comments regarding illness, injuries, fatalities, and threat management for this incident, such as whether estimates were used for numbers given in Block 31.</li> <li>This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change.</li> <li>Evacuation information can be very sensitive to local residents and officials. Be accurate in the assessment.</li> <li>Clearly note primary responsibility and contacts for any activities or information in Blocks 31, 32, and 34 that may be caused by the incident, but that are being managed and/or reported by other parties.</li> <li>Provide additional explanation or information as relevant in Blocks 28, 36, 38, 40, 41, or in Remarks (Block 47).</li> </ul>				

Block Number	Block Title	Instructions				
*34	Life, Safety, and Health Threat Management	Note any details in Life, Safety, and Health Status/Threat Remarks (Block 33), and provide additional explanation or information as relevant in Blocks 28, 36, 38, 40, 41, or in Remarks (Block 47). Additional pages may be necessary for notes.				
	A. Check if Active	Check any applicable blocks in 34C–P based on currently available information regarding incident activity and potential.				
	B. Notes	Note any specific details, or include in Block 33.				
	C. No Likely Threat	Check if there is no likely threat to life, health, and safety.				
	D. Potential Future Threat	Check if there is a potential future threat to life, health, and safety.				
	E. Mass Notifications In Progress	<ul> <li>Check if there are any mass notifications in progress regarding emergency situations, evacuations, shelter in place, or other public safety advisories related to this incident.</li> <li>These may include use of threat and alert systems such as the Emergency Alert System or a "reverse 911" system.</li> <li>Please indicate the areas where mass notifications have been completed (e.g., "mass notifications to ZIP codes 50201, 50014, 50010, 50011," or "notified all residents within a 5-mile radius of Gatlinburg").</li> </ul>				
	F. Mass Notifications Completed	Check if actions referred to in Block 34E above have been completed.				
	G. No Evacuation(s) Imminent	Check if evacuations are not anticipated in the near future based on current information.				
	H. Planning for Evacuation	Check if evacuation planning is underway in relation to this incident.				
	I. Planning for Shelter-in- Place	Check if planning is underway for shelter-in-place activities related to this incident.				
	J. Evacuation(s) in Progress	Check if there are active evacuations in progress in relation to this incident.				
	K. Shelter-In-Place in Progress	Check if there are active shelter-in-place actions in progress in relation to this incident.				
	L. Repopulation in Progress	Check if there is an active repopulation in progress related to this incident.				
	M. Mass Immunization in Progress	Check if there is an active mass immunization in progress related to this incident.				
	N. Mass Immunization Complete	Check if a mass immunization effort has been completed in relation to this incident.				
	O. Quarantine in Progress	Check if there is an active quarantine in progress related to this incident.				
	P. Area Restriction in Effect	Check if there are any restrictions in effect, such as road or area closures, especially those noted in Block 28.				

Block Number	Block Title	Instructions				
35	Weather Concerns (synopsis of current and predicted weather; discuss related factors that may cause concern)	<ul> <li>Complete a short synopsis/discussion on significant weather factors that could cause concerns for the incident when relevant.</li> <li>Include current and/or predicted weather factors, and the timeframe for predictions.</li> <li>Include relevant factors such as: <ul> <li>Wind speed (label units, such as mph).</li> <li>Wind direction (clarify and label where wind is coming from and going to in plain language – e.g., "from NNW," "from E," or "from SW").</li> <li>Temperature (label units, such as F).</li> <li>Relative humidity (label %).</li> <li>Watches.</li> <li>Warnings.</li> <li>Tides.</li> <li>Currents.</li> </ul> </li> <li>Any other weather information relative to the incident, such as flooding, hurricanes, etc.</li> </ul>				
36	Projected Incident Activity, Potential, Movement, Escalation, or Spread and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes 12 hours 24 hours 24 hours 72 hours Anticipated after 72 hours	<ul> <li>Provide an estimate (when it is possible to do so) of the direction/scope in which the incident is expected to spread, migrate, or expand during the next indicated operational period, or other factors that may cause activity changes.</li> <li>Discuss incident potential relative to values at risk, or values to be protected (such as human life), and the potential changes to those as the incident changes.</li> <li>Include an estimate of the acreage or area that will likely be affected.</li> <li>If known, provide the above information in 12-, 24-, 48- and 72-hour timeframes, and any activity anticipated after 72 hours.</li> </ul>				
37	Strategic Objectives (define planned end-state for incident)	Briefly discuss the desired outcome for the incident based on currently available information. Note any high-level objectives and any possible strategic benefits as well (especially for planned events).				

Block Number	Block Title	Instructions			
ADDITIONA	ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (continued) (PAGE 3)				
38	Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond. Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident- related potential economic or cascading impacts. 12 hours 24 hours 48 hours 72 hours Anticipated after 72 hours	Summarize major or significant threats due to incident activity based on currently available information. Include a breakdown of threats in terms of 12-, 24-, 48-, and 72-hour timeframes.			

Block Number	Block Title	Instructions				
39	Critical Resource Needs in 12-, 24-, 48-, and 72- hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order: 12 hours 24 hours 24 hours 72 hours Anticipated after 72 hours	<ul> <li>List the specific critical resources and numbers needed, in order of priority. <i>Be specific as to the need</i>.</li> <li>Use plain language and common terminology for resources, and indicate resource category, kind, and type (if available or known) to facilitate incident support.</li> <li>If critical resources are listed in this block, there should be corresponding orders placed for them through appropriate resource ordering channels.</li> <li>Provide critical resource needs in 12-, 24-, 48- and 72-hour increments. List the most critical resources needed for each timeframe, if needs have been identified for each timeframe. Listing critical resources by the time they are needed gives incident support personnel a "heads up" for shortrange planning, and assists the ordering process to ensure these resources will be in place when they are needed.</li> <li>More than one resource need may be listed for each timeframe. For example, a list could include: <ul> <li><u>24 hrs</u>: 3 Type 2 firefighting helicopters, 2 Type I Disaster Medical Assistance Teams</li> <li><u>48 hrs</u>: Mobile Communications Unit (Law/Fire)</li> <li><u>After 72 hrs</u>: 1 Type 2 Incident Management Team</li> </ul> </li> <li>Documentation in the ICS 209 can help the incident obtain critical regional or national resources, including Blocks 28, 29, 31–38, and 40–42.</li> <li>Additional comments in the Remarks section (Block 47) can also help explain what the incident is requesting and why it is critical (for example, "Type 2 Incident Management Team is needed in three days to transition command when the current Type 2 Team times out".</li> </ul>				
40	Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to: 1) critical resource needs	<ul> <li>Wording should be consistent with Block 39 to justify critical resource needs, which should relate to planned actions in the Incident Action Plan.</li> <li>Give a short assessment of the likelihood of meeting the incident management targets, given the current management strategy and currently known constraints.</li> <li>Identify when the chosen management strategy will succeed given the gurrent constraints.</li> </ul>				
	2) the Incident Action Plan and management objectives and targets,	<ul> <li>Current constraints. Adjust the anticipated incident management completion target in Block 43 as needed based on this discussion.</li> <li>Explain major problems and concerns as indicated.</li> </ul>				
	3) anticipated results.					
	Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.					

Block Number	Block Title	Instructions				
41	Planned Actions for Next Operational Period	<ul> <li>Provide a short summary of actions planned for the next operational period.</li> <li>Examples:         <ul> <li>"The current Incident Management Team will transition out to a replacement IMT."</li> <li>"Continue to review operational/ engineering plan to facilitate removal of the partially collapsed west bridge supports."</li> <li>"Continue refining mapping of the recovery operations and damaged assets using GPS."</li> <li>"Initiate removal of unauthorized food vendors."</li> </ul> </li> </ul>				
42	Projected Final Incident Size/Area (use unit label – e.g., "sq mi")	<ul> <li>Enter an estimate of the total area likely to be involved or affected over the course of the incident.</li> <li>Label the estimate of the total area or population involved, affected, or impacted with the relevant units such as acres, hectares, square miles, etc.</li> <li>Note that total area involved may not be limited to geographic area (see previous discussions regarding incident definition, scope, operations, and objectives). Projected final size may involve a population rather than a geographic area.</li> </ul>				
43	Anticipated Incident Management Completion Date	<ul> <li>Enter the date (month/day/year) at which time it is expected that incident objectives will be met. This is often explained similar to incident containment or control, or the time at which the incident is expected to be closed or when significant incident support will be discontinued.</li> <li>Avoid leaving this block blank if possible, as this is important information for managers.</li> </ul>				
44	Projected Significant Resource Demobilization Start Date	Enter the date (month/day/year) when initiation of significant resource demobilization is anticipated.				
45	Estimated Incident Costs to Date	<ul> <li>Enter the estimated total incident costs to date for the entire incident based on currently available information.</li> <li>Incident costs include estimates of all costs for the response, including all management and support activities per discipline, agency, or organizational guidance and policy.</li> <li>This does not include damage assessment figures, as they are impacts from the incident and not response costs.</li> <li>If costs decrease, explain in Remarks (Block 47).</li> <li>If additional space is required, please add as an attachment.</li> </ul>				
46	Projected Final Incident Cost Estimate	<ul> <li>Enter an estimate of the total costs for the incident once all costs have been processed based on current spending and projected incident potential, per discipline, agency, or organizational guidance and policy. This is often an estimate of daily costs combined with incident potential information.</li> <li>This does not include damage assessment figures, as they are impacts from the incident and not response costs.</li> <li>If additional space is required, please add as an attachment.</li> </ul>				

Block Number	Block Title	Instructions		
47	Remarks (or continuation of any blocks above – list block number in notation)	<ul> <li>Use this block to expand on information that has been entered in previous blocks, or to include other pertinent information that has not been previously addressed.</li> <li>List the block number for any information continued from a previous block.</li> <li>Additional information may include more detailed weather information, specifics on injuries or fatalities, threats to critical infrastructure or other resources, more detailed evacuation site locations and number of evacuated, information or details regarding incident cause, etc.</li> <li>For Complexes that include multiple incidents, list all sub-incidents included in the Complex.</li> <li>List jurisdictional or ownership breakdowns if needed when an incident is in more than one jurisdiction and/or ownership area. Breakdown may be:</li> <li>By size (e.g., 35 acres in City of Gatlinburg, 250 acres in Great Smoky Mountains), and/or</li> <li>By geography (e.g., incident area on the west side of the river is in jurisdiction; river is joint jurisdiction with USACE).</li> <li>Explain any reasons for incident size reductions or adjustments (e.g., reduction in acreage due to more accurate mapping).</li> <li>This section can also be used to list any additional information about the incident that may be needed by incident support mechanisms outside the incident itself. This may be basic information needed through multiagency coordination systems or public information systems (e.g., a public information phone number for the incident, or the incident Web site address).</li> <li>Attach additional pages if it is necessary to include additional comments in the Remarks section.</li> </ul>		
INCIDENT F	RESOURCE COMMITMENT	SUMMARY (PAGE 4)		
<ul> <li>This last/fourth page of the ICS 209 can be copied and used if needed to accommodate additional resources, agencies, or organizations. Write the actual page number on the pages as they are used.</li> <li>Include only resources that have been assigned to the incident and that have arrived and/or been checked in to the incident. Do not include resources that have been ordered but have <i>not</i> yet arrived.</li> </ul>				

- When there are large numbers of responders, it may be helpful to group agencies or organizations together. Use the approach that works best for the multiagency coordination system applicable to the incident. For example,
  - Group State, local, county, city, or Federal responders together under such headings, or
     Group resources from one jurisdiction together and list only individual jurisdictions (e.g., list the public works, police, and fire department resources for a city under that city's name).
- On a large incident, it may also be helpful to group similar categories, kinds, or types of resources together for this summary.

Block Number	Block Title	Instructions				
48	Agency or Organization	<ul> <li>List the agencies or organizations contributing resources to the incident as responders, through mutual aid agreements, etc.</li> <li>List agencies or organizations using clear language so readers who may not be from the discipline or host jurisdiction can understand the information.</li> <li>Agencies or organizations may be listed individually or in groups.</li> <li>When resources are grouped together, individual agencies or organizations may be listed below in Block 53.</li> <li>Indicate in the rows under Block 49 how many resources are assigned to the incident under each resource identified.</li> <li>These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box.</li> <li>For example: <ul> <li><i>Resource:</i> Type 2 Helicopters 3/8 (indicates 3 aircraft, 8 personnel).</li> <li>Indicate in the rows under Block 51 the total number of personnel assigned for each agency listed under Block 48, including both individual overhead and those associated with other resources such as fire engines, decontamination units, etc.</li> </ul> </li> </ul>				
49	Resources (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box)	<ul> <li>List resources using clear language when possible – so ICS 209 readers who may not be from the discipline or host jurisdiction can understand the information.</li> <li>Examples: Type 1 Fire Engines, Type 4 Helicopters</li> <li>Enter total numbers in columns for each resource by agency, organization, or grouping in the proper blocks.</li> <li>These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box.</li> <li>For example: <ul> <li><i>Resource:</i> Type 1 Helicopters 3/8 (indicates 3 aircraft, 8 personnel).</li> <li><i>Resource:</i> Type 1 Decontamination Unit 1/3 (indicates 1 unit, 3 personnel).</li> </ul> </li> <li>NOTE: One option is to group similar resources together when it is sensible to do so for the summary.</li> <li>For example, do not list every type of fire engine – rather, it may be advisable to list two generalized types of engines, such as "structure fire engines" and "wildland fire engines" in separate columns with totals for each.</li> </ul> <li>NOTE: It is not advisable to list individual overhead personnel individually in the resource section, especially as this form is intended as a summary. These personnel should be included in the Total Personnel sums in Block 51.</li>				
50	Additional Personnel not assigned to a resource	List the number of <i>additional</i> individuals (or overhead) that are not assigned to a specific resource by agency or organization.				
51	<b>Total Personnel</b> (includes those associated with resources – e.g., aircraft or engines – <i>and</i> individual overhead)	<ul> <li>Enter the total personnel for each agency, organization, or grouping in the Total Personnel column.</li> <li><u>WARNING</u>: Do not simply add the numbers across!</li> <li>The number of Total Personnel for each row should include <u>both</u>: <ul> <li>The total number of personnel assigned to each of the resources listed in Block 49, and</li> <li>The total number of additional individual overhead personnel from each agency, organization, or group listed in Block 50.</li> </ul> </li> </ul>				

Block Number	Block Title	Instructions			
52	Total Resources	Include the sum total of resources for each column, including the total for the column under Blocks 49, 50, and 51. This should include the total number of <i>resources</i> in Block 49, as personnel totals will be counted under Block 49.			
53	Additional Cooperating and Assisting Organizations Not Listed Above	<ul> <li>List all agencies and organizations that are not directly involved in the incident, but are providing support.</li> <li>Examples may include ambulance services, Red Cross, DHS, utility companies, etc.</li> <li>Do not repeat any resources counted in Blocks 48–52, unless explanations are needed for groupings created under Block 48 (Agency or Organization).</li> </ul>			

1. Incident Name:			2. Operational Period: Date From: Time From:		Date To: Time To:		
3. Resource Number	B. Resource Number4. New Status (Available, Assigned, O/S)5. From (A and Status)		Assignment s):	<b>6. To</b> (Assignment and Status):	7. Time and Date of Change:		
8. Comments	8. Comments:						
9 Prenared by: Name:			Position/	Fitle:	Signature:		
			Date/Tim	e.			

## **RESOURCE STATUS CHANGE (ICS 210)**

## ICS 210 Resource Status Change

**Purpose.** The Resource Status Change (ICS 210) is used by the Incident Communications Center Manager to record status change information received on resources assigned to the incident. This information could be transmitted with a General Message (ICS 213). The form could also be used by Operations as a worksheet to track entry, etc.

**Preparation.** The ICS 210 is completed by radio/telephone operators who receive status change information from individual resources, Task Forces, Strike Teams, and Division/Group Supervisors. Status information could also be reported by Staging Area and Helibase Managers and fixed-wing facilities.

**Distribution.** The ICS 210 is maintained by the Communications Unit and copied to Resources Unit and filed by Documentation Unit.

- Notes:
- The ICS 210 is essentially a message form that can be used to update Resource Status Cards or T-Cards (ICS 219) for incident-level resource management.
- If additional pages are needed, use a blank ICS 210 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Resource Number	Enter the resource identification (ID) number (this may be a letter and number combination) assigned by either the sending unit or the incident.
4	New Status (Available,	Indicate the current status of the resource:
	Assigned, Out of Service)	Available – Indicates resource is available for incident use immediately.
		<ul> <li>Assigned – Indicates resource is checked in and assigned a work task on the incident.</li> </ul>
		<ul> <li>Out of Service – Indicates resource is assigned to the incident but unable to respond for mechanical, rest, or personnel reasons. If space permits, indicate the estimated time of return (ETR). It may be useful to indicate the reason a resource is out of service (e.g., "O/S – Mech" (for mechanical issues), "O/S – Rest" (for off shift), or "O/S – Pers" (for personnel issues).</li> </ul>
5	<b>From</b> (Assignment and Status)	Indicate the current location of the resource (where it came from) and the status. When more than one Division, Staging Area, or Camp is used, identify the specific location (e.g., Division A, Staging Area, Incident Command Post, Western Camp).
6	To (Assignment and Status)	Indicate the assigned incident location of the resource and status. When more than one Division, Staging Area, or Camp is used, identify the specific location.
7	Time and Date of Change	Enter the time and location of the status change (24-hour clock). Enter the date as well if relevant (e.g., out of service).
8	Comments	Enter any special information provided by the resource or dispatch center. This may include details about why a resource is out of service, or individual identifying designators (IDs) of Strike Teams and Task Forces.
9	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

## **INCIDENT CHECK-IN LIST (ICS 211)**

1. Incident Name: 2. Incident Number:						<b>2. I</b> r	ncident Nu	umber:	3. Check-In	3. Check-In Location (complete all that apply):       4. Start Date/Time:							
									🗌 Base 🛛 [	_ Stagin	Date: Time:						
	_	_	_	_							11110.						
Check-In Information (use reverse of form for remarks or comments)											번		1				
5. pe ag OF fol	List rsor ency list lowi	sing nnel y an t res ing f	gle r (ov d na our form	erhe ame ces nat:	urce ead) by , by the		equest #	Ð	Name	mber of	t Contact	Jnit or	ıre Point, ime	of Travel	t Assignmen	tualifications	ovided to Unit
State	Agency	Category	Kind	Type	Resource Name or Identifier	ST or TF	6. Order Re	7. Date/Tim Check-In	8. Leader's	9. Total Nu Personnel	10. Inciden Informatior	11. Home L Agency	12. Departu Date and T	13. Method	14. Inciden	15. Other Q	16. Data Pr Resources
ICS 211         17. Prepared by:         Name:         Position/Title:					Signatu	ire:	D	ate/Time:		•							

## ICS 211 Incident Check-In List

**Purpose.** Personnel and equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information, which is recorded on the Check-In List (ICS 211). The ICS 211 serves several purposes, as it: (1) records arrival times at the incident of all overhead personnel and equipment, (2) records the initial location of personnel and equipment to facilitate subsequent assignments, and (3) supports demobilization by recording the home base, method of travel, etc., for resources checked in.

**Preparation.** The ICS 211 is initiated at a number of incident locations including: Staging Areas, Base, and Incident Command Post (ICP). Preparation may be completed by: (1) overhead at these locations, who record the information and give it to the Resources Unit as soon as possible, (2) the Incident Communications Center Manager located in the Communications Center, who records the information and gives it to the Resources Unit as soon as possible, (3) a recorder from the Resources Unit during check-in to the ICP. As an option, the ICS 211 can be printed on colored paper to match the designated Resource Status Card (ICS 219) colors. The purpose of this is to aid the process of completing a large volume of ICS 219s. The ICS 219 colors are:

- 219-1: Header Card Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card Green
- 219-3: Engine Card Rose
- 219-4: Helicopter Card Blue
- 219-5: Personnel Card White
- 219-6: Fixed-Wing Card Orange
- 219-7: Equipment Card Yellow
- 219-8: Miscellaneous Equipment/Task Force Card Tan
- 219-10: Generic Card Light Purple

**Distribution.** ICS 211s, which are completed by personnel at the various check-in locations, are provided to the Resources Unit, Demobilization Unit, and Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident.

- Also available as 81/2 x 14 (legal size) or 11 x 17 chart.
- Use reverse side of form for remarks or comments.
- If additional pages are needed for any form page, use a blank ICS 211 and repaginate as needed.
- Contact information for sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	Incident Number	Enter the number assigned to the incident.
3	Check-In Location Base Staging Area ICP Helibase Other	Check appropriate box and enter the check-in location for the incident. Indicate specific information regarding the locations under each checkbox. ICP is for Incident Command Post. Other may include
4	Start Date/Time <ul> <li>Date</li> <li>Time</li> </ul>	Enter the date (month/day/year) and time (using the 24-hour clock) that the form was started.

Block Number	Block Title	Instructions
	Check-In Information	Self explanatory.
5	List single resource	Enter the following information for resources:
	agency and name, OR list resources by the following format	OPTIONAL: Indicate if resource is a single resource versus part of Strike Team or Task Force. Fields can be left blank if not necessary.
	State	Use this section to list the home State for the resource.
	Agency	Use this section to list agency name (or designator), and individual names for all single resource personnel (e.g., ORC, ARL, NYPD).
	Category	Use this section to list the resource category based on NIMS, discipline, or jurisdiction guidance.
	• Kind	Use this section to list the resource kind based on NIMS, discipline, or jurisdiction guidance.
	• Туре	Use this section to list the resource type based on NIMS, discipline, or jurisdiction guidance.
	Resource Name or Identifier	Use this section to enter the resource name or unique identifier. If it is a Strike Team or a Task Force, list the unique Strike Team or Task Force identifier (if used) on a single line with the component resources of the Strike Team or Task Force listed on the following lines. For example, for an Engine Strike Team with the call sign "XLT459" show "XLT459" in this box and then in the next five rows, list the unique identifier for the five engines assigned to the Strike Team.
	ST or TF	Use ST or TF to indicate whether the resource is part of a Strike Team or Task Force. See above for additional instructions.
6	Order Request #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
7	Date/Time Check-In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
8	Leader's Name	For equipment, enter the operator's name.
		Enter the Strike Team or Task Force leader's name.
		Leave blank for single resource personnel (overhead).
9	Total Number of Personnel	Enter total number of personnel associated with the resource. Include leaders.
10	Incident Contact Information	Enter available contact information (e.g., radio frequency, cell phone number, etc.) for the incident.
11	Home Unit or Agency	Enter the home unit or agency to which the resource or individual is normally assigned (may not be departure location).
12	Departure Point, Date and Time	Enter the location from which the resource or individual departed for this incident. Enter the departure time using the 24-hour clock.
13	Method of Travel	Enter the means of travel the individual used to bring himself/herself to the incident (e.g., bus, truck, engine, personal vehicle, etc.).
14	Incident Assignment	Enter the incident assignment at time of dispatch.
15	Other Qualifications	Enter additional duties (ICS positions) pertinent to the incident that the resource/individual is qualified to perform. Note that resources should not be reassigned on the incident without going through the established ordering process. This data may be useful when resources are demobilized and remobilized for another incident.

Block Number	Block Title	Instructions
16	Data Provided to Resources Unit	Enter the date and time that the information pertaining to that entry was transmitted to the Resources Unit, and the initials of the person who transmitted the information.
17	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

## GENERAL MESSAGE (ICS 213)

1. Incident Name (Optional):			
2. To (Name and Position):			
3. From (Name and Position):			
4. Subject:		5. Date:	6. Time
7. Message:			
8. Approved by: Name:	Signature: Pos	sition/Title:	
9. Reply:			
10. Replied by: Name:	Position/Title: S	ignature:	

## ICS 213 General Message

**Purpose.** The General Message (ICS 213) is used by the incident dispatchers to record incoming messages that cannot be orally transmitted to the intended recipients. The ICS 213 is also used by the Incident Command Post and other incident personnel to transmit messages (e.g., resource order, incident name change, other ICS coordination issues, etc.) to the Incident Communications Center for transmission via radio or telephone to the addressee. This form is used to send any message or notification to incident personnel that requires hard-copy delivery.

Preparation. The ICS 213 may be initiated by incident dispatchers and any other personnel on an incident.

**Distribution.** Upon completion, the ICS 213 may be delivered to the addressee and/or delivered to the Incident Communication Center for transmission.

- The ICS 213 is a three-part form, typically using carbon paper. The sender will complete Part 1 of the form and send Parts 2 and 3 to the recipient. The recipient will complete Part 2 and return Part 3 to the sender.
- A copy of the ICS 213 should be sent to and maintained within the Documentation Unit.
- Contact information for the sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	Incident Name (Optional)	Enter the name assigned to the incident. This block is optional.
2	<b>To</b> (Name and Position)	Enter the name and position the General Message is intended for. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
3	From (Name and Position)	Enter the name and position of the individual sending the General Message. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
4	Subject	Enter the subject of the message.
5	Date	Enter the date (month/day/year) of the message.
6	Time	Enter the time (using the 24-hour clock) of the message.
7	Message	Enter the content of the message. Try to be as concise as possible.
8	<ul><li>Approved by</li><li>Name</li><li>Signature</li><li>Position/Title</li></ul>	Enter the name, signature, and ICS position/title of the person approving the message.
9	Reply	The intended recipient will enter a reply to the message and return it to the originator.
10	<ul><li>Replied by</li><li>Name</li><li>Position/Title</li><li>Signature</li><li>Date/Time</li></ul>	Enter the name, ICS position/title, and signature of the person replying to the message. Enter date (month/day/year) and time prepared (24-hour clock).

# ACTIVITY LOG (ICS 214)

1. Incident Name:			2. Operational Period: Date Time	e From e From	: Date To: I: Time To:
3. Name:		4. IC	S Position:		5. Home Agency (and Unit):
6. Resources Assig	gned:				
Nan	ne		ICS Position		Home Agency (and Unit)
7 Activity Logy					
7. ACTIVITY LOG.					
Date/Time	Notable Activities				
8. Prepared by: Na	ame:		Position/Title:		Signature:
ICS 214, Page 1			Date/Time:		

# ACTIVITY LOG (ICS 214)

1. Incident Name:		2. Operational Period:	Date From: Time From:	Date To: Time To:
7. Activity Log (cor	ntinuation):			
Date/Time	Notable Activities			
8. Prepared by: Na	ame:	Position/Title:	Signature	:
ICS 214, Page 2		Date/Time:		

## ICS 214 Activity Log

**Purpose.** The Activity Log (ICS 214) records details of notable activities at any ICS level, including single resources, equipment, Task Forces, etc. These logs provide basic incident activity documentation, and a reference for any after-action report.

**Preparation.** An ICS 214 can be initiated and maintained by personnel in various ICS positions as it is needed or appropriate. Personnel should document how relevant incident activities are occurring and progressing, or any notable events or communications.

**Distribution.** Completed ICS 214s are submitted to supervisors, who forward them to the Documentation Unit. All completed original forms must be given to the Documentation Unit, which maintains a file of all ICS 214s. It is recommended that individuals retain a copy for their own records.

- The ICS 214 can be printed as a two-sided form.
- Use additional copies as continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Name	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
4	ICS Position	Enter the name and ICS position of the individual in charge of the Unit.
5	Home Agency (and Unit)	Enter the home agency of the individual completing the ICS 214. Enter a unit designator if utilized by the jurisdiction or discipline.
6	Resources Assigned	Enter the following information for resources assigned:
	Name	Use this section to enter the resource's name. For all individuals, use at least the first initial and last name. Cell phone number for the individual can be added as an option.
	ICS Position	Use this section to enter the resource's ICS position (e.g., Finance Section Chief).
	Home Agency (and Unit)	Use this section to enter the resource's home agency and/or unit (e.g., Des Moines Public Works Department, Water Management Unit).
7	<ul><li>Activity Log</li><li>Date/Time</li><li>Notable Activities</li></ul>	• Enter the time (24-hour clock) and briefly describe individual notable activities. Note the date as well if the operational period covers more than one day.
		<ul> <li>Activities described may include notable occurrences or events such as task assignments, task completions, injuries, difficulties encountered, etc.</li> </ul>
		<ul> <li>This block can also be used to track personal work habits by adding columns such as "Action Required," "Delegated To," "Status," etc.</li> </ul>
8	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

## **OPERATIONAL PLANNING WORKSHEET (ICS 215)**

1. Incident Name:				2. 0	pera	tiona	l Peri	od:	Date Time	From From	: :	Date To: Time To:					
3. Branch	4. Division, Group, or Other	5. Work Assignment & Special Instructions	6. Resources											7. Overhead Position(s)	8. Special Equipment & Supplies	9. Reporting Location	10. Requested Arrival Time
			Req.														
			Have														
			Need														
			Req.														
			Need														
			Reg.														
			Have														
			Need														
			Req.														
			Have														
			Need														
			Req.														
			Have														
			Reg														
			Have														
			Need														
	1	11. Total Reso Rec	urces quired												14. Prepared	d by:	
		12. Total Reso Have on	urces Hand												Position/Title	:	
ICS	215	13. Total Reso Need To	urces Order												Signature: _		

### ICS 215 Operational Planning Worksheet

**Purpose.** The Operational Planning Worksheet (ICS 215) communicates the decisions made by the Operations Section Chief during the Tactics Meeting concerning resource assignments and needs for the next operational period. The ICS 215 is used by the Resources Unit to complete the Assignment Lists (ICS 204) and by the Logistics Section Chief for ordering resources for the incident.

**Preparation.** The ICS 215 is initiated by the Operations Section Chief and often involves logistics personnel, the Resources Unit, and the Safety Officer. The form is shared with the rest of the Command and General Staffs during the Planning Meeting. It may be useful in some disciplines or jurisdictions to prefill ICS 215 copies prior to incidents.

**Distribution.** When the Branch, Division, or Group work assignments and accompanying resource allocations are agreed upon, the form is distributed to the Resources Unit to assist in the preparation of the ICS 204. The Logistics Section will use a copy of this worksheet for preparing requests for resources required for the next operational period.

- This worksheet can be made into a wall mount.
- Also available as 81/2 x 14 (legal size) and 11 x 17 chart.
- If additional pages are needed, use a blank ICS 215 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Branch	Enter the Branch of the work assignment for the resources.
4	Division, Group, or Other	Enter the Division, Group, or other location (e.g., Staging Area) of the work assignment for the resources.
5	Work Assignment & Special Instructions	Enter the specific work assignments given to each of the Divisions/Groups and any special instructions, as required.
6	Resources	Complete resource headings for category, kind, and type as appropriate for the incident. The use of a slash indicates a single resource in the upper portion of the slash and a Strike Team or Task Force in the bottom portion of the slash.
	Required	Enter, for the appropriate resources, the number of resources by type (engine, squad car, Advanced Life Support ambulance, etc.) required to perform the work assignment.
	Have	Enter, for the appropriate resources, the number of resources by type (engines, crew, etc.) available to perform the work assignment.
	Need	Enter the number of resources needed by subtracting the number in the "Have" row from the number in the "Required" row.
7	Overhead Position(s)	List any supervisory and nonsupervisory ICS position(s) not directly assigned to a previously identified resource (e.g., Division/Group Supervisor, Assistant Safety Officer, Technical Specialist, etc.).
8	Special Equipment & Supplies	List special equipment and supplies, including aviation support, used or needed. This may be a useful place to monitor span of control.
9	Reporting Location	Enter the specific location where the resources are to report (Staging Area, location at incident, etc.).
10	Requested Arrival Time	Enter the time (24-hour clock) that resources are requested to arrive at the reporting location.

Block Number	Block Title	Instructions
11	Total Resources Required	Enter the total number of resources required by category/kind/type as preferred (e.g., engine, squad car, ALS ambulance, etc.). A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/ Task Forces in the bottom portion of the slash.
12	Total Resources Have on Hand	Enter the total number of resources on hand that are assigned to the incident for incident use. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
13	Total Resources Need To Order	Enter the total number of resources needed. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
14	<ul><li>Prepared by</li><li>Name</li><li>Position/Title</li><li>Signature</li><li>Date/Time</li></ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

## INCIDENT ACTION PLAN SAFETY ANALYSIS (ICS 215A)

1. Incident Name	:		2. Incident	Number:	
3. Date/Time Pre	pared:	4. Operational	Period: Da	te From:	Date To:
Date:	Time:		Tin	Time To:	
5. Incident Area	6. Hazards/Risks			7. Mitigations	
8. Prepared by (S	Safety Officer): Name:			Signature:	
Prepared by (C	Operations Section Chief):	Name:		Signature:	
ICS 215A		Date/Time:			

### ICS 215A Incident Action Plan Safety Analysis

**Purpose.** The purpose of the Incident Action Plan Safety Analysis (ICS 215A) is to aid the Safety Officer in completing an operational risk assessment to prioritize hazards, safety, and health issues, and to develop appropriate controls. This worksheet addresses communications challenges between planning and operations, and is best utilized in the planning phase and for Operations Section briefings.

**Preparation.** The ICS 215A is typically prepared by the Safety Officer during the incident action planning cycle. When the Operations Section Chief is preparing for the tactics meeting, the Safety Officer collaborates with the Operations Section Chief to complete the Incident Action Plan Safety Analysis. This worksheet is closely linked to the Operational Planning Worksheet (ICS 215). Incident areas or regions are listed along with associated hazards and risks. For those assignments involving risks and hazards, mitigations or controls should be developed to safeguard responders, and appropriate incident personnel should be briefed on the hazards, mitigations, and related measures. Use additional sheets as needed.

**Distribution.** When the safety analysis is completed, the form is distributed to the Resources Unit to help prepare the Operations Section briefing. All completed original forms must be given to the Documentation Unit.

- This worksheet can be made into a wall mount, and can be part of the IAP.
- If additional pages are needed, use a blank ICS 215A and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	Incident Number	Enter the number assigned to the incident.
3	Date/Time Prepared	Enter date (month/day/year) and time (using the 24-hour clock) prepared.
4	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (24-hour clock) and end date and time for the operational period to which the form applies.
5	Incident Area	Enter the incident areas where personnel or resources are likely to encounter risks. This may be specified as a Branch, Division, or Group.
6	Hazards/Risks	List the types of hazards and/or risks likely to be encountered by personnel or resources at the incident area relevant to the work assignment.
7	Mitigations	List actions taken to reduce risk for each hazard indicated (e.g., specify personal protective equipment or use of a buddy system or escape routes).
8	<ul> <li>Prepared by (Safety Officer and Operations Section Chief)</li> <li>Name</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name of both the Safety Officer and the Operations Section Chief, who should collaborate on form preparation. Enter date (month/day/year) and time (24-hour clock) reviewed.

R	ADIO RE(	QUIREM	IENTS WORKS	HEET	1. II	ICIDENT NAME	Ξ	2. DAT	E	3. TIME						
4. BRANCH			5. AGENCY		·	6. OPERATION	NAL PERIOD	7. TAC	TICAL FREQUI	ENCY						
8. DIVISION/G	ROUP		DIVISION/ GROUP			DIVISION/ GROUP			DIVISION/ GROUP							
AGENCY			AGENCY			AGENCY_			AGENCY							
9. AGENCY	ID NO.	RADIO RQMT	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS	AGENCY	ID NO.	RADIO RQMTS					
216 ICS 3-82		PA	AGE			10. PREPAREI	D BY (COMM	IUNICATIC	DNS UNIT)							
216 ICS 3-82											4.0 1					
NFES 1339									Electro	onic version: NOAA	1.0 June 1, 2000					

#### **RADIO REQUIREMENTS WORKSHEET (ICS FORM 216)**

**Purpose**. The Radio Requirements Worksheet is used to develop the total number of personal portable radios required for each Division/Group and Branch. It provides a listing of all units assigned to each Division, and thus depicts the total incident radio needs.

**Initiation of Form**. The worksheet is prepared by the Communications Unit for each operational period and can only be completed after specific resource assignments are made and designated on Assignment Lists. This worksheet need not be used if the Communications Unit Leader can easily obtain the information directly from Assignment Lists.

**Distribution**. The worksheet is for internal use by the Communications Unit and therefore there is no distribution of the form.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date	Enter date prepared (e.g., 09/17/1996).
3.	Time Prepared	Enter time prepared (e.g., 1530).
4.	Branch	Enter the Branch number (I, II, etc.) for which radio requirements are being prepared.
5.	Agency	Enter the three-letter designator of the agency staffing the Branch Director position (e.g., VNC, CDF, ANF, LFD, etc.).
6.	Operational Period	Enter the time interval for which the assignment applies (e.g., 9/17/96-0600 to 9/18/96-0600).
7.	Tactical Frequency	Enter the radio frequency to be used by the Branch Director to communicate with each Division/Group Supervisor in the Branch.
8.	Division/Group	Enter for each Division/Group in the Branch the Division/Group identifier (A, B, etc.) and the agency assigned (e.g., LAC, VNC, etc.).
9.	Agency/ID No./Radio Requirements	List all units assigned to each Division/Group. Record the agency designator, unit or resource identification, and total number of radios needed for each unit or resource.
10.	Prepared By	Enter the name and position of the person completing the worksheet.

RADIO FREQUENCY ASSIGNMENT WORKSHEET							1. IN	ICIDE	NTNA	ME					2. DA1	ΓE			3. Fro	OPERA om:	ATIO	NAL P	ERIOE	O (DAT	(DATE/TIME)								
5. RA	.DIO E	4. IN	CIDENT	ORGANIZATION			. / >							. / .			Ewr.	£  .	J.Jon		Tiles,	Treest		Uhim Uhim	; /	/	/			/			
SOU	RCE	FUNCTION	CH#	FREQUENCY	BRANCT	DIVISION	DIVISIO	DIVISIOI	BRANC	DIVISIO	DIVISIOI	DIVISION	BRANC	DIVISIOI	DIVISIO	DIVISION	COMME	SAFETY OFFICER	SECTION	AIR Ope	AIR TAC	SECTION SECTION	17.98-19.9	BASE		/		/		/	CONNE		TOTAL BY REQ.
														-							-			-									
																																<u> </u>	
6	Б		CH#	EREQUENCY																												<u> </u>	
o. A	ID		Сп#	FREQUENC I																													
G E N																																	
C Y																																	
7. TC	TAL F	RADIOS REQUIRED																															
217	ICS																							8. PR	EPARI	ED BY	(NAI	ME/PO	SITIO	N)			

Electronic version: NOAA 1.0 June 1, 2000

### RADIO FREQUENCY ASSIGNMENT WORKSHEET (ICS FORM 217)

**Purpose**. The Radio Frequency Assignment Worksheet is used by the Communications Unit Leader to assist in determining frequency allocations.

**Preparation**. Cache radio frequencies available to the incident are listed on the form. Major agency frequencies assigned to the incident should be added to the bottom of the worksheet.

**Distribution**. The worksheet, prepared by the Communications Unit, is for internal use.

Item #	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date	Enter date prepared (e.g., 09/17/1996).
3.	Operational Period	Enter the time interval for which the assignment applies (e.g., 9/17/96-0600 to 9/18/96-0600).
4.	Incident Organization	List frequencies allocated for each channel for each organizational element activated, record the number of radios required to perform the designated function on the specified frequency.
5.	Radio Data	For each radio cache and frequency assigned, record the associated function. Functional assignments are: a. Command b. Support c. Division tactical d. Ground-to-air
6.	Agency	List the frequencies for each major agency assigned to the incident. Also list the function and channel number assigned.
7.	Total Radios Required	Totals for each row and column are calculated automatically. This provides the number of radios required by each organizational unit and the number of radios using each available frequency.
8.	Prepared By	Enter the name and position of the person completing the worksheet.

#### 1. Incident Name: 2. Incident Number: 3. Date/Time Prepared: 4. Vehicle/Equipment Category: Date: Time: 5. Vehicle/Equipment Information Category/ Incident Kind/Type, Vehicle or Order Vehicle or Vehicle or Operator Vehicle Incident Release Agency Equipment Equipment Capacity, or Equipment Incident Name or Incident Start Date Request or License or Date and Number ID No. Classification Make Size Features ID No. Assignment and Time Contact Time Owner **ICS 218** Position/Title: Signature: 6. Prepared by: Name: \_\_\_\_\_

## SUPPORT VEHICLE/EQUIPMENT INVENTORY (ICS 218)

## ICS 218 Support Vehicle/Equipment Inventory

**Purpose.** The Support Vehicle/Equipment Inventory (ICS 218) provides an inventory of all transportation and support vehicles and equipment assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles and equipment on the incident. The Resources Unit uses the information to initiate and maintain status/resource information.

**Preparation.** The ICS 218 is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader.

**Distribution.** Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles and equipment should be provided to the Resources Unit immediately.

- If additional pages are needed, use a blank ICS 218 and repaginate as needed.
- Also available as 81/2 x 14 (legal size) and 11 x 17 chart.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	Incident Number	Enter the number assigned to the incident.
3	Date/Time Prepared	Enter the date (month/day/year) and time (using the 24-hour clock) the form is prepared.
4	Vehicle/Equipment Category	Enter the specific vehicle or equipment category (e.g., buses, generators, dozers, pickups/sedans, rental cars, etc.). Use a separate sheet for each vehicle or equipment category.
5	Vehicle/Equipment Information	Record the following information:
	Order Request Number	Enter the order request number for the resource as used by the jurisdiction or discipline, or the relevant EMAC order request number.
	Incident Identification Number	Enter any special incident identification numbers or agency radio identifier assigned to the piece of equipment used only during the incident, if this system if used (e.g., "Decontamination Unit 2," or "Water Tender 14").
	Vehicle or Equipment Classification	Enter the specific vehicle or equipment classification (e.g., bus, backhoe, Type 2 engine, etc.) as relevant.
	Vehicle or Equipment Make	Enter the vehicle or equipment manufacturer name (e.g., "GMC," "International").
	Category/Kind/Type, Capacity, or Size	Enter the vehicle or equipment category/kind/type, capacity, or size (e.g., 30-person bus, 3/4-ton truck, 50 kW generator).
	Vehicle or Equipment Features	Indicate any vehicle or equipment features such as 2WD, 4WD, towing capability, number of axles, heavy-duty tires, high clearance, automatic vehicle locator (AVL), etc.
	Agency or Owner	Enter the name of the agency or owner of the vehicle or equipment.
	Operator Name or Contact	Enter the operator name and/or contact information (cell phone, radio frequency, etc.).
	Vehicle License or Identification Number	Enter the license plate number or another identification number (such as a serial or rig number) of the vehicle or equipment.
	Incident Assignment	Enter where the vehicle or equipment will be located at the incident and its function (use abbreviations per discipline or jurisdiction).

Block Number	Block Title	Instructions
<b>5</b> (continued)	Incident Start Date and Time	Indicate start date (month/day/year) and time (using the 24-hour clock) for driver or for equipment as may be relevant.
	Incident Release Date and Time	Enter the date (month/day/year) and time (using the 24-hour clock) the vehicle or equipment is released from the incident.
6	<ul><li>Prepared by</li><li>Name</li><li>Position/Title</li><li>Signature</li></ul>	Enter the name, ICS position/title, and signature of the person preparing the form.

### ICS 219 Resource Status Card (T-Card)

**Purpose.** Resource Status Cards (ICS 219) are also known as "T-Cards," and are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. These cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including, but not limited to:

- Incident Briefing (ICS 201).
- Incident Check-In List (ICS 211).
- General Message (ICS 213).
- Agency-supplied information or electronic resource management systems.

**Distribution.** ICS 219s are displayed in resource status or "T-Card" racks where they can be easily viewed, retrieved, updated, and rearranged. The Resources Unit typically maintains cards for resources assigned to an incident until demobilization. At demobilization, all cards should be turned in to the Documentation Unit.

**Notes.** There are eight different status cards (see list below) and a header card, to be printed front-to-back on cardstock. Each card is printed on a different color of cardstock and used for a different resource category/kind/type. The format and content of information on each card varies depending upon the intended use of the card.

- 219-1: Header Card Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card Green
- 219-3: Engine Card Rose
- 219-4: Helicopter Card Blue
- 219-5: Personnel Card White
- 219-6: Fixed-Wing Card Orange
- 219-7: Equipment Card Yellow
- 219-8: Miscellaneous Equipment/Task Force Card Tan
- 219-10: Generic Card Light Purple

Acronyms. Abbreviations utilized on the cards are listed below:

- AOV: Agency-owned vehicle
- ETA: Estimated time of arrival
- ETD: Estimated time of departure
- ETR: Estimated time of return
- O/S Mech: Out-of-service for mechanical reasons
- O/S Pers: Out-of-service for personnel reasons
- O/S Rest: Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
- POV: Privately owned vehicle

Prepared by:
Date/Time:
ICS 219-1 HEADER CARD (GRAY)

Prepared by:
Date/Time:
ICS 219-1 HEADER CARD (GRAY)
### ICS 219-1: Header Card

Block Title	Instructions
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

ST/Uni	t:		LDW	:	# Pers:	Order #:
Ageno	;y	C	at/Kinc	, T/t	уре	Name/ID #
Da	te/T	ïme Ch	Fro ecked	ont In:		
Le	ade	r Name:	:			
Pri	imai	ry Conta	act Info	orn	nation:	
Cr	ew/	Гeam ID	) #(s) o	or N	lame(s):	
Ма	nife	est:			Total We	eight:
Me	Yes tho	d of Tra	No Ivel to	Inc	ident:	
	AO'			Bus	; [_] Air [_	] Other
De	par	Base: ture Poi	int:			
ET	D:			E	TA:	
Tra	<b>ans</b> Veh	oortatio	<b>n Need</b> Bus	i st	at Incider	<b>t:</b> ] Other
Da	te/T	ïme Oro	dered:			
Re	mai	'ks:				
Pro	enal	red by:				
Da	te/T	ime:				
IC	S 21	9-2 CR	EW/TE	A	I (GREEN	1)

ſ/Unit:		LDW:	#1	Pers:	Order #	<b>#</b> :	
gency	C	at/Kind/T	 Уре	•	Name/IE	) #	
Incide	Back Incident Location: Time:						
Status Status Ass Ava Notes:	: igned [ ilable [	] O/S Re ] O/S Me	est ech	0/\$	S Pers R:		
Incide	nt Loca	tion:		Time	:		
Status	: igned [ ilable [	] O/S Re ] O/S Me	est ech	□ 0/\$ □ ET	S Pers R:		
Notes:							
Incide	nt Loca	tion:		Time	:		
Status	: igned [ ilable [	] O/S Re ] O/S Me	est ech	□ 0/\$ □ ET	S Pers R:		
NOLES.							
Incide	nt Loca	tion:		Time	:		
Status Ass Ava Notes:	: igned [ ilable [	] O/S Re ] O/S Me	est ech	□ 0/\$ □ ET	S Pers R:		
						_	

### ICS 219-2: Crew/Team Card

Block Title	Instructions
ST/Unit	Enter the State and/or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the crew/team. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).
	Phone and pager numbers should include the area code and any satellite phone specifics.
Crew/Team ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this crew/team (e.g., Air Monitoring Team 2, Entry Team 3).
Manifest	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
🗌 No	
Total Weight	Enter the total weight for the crew/team. This information is necessary when the crew/team are transported by charter air.
Method of Travel to Incident AOV POV Bus Air Other	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew/team's estimated time of departure (using the 24-hour clock) from their home base.
ЕТА	Use this section to enter the crew/team's estimated time of arrival (using the 24-hour clock) at the incident.

Block Title	Instructions
Transportation Needs at Incident	Check the box(es) for the appropriate method(s) of transportation at the incident.
Vehicle	
🗌 Bus	
🗌 Air	
Other	
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew/team was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew/team.
BACK OF FORM	
Incident Location	Enter the location of the crew/team.
Time	Enter the time (24-hour clock) the crew/team reported to this location.
Status	Enter the crew/team's current status:
Assigned	Assigned – Assigned to the incident
O/S Rest	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to
O/S Pers	operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
Available	<ul> <li>O/S Pers – Out-of-service for personnel reasons</li> </ul>
O/S Mech	<ul> <li>Available – Available to be assigned to the incident</li> </ul>
ETR:	O/S Mech – Out-of-service for mechanical reasons
	ETR – Estimated time of return
Notes	Enter any additional information pertaining to the crew/team's current location or status.
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

ST	/Unit:	Unit: LDW: # Pers: Order a		Order #	<b>#</b> :			
Aç	gency Cat/Kind/Type Name/ID #							
	Date/T	ime Ch	Fron ecked In	t				
	Leade	r Name:						
	Prima	ry Conta	act Infor	mation:				
	Resou	rce ID #	(s) or Na	ame(s):				
		Dee						
	Home Depart	Base: ture Poi	nt:					
	ETD:		E	TA:				
	Date/T	ime Oro	dered:					
	Remar	KS:						
	Prepai Date/T	red by: ïme:						
	ICS 2	19-3 El	NGINE	ROSE)				

ST	ST/Unit:		LDW:	# Pers:		Order #:	
Aç	gency Cat/Kind/Typ				e	Name/II	D #
			Back		-		
	Incide	nt Loca	tion:		Time	:	
	Status	:					
	Ass	igned [	O/S Re	st	0/5	8 Pers	
	Ava	ilable [	O/S Me	ech		R:	
	Notes:	-					
					1		
	Incide	nt Loca	ition:		Time:		
	Status	:					
		igned [	O/S Re	est		Pers	
	Notes:			5011		··· <u> </u>	
	Incide	nt Loca	ition:		Time:		
	Status	:					
		igned [	_] O/S R€	est		B Pers	
	Notes:			5011		<u>.                                    </u>	
	Incide	nt Loca	ition:		Time:		
	Status	:					
	🗌 Ass	igned [	O/S Re	est	O/S	8 Pers	
	Ava	ilable [	O/S Me	ech	ETI	R:	
	Notes:						
	Prepar Date/T	red by: ime:					
	ICS 2	19-3 E	NGINE (	RO	SE)		

## ICS 219-3: Engine Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).
	Phone and pager numbers should include the area code and any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for the resource(s).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status	Enter the resource's current status:
Assigned	Assigned – Assigned to the incident
O/S Rest O/S Pers	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
☐ Available	O/S Pers – Out-of-service for personnel reasons
☐ O/S Mech	Available – Available to be assigned to the incident
ETR:	O/S Mech – Out-of-service for mechanical reasons
	ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.

Block Title	Instructions
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

ST/Unit:		LDW:	# Pers:	Order #:			
Agency	agency Cat/Kind/Type Name/ID #						
		Fron	t				
Date/1	ime Ch	ecked in	:				
Pilot N	lame:						
Home	Base:						
Depart	ure Poi	nt:					
ETD:		E	TA:				
Destin	ation P	oint:					
Date/T	ime Oro	dered:					
Remar	ks:						
Prepar	ed by:						
Date/T	ime:						
ICS 2	19-4 H	ELICOP	TER (BL	UE)			

/Unit: LDW: #I		Pers:	Order	#:		
gency	C	at/Kind/T	ј уре	;	Name/II	D #
		Back				
Incide	nt Loca	tion:		Time	:	
Status	:					
Ass 🗌 Ava	igned [ ilable [	_] O/S Re _] O/S Me	est ech		S Pers R:	
Notes:						
Incide	nt Loca	tion:		Time	:	
Status	:					
🗌 Ass	igned [ ilable [	_] O/S Re _] O/S Me	est ech		S Pers R:	
Notes:						
Incide	nt Loca	tion:		Time	:	
Status	: ianed [		est		S Pers	
Ava	ilable [	O/S Me	ech		R:	
Notes:	:					
Incide	nt Loca	tion:		Time		
Status	: ianed [				S Pore	
Ava	ilable [	_ 0/S Ke	ech		R:	
Notes:						
Prepai Date/T	red by:					

S

## ICS 219-4: Helicopter Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ЕТА	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status	Enter the resource's current status:
Assigned	Assigned – Assigned to the incident
O/S Rest	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to
O/S Pers	operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
Available	O/S Pers – Out-of-service for personnel reasons
O/S Mech	Available – Available to be assigned to the incident
□ ETR:	O/S Mech – Out-of-service for mechanical reasons
	ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by Date/Time	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST	/Unit:	Name:	Pos	ition/Title:					
	Dutit	Fron							
	Date/Time Checked In:								
	Name								
	Prima	ary Contact Inform	nation:						
	Manif	est:	Total W	/eight:					
	□Ye	s 🗌 No		- g					
	Meth	od of Travel to In	ident:						
		DV 🗌 POV 🗌 Bu	Air	Other					
	Home	e Base:							
	Depa	rture Point:							
	ETD:	E	ΓΑ:						
	Trans	sportation Needs	at Incide	ent:					
	□ Ve	hicle Bus	Air	Other					
	Date/	Time Ordered:							
	Rema	arks:							
	Prepa	ared by:							
	Date/	Time:							
	ICS 2 CAR	219-5 PERSON D)	IEL (WI	HITE					

	Position/Title:	ST/Unit:	Name:	Position/Titl
Front			Back	
əd In:		Incide	ent Location:	Time:
		Status		
Informa	tion:		ailable	
		Notes	:	
Т	otal Weight:			
10		Incide	ent Location:	Time:
to Incid				
Bus [		Statu	5:	1
		Ass	signed O/S Rest	O/S Pers
			ailable 🗌 O/S Mech	🗌 ETR:
ETA	A:	Notes	:	
eeds at	Incident:			
; 🗌 A	ir 🗌 Other			
<u> </u>		Incide	ont Location.	Time:
ed:		monac		Time.
ed:		includ		Time.
ed:		Status	3:	Time.
ed:		Status Asso	s: signed □ 0/S Rest	
ed:		Status Ass Notes	s: signed	O/S Pers
ed:		Status Ass Notes	s: signed	O/S Pers
ed:		Status Ass Ava Notes	s: signed	O/S Pers
ed:		Status Ass Notes	s: signed	O/S Pers
ed:		Status Status Ass Notes	s: signed O/S Rest ailable O/S Mech : ent Location:	O/S Pers     ETR:      Time:
ed:		Status Ass Notes	s: signed ☐ O/S Rest ailable ☐ O/S Mech : ent Location:	O/S Pers     ETR:      Time:
ed:		Status Ava Notes	s: signed O/S Rest ailable O/S Mech : ent Location: s:	O/S Pers     ETR:     Time:
ed:		Status Status Ava Notes Incide Status Ass Ass Ass Ass Ass Ass Ass A	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Rest	O/S Pers     ETR:     O/S Pers     O/S Pers     O/S Pers     O/S Pers
ed:		Status Ava Notes	signed	O/S Pers     ETR:     O/S Pers     O/S Pers     O/S Pers     D/S Pers     D/S Pers
ed:		Status Ava Notes Incide Status Ava Ava Notes	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Mech :	O/S Pers     ETR:      O/S Pers     O/S Pers     D/S Pers     D/S Pers     D/S Pers
ed:		Status Ava Notes	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Mech :	O/S Pers         ETR:             Time:
ed:		Status Status Ava Notes Incide Status Ass Ava Notes	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Mech : red by:	O/S Pers     ETR:      Time:     O/S Pers     O/S Pers     ETR:
ed:		Statu: Ava Notes Incide Statu: Ava Statu: Ava Notes Prepa Date/	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Mech : red by: Fime:	Image: 0/S Pers         ETR:         O/S Pers         O/S Pers         ETR:
ed:		Status Status Ava Notes Incide Status Ava Notes Prepa Date/ ICS 2	s: signed □ O/S Rest ailable □ O/S Mech : ent Location: s: signed □ O/S Rest ailable □ O/S Rest ailable □ O/S Mech : red by: fime: 19-5 PERSONNE	O/S Pers     ETR:     O/S Pers     O/S Pers     O/S Pers     D/S PER     D/S PER     D/S PER     D/S PER     D/S PER

### ICS 219-5: Personnel Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
Name	Enter the individual's first initial and last name.
Position/Title	Enter the individual's ICS position/title.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Name	Enter the individual's full name.
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).
	Phone and pager numbers should include the area code and any satellite phone specifics.
Manifest Yes No	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
Total Weight	Enter the total weight for the crew. This information is necessary when the crew are transported by charter air.
Method of Travel to Incident	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
☐ Air	
☐ Other	
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew's estimated time of departure (using the 24-hour clock) from their home base.
ΕΤΑ	Use this section to enter the crew's estimated time of arrival (using the 24-hour clock) at the incident.
Transportation Needs at Incident	Check the box(es) for the appropriate method(s) of transportation at the incident.
U Vehicle	
🗌 Bus	
🗌 Air	
Other	
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew.
BACK OF FORM	
Incident Location	Enter the location of the crew.
Time	Enter the time (24-hour clock) the crew reported to this location.

Block Title	Instructions	
Status	Enter the crew's current status:	
Assigned	Assigned – Assigned to the incident	
O/S Rest	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to	
O/S Pers	operating time limits/policies for pilots, operators, drivers, equipment, or aircraft	
Available	<ul> <li>O/S Pers – Out-of-service for personnel reasons</li> </ul>	
O/S Mech	<ul> <li>Available – Available to be assigned to the incident</li> </ul>	
ETR:	O/S Mech – Out-of-service for mechanical reasons	
	ETR – Estimated time of return	
Notes	Enter any additional information pertaining to the crew's current location or status.	
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and	
Date/Time	time prepared (using the 24-hour clock).	

ST/Unit:		LDW:	# Pers:	Order	¥:				
Agency	Ca	at/Kind/T	ype	Name/I	) #				
Data	Time Ch	Fron	t						
Date	Date/Time Checked-in:								
Pilot I	Pilot Name:								
Home	Home Base:								
Depar	ture Poi	nt:							
ETD:		E	TA:						
Destir	nation P	oint:							
Date/	Time Ord	dered:							
Manu	acturer:								
Rema	rks:								
Propo	red by:								
Date/	Time:								
	10-6 F								
1032	13-0 11			NIGE)					

т,	Γ/Unit:		LDW:	# Pers:		Order #:	
٩ç	gency	Ci	at/Kind/T	ype	÷	Name/II	D #
	Incide	nt Loca	Back tion:	[	Time	:	
	Status	: igned [	] O/S Re	est	O/:	S Pers	
	Notes:	ilable [	<u>]</u> O/S M€	ech	ET	R:	
	Incide	nt Loca	tion:		Time	:	
	Status	: igned [ ilable [	] O/S Re	est		S Pers	
	Notes:						
	Incide	nt Loca	tion:		Time	:	
	Status	: igned [ ilable [	] O/S Re ] O/S Me	est ech	0/: ET	S Pers R:	
	Notes:						
	Incide	nt Loca	tion:		Time	:	
	Status	: igned [ ilable [	] O/S Re	est ech	O/: ET	S Pers R:	
	Notes:						
	Prepar Date/T	red by: ime:					
	ICS 2	19-6 FIX	XED-WI	NG	(ORA	NGE)	

S

## ICS 219-6: Fixed-Wing Card

Block Title	Instructions	
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.	
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.	
# Pers	Enter total number of personnel associated with the resource. Include the pilot.	
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.	
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).	
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.	
Name/ID #	Use this section to enter the resource name or unique identifier.	
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.	
Pilot Name:	Enter pilot's name (use at least the first initial and last name).	
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).	
Departure Point	Enter the location from which the resource or individual departed for this incident.	
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.	
ЕТА	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.	
Destination Point	nation Point       Use this section to enter the location at the incident where the resource has been requested to report.	
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.	
Manufacturer	Enter the manufacturer of the aircraft.	
Remarks	Enter any additional information pertaining to the resource.	
BACK OF FORM		
Incident Location	Enter the location of the resource.	
Time	Enter the time (24-hour clock) the resource reported to this location.	
Status	Enter the resource's current status:	
Assigned	Assigned – Assigned to the incident	
O/S Rest	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to	
O/S Pers	operating time limits/policies for pilots, operators, drivers, equipment, or aircraft	
	O/S Pers – Out-of-service for personnel reasons	
	Available – Available to be assigned to the incident	
	O/S wiech – Out-oi-service for mechanical reasons	
Notoo	EIR - Esumated time of return	
Notes Dremered by	Enter any additional information pertaining to the resource's current location or status.	
Prepared by Date/Time	time prepared (using the 24-hour clock).	

ST/Unit:		LDW:	# Pers:	Order #:				
Agency	Ca	at/Kind/T	уре	Name/ID #				
Date/T	ime Ch	<i>Fron</i> ecked In	t :					
Lorde	Date/Time Checked In:							
Leade	Leader Name:							
Prima	ry Conta	act Infori	mation:					
Resou	rce ID #	(s) or Na	ıme(s):					
Home	Base:							
Depart	ture Poi	nt:						
ETD:		E	TA:					
Date/T	<mark>ime Or</mark> c	dered:						
Remar	'ks:							
Prepa	red by:							
Date/T	ime:							
ICS 2	19-7 E	QUIPME	NT (YELI	LOW)				

ST/	/Unit:		LDW:	#	Pers:	Order	#:
Aç	gency	C	at/Kind/T	ype	)	Name/I	D #
	Incide	nt Loca	Back tion:	<u> </u>	Time	:	
	Status	igned [ ilable [	] O/S R∉ ] O/S M€	est ech	O/: ET	S Pers R:	
	Incide	nt Loca	tion:		Time	:	
	Status Ass Ava Notes:	igned [ ilable [	] O/S Re ] O/S Me	est ech	O/S ET	S Pers R:	
	Incide	nt Loca	tion:		Time		
	Status Ass	: igned [ ilable [	] O/S Re ] O/S Me	est ech	0/8	S Pers R:	
	Notes:	:					
	Incide	nt Loca	tion:		Time	:	
	Status Ass Ass Ava Notes:	: igned [ ilable [	] O/S Re ] O/S Me	est ech	0/\$ ET	S Pers R:	
	Prepar Date/T	red by: ïme: 19-7 E	QUIPME	ENT	· (YEL	LOW)	

## ICS 219-7: Equipment Card

Block Title	Instructions		
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.		
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.		
# Pers	Enter total number of personnel associated with the resource. Include leaders.		
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.		
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).		
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.		
Name/ID #         Use this section to enter the resource name or unique identifier (e.g., 13, Bluew Utility 32).			
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.		
Leader Name	Enter resource leader's name (use at least the first initial and last name).		
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.		
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).		
	Phone and pager numbers should include the area code and any satellite phone specifics.		
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this resource.		
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).		
Departure Point	Enter the location from which the resource or individual departed for this incident.		
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.		
ЕТА	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.		
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.		
Remarks	Enter any additional information pertaining to the resource.		
BACK OF FORM			
Incident Location	Enter the location of the resource.		
Time	Enter the time (24-hour clock) the resource reported to this location.		
Status	Enter the resource's current status:		
Assigned	Assigned – Assigned to the incident		
O/S Rest O/S Pers	<ul> <li>O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft</li> </ul>		
 ☐ Available	O/S Pers – Out-of-service for personnel reasons		
 □ O/S Mech	Available – Available to be assigned to the incident		
ETR:	O/S Mech – Out-of-service for mechanical reasons		
	ETR – Estimated time of return		
Notes	Enter any additional information pertaining to the resource's current location or status.		

Block Title	Instructions
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

ST/Unit:		LDW:	# Pers:	Order #	ŧ:					
Agency	Agency Cat/Kind/Type Name/ID :									
Dato/T	ime Ch	Fron	t							
Date/1	Date/Time Checked In:									
Leade	Leader Name:									
Primar	y Conta	act Infori	nation:							
Resou	rce ID #	ŧ(s) or Na	ame(s):							
Home	Base:									
Depart	ure Poi	nt:	т.							
Date/T	ime Ord	Hered <sup>.</sup>								
Remar	ks:									
Prena	red by:									
Date/T	ime.									
	10.0.11									
EQUI	ICS 219-8 MISCELLANEOUS EQUIPMENT/TASK FORCE (TAN)									

/Unit:		LDW:	#	Pers:	Order	Order #:	
gency	С	at/Kind/T	ј уре	;	Name/I	D #	
		Back	(				
Incide	nt Loca	tion:		Time	:		
Status	:					-	
🗌 Ass	igned [ iilable [	_] O/S Re _] O/S Me	est ech		S Pers R:		
Notes	:						
Incide	nt Loca	tion:		Time	:		
Status	: ianed [		et		S Pore		
Assigned O/S Rest					R:		
Notes	:						
Incide	nt Loca	tion:		Time	:	1	
Status	:						
Ass	igned [ ilable [	] O/S R∉ ∃ O/S M∉	est ech		S Pers R:		
Notes	:						
Incide	nt Loca	tion:		Time	:		
Status	igned [	] O/S Re	est	0/5	S Pers		
Notes:		O/S Me	ech		R:		
Prepa Date/T	red by: 'ime:						
ICS 2 EQUI	19-8 M PMENT	ISCELL /TASK	AN FOF	EOUS RCE (1	FAN)		

S

## ICS 219-8: Miscellaneous Equipment/Task Force Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available work day that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).
	Phone and pager numbers should include the area code and any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number or name for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ЕТА	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status	Enter the resource's current status:
Assigned	Assigned – Assigned to the incident
O/S Rest	O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to
O/S Pers	operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
Available	O/S Pers – Out-of-service for personnel reasons
	Available – Available to be assigned to the incident
	U/S ween – Out-of-service for mechanical reasons
Nataa	EIK – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.

Block Title	Instructions
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

ST	/Unit:		LDW:	# Pers:	Order	<b>#:</b>
Aç	gency	Ca	 at/Kind/	Гуре	Name/II	) #
	Date/T Leader Primar Resou	ime Cho r Name: y Conta rce ID #	From ecked In act Infor	nt n: mation: ame(s):		
	Home	Base:				
	Depart ETD:	ture Poi	nt:	ETA:		
	Date/T	ime Oro	dered:			
	Kemar	KS:				
	Prepar Date/T	red by: ime:				
	ICS 2' PURP	19-10 ( LE)	GENER	IC (LIGHT	Γ	

ST	ST/Unit:		LDW:	# Pers:		Order #:	
Aç	Agency Cat/Kind			ј уре	9	Name/II	D #
			Back				
	Incide	nt Loca	ation:		Time:	:	
	Status	:				Dere	
	🗌 Ass	igned [ ilable [	0/S Re 0/S Me	est ech		R:	
	Notes:	:					
	Incide	nt Loca	ation:		Time:		
	Status	:					
	□ Ass □ Ava	igned [ ilable [	_] O/S Re □ O/S Me	est ech		8 Pers R:	
	Notes:					<u> </u>	
	Incide	nt Loca	ition:		Time:		
	Status	:					
	🗌 Ass	igned [ ilable [	_] O/S Re _] O/S Me	est ech		8 Pers R:	
	Notes:	:					
	Incide	nt Loca	ation:		Time:		
	Status	:					
	🗌 Ass	igned [ ilable [	_] O/S Re _] O/S Me	est ech		8 Pers R: <u> </u>	
	Notes:						
	Prepar Date/T	red by: ime:					
	ICS 2 <sup>r</sup> PURP	19-10 'LE)	GENERI	C (	LIGHT		

### ICS 219-10: Generic Card

Block Title	Instructions				
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.				
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.				
# Pers	Enter total number of personnel associated with the resource. Include leaders.				
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.				
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).				
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.				
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).				
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.				
Leader Name	Enter resource leader's name (use at least the first initial and last name).				
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader.				
	If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205).				
	Phone and pager numbers should include the area code and any satellite phone specifics.				
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this resource.				
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).				
Departure Point	Enter the location from which the resource or individual departed for this incident.				
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.				
ЕТА	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.				
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.				
Remarks	Enter any additional information pertaining to the resource.				
BACK OF FORM					
Incident Location	Enter the location of the resource.				
Time	Enter the time (24-hour clock) the resource reported to this location.				
Status	Enter the resource's current status:				
Assigned	Assigned – Assigned to the incident				
O/S Rest O/S Pers	<ul> <li>O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft</li> </ul>				
Available	O/S Pers – Out-of-service for personnel reasons				
O/S Mech	Available – Available to be assigned to the incident				
ETR:	O/S Mech – Out-of-service for mechanical reasons				
	ETR – Estimated time of return				
Notes	Enter any additional information pertaining to the resource's current location or status.				

Block Title	Instructions
Prepared by	Enter the name of the person preparing the form. Enter the date (month/day/year) and
Date/Time	time prepared (using the 24-hour clock).

# AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:		<b>2. Operational</b> Date From: Time From:	2. Operational Period:Date From:Date To:Time From:Time To:			3. Sunrise:	Sunset:
<b>4. Remarks</b> (safety notes, hazards, air operations special equipment, etc.):			<b>5. Ready Alert Aircraft:</b> Medivac: New Incident:			6. Temporary Flight Altitude: Center Point:	Restriction Number:
			8. Frequencies:	AM	FM	9. Fixed-Wing (categ make/model, N#, bas	ory/kind/type, e):
			Air/Air Fixed-Wing			Air Tactical Group Su	pervisor Aircraft:
7. Personnel:	Name:	Phone Number:	Air/Air Rotary-Wing – Flight Following				
Air Operations Branch Director			Air/Ground				
Air Support Group Supervisor			Command			Other Fixed-Wing Air	craft:
Air Tactical Group Supervisor			Deck Coordinator				
Helicopter Coordinator			Take-Off & Landing Coordinator				
Helibase Manager			Air Guard				
10. Helicopters (use	additional sheets as ne	ecessary):					
FAA N#	Category/Kind/Type	Make/Model	Base	Ava	ailable	Start	Remarks
11. Prepared by: Na	ime:	Po	sition/Title:			Signature:	
ICS 220, Page 1			Date/Time:				

# AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	2. Operationa	I Period:		3. Sunrise:	Sunset:
	Date From: Time From:	Date To Time To			
12. Task/Mission/Assignmen	t (category/kind/type and functio	n includes: air tactical, rec	onnaissance, personnel tran	sport, search and res	cue, etc.):
Category/Kind/Type	Name of Person	nel or Cargo (if applicable)	Mission		
and Function	or Instructio	ns for Tactical Aircraft	Start	Fly From	Fly To
11. Prepared by: Name:	P	Position/Title:	Sigr	nature:	
ICS 220, Page 2		Date/Time:			

### ICS 220 Air Operations Summary

**Purpose.** The Air Operations Summary (ICS 220) provides the Air Operations Branch with the number, type, location, and specific assignments of helicopters and air resources.

**Preparation.** The ICS 220 is completed by the Operations Section Chief or the Air Operations Branch Director during each Planning Meeting. General air resources assignment information is obtained from the Operational Planning Worksheet (ICS 215), which also is completed during each Planning Meeting. Specific designators of the air resources assigned to the incident are provided by the Air and Fixed-Wing Support Groups. If aviation assets would be utilized for rescue or are referenced on the Medical Plan (ICS 206), coordinate with the Medical Unit Leader and indicate on the ICS 206.

**Distribution.** After the ICS 220 is completed by Air Operations personnel, the form is given to the Air Support Group Supervisor and Fixed-Wing Coordinator personnel. These personnel complete the form by indicating the designators of the helicopters and fixed-wing aircraft assigned missions during the specified operational period. This information is provided to Air Operations personnel who, in turn, give the information to the Resources Unit.

#### Notes:

• If additional pages are needed for any form page, use a blank ICS 220 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	<ul><li>Operational Period</li><li>Date and Time From</li><li>Date and Time To</li></ul>	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	Sunrise/Sunset	Enter the sunrise and sunset times.
4	<b>Remarks</b> (safety notes, hazards, air operations special equipment, etc.)	Enter special instructions or information, including safety notes, hazards, and priorities for Air Operations personnel.
5	<ul><li>Ready Alert Aircraft</li><li>Medivac</li><li>New Incident</li></ul>	Identify ready alert aircraft that will be used as Medivac for incident assigned personnel and indicate on the Medical Plan (ICS 206). Identify aircraft to be used for new incidents within the area or new incident(s) within an incident.
6	Temporary Flight Restriction Number • Altitude • Center Point	Enter Temporary Flight Restriction Number, altitude (from the center point), and center point (latitude and longitude). This number is provided by the Federal Aviation Administration (FAA) or is the order request number for the Temporary Flight Restriction.
7	<ul><li>Personnel</li><li>Name</li><li>Phone Number</li></ul>	Enter the name and phone number of the individuals in Air Operations.
	Air Operations Branch Director	
	Air Support Group Supervisor	
	Air Tactical Group Supervisor	
	Helicopter Coordinator	
	Helibase Manager	

Block Number	Block Title	Instructions
8	Frequencies <ul> <li>AM</li> <li>FM</li> </ul>	Enter primary air/air, air/ground (if applicable), command, deck coordinator, take-off and landing coordinator, and other radio frequencies to be used during the incident.
	Air/Air Fixed-Wing	
	Air/Air Rotary-Wing – Flight Following	Flight following is typically done by Air Operations.
	Air/Ground	
	Command	
	Deck Coordinator	
	Take-Off & Landing Coordinator	
	Air Guard	
9	<b>Fixed-Wing</b> (category/kind/type, make/model, N#, base)	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance, make/model, N#, and base of air assets allocated to the incident.
	Air Tactical Group Supervisor Aircraft	
	Other Fixed-Wing Aircraft	
10	Helicopters	Enter the following information about the helicopter resources allocated to the incident.
	FAA N#	Enter the FAA N#.
	Category/Kind/Type	Enter the helicopter category/kind/type based on NIMS, discipline, or jurisdiction guidance.
	Make/Model	Enter the make and model of the helicopter.
	Base	Enter the base where the helicopter is located.
	Available	Enter the time the aircraft is available.
	Start	Enter the time the aircraft becomes operational.
	Remarks	
11	<ul> <li>Prepared by</li> <li>Name</li> <li>Position/Title</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
12	Task/Mission/Assignment (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.)	Enter the specific assignment (e.g., water or retardant drops, logistical support, or availability status for a specific purpose, support backup, recon, Medivac, etc.). If applicable, enter the primary air/air and air/ground radio frequency to be used. Mission assignments may be listed by priority.
	Category/Kind/Type and Function	
	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	
	Mission Start	
	Fly From	Enter the incident location or air base the aircraft is flying from.
	Fly To	Enter the incident location or air base the aircraft is flying to.

# **DEMOBILIZATION CHECK-OUT (ICS 221)**

1. Inc	ident Name:			2. Inc	ident Number	:	
3. Pla Date:	inned Release Date/Tim Time:	e:	4. Resou	rce or Personnel F	Released:	5. Order Request Number:	
6. Re Yo be rep LOG	<ul> <li>6. Resource or Personnel: You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative).</li> <li>LOGISTICS SECTION</li> </ul>						
	Unit/Manager	Rem	arks		Name	Signature	
	Supply Unit						
	Communications Unit						
	Facilities Unit						
	Ground Support Unit						
	Security Manager						
FIN/	ANCE/ADMINISTRATIO	N SEC Rem	TION arks		Name	Signature	
	Time Unit					<u>×</u>	
OTH	IER SECTION/STAFF	Por	arks		Namo	Signature	
	ondother	Ken			Name	Signature	
 PLA	NNING SECTION Unit/Leader	Rem	arks		Name	Signature	
	Documentation Leader						
	Demobilization Leader						
7. Re	marks:						
8. Tra	avel Information:			Room	n Overnight:	Yes 🗌 No	
Estim	ated Time of Departure:			Actua	Actual Release Date/Time:		
Desti	nation:			Estim	_ Estimated Time of Arrival:		
Travel Method:			Conta	Contact Information While Traveling:			
Manif	est:  Yes  No Number:			Area/	Agency/Region	Notified:	
9. Re	eassignment Informatio	n: 🗌	Yes 🗌 No	D			
Incident Name:			Incide	ent Number:			
Locat	ion:			Order	Request Num	oer:	
10. P	repared by: Name:			Position/Title	):	Signature:	
ICS 2	21			Date/Time:			

### ICS 221 Demobilization Check-Out

**Purpose.** The Demobilization Check-Out (ICS 221) ensures that resources checking out of the incident have completed all appropriate incident business, and provides the Planning Section information on resources released from the incident. Demobilization is a planned process and this form assists with that planning.

**Preparation.** The ICS 221 is initiated by the Planning Section, or a Demobilization Unit Leader if designated. The Demobilization Unit Leader completes the top portion of the form and checks the appropriate boxes in Block 6 that may need attention after the Resources Unit Leader has given written notification that the resource is no longer needed. The individual resource will have the appropriate overhead personnel sign off on any checked box(es) in Block 6 prior to release from the incident.

**Distribution.** After completion, the ICS 221 is returned to the Demobilization Unit Leader or the Planning Section. All completed original forms must be given to the Documentation Unit. Personnel may request to retain a copy of the ICS 221.

#### Notes:

- Members are not released until form is complete when all of the items checked in Block 6 have been signed off.
- If additional pages are needed for any form page, use a blank ICS 221 and repaginate as needed.

Block Number	Block Title	Instructions
1	Incident Name	Enter the name assigned to the incident.
2	Incident Number	Enter the number assigned to the incident.
3	Planned Release Date/Time	Enter the date (month/day/year) and time (using the 24-hour clock) of the planned release from the incident.
4	Resource or Personnel Released	Enter name of the individual or resource being released.
5	Order Request Number	Enter order request number (or agency demobilization number) of the individual or resource being released.
6	Resource or PersonnelYou and your resources are inthe process of being released.Resources are not released untilthe checked boxes below havebeen signed off by theappropriate overhead and theDemobilization Unit Leader (orPlanning Sectionrepresentative).Unit/Leader/Manager/OtherRemarksNameSignature	Resources are not released until the checked boxes below have been signed off by the appropriate overhead. Blank boxes are provided for any additional unit requirements as needed (e.g., Safety Officer, Agency Representative, etc.).
	Logistics Section           Supply Unit           Communications Unit           Facilities Unit           Ground Support Unit           Security Manager	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.

Block Number	Block Title	Instructions					
6 (continued)	Finance/Administration Section	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out.					
	Time Unit	Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.					
	Other Section/Staff	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out.					
		Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.					
	Planning Section Documentation Leader	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out.					
	Demobilization Leader	Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.					
7	Remarks	Enter any additional information pertaining to demobilization or release (e.g., transportation needed, destination, etc.). This section may also be used to indicate if a performance rating has been completed as required by the discipline or jurisdiction.					
8	Travel Information	Enter the following travel information:					
	Room Overnight	Use this section to enter whether or not the resource or personnel will be staying in a hotel overnight prior to returning home base and/or unit.					
	Estimated Time of Departure	Use this section to enter the resource's or personnel's estimated time of departure (using the 24-hour clock).					
	Actual Release Date/Time	Use this section to enter the resource's or personnel's actual release date (month/day/year) and time (using the 24-hour clock).					
	Destination	Use this section to enter the resource's or personnel's destination.					
	Estimated Time of Arrival	Use this section to enter the resource's or personnel's estimated time of arrival (using the 24-hour clock) at the destination.					
	Travel Method	Use this section to enter the resource's or personnel's travel method (e.g., POV, air, etc.).					
	Contact Information While Traveling	Use this section to enter the resource's or personnel's contact information while traveling (e.g., cell phone, radio frequency, etc.).					
	Manifest  Yes No Number	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.					
	Area/Agency/Region Notified	Use this section to enter the area, agency, and/or region that was notified of the resource's travel. List the name (first initial and last name) of the individual notified and the date (month/day/year) he or she was notified.					
9	Reassignment Information	Enter whether or not the resource or personnel was reassigned to another incident. If the resource or personnel was reassigned,					
		complete the section below.					
		resource was reassigned.					
	Incident Number	Use this section to enter the number of the new incident to which the resource was reassigned.					
	Location	Use this section to enter the location (city and State) of the new incident to which the resource was reassigned.					
	Order Request Number	Use this section to enter the new order request number assigned to the resource or personnel.					

Block Number	Block Title	Instructions
10	Prepared by • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (using the 24-hour clock).

# INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)

THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT									
1. Name:       2. Incident Name:       3. Incident Number:									
4. Home Unit Name and	l Add	ress:	5. Incident Agency and Address:						
6. Position Held on Inci	dent:	7. Date(s) of Assignment From: To:	:	8. Incident Complexity Level:     9. Incident Definition:       1     2     3     4     5					
10. Evaluation									
Rating Factors	N/A	1 – Unacceptable	2	3 – Met Standards	4	5 – Exceeded Expectations			
11. Knowledge of the Job/ Professional Competence: Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)	ge of the Job/ Competence: ire, apply, and al and knowledge and ed with duties. (Includes pects such as , seamanship, AR, etc., as			Competent and credible authority on specialty or operational issues. Acquired and applied excellent operational or specialty expertise for assigned duties. Showed professional growth through education, training, and professional reading. Shared knowledge and information with others clearly and simply. Understood own organizational role and customer needs.		Superior expertise; advice and actions showed great breadth and depth of knowledge. Remarkable grasp of complex issues, concepts, and situations. Rapidly developed professional growth beyond expectations. Vigorously conveyed knowledge, directly resulting in increased workplace productivity. Insightful knowledge of own role, customer needs, and value of work.			
12. Ability To Obtain Performance/Results: Quality, quantity, timeliness, and impact of work.	Obtain Results: y, timeliness, vork.			Got the job done in all routine situations and in many unusual ones. Work was timely and of high quality; required same of subordinates. Results had a positive impact on IMT. Continuously improved services and organizational effectiveness.		Maintained optimal balance among quality, quantity, and timeliness of work. Quality of own and subordinates' work surpassed expectations. Results had a significant positive impact on the IMT. Established clearly effective systems of continuous improvement.			
13. Planning/ Preparedness: Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident		Got caught by the unexpected; appeared to be controlled by events. Set vague or unrealistic goals. Used unreasonable criteria to set priorities and deadlines. Rarely had plan of action. Failed to focus on relevant information.		Consistently prepared. Set high but realistic goals. Used sound criteria to set priorities and deadlines. Used quality tools and processes to develop action plans. Identified key information. Kept supervisors and stakeholders informed.		Exceptional preparation. Always looked beyond immediate events or problems. Skillfully balanced competing demands. Developed strategies with contingency plans. Assessed all aspects of problems, including underlying issues and impact.			
14. Using Resources: Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).		Concentrated on unproductive activities or often overlooked critical demands. Failed to use people productively. Did not follow up. Mismanaged information, money, or time. Used ineffective tools or left subordinates without means to accomplish tasks. Employed wasteful methods.		Effectively managed a variety of activities with available resources. Delegated, empowered, and followed up. Skilled time manager, budgeted own and subordinates' time productively. Ensured subordinates had adequate tools, materials, time, and direction. Cost conscious, sought ways to cut waste.		Unusually skilled at bringing scarce resources to bear on the most critical of competing demands. Optimized productivity through effective delegation, empowerment, and follow-up control. Found ways to systematically reduce cost, eliminate waste, and improve efficiency.			
15. Adaptability/Attitude: Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.	<ul> <li>'/Attitude: a positive fy work rities in information, ons, political pected</li> <li>Unable to gauge effectiveness of work, recognize political realities, or make adjustments when needed. Maintained a poor outlook. Overlooked or screened out new information. Ineffective in ambiguous, complex, or pressured situations.</li> </ul>			Receptive to change, new information, and technology. Effectively used benchmarks to improve performance and service. Monitored progress and changed course as required. Maintained a positive approach. Effectively dealt with pressure and ambiguity. Facilitated smooth transitions. Adjusted direction to accommodate political realities.		Rapidly assessed and confidently adjusted to changing conditions, political realities, new information, and technology. Very skilled at using and responding to measurement indicators. Championed organizational improvements. Effectively dealt with extremely complex situations. Turned pressure and ambiguity into constructive forces for change.			
<ul> <li>16. Communication Skills: Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.</li> <li>Unable to effectively articulate ide and facts; lacked preparation, confidence, or logic. Used inappropriate language or ramble Nervous or distracting mannerism detracted from message. Failed t listen carefully or was too argumentative. Written material frequently unclear, verbose, or poorly organized. Seldom proofree</li> </ul>		Unable to effectively articulate ideas and facts; lacked preparation, confidence, or logic. Used inappropriate language or rambled. Nervous or distracting mannerisms detracted from message. Failed to listen carefully or was too argumentative. Written material frequently unclear, verbose, or poorly organized. Seldom proofread.		Effectively expressed ideas and facts in individual and group situations; nonverbal actions consistent with spoken message. Communicated to people at all levels to ensure understanding. Listened carefully for intended message as well as spoken words. Written material clear, concise, and logically organized. Proofread conscientiously.		Clearly articulated and promoted ideas before a wide range of audiences; accomplished speaker in both formal and extemporaneous situations. Adept at presenting complex or sensitive issues. Active listener; remarkable ability to listen with open mind and identify key issues. Clearly and persuasively expressed complex or controversial material, directly contributing to stated objectives.			

## **INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)**

1. Name:	2. Incident Name:					3. Incident Number:			
10. Evaluation									
Rating Factors	N/A	1 -	- Unacceptable	e	2	3 – Met Standards	4	5 – Exceeded Expectations	
17. Ability To Work on a Team: Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.		Used teams ineffectively or at wrong times. Conflicts mismanaged or often left unresolved, resulting in decreased team effectiveness. Excluded team members from vital information. Stifled group discussions or did not contribute productively. Inhibited cross functional cooperation to the detriment of unit or service goals.			Skillfully used teams to increase unit effectiveness, quality, and service. Resolved or managed group conflict, enhanced cooperation, and involved team members in decision process. Valued team participation. Effectively negotiated work across functional boundaries to enhance support of broader mutual goals.		Insightful use of teams raised unit productivity beyond expectations. Inspired high level of esprit de corps, even in difficult situations. Major contributor to team effort. Established relationships and networks across a broad range of people and groups, raising accomplishments of mutual goals to a remarkable level.		
18. Consideration for		Seldom rec	ognized or responded to			Cared for people. Recognized and		Always accessible. Enhanced overall	
Personnel/Team Welfare: Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.		needs of people; left outside resources untapped despite apparent need. Ignorance of individuals' capabilities increase chance of failure. Seldom recognized or rewarded deserv subordinates or other IMT mem		e of eased serving nembers.		esponded to their needs; referred to butside resources as appropriate. Considered individuals' capabilities to naximize opportunities for success. Consistently recognized and rewarded Jeserving subordinates or other IMT nembers.		quality of life. Actively contributed to achieving balance among IMT requirements and professional and personal responsibilities. Strong advocate for subordinates; ensured appropriate and timely recognition, both formal and informal.	
19. Directing Others: Ability to influence or direct others in accomplishing tasks or missions.		Showed difficulty in directing influencing others. Low or un work standards reduced proc Failed to hold subordinates accountable for shoddy work irresponsible actions. Unwillin delegate authority to increase efficiency of task accomplish		g or inclear oductivity. 'k or ling to se hment.		A leader who earned others' support and commitment. Set high work standards; clearly articulated job requirements, expectations, and measurement criteria; held subordinates accountable. When appropriate, delegated authority to those directly responsible for the task.		An inspirational leader who motivated others to achieve results not normally attainable. Won people over rather than imposing will. Clearly articulated vision; empowered subordinates to set goals and objectives to accomplish tasks. Modified leadership style to best meet challenging situations.	
20. Judgment/Decisions Under Stress: Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.		Decisions o analysis. Fa decisions, c without con alternatives effectively v consideratio political driv	ften displayed p ailed to make ne or jumped to con sidering facts, , and impact. Di veigh risk, cost, ons. Unconcerne rers on organiza	oor cessary clusions d not and time ed with tion.		Demonstrated analytical thought and common sense in making decisions. Jsed facts, data, and experience, and considered the impact of alternatives and political realities. Weighed risk, cost, and time considerations. Made sound decisions promptly with the best available information.		Combined keen analytical thought, an understanding of political processes, and insight to make appropriate decisions. Focused on the key issues and the most relevant information. Did the right thing at the right time. Actions indicated awareness of impact of decisions on others. Not afraid to take reasonable risks to achieve positive results.	
21. Initiative Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.		Postponed needed action. Implemented or supported improvements only when directed to do so. Showed little interest in career development. Feasible improvements in methods, services, or products went unexplored.			Championed improvement through new ideas, methods, and practices. Anticipated problems and took prompt action to avoid or resolve them. Pursued productivity gains and enhanced mission performance by applying new ideas and methods.		Aggressively sought out additional responsibility. A self-learner. Made worthwhile ideas and practices work when others might have given up. Extremely innovative. Optimized use of new ideas and methods to improve work processes and decisionmaking.		
22. Physical Ability for the Job: Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.		Failed to meet minimum standards of sobriety. Tolerated or condoned others' alcohol abuse. Seldom considered subordinates' health and well-being. Unwilling or unable to recognize and manage stress despite apparent need.			Committed to health and well-being of self and subordinates. Enhanced personal performance through activities supporting physical and emotional well- being. Recognized and managed stress effectively.		Remarkable vitality, enthusiasm, alertness, and energy. Consistently contributed at high levels of activity. Optimized personal performance through involvement in activities that supported physical and emotional well-being. Monitored and helped others deal with stress and enhance health and well-being		
23. Adherence to Safetv:		Failed to ac	Lequately identify	y and		Ensured that safe operating procedures		Demonstrated a significant commitment	
Ability to invest in the IMT's future by caring for the safety of self and others.		protect personnel from safety hazards.			were followed.		toward safety of personnel.		
24. Remarks:					•	•	•	•	
25. Rated Individual (This rating has been discussed with me):									
Signature: Date/Time:									
26. Rated by: Name:	26. Rated by: Name: Signature:								
Home Unit:				_		Position Held on This Incide	ent:		
ICS 225 Date/Time:									

### ICS 225 Incident Personnel Performance Rating

**Purpose.** The Incident Personnel Performance Rating (ICS 225) gives supervisors the opportunity to evaluate subordinates on incident assignments. THIS RATING IS TO BE USED <u>ONLY</u> FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT.

**Preparation.** The ICS 225 is normally prepared by the supervisor for each subordinate, using the evaluation standard given in the form. The ICS 225 will be reviewed with the subordinate, who will sign at the bottom. It will be delivered to the Planning Section before the rater leaves the incident

Distribution. The ICS 225 is provided to the Planning Section Chief before the rater leaves the incident.

#### Notes:

- Use a blank ICS 225 for each individual.
- Additional pages can be added based on individual need.

Block Number	Block Title	Instructions
1	Name	Enter the name of the individual being rated.
2	Incident Name	Enter the name assigned to the incident.
3	Incident Number	Enter the number assigned to the incident.
4	Home Unit Address	Enter the physical address of the home unit for the individual being rated.
5	Incident Agency and Address	Enter the name and address of the authority having jurisdiction for the incident.
6	Position Held on Incident	Enter the position held (e.g., Resources Unit Leader, Safety Officer, etc.) by the individual being rated.
7	<ul><li>Date(s) of Assignment</li><li>From</li><li>To</li></ul>	Enter the date(s) (month/day/year) the individual was assigned to the incident.
8	Incident Complexity Level 1 2 3 4 5	Indicate the level of complexity for the incident.
9	Incident Definition	Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire,", "bridge collapse,", "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	Evaluation	Enter "X" under the appropriate column indicating the individual's level of performance for each duty listed.
	N/A	The duty did not apply to this incident.
	1 – Unacceptable	Does not meet minimum requirements of the individual element. Deficiencies/Improvements needed must be identified in Remarks.
	2 – Needs Improvement	Meets some or most of the requirements of the individual element. IDENTIFY IMPROVEMENT NEEDED IN REMARKS.
	3 – Met Standards	Satisfactory. Employee meets all requirements of the individual element.

Block Number	Block Title	Instructions					
	4 – Fully Successful	Employee meets all requirements and exceeds one or several of the requirements of the individual element.					
10	5 – Exceeded Expectations	Superior. Employee consistently exceeds the performance requirements.					
11	Knowledge of the Job/ Professional Competence:	Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)					
12	Ability To Obtain Performance/Results:	Quality, quantity, timeliness, and impact of work.					
13	Planning/Preparedness:	Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident Management Team (IMT).					
14	Using Resources:	Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).					
15	Adaptability/Attitude:	Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.					
16	Communication Skills:	Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.					
17	Ability To Work on a Team:	Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.					
18	Consideration for Personnel/Team Welfare:	Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.					
19	Directing Others:	Ability to influence or direct others in accomplishing tasks or missions.					
20	Judgment/Decisions Under Stress:	Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.					
21	Initiative	Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.					
22	Physical Ability for the Job:	Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.					
23	Adherence to Safety:	Ability to invest in the IMT's future by caring for the safety of self and others.					
24	Remarks	Enter specific information on why the individual received performance levels.					
25	<ul> <li>Rated Individual (This rating has been discussed with me)</li> <li>Signature</li> <li>Date/Time</li> </ul>	Enter the signature of the individual being rated. Enter the date (month/day/year) and the time (24-hour clock) signed.					
26	<ul> <li>Rated by</li> <li>Name</li> <li>Signature</li> <li>Home Unit</li> <li>Position Held on This Incident</li> <li>Date/Time</li> </ul>	Enter the name, signature, home unit, and position held on the incident of the person preparing the form and rating the individual. Enter the date (month/day/year) and the time (24-hour clock) prepared.					

# Appendix A

I

# BAYVIEW TORNADO ICS-209

٦

*1. Incident Name: Bayview Tornado				2. Incident Number: 0502 (from F and A)					
*3. Report Version (check	commander(s)	&	5. Incident		*6. Incident Start Date/Time:				
one box on left):	Agency or O	rganization:		Management Organization:		Date: <u>5-2-2009</u>			
X Initial Rpt #	N. Kempfer-N Roberts-Neec	Needland Fire, D. dland EMS, K. nger Co. Sheriff's		Unified Comma	nd	Time: 1719 hours			
	Anthony-Gran			Chinica Command		Timo Zono: Control			
Final	Office, J. Dav D.Doan-Gran	ila-Needland PI ger	D,			Time Zono. <u>Contrar</u>			
7. Current Incident Size	8. Percent (%	b) *9. Incide	ent	10. Incident		*11. For Tim	ne Period:		
or Area Involved (use unit label – e.g., "sg.mi," "city	Contained	Definitio	n:	Complexity		From Date/Time: 5-2-2009/2029hrs			
block"):		lornado		Type 3		<u> </u>			
9 Block area				1)000		To Date/Tim	e: <u>5-3-2009/06</u>	<u> 300hrs</u>	
Annual 8 Daviding Informa	20%								
	tion				*40	Dete/Times	Deck and the state of the	0000	
<sup>^</sup> 12. Prepared By: Print Name: SL Gaithe	IC	S Position · Pla	nning De	13. Date/Time Submitted: 5-3-2009			5-2009		
		0 1 0311011. <u>1 10</u>		pary	Tim	SUU NIS			
Date/Time Prepared: May 09	, 2009 / 2249 h	<u>ours</u>			* 4 5				
*14. Approved By: Print Name: A Archer	IC	S Position: Pla	nning Ch	ief	*15. Age	Primary Lo ency Sent To	cation, Organi o:	zation, or	
	10	01 0511011. <u>114</u>			EOC	OC			
Incident Location Informatio	n								
*16. State:		*17. County/F	Parish/Bo	prough:	ough: *18 City:				
Columbia		Granger Coun	ity		Ν	Needland			
19. Unit or Other:		*20. Incident	20. Incident Jurisdiction:			21. Incident Location Ownership			
Needland EMS, Needland Po	olice,	City of Needla	City of Needland			(if different than jurisdiction):			
Needland Fire			,			N/A			
22. Longitude (indicate form	at):	23. US Nation	3. US National Grid Reference:			<b>24. Legal Description</b> (township, section,			
-97 23' 38.30		N/A	N/A			range): Bawiew area encompassing Bawiew			
Latitude (indicate format): 27	7 47' 38.99					Convention Cntr			
*25. Short Location or Area	Description (	ist all affected a	areas or a	a reference point): 26. UTM Coordinates:					
City of Needland in Granger of downtown area new the Bay	County, State o	f Columbia. The n Center.	e tornado	struck the	Ν	J/A			
27. Note any electronic geo	spatial data in	cluded or atta	ched (ind	dicate data format	t, conte	ent, and colle	ection time info	rmation and	
N/A									
Incident Summary									
*28. Significant Events for t	the Time Perio	d Reported (su	ummarize	significant progr	ess ma	ade, evacuat	ions, incident g	rowth, etc.):	
Responders call to the scene as search and rescue efforts	of a tornado to are underway.	uchdown that c As of 23:50 42	lamaged victims h	many building in ave been confirm	a 9 blo ied deo	ock area of B ceased and §	aytown, Evacu 983 injuries.	ation as well	
29. Primary Materials or Ha	zards Involved	(hazardous ch	nemicals,	fuel types, infecti	ious ag	gents, radiati	on, etc.):		
None known at this time. Mos	stly Structural D	amage and poo	or weathe	er is hampering re	escue/	recovery effo	orts.		
<b>30. Damage Assessment Information</b> (summarize damage and/or restriction of use or availability to				ctural arv	B. # 1 (7	Threatened 72 hrs)	C. # Damaged	D. # Destroved	
residential or commercial pro	esources,	E Sing	ode Residences			2	200.0900		
critical infrastructure and key	resources, etc.	):	E Non	residential	50		12	5	
	Comme	ercial Property	00		12	Ŭ			
			<i>l</i> inor						
		Structures							
--------------------	-------	------------------------	--	--					
		Other							
ICS 209, Page 1 of	* Req	uired when applicable.							

#### **BAYVIEW TORNADO ICS-209**

\*1. Incident Name: Bayview Tornado

2. Incident Number: 0502

Additional Incident Decision Support Inf	ormation		•		
	A. # This			A. # This	
*24 Dublic Status Summany	Reporting	B. Total #	*22 Beenender Statue Summeru	Reporting	B. Total #
"31. Public Status Summary:	Period	to Date	32. Responder Status Summary:	Period	to Date
<u>C. Indicate Number of Civilians (Public) Be</u>	<u>elow:</u>		C. Indicate Number of Responders Below:		
D. Fatalities	102			0	
E. With Injuries/Illness	1837		E. With Injuries/Illness	4	
F. Trapped/in Need of Rescue			F. Trapped/in Need of Rescue	0	
G. Missing (note if estimated)				0	
Evacuated (note if estimated)     Sheltering in Place (note if estimated)			п. I Sheltering in Place	0	
I In Temporary Shelters (note if est.)	700			0	
K Have Received Mass Immunizations	0		K Have Received Immunizations	0	
L. Require Immunizations (note if est.)	0		L. Require Immunizations	0	
M. In Quarantine	0		M. In Quarantine	0	
N. Total # Civilians (Public) Affected:			N. Total # Responders Affected:		
33. Life. Safety, and Health Status/Threa	at Remarks	:	*34. Life. Safety, and Health Threat	1	
May trapped and missing victims			Management:	A. Check	k if Active
way happed and missing victims			A. No Likely Threat	Г	
			B. Potential Euture Threat		<u> </u>
			C Mass Notifications in Progress	Г	7
			D. Mass Notifications Completed	Г	7
			E No Evacuation(s) Imminent	Г	7
			E Planning for Evacuation	<u>г</u>	7
			G Planning for Shelter-in-Place	Г	
35 Weather Concerns (synapsis of surro	nt and prod	ictod	H Evacuation(s) in Progress	<u>ر</u>	 X
weather: discuss related factors that may	cause conce	ern):	1. Shelter-in-Place in Progress	,	X
Heavy rain and severe weather			I. Benopulation in Progress	,	X X
rieavy fain and severe weather			K Mass Immunization in Progress	Г Г	$\overline{}$
			Mass Immunization Complete		
			L. Mass minufization Complete		
			N. Area Postriction in Effect	L	 v
			N. Alea Restriction in Ellect	Г	^ 
				<u> </u>	
				<u> </u>	
36. Projected Incident Activity. Potentia	I. Moveme	nt. Escalatio	I or Spread and influencing factors during	the next op	 erational
period and in 12-, 24-, 48-, and 72-hour tir	neframes:	,	,		
12 hours: Search and rescue, looting, she	elter for 1 <sup>st</sup> r	esponders, c	lemobilization		
24 hours: Treatment and transport of victi	ms, restore	utilities			
48 hours: Area clean up					
72 hours: Restore business					
Anticipated after 72 hours: Rebuild					
37. Strategic Objectives (define planned	end-state for	or incident):			
The desired outcome is to restore life and	property to	normal oper	ation as soon as possible		
	property to				
ICS 209, Page 2 of		* Required	when applicable.		

#### **BAYVIEW TORNADO ICS-209**

*1. Incident Name: Bayview Tornado incident		2. Incident Number: 0502				
Additional Incident Decision Support Information (continued)						
<b>38. Current Incident Threat Summary and Risk Info</b> primary incident threats to life, property, communities infrastructure and key resources, commercial facilities operations and/or business. Identify corresponding in	ormation in 1 and commun s, natural and acident-related	<b>2-, 24-, 48-, and 72-hour timeframes and beyond.</b> Summarize ty stability, residences, health care facilities, other critical environmental resources, cultural resources, and continuity of potential economic or cascading impacts.				
12 hours: Heavy casualties taxing the EMS system.	Severe weath	er, need for additional Engines				
24 hours: N/A						
48 hours: Need for relief teams, supplies and equipm	nent					
72 hours: Need for supplies, food and drink						
Anticipated after 72 hours: Same						
<b>39. Critical Resource Needs</b> in 12-, 24-, 48-, and 72 category, kind, and/or type, and amount needed, in pr	-hour timefrar riority order:	nes and beyond to meet critical incident objectives. List resource				
12 hours: Loss of 6 Engines that are needed by to th	eir community	,				
24 hours:						
48 hours:						
72 hours:						
Anticipated after 72 hours:						
<ul> <li>40. Strategic Discussion: Explain the relation of c</li> <li>1) critical resource needs identified above,</li> <li>2) the Incident Action Plan and management objec</li> <li>3) anticipated results.</li> <li>Explain major problems and concerns such as op political, economic, or environmental concerns or</li> </ul>	overall strate	gy, constraints, and current available information to: lets, Illenges, incident management problems, and social,				
41. Planned Actions for Next Operational Period:						
Continue with search, rescue and safety operations						
42. Projected Final Incident Size/Area (use unit labor	el – e.g., "sq r	ni"): 9 Sq blocks				
43. Anticipated Incident Management Completion	Date: Unknov	vn				
44. Projected Significant Resource Demobilization	Start Date:	4 May 2009				
45. Estimated Incident Costs to Date: 277,578	45. Estimated Incident Costs to Date: 277,578					
46. Projected Final Incident Cost Estimate: Unknown						
<b>47. Remarks</b> (or continuation of any blocks above – li	ist block numl	per in notation):				
ICS 209, Page 3 of	* Required v	hen applicable.				

#### **BAYVIEW TORNADO ICS-209**

1. Incident Name: Bayview Tornado

2. Incident Number: 0502

ncident Resource Commitment Summary																							
	<b>49</b> res bo	. Re soure	sou ces	rces on to of bo	s (su op ½ x):	mma of k	arize box,	e res shov	ourc v # (	es t of pe	by ca ersor	atego nnel	ory, asso	kind ocia	, and ted v	d/or with	type resc	; sho ource	ow # e on	≠ of		rsonnel	51. Total Personnel
48. Agency or Organization:	Police Motor units	ALS Ambulance	BLS Ambulance	Engine	Ladder Truck	Bus - 45 Pass	Medic	Animal Cont. Off	Backhoe	EMS Res. Team	Rescue	DPW Sedan	Dump Truck	DPW Light Plant	Structural Eng.	Street Sweeper	Heavy Rescue	Police Officer	Medical Examiner	Buses – 20 Pass	Portable Morgue	50. Additional Per not assigned to a resource:	(includes those associated with resources – e.g., aircraft or engines – and individual overhead):
City of Needland	3 3 3 3	1 6 3 2	4 8	2 2 8 8	7 2 8		1 2 2 4	5 5	7 7	3 4 5		4	5 5	1 1 1 1	3 3	4	3 1 5	4 0 4 0	2 1		1 9	19	302
Granger County Fire Department				1 5 6 0	7 2 8																	8	96
Arkansas Pass Fire Department	3 3	3 6		3 1 2	2 8		8 8				3 6							5 5				6	54
Boise Fire Department			2	2 8	2 8		6 6				2 8											4	38
Calvinton Fire Department		2 4		3 1 2	2 8		4															2	30
Columbia State Police	6 6																	7 7				1	14
Granger Area Transit Enterprise						1 8 1 8														1 2 1 2		3	33
Granger County EMS		2 1 4 2	9 1 8				1 6 1 6															4	80
Granger County Sherriff	1 2 1 2																	2 3 2 3				15	50
City of Pleasant Grove	1 7 1 7			5	2 8		6 6				1		2	2				1 1 1 1				9	83
MED STAT				0						3													30
Port Arkansas	5 5																						5
Taft Police Department	3 3																4						7
Granger County DPW									4				6 6	7 7		8 8						14	39
52. Total Resources	7 9	4 2	1 5	5 0	2 2	1 8	5 2	5	1 1	5	6	4	1 3	2 0	3	1 2	3	9 0	2	1 2	1	85	861
53. Additional Coope	53. Additional Cooperating and Assisting Organizations Not Listed Above:																						
ICS 209, Page of * Required when applicable.																							

### RESOURCE REQUEST MESSAGE (ICS 213 RR)

1. In	. Incident Name:		2. Date/Time		3. Resource Requ	uest Number:					
	4. Orde	e <b>r</b> (Use a	additiona	I forms when requesting different res	ource sources of supply.):						
	Qty.	Kind	Туре	Detailed Item Description: (Vital cha	aracteristics, brand, specs,		Arrival Date and Ti	ime	Cost		
				experience, size, etc.)			Requested	Estimated			
stor											
nes											
Seq											
-											
	5. Reau	lested [	Deliverv	Reporting Location:							
	6. Suitable Substitutes and/or Suggested Sources:										
	7. Requ	lested b	oy Name	Position: 8	Priority: Urgent Rout	ine 🗌 Low	9. Section Chief Approval:				
	-		-			—					
	10. Log	istics C	Order Nu	mber:			11. Supplier Phor	11. Supplier Phone/Fax/Email:			
6	12. Nar	ne of Sı	upplier/F	POC:							
stics	13. Not	es:									
ogis											
Ľ											
	14. App	oroval S	ignature	e of Auth Logistics Rep:			15. Date/Time:				
	16. Ord	er place	ed by (c	heck box): 🗌 SPUL 📋 PROC			•				
	17. Rep	oly/Com	ments f	rom Finance:							
nce	-	-									
ina											
	18. Fina	ance Se	ction Si	gnature:			19. Date/Time:				
ICS	213 RR, I	Page 1					<u>.</u>				

#### Modified ICS 208 Form Site Specific Safety Plan

This form to be completed by the designated Safety Officer.

#### **INCIDENT DESCRIPTION:**

Date:	Location:	
Vessel Involved? Product Spilled:	Yes/No	Vessel Name: Est. Volume Spilled:
Wind Direction/Speed Weather Conditions: ( <i>rain, snow, visibility, etc.</i> )		Temperature:
Surrounding Population:	industri	al residential unpop other
Topography: rocky, sandy/gravel, beach, of Immediate danger to life or he	eliffs, marsh/tu ealth (IDLH):	ındra, etc.
1. Suspected hazards on	site (Check all	that are applicable):
Fire & explosion	Ι	Drowning (on water activities)
Inhalation	(	Confined space
Skin contact & absorp Cold/heat exposure	tion I	Noise

2. Initial monitoring results (to be performed by Local Fire Department) *Perform for each area of a spill.* 

Hazard	Detection Level	Frequency	Time
		hourly/daily	
Combustible gas			
Oxygen			
Toxic compounds			
Benzene			
Toluene			
Xylenes			
Total Hydrocarbons			

3. Recommended personnel protection

The Incident Commander and Safety Officer will work with a PRAC representative to ensure that the appropriate level of PPE is selected and available for the incident and job function.

Job Function:	J	lob Function:	
Level of PPE:	I	Level of PPE:	
Job Function:	J	lob Function:	
Level of PPE:	I	Level of PPE:	

#### NO EMPLOYEE OR CONTRACTOR MAY ENTER AN AREA THAT REQUIRES LEVEL A, B OR LEVEL C PROTECTION UNLESS HE/SHE IS TRAINED IN ITS USE, AND MEDICALLY CERTIFIED AND FIT TESTED FOR A RESPIRATOR.

IF YOU CANNOT DETERMINE THAT IT IS SAFE TO RESPOND, DO NOT RESPOND.

#### **Personal Protective Equipment**

Vapors, gases, and particulates from hazardous substance response activities place response personnel at risk. For this reason, response personnel must wear appropriate personal protective clothing and equipment whenever they are near the site. There are four levels of personal protective equipment.

**Level A** protection is required when the greatest potential for exposure to hazards exists, and when the greatest level of skin, respiratory, and eye protection is required. Examples of Level A clothing and equipment include:

- positive pressure, full face-piece self contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA;
- totally encapsulated chemical- and vapor-protective suit;
- inner and outer chemical-resistant gloves; and
- disposable protective suit, gloves, and boots.

**Level B** protection is required under circumstances requiring the highest level of respiratory protection, with lesser level of skin protection. Examples of Level B protection include:

- positive pressure, full face-piece self contained breathing apparatus (SCBA) or positive pressure supplied air respirator with escape SCBA;
- inner and outer chemical-resistant gloves;
- face shield;
- hooded chemical resistant clothing;
- coveralls; and
- outer chemical-resistant boots.

**Level C** protection is required when the concentration and type of airborne substances is known and the criteria for using air purifying respirators is met. Typical Level C equipment includes:

- full-face or half-face air purifying respirators;
- inner and outer chemical-resistant gloves;
- hard hat;
- escape mask; and
- disposable chemical-resistant outer boots.

**Level D** protection is the minimum protection required. Level D protection may be sufficient when no contaminants are present or work operations preclude splashes, immersion, or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Appropriate Level D protective equipment may include:

- Oil resistant gloves;
- coveralls or raingear;
- safety glasses;
- face shield; and

• chemical-resistant, steel-toe boots or shoes.

While these are general guidelines for typical equipment to be used in certain circumstances, other combinations of protective equipment may be more appropriate, depending upon specific site characteristics.

#### **General Safe Work Practices**

Summarized from Annex H of the Unified Plan

**Buddy System:** The buddy system will be observed inside the Work Area. Personnel must work within sight of their assigned partner at all times. Partners will be assigned by the Safety Officer.

**Fires:** The Safety Officer will make sure the appropriate class of fire extinguisher is available at each response site with an identified fire hazard.

**Lighting:** Fixed or portable lighting will be maintained to provide sufficient illumination for dark areas or for work during dusk/dawn, and work after sunset.

**Slippery Rocks/Surfaces:** All personnel will wear chemical resistant safety boots with steel toe/shank and textured bottoms. Brief personnel to keep soles free of excess oil.

Slip-Trip-Fall Hazards: Brief personnel to be wary of tripping hazards.

**Work Near/On Water:** All personnel working in boats; on docks; or generally within 10 feet of water deeper than 3 feet will wear Coast Guard approved personal floatation devices (PFD's).

**Cold/Heat Stress:** Workers will be provided with adequate warm clothing, rest opportunities, exposure protection. Fluids (warm or cold based on conditions) will be provided at rest stations, and be available to personnel at all times.

**Noise Level:** Hearing protection will be used in high noise areas, which will be designated by the Safety Officer.

**Drum Handling:** Manual lifting and handling of drums and other collection containers will be kept to a minimum. To the extent possible, mechanical devices, drum slings, or other devices will be used.

**Confined Spaces:** If a confined space is identified during a spill response, the Safety Officer will ensure that a confined space work authorization checklist will be utilized, and that only trained and experienced personnel will enter the identified confined space.

#### APPENDIX C

#### MOST ENVIRONMENTALLY SENSITIVE AREAS (MESA)



# MESA27 PRIBILOF ISLANDS

### LEGEND

Sea Lion Haulout Concentrations

▲ N Sea Lion Rookeries

Fur Seal Rookeries

Fur Seal Haulout Concentrations

SOURCES:ADF&G 1985a; USFWS 1996.

Seabird Colonies

- Less Than or Equal To 10,000 Birds
- 10,001 To 100,000 Birds
- Greater Than 100,000 Birds
- Alaska Maritime National Wildlife Refuge Boundary





State of Alaska Department of Fish and Game Habitat and Restoration Division June, 1997

#### APPENDIX D

#### CATHODIC PROTECTION SYSTEM INFORMATION





2-1-18







2



2-1-22

#### APPENDIX E

#### SECONDARY CONTAINMENT LINER SPECIFICATIONS

May 1993 #\$9200

# C L A Y M A X<sup>®</sup>

# **GEOSYNTHETIC CLAY LINER**

## MATERIAL SPECIFICATIONS

#### FOR

### CLAYMAX® 200R

#### AND

CLAYMAX<sup>®</sup> 500SP SHEAR-PRO



#### James Clem Corporation

444 North Michigan, Suite 1610, Chicago, 1.50611 USA The second 2021 5255 Free 312 321 5253

# Critical Design and Specification Issues

The success of a project depends on quality design and exacting specifications to ensure performance from properly selected products. When specifying GCLs:

- ▲ Make sure a low permeability can be achieved in the GCL and in the seams at the confining stress particular to the project.
- ▲ Specify GCL product performance properties, not raw material properties.
- ▲ Ensure that the bentonite in the delivered GCL has adequate swelling properties to self-seam and self-seal a one inch diameter hole.
- Specify a GCL that can meet the permeability requirements of the project at the overlapped seam without the use of granular bentonite.
- ▲ Specify a GCL that has a strong performance track record in similar applications.
- ▲ Specify field acceptance testing of the GCL.
- ▲ Specify a GCL that has the shear strength to meet the slope stability requirements of the project.

		EN	IGLISH	SI		
PACKAGING	PROPERTY	UNITS	VALUE	UNITS	VALUE	
	WIDTH	ft	13.5 (TYP)	m	4 ' (TYP)	
	LENGTH	, <del>fi</del>	100 (TYP)	<b>m</b>	30.5 (TYP)	
DIMENSION	ROLL DIAMETER	in	20 (TYP)	cm	50 (TYP)	
	WEIGHT	Ъ	1500 (TYP)	÷Ģ.	580 T/PI	
	CORE	'n	1 (7/0)			
					· · ·	

#### CLAYMAX? STANDARD ROLL SIZE

### **CLAYMAX® EOSYNTHETIC CLAY LINER MATERIAL SPECIFICATIONS** (ENGLISH)

	PROPERTY	Test Method (1)	UNITS	CLAYMAX STYLE 200R	CLAYMAX STYLE 500SP	
PROPERTIES	FREE SWELL	USP-NF-XVII	mł	30 (MARV)	30 (MARV)	
of Bentonite Removed from Finished Product	Fluid Loss	API 13 A	mi	15 (MAX. A.R.V.)	15 (MAX. A.R.V.)	
	PLATE WATER ABSORPTION	ASTM E946	òç	800 (MARV)	800 (MARV)	
	MOISTURE CONTENT (3)	ASTM D4643	%	20 (TYP)	20 (TYP)	
Adhesive	Adhesion	VISUAL		Continuous adhesion to backing material	CONTINUOUS ACHESIC	
PHYSICAL	THICKNESS	ASTM D1777	inches	0.2 (TYP)	0.2 (TYP)	
PROPERTIES	WIDE WIDTH TENSILE	ASTM D4595	lb/in	60 (TYP) (2)	100 (TYP)	
	GRAB TENSILE	ASTM D4632	lb	90 (MARV) (2)	90 (MARV) 🗄	
	BENTONITE CONTENT <sup>(3)</sup> @ 20% moisture	Weigh 12" x Roll Width	lb/sf	0.95 (MARV)	0.95 (MARV)	
	SHEAR RESISTENCE					
	HYDRATED	ASTM D35.01.81.07	-	10 DEGREES (TYP)	500 psf (TYP)	
	Dry	(DRAFT)		35 DEGREES (TYP)	500 psf (TYP) ::	
HYDRAULIC	PERMEABILITY					
PROPERTIES	A) 5 psi EFFECTIVE STRESS	ASTM D5084	cm/s	5 E – 9 (MAX)	5 E – 9 (MAX)	
	B) 5 psi Effective Stress Overlapped Claymax <sup>(5)</sup> (without the use of granular bentonite between the seams)	ASTM D5084	cm/s	5 E – 9 (MAX)	5 E – ? (MAX)	
	C) 30 psi Effective Stress	ASTM D5084	cm/s	<5 E - 10 (TYP)	<5 E - 10 (TYP)	
	D) 5 psi Effective Stress Damaged Claymax (3 each, 1" holes)	ASTM D5084	cm/s	<5 E - 9 (TYP)	<5 E - <sup>0</sup> (TYP)	
	E) 5 psi Effective Stress After 3 Wet/Dry Cycles	ASTM D5084	cm/s	<5 E - 9 (TYP)	<5 E - 9 (TYP)	
	F) 5 psi Effective Stress After 3 Frz/Thaw Cycles	ASTM D5084	cm/s	<5 E - 9 (TYP)	<5 E - 9 (TYP)	

(1) Standard test methods modified where appropriate to facilitate testing on Geosynthetic "Elay Liner (GCL).

21 Machine (warp) direction of primary backing.

•

3) D4643 modified to include wet weight as the denominator.

41 sternal chear strength of CLAYMAX 500SP is independent of confining stress. armagmatar

#\$9200

#### **CLAYMAX®**

# EOSYNTHETIC CLAY LINER MATERIAL SPECIFICATIONS

(SI)

	PROPERTY	Test Method (1)	Units	CLAYMAX STYLE 200R	CLAYMAX STYLE 500SP	
PROPERTIES	FREE SWELL	USP-NF-XVII	ml	30 (MARV)	30 (MARV)	
OF BENTONITE REMOVED FROM	FLUID LOSS	API 13 A	mi	15 (MAX. A.R.V.)	15 (MAX. A.R.V.)	
FINISHED PRODUCT	PLATE WATER ABSORPTION	ASTM E946	%	800 (MARV)	800 (MARV)	
	MOISTURE CONTENT (3)	ASTM D4643	%	20 (TYP)	20 (TYP)	
Adhesive	Adhesion	Visual		Continuous adhesion to backing material	CONTINUOUS ADHESICT. TO BACKING MATERIAL	
PHYSICAL	Thickness	ASTM D1777	mm	5 (TYP)	5 (TYP)	
PROPERTIES	Wide Width Tensile	ASTM D4595.	KN/m	10.5 (TYP) (2)	17.5 (TYP)	
	GRAB TENSILE	ASTM D4632	KN	0.4 (MARV) (2)	0.4 (MARV) 🗈	
	BENTONITE CONTENT <sup>(3)</sup> @ 20% moisture	Weigh 0.3m x Roll Width	kg∕m²	4.6 (MARV)	4.ó (MARV)	
	SHEAR RESISTENCE					
	HYDRATED	ASTM D35.01.81.07	<u> </u>	10 DEGREES (TYP)	24 KPa (TYP)	
	Dry	(DRAFT)		35 DEGREES (TYP)	24 KPa (TYP) 斗	
HYDRAULIC	PERMEABILITY	· · ·				
PROPERTIES	A) 35 KPa Effective Stress	ASTM D5084	m/s	5 E - 11 (MAX)	5 E - 11 (MAX)	
	B) 35 KPa Effective Stress Overlapped Claymax <sup>(5)</sup> (without the use of Granular bentonite between the seams)	ASTM D5084	m/s	5 E - 11 (MAX)	5 E - 11 (MAX)	
	C) 200 KPa Effective Stress	ASTM D5084	m/s	<5 E - 12 (TYP)	<5 E - 12 (TYP)	
	D) 35 KPa Effective Stress Damaged Claymax (3 each, 25mm holes)	ASTM D5084	m/s	<5 E - 11 (TYP)	<5 E - 11 (TYP)	
	E) 35 KPa Effective Stress After 3 Wet/Dry Cycles	ASTM D5084	m/s	<5 E - 11 (TYP)	<5 E - 11 (TYP)	
	F) 35 KPa Effective Stress After 3 Frz/Thaw Cycles	ASTM D5084	m/s	<5 E - 11 (TYP)	<5 E - 11 (TYP)	

(1) Standard test methods modified where appropriate to facilitate testing on Geosynthetic Clay Liner (GCL).

(2) Machine (warb) direction of primary backing.

- 3) 04643 moaified to include wet weight as the denominator
- 4) internal chear strength of CLAYMAX 500SP is independent of confining stress.

-1 im 24 to 100 milliormodmerer roll