TOTAL E&P CANADA LTD

Integrated Application for Approval of the TOTAL Upgrader

Additional Information

Submitted to
Alberta Energy Resources Conservation Board
and Alberta Environment

February 2008

TOTAL

Hardcopies of the Volume 1, Volume 2 and Baseline errata inserts were provided to the Energy Resources Conservation Board and Alberta Environment to replace those parts of the Integrated Application submitted to them on December 14, 2007. Copies of the Application issued in 2008 contain the corrected pages and include an errata tab and list.

TOTAL E&P CANADA LTD.

February 6, 2008

Energy Resources Conservation Board
640 – 5th Avenue SW
Calgary, AB T2P 3G4

Attention: R.R. Germain

Re: TOTAL E&P Canada Ltd. (TEPC) Upgrader Application 1551460
Additional Information

In response to your letters of December 20, 2007 and January 23, 2008, please find enclosed a revised TOTAL Upgrader Integrated Application (Application) Volume 1 Table of Contents and Environmental Impact Assessment Terms of Reference (EIA ToR) Concordance Tables to replace those in the 15 copies of the TOTAL Upgrader Integrated Application (Application) delivered to the ERCB on December 14, 2007, an errata tab and list to be inserted in the Application and 15 Application CDs.

Of the items listed in your December 20, 2007 letter, please note the following:

Item	Bitumen Processing Rate: 47,200 m^3/stream day (sd)
Hydrocarbon balances	See Table 1 and Figure 1 attached. The numbers in Table 3.4-5 of Volume 1 of the Application for the petroleum coke and sulphur volumes are for a bitumen processing rate of 39,200 m^3/sd. For a bitumen processing rate of 47,200 m^3/sd, as shown on attached Figure 1, the petroleum coke and sulphur volumes are 7100 t/d and 1520 t/d, respectively.
Water balances	The water balance shown in Figure 3.3-7 of Volume 1 of the Application was based on a bitumen processing rate of 47,200 m^3/sd.
Sulphur balances	The SO_2 emissions and air modelling described in Volume 2, Section 3 of the Application were based on a bitumen processing rate of 47,200 m^3/sd.
Energy balances	See Table 2 and Figure 2. See Table 3 for Overall Energy Efficiency based on a bitumen processing rate of 47,200 m^3/sd. The numbers in Table 3.3-5 and Table 3.3-6 of Volume 1 of the Application for the natural gas and electric power requirements are for a bitumen processing rate of 39,200 m^3/sd. For a bitumen processing rate of 47,200 m^3/sd, as shown in attached Table 2 and Figure 2, the natural gas requirements are 5335 GJ/h and electrical power demand is 153 MW.
Process flow diagrams (pfds)	The pfds shown in Volume 2, Section 3 of the Application were based on a bitumen processing rate of 47,200 m^3/sd.
Emissions	All the emissions described in both Volume 1 and Volume 2 of the Application were based on 47,200 m^3/sd.
Emissions impact modelling	All air emissions (SO_2, NO_X, $PM_{2.5}$ and VOC) emissions and air modelling as well as treated discharge water described in Volume 1 and 2 were based on a bitumen processing rate of 47,200 m^3/sd.
Emissions impact assessments	
Socio-economic impact assessments	The socio-economic assessment included in Volume 1, Section 5 was based on bitumen processing rate 47,200 m^3/sd.
Emergency response plans	See Attachment 1 for the Total E&P Canada Ltd. Corporate ERP.

TOTAL
1900, 333 - 7th Avenue S.W., Calgary, Alberta T2P 2Z1 Tel 403 571 7599 Fax 403 571 7595
2, place de la Coupole - La Défense 6, 92078 Paris la Défense Cedex - France Tel 33 1 47 44 45 46

Attachment 1 also addresses the information referred to in the January 23, 2008 correspondence from you.

The following enclosures are provided to be inserted in the Application:

Volume 1

- TOC – pgs. v to xii (replacement)
- Appendix B, Table B-1: Concordance with EIA Terms of Reference (pgs. B-1 to B-44) (replacement)

Volume 2

- Appendix 1A, Table 1A-1: Concordance with EIA Terms of Reference (pgs. 1A-1 to 1A-44) (replacement)

- Errata tab and List of Errata (to be inserted at end of volume)

Baseline

- Errata tab and List of Errata (to be inserted at end of volume)

The TOTAL Upgrader Integrated Application CDs have the same content as the earlier version provided, however, this version includes the material mentioned above and has a silkscreened disk.

Total E&P Canada Ltd. trusts this information will assist in completing the Application review by the ERCB and Alberta Environment.

Yours sincerely,

Geoff Chow

Geoff Chow
Manager, Regulatory Affairs

cc: Mike Boyd
Kem Singh

TOTAL

Table 1: Overall Material Balance for Production Rate of 47,200 m^3/day Bitumen

Feedstocks		Products	
Type	**Rate**	**Type**	**Rate**
Diluent (in dilbit)	20,500 m^3/d 129,000 BPSD	Diluent return	20,500 m^3/d 129,000 BPSD
Bitumen (in dilbit)	47,200 m^3/stream day 295,000 BPSD	SCO	43,200 m^3/stream day 271,000 BPSD
Natural gas[1]	3,057 K Nm^3/d	Propane/propylene	965 m^3/d 5,900 BPSD
Natural gas[2]	453 K Nm^3/d	Coke	7,100 t/d
		Sulphur	1,530 t/d

NOTES:

[1] Includes only natural gas feedstock for hydrogen production.

[2] Includes only natural gas for supplement to upgrader fuel gas system.

Figure 1: Overall Material Balance for Production Rate of 47,200 m^3/day Bitumen

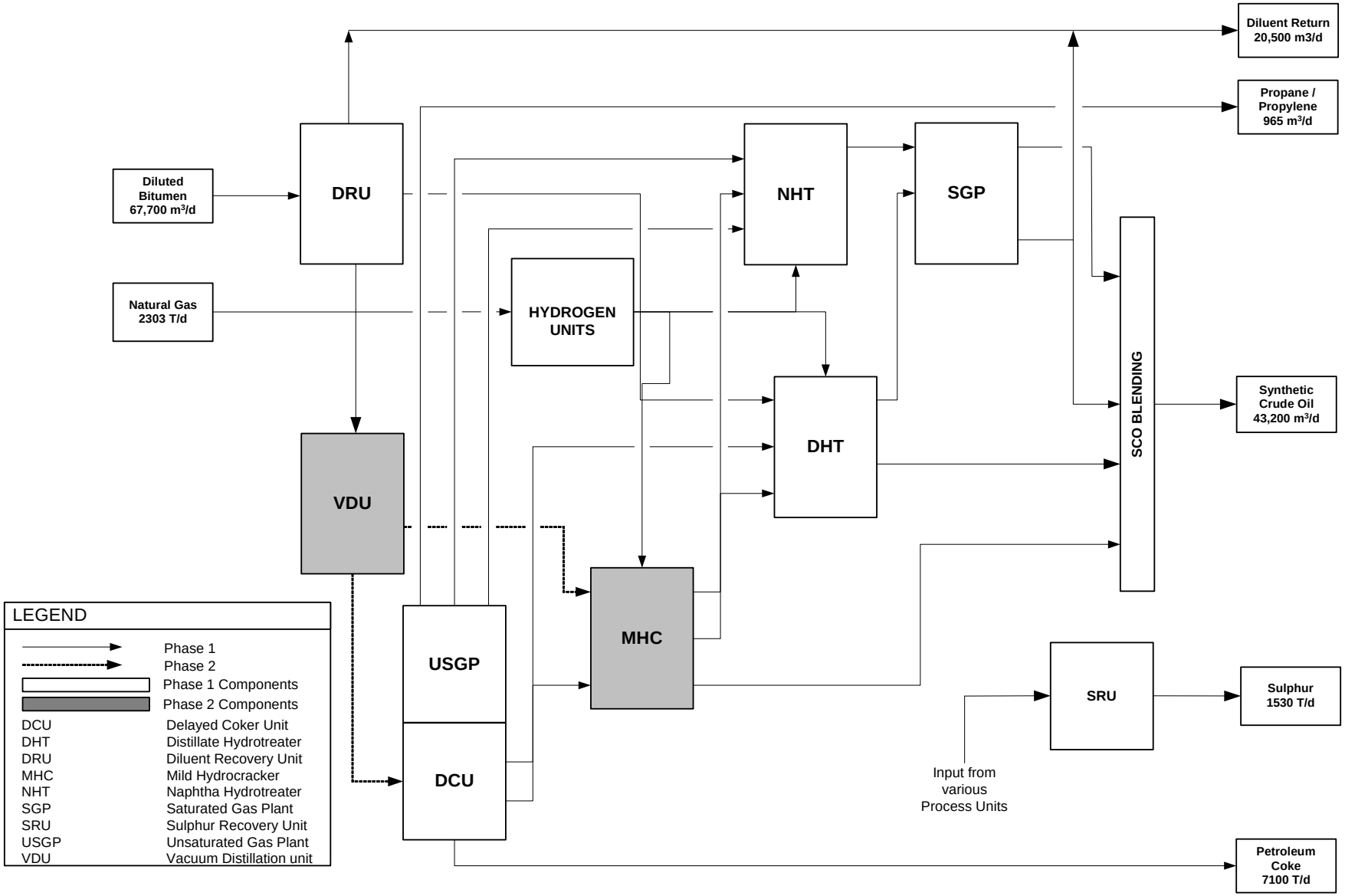

Table 2: Overall Energy Balance for Production Rate of 47,200 m^3/day Bitumen

Energy Balance		Electricity (MW)	Feedstock (GJ/h)	Fuel (GJ/h)
Primary source of energy	Equivalent energy from fuel gas from USGP			5,247
	Equivalent energy from purchased natural gas for fuel gas			688
	Equivalent energy from natural gas purchase for hydrogen production		4,647	
	Imported electricity	153		
Primary consumption	DRU			708
	VDU			347
	DCU			1,500
	USGP			
	NHT			11.4
	DHT			405
	MHC			290
	Hydrogen production units/compression			1,455
	Boilers			1,219
	Total consumption	153	4,647	5,935

Figure 2: Overall Energy Balance for Production Rate of 47,200 m^3/day Bitumen

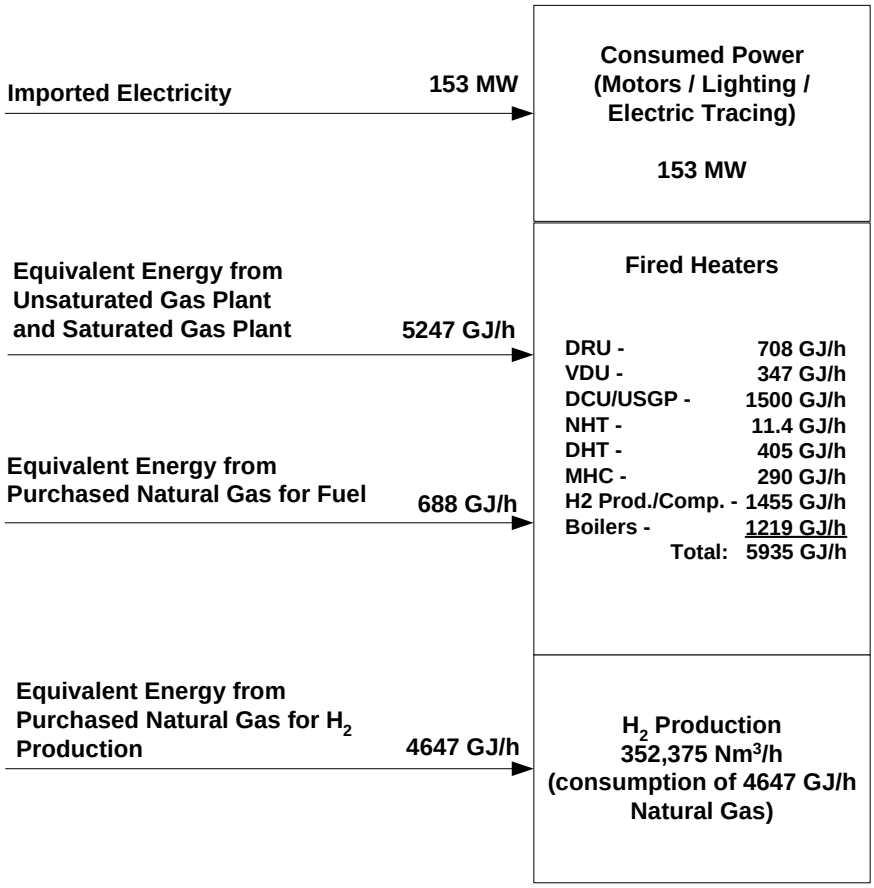

Table 3: Overall Energy Efficiency for Production Rate of 47,200 m^3/day Bitumen

Material, Energy and Utilities Balances	Mass Flow Rate Stream (t/sd)	Power (MW)	Energy Stream[1] (GJ/h)
Input			
Diluent	14,700		29,063
Bitumen	47,200		83,630
Natural gas import for H_2 production	2,303		4,647
Natural gas import for supplement to fuel gas system	341		688
Net import of electricity		153	551
Total			118,580
Output			
Diluent return	14,700		29,063
Propane	480		1033
SCO product	37,300		70,156
Coke to market	7,100		9,753
Sulphur to market	1,530		584
Total			111,344
Used			
Onsite fuel gases (C_2-, C_3, C_4, H_2)	2,390		5,247
Loss in sulphur to SO_2	14.1		5
Power		153	551
Other (losses such as ammonia and water)			1,526
		Total	7,235
		Subtotal of Output + Used	118,580
Overall Efficiency = Ouput/Input			94%

NOTES:

Values are based on rounding.

The energy balance used to estimate the energy efficiency is based on the most current design information. This information is an improvement over the energy balance information used for the environmental impact assessment.

[1]Based on a lower heat value (LHV).

C_2- – ethane and lighter

C_3 –propane/propylene

C_4 – butanes

GJ/sh – gigajoules per stream hour

t/sd – tonnes per stream day

Total E & P Canada

L2-PLAN-HSE-01
Revision 1

COMPANY MANAGEMENT SYSTEM
LEVEL 2
AFFILIATE / DIVISION DOCUMENT

TEPC AFFILIATE EMERGENCY RESPONSE PLAN

Rev	Date	Prepared by	Reviewed by	Approved by
1	*November 2007*	*Kelly Wisoley Sr. Safety Engineering/ Operations Advisor*	*Hugh Campbell, HSE Manager* *Ray Reipas, VP Mining* *Andre DeLeebeeck VP Thermal*	*Mike Borrell President*


TOTAL

INTRODUCTION

This document has been developed in accordance with applicable regulations from Alberta and Canada including:

- Canadian Standards Association Z 731- 03 Emergency Preparedness and Response
- Alberta Workplace Health and Safety Occupational Health and Safety Act, Regulation and Code
- The Alberta Energy and Utilities Board Directive 71 - Emergency Preparedness and Response Requirements for the Upstream Petroleum Industry

In addition to the above regulatory requirements, this affiliate plan meets requirements established by Total E&P, specifically:

- Rules GM EP HSE 091, Guidelines for Affiliate Emergency Response Plan
- CR EP HSE 091 Affiliate Emergency Response Plan
- GM EP HSE 093 Guidelines for Site Contingency Plan

This manual shall be updated yearly by the TEPC HSE Department and any recommendations for additions, deletions or other changes should be directed to that office. Changes should be detailed in nature and sent via email to the GM HSE&SD and specify the nature of the change, the reason for the change including changes or applications of regulations or legislation, company rules or industry standard practice.

Each manual is numbered and assigned to an individual or Emergency Operations Centers and On Site Command Posts.

Updates shall be sent to each manual and the owner of the manual is responsible for:

- inserting the changes where appropriate
- removing the changed pages
- including the change log sheet in each binder

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SECTION 6 – RESOURCES

SECTION 7 – RECOVERY

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* Page numbers in the Forms Annex purposefully left out.

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

SECTION 9 - ADMINISTRATION

MANUAL #	LOCATION	RESPONSIBLE POSITION	FORMAT
1.	Calgary Head Office	President	Hard Copy
2.	Calgary Head Office	HSE Manager	Hard Copy Electronic Copy
3.	Calgary Head Office	VP Finance& CFO	Hard Copy
4.	Calgary Head Office	VP General Counsel & Corp. Secretary	Hard Copy
5.	Calgary Head Office	VP Geosciences	Hard Copy
6.	Calgary Head Office	VP Business Development and Planning	Hard Copy
7.	Calgary Head Office	VP Mining	Hard Copy
8.	Calgary Head Office	VP Thermal	Hard Copy
9.	Calgary Head Office	VP Midstream and Downstream	Hard Copy
10.	Calgary Head Office	VP HR, Comm. & Administration	Hard Copy
11.	Calgary Head Office	General Manager (Thermal)	
12.	Calgary Head Office	Drilling Manager (Thermal)	
13.	Calgary Head Office	Duty Manager	Hard Copy
14.	Calgary Head Office	Senior Safety Advisor	Hard Copy Electronic Copy
15.	Calgary Head Office	Engineering Manager (Thermal)	Hard Copy
16.	Calgary Head Office	Civil Construction Coordinator (Thermal)	Hard Copy
17.	Calgary Head Office	Senior Communications Advisor	Hard Copy
18.	Calgary Head Office	Administrative Assistant	Hard Copy
19.	Calgary Head Office	Spare	Hard Copy
20.	Joslyn Site	RSES	Hard Copy
21.	Joslyn Site	HSE Advisor	Hard Copy
22.	Regional Municipality of Wood Buffalo	Mutual Aid Organization	Hard Copy
23.	Regional Municipality of Wood Buffalo	Public Records	Hard Copy
24.	Alberta Energy and Utilities Board	Calgary Office	Hard Copy
25.	Alberta Energy and Utilities Board	Fort McMurray Office	Hard Copy

SECTION 1 – IMMEDIATE ACTIONS

1.1 LEVELS OF EMERGENCY

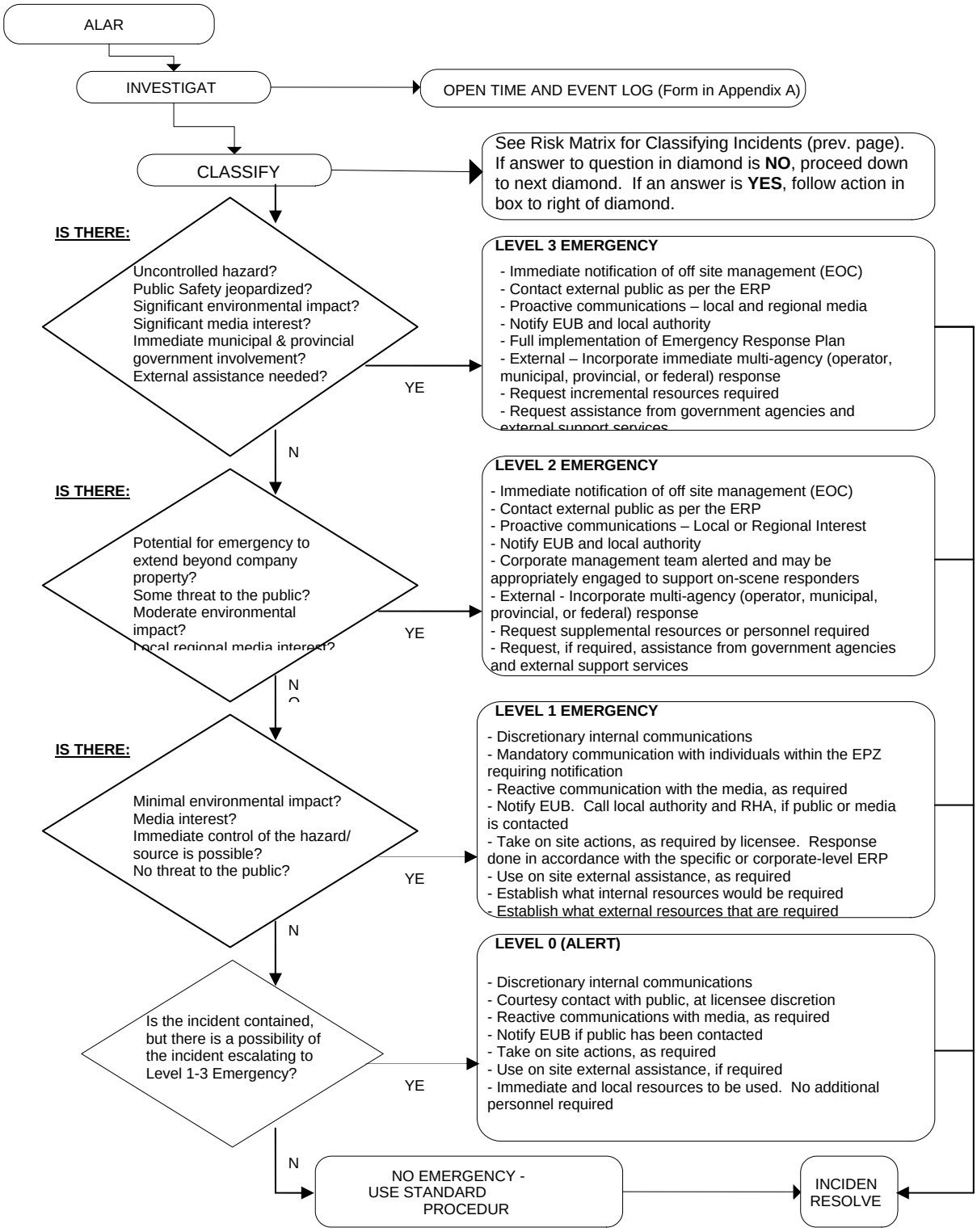
The table below is a segment of the EUB Directive 071 Appendix 3 *Risk Assessment Matrix for Classifying Incidents*. The entire matrix is located in Section 4 of this manual. The table below identifies Emergency Levels, to be referenced when determining a Level of Emergency.

The decision chart on the following page indicates immediate actions to be taken with each Emergency Level, in accordance with the same EUB Appendix 3.

Control Considerations	
Risk Level	**Assessment Results**
Very Low 2-3	**Level 0 (Alert)** No Action Required
Low 4-5	**Level 1 Emergency** There is no danger outside Company property or right-of-way. The situation can be handled entirely by Company personnel. • Immediate control of the hazard/source is possible • No threat to the public • Minimal environmental impact • Little or no media interest
Medium 6	**Level 2 Emergency** Potential for the emergency to extend beyond Company property. Imminent control of the situation is probable; some threat to the public; moderate environmental impact; local regional media interest.
High 7-8	**Level 3 Emergency** • Uncontrolled hazard • Public safety jeopardized • Significant ongoing environmental impact • Significant media interest • Immediate municipal and provincial government involvement • Assistance from outside parties required

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

SECTION 1 – IMMEDIATE ACTIONS

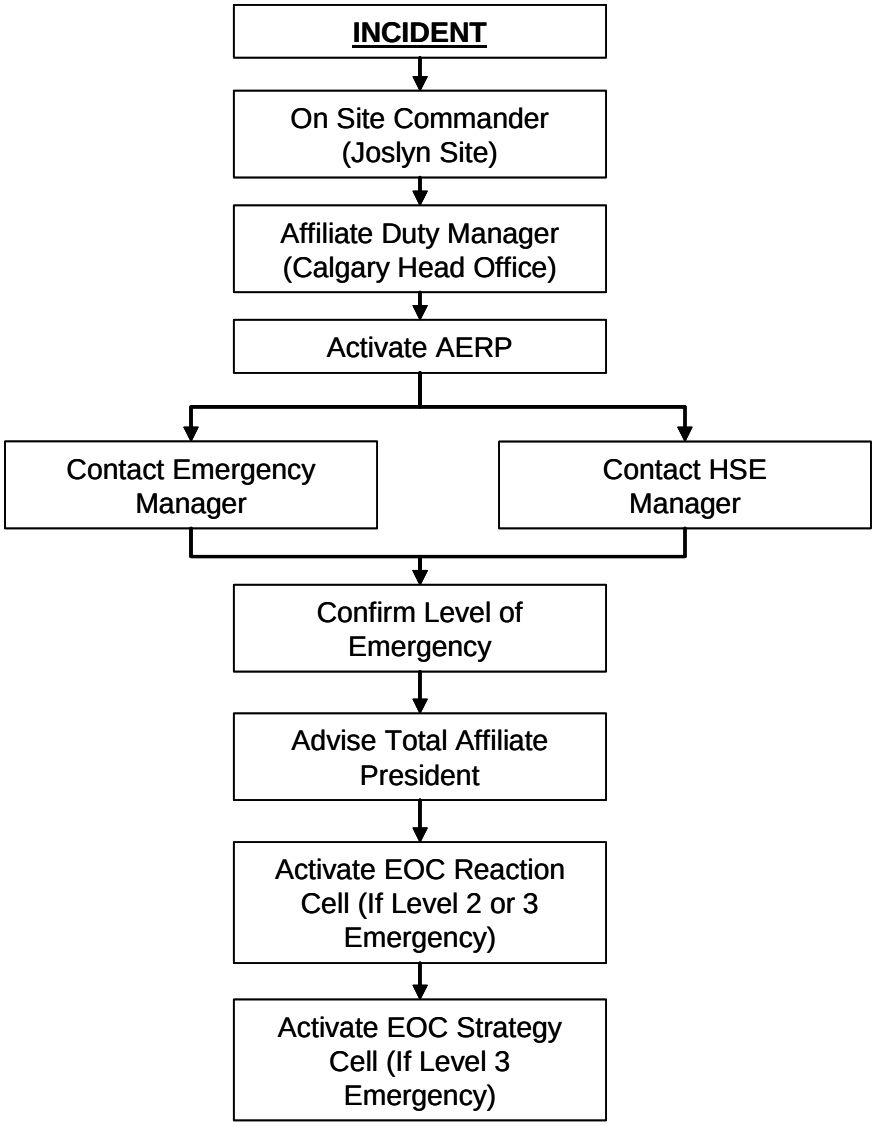


SECTION 1 – IMMEDIATE ACTIONS

1.2 ALERTING, ACTIVATION, AND NOTIFICATION – INTERNAL

Level	OCP		EOC – REACTION CELL		EOC – STRATEGY CELL		R.M. of WOOD BUFFALO		MUTUAL AID	
-	Notify	Activate	Notify	Activate	Notify	Activate	Notify	Activate	Notify	Activate
Alert	Yes	No	No	No	No	No	No	No	No	No
1	Yes	Yes	Yes	No	Yes	No	No	No	No	No
2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

FIG. 1-1 TOTAL E&P AERP ACTIVATION



SECTION 1 – IMMEDIATE ACTIONS

1.3 CONTACT INFORMATION

1.3.1 CRISIS MANAGEMENT CELL - PARIS

TITLE	NAME
Duty Manager*	

*Emergency Operations Centre (Strategy Cell) staff have numbers, including the CMC Duty Manager.

1.3.2 EMERGENCY OPERATIONS CENTRE (REACTION CELL)

TITLE	NAME
Emergency Manager	John Foulkes
Alternate	Dave Zebak
Senior Safety Advisor	Kelly Wisoley
Alternate	Stan McBride
HR Manager	Albert Elliott
Alternate	Vanita Haining
Engineering Manager (Thermal)	John Foulkes
Alternate	Jose Contrares
Civil Construction Coordinator (Thermal)	Leonard Ruud
Alternate	Bob Cox
Senior Communications Advisor	Christianne Wile
Alternate	Derek Rogers
Administrative Asst.	Sheri LeDrew
Alternate	Christin Bell

1.3.3 EMERGENCY OPERATIONS CENTRE (STRATEGY CELL)

TITLE	NAME
President	Mike Borrell
Alternate	Designated Dept. V.P.
HSE Manager	Hugh Campbell
Alternate	Kelly Wisoley
VP Finance & CFO	John Kowal
Alternate	Shyam Mohamed
VP General Counsel & Corp. Secretary	Anita O'Brien
Alternate	Suzzi Sethi
VP HR, Comm., Admin.	Thierry Renard

SECTION 1 – IMMEDIATE ACTIONS

Alternate	Albert Elliott

SECTION 1 – IMMEDIATE ACTIONS

1.3.4 ON SITE COMMAND POST

TITLE	POSITION
On Site Commander	RSES
Alternate	
HSE Advisor	HSE Advisor
Alternate	
Control Room Operator	Control Room Operator
Alternate	Assistant Control Room Operator
Event Logger	Administrative Assistant
Alternate	
Medical Coordinator	Site Paramedic
Alternate	
Muster Officer	Steam Chief
Alternate	
Rover & Roadblock Coordinator	Maintenance Foreman
Alternate	

1.3.5 INCIDENT COMMAND POST

TITLE	POSITION
Incident Response Leader	Production Foreman
Alternate	
Intervention Teams	

Note: blank spaces indicate that no alternate contact numbers exist for these positions. Contact will be made either personally or by plant radio.

SECTION 1 – IMMEDIATE ACTIONS

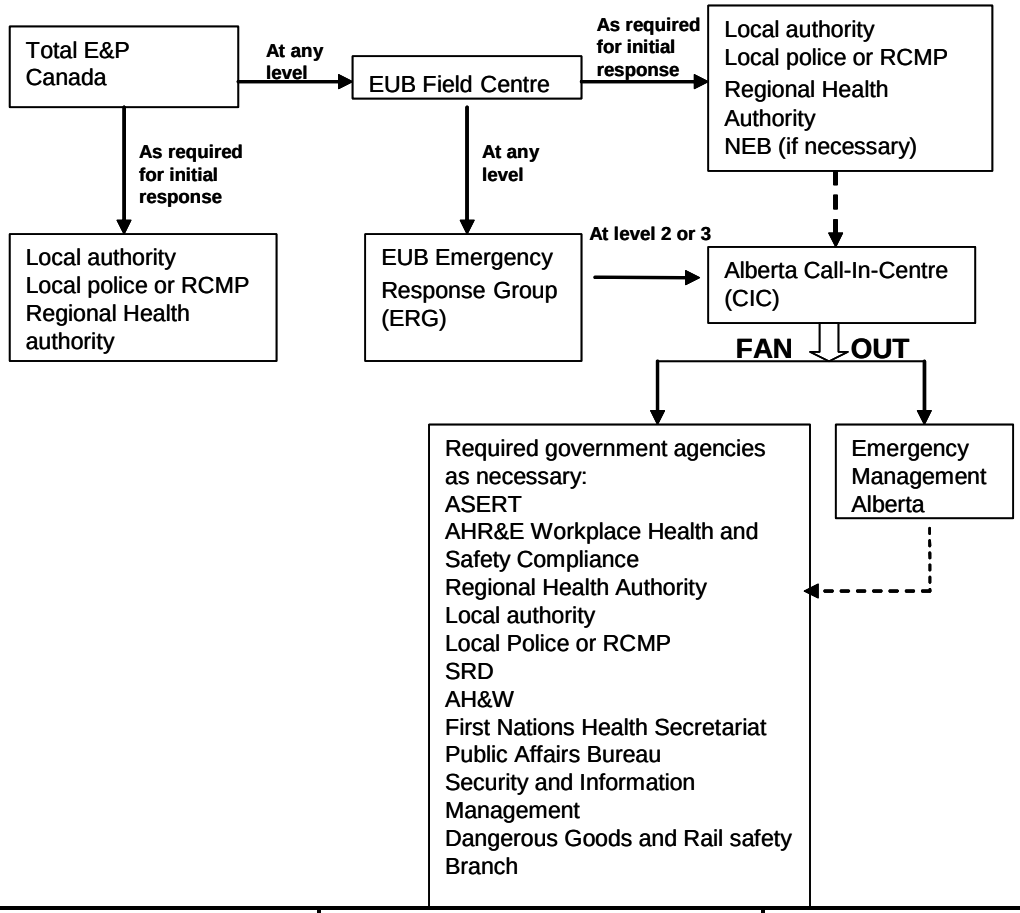
1.4 FAN-OUT PROCEDURES FOR EMERGENCIES - EXTERNAL

Fig 4-3 is the Fan-Out Procedures for Emergencies, as extracted from EUB Dir. 071 Appendix 10. It outlines who Total is to contact during an incident.

When an emergency takes place at the Joslyn site and Mutual Aid is required, the On Site Command Post will call the Municipal District of Wood Buffalo (which is the local authority). When emergency services are required (fire, police, ambulance), they can be accessed by calling 911.

For any Level 1 to Level 3 Emergency, Total must contact the EUB. It is the responsibility of the Senior Safety Advisor in the EOC to ensure this is completed, and that the call is made to the EUB Field Office at Fort McMurray. The Fan Out procedures below outline who the EUB calls in turn.

That stated, Total will still remain proactive in its notification process. See Section 4.4 for additional contacts that Total will make when the response has begun.



SECTION 1 – IMMEDIATE ACTIONS

1.5 NOTIFICATION - PUBLIC

The table below indicates when notification of the public will take place after it is determined that there is a possible threat to the public.

Note: A list of individuals requesting early notification must be located at each incident management centre. The list must also be maintained.

EN –Individuals requesting early notification
N – Individuals not requesting early notification

Level	IIZ		PAZ		EPZ		EAZ	
-	EN	N	EN	N	EN	N	EN	N
Alert	Yes	No	Yes	No	Yes	No	No	No
1	Yes	Yes	Yes	Yes	Yes	No	Yes	No
2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

IIZ	Initial Isolation Zone – an area in close proximity to a hazardous release in which the public may be exposed to dangerous (upwind) and life threatening (downwind) concentration levels.
PAZ	Protective Action Zone – Area downwind of a hazardous release where outdoor concentration levels may result in life threatening or serious and possibly irreversible health effects to the public.
EPZ	Emergency Planning Zone - the geographical area surrounding the facility containing hazards product (s) that requires specific emergency response planning by the operator.
EAZ	Emergency Awareness Zone – the distance outside the EPZ where public protection measures may be required due to poor dispersion conditions of the hazard.

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

SECTION 1 – IMMEDIATE ACTIONS

FORM 1-1 LOG SHEET

Incident Title:	Date:	Page No /

Time	Message		Message Details / Events	Comments
	From:	To:		

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.1 EMERGENCY RESPONSE ORGANIZATION

2.1.1 OVERVIEW

With respect to Total E&P operations in Canada, the Emergency Response Organization (ERO) is structured into the following incident management centres and locations:

a) Crisis Management Cell (CMC) – Paris Head Office
b) Emergency Operations Centre (EOC) – Calgary Head Office
c) On Site Command Post (OCP) – Joslyn site*
d) Incident Command Post (ICP) – Joslyn site

* In certain circumstances, the OCP may have to be located away from the Joslyn site. See Section 2.4 for more details.

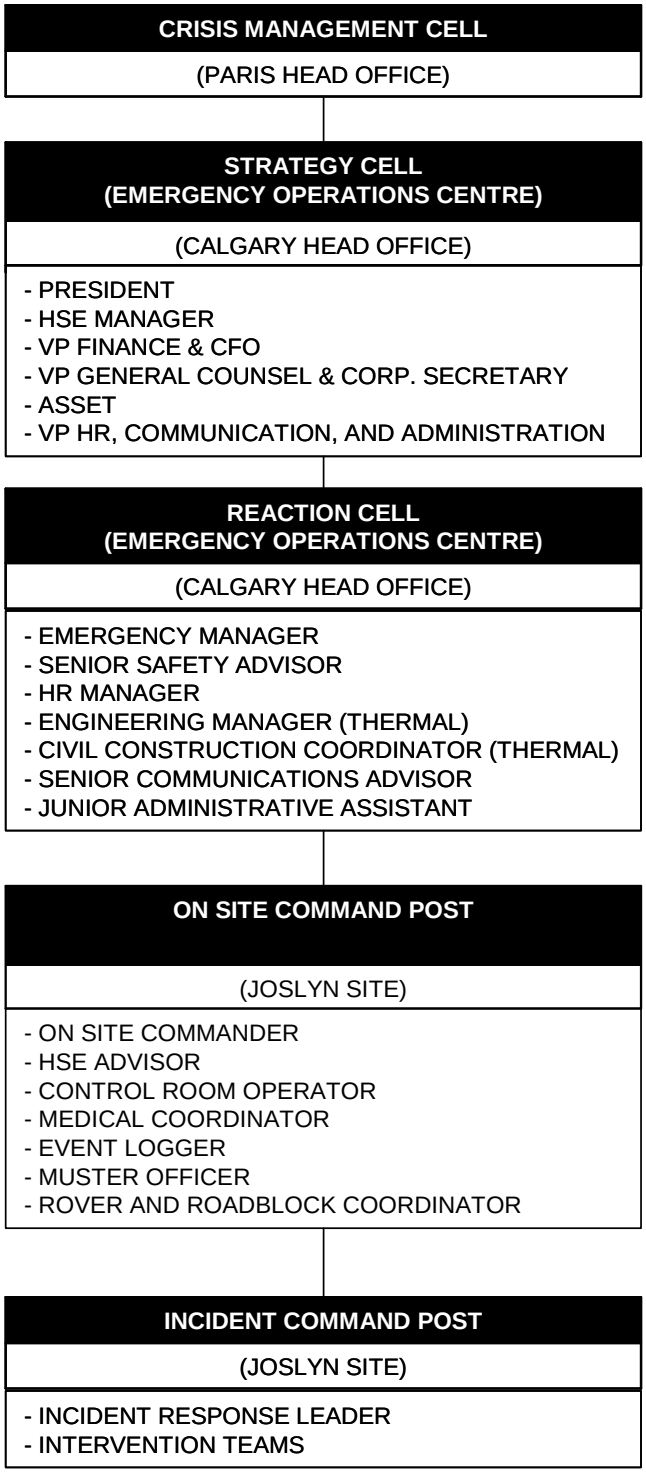
Depending on the circumstances of the incident, one or more of the following support centres may be activated to assist with managing the response:

e) Evacuation Centre
f) Staging Area

This section outlines details of each level of the organization.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

FIG. 2-1 TOTAL E&P EMERGENCY RESPONSE ORGANIZATION



SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.2 CRISIS MANAGEMENT CELL

2.2.1 GENERAL

The Crisis Management Cell (CMC) communicates with the Strategy Cell of the Emergency Operations Centre at the Head Office in Calgary during a Level 3 Emergency. The CMC provides direction, guidance and support to the EOC, while the EOC provides updates and information to the CMC.

2.2.2 FUNCTION

The CMC functions are as follows:

- Ensuring that Total expectations for the protection of employees, the public, and the environment are upheld and respected during the management of the crisis
- Coordinating assistance among other affiliates
- Providing a link with French and international media
- Providing a link with families residing out of country
- Communicating within the organization

2.2.3 STAFFING

The CMC will have staff available for communication when AERPs have been activated.

Contact information for the CMC is in Section 7 – Resources.

2.2.4 LOCATION

The CMC is located at the DGEP Head office in Paris, France.

2.2.5 COMMUNICATION

Verbal communication from the CMC to the EOC and vice versa will be as follows:

- Primary: Telephone (land line)
- Alternate 1: Cell phone
- Alternate 2: Satellite phone

The President of the EOC Strategy Cell is the point of contact for communications with the CMC. The President will speak with the Duty Manager and other staff at the CMC.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.3 EMERGENCY OPERATIONS CENTRE

2.3.1 GENERAL

The Reaction Cell of the Emergency Operations Centre (EOC) is responsible for providing direction, guidance, and support to the On Site Command Post at the Joslyn Site. The Strategy Cell of the EOC also communicates with the CMC. The Reaction Cell will be fully activated and maintained for any Level 3 Emergency. It may also be fully activated for a Level 2 Emergency, based on the discretion of the Emergency Manager.

2.3.2 FUNCTION

The EOC functions are as follows:

- Ensuring that the health and safety of employees, the public, and protection of the environment are priorities during the management of the crisis
- Coordinating assistance and resources required by the On Site Command Post
- Providing a link with Regional and National media
- Providing a link with the CMC
- Communicating messages and information within the organization

The EOC is divided into two entities:

Reaction Cell. The Reaction Cell is responsible for operational management of the crisis, complementing the response being carried out on site. It is also responsible for mobilizing additional assistance as necessary. It is activated for all Level 2 and Level 3 Emergencies.

Strategy Cell. The Strategy function must anticipate the evolution of the crisis to help prepare specific responses and to ensure the communication and coordination with the DGEP and outside parties. These parties may include local families, authorities, partners and contractors, and local media. It will be activated for all Level 3 Emergencies.

2.3.3 STAFFING

The EOC is staffed as follows:

EOC (Reaction Cell):

- Emergency Manager
- Senior Safety Advisor
- HR Manager
- Engineering Manager (Thermal)
- Civil Construction Coordinator (Thermal)
- Senior Communications Advisor
- Junior Administrative Assistant

EOC (Strategy Cell):

- President
- HSE Manager
- VP Finance and CFO
- VP General Counsel & Corp. Secretary
- Asset
- VP HR, Communications, and Administration

There must be a 24 hour point of contact available at all times. EOC personnel will be able to meet in the EOC within one hour of being called out.

2.3.4 LOCATION

The EOC operates from Head Office building in Calgary. The EOC Reaction Cell will meet in Boardroom 1 on the 20th floor of the Stock Exchange Tower or in a location determined by the Emergency Manager. The EOC Strategy Cell will meet in the President's Office.

2.3.5 EQUIPMENT

The following equipment is located at the EOC:

PLANS/AGREEMENTS:

- Copies of the AERP for each EOC member; Site Contingency Plan; Specific Contingency Plans; Specific Emergency Plans
- Mutual Aid agreements

DIRECTORIES:

- Phone directory – Fort McMurrary (white & yellow pages)
- Phone directory – Calgary
- Government of Alberta – electronic and paper copies

DISPLAY:

- 1 – EOC floor map
- 2 – City of Fort McMurray and surrounding area map
- 2 – Joslyn site map
- 1 – Pipelines and oil sands lease map (Joslyn area)
- 1 – Whiteboard (electronic) with printing capability (ie. 'Smart' board)
- 2 - White boards
- Status Board – Event
- Status Board – Resources
- Status Board – Notifications
- 2 - Projection screens
- 2 – Flip Charts

TECHNICAL EQUIPMENT:

- Computer network and phone connections in walls
- 1 – Standalone computer
- 1 – Laptop computer for the Junior Administrative Assistant

- 6-8 – Laptop docking stations (EOC staff to bring personal laptops when activated)
- Landline phones (with speaker capability)
- Cell phone (EOC members to bring their own)
- Satellite Phone
- 1 – TV with cable/satellite connection
- 1 – VCR/DVD Player
- 1 – Battery powered AM/FM radio
- Wall mountable clock with a battery back-up

SUPPLIES:

Large cabinets or lockers are required to store equipment. EOC 'kits' for each EOC member/team have been created (ie boxes, containers), to assist EOC members in the execution of their duties. Additional EOC supplies include:

- Tent cards to write names of staff/team
- 2 - Computer memory sticks (min 1 GB each)
- clip boards
- Hole punch
- Stapler, staples & staple remover
- General supplies: scissors, elastic bands, pens, paper clips, binder clips, tape, tape gun, packing tape, glue, note pads, message pads, fax header sheets, post-it page markers, post-it notes, lined paper pads, pencils & sharpeners, erasers, highlighters, flip chart pens, dry erase markers, eraser for dry erase surfaces, ruler, file folders (various colours)
- Overhead projector sheets (blank)
- Extra paper for printers, fax machine and electronic whiteboard
- Extra batteries
- 5 – blank VCR tapes and/or DVDs
- Personal time & event log sheets
- Solar-powered calculator with extra batteries (part of supplies)
- Timer (for deadlines)

The following equipment is to be available in close proximity to the EOC:

- 1 – Laser printer
- 1 – Photocopier
- 1 – Color printer
- 1 – Fax Machine
- 1 – Paper shredder
- 2 – Rollaway cot
- 1 – Overhead projector
- Additional tables & chairs

The following equipment is required to be carried by each of the EOC positions:

- Cell phones or personal digital assistant

2.3.6 COMMUNICATION

Verbal communication between the EOC and the CMC will be as follows:

- Primary: Telephone (land line)
- Alternate : Cell phone

The President of the EOC Strategy Cell is the point of contact for communications with the CMC. The President will speak with the Duty Manager and any other staff at the CMC.

Verbal communication between the EOC and the On Site Command Post is as follows (note that there is no cell phone coverage at the site):

- Primary: Telephone (land line)
- Alternate : Satellite Phone

The Emergency Manager at the EOC will be the point of contact for the EOC, and the On Site Commander will be the point of contact for the On Site Command Post.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.4 ON SITE COMMAND POST

2.4.1 GENERAL

The On Site Command Post (OCP) manages the direct response to an emergency and communicates with the EOC to request or receive guidance and resources. The On Site Commander directs all on site activities from this post, and the OCP is activated for any Level 1, 2 or 3 Emergency.

2.4.2 FUNCTION

The OCP is the location from which site emergency response operations are controlled. It is the local command centre and the point of contact for all communications external to the site. The OCP dispatches the Incident Response Leader and Intervention Team(s) to the incident site to manage the response to the emergency.

The OCP functions are as follows:

- Providing first intervention, to shut down the installations and protect infrastructure as necessary
- Activating fire protection means
- Receiving fire fighting brigades and external assistance teams
- Controlling site access and operations
- Protecting employees and visitors, including evacuation from muster points, and identification of missing people, if needed

2.4.3 STAFFING

The OCP is staffed by the following personnel as a minimum:

- On Site Commander
- HSE Advisor
- Control Room Operator
- Event Logger
- Medical Coordinator*
- Muster Officer*
- Rover and Roadblock Coordinator*

* Members do not work inside the Control Room with the other OCP members (Medical Coordinator – incident site; Muster Officer – Muster Point; Rover & Roadblock Coordinator – site wide)

2.4.4 LOCATION

In most situations, The OCP operates from the Control Room at the Joslyn Site. The Control Room is located in the Administrative Building at Phase 2. An alternate location has yet to be determined.

In certain situations, such as during drilling, seismic, or exploration activities, there may be a requirement to establish an OCP at a location external to the Joslyn site. If this situation occurs, the On Site Commander will determine an OCP location when the drilling, seismic,

or exploration site is established and confirm it with the Emergency Manager of the EOC in Calgary.

2.4.5 COMMUNICATION

Verbal communication from the OCP to the EOC will be as follows (note that there is no cell phone coverage at the site) :

- Primary: Telephone (land line)
- Alternate : Satellite Phone

The On Site Commander is the point of contact for the On Site Command Post, and the Emergency Manager at the EOC is the point of contact for the EOC.

Verbal communication from the OCP to the Incident Command Post (ICP) is as follows:

- Primary: Radio
- Alternate: Telephone (land line)

The On Site Commander is the point of contact at the OCP, and the Incident Response Leader is the primary point of contact for the ICP.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.5 INCIDENT COMMAND POST

2.5.1 GENERAL

The Incident Command Post (ICP) is established by the Incident Response Leader to assist with providing the direct response to an incident. The ICP is activated for any Level 1, 2, or 3 Emergency.

2.5.2 FUNCTION

The function of the ICP is to provide a command and control location from which the possible following activities can be managed:

- Advising the OCP of the need to escalate the Level of Emergency
- Fire fighting operations
- Rescue, emergency medical care, and casualty evacuation
- Evacuating the immediate danger area
- Staging and deployment of mutual aid and external Emergency Service resources
- Securing the emergency site
- Identifying and requesting additional resources when necessary
- Providing situation reports to the OCP
- Communicating requests for aid to the OCP

2.5.3 STAFFING

The ICP is staffed by the following personnel as a minimum:

- Incident Response Leader
- Intervention Teams

2.5.4 LOCATION

Given that emergencies vary from situation to situation, the ICP will be located in the general area of an emergency. The Incident Response Leader determines the exact location of the ICP.

The ICP will be situated in a safe, yet close enough location to permit the Incident Response Leader to be able to effectively manage the emergency and maintain good communications.

2.5.5 EQUIPMENT

The Incident Response Leader must ensure the following is available :

- A copy of the Site Contingency Plan
- Two way radio
- GPS

2.5.6 COMMUNICATION

Verbal communication from the ICP to the OCP will be as follows:

- Primary: Radio
- Alternate: Telephone (land line)

The Incident Response Leader is the point of contact for the OCP, and the On Site Commander is the point of contact at the OCP.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

2.6 EVACUATION CENTRE

Total E&P representatives at this administrative and registration centre manage the concerns and immediate needs of evacuated staff or residents. Arrangements for alternative accommodation, reimbursement of daily expenses, and temporary care of evacuated property are managed through this centre.

2.7 STAGING AREA

The staging centre is a control point for regulating the flow of equipment and services to and from the incident location. It is usually located at a safe location (outside the designated emergency planning zone). It could also be near the Incident Command Post.

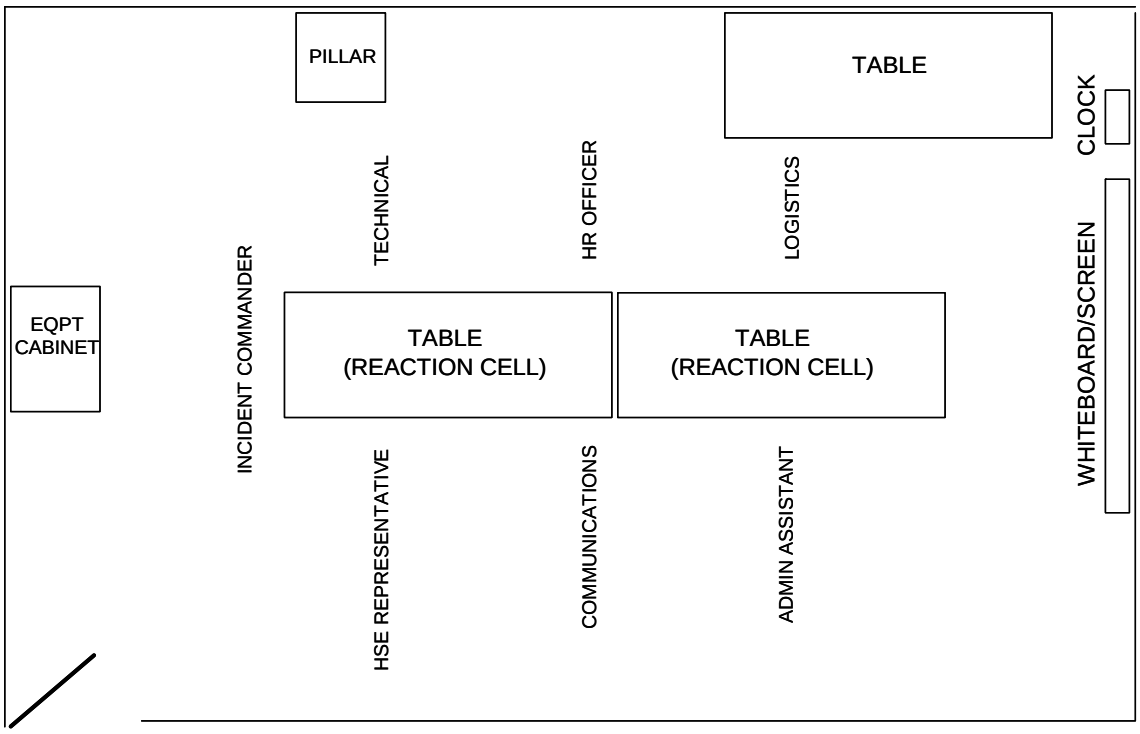
2.8 OFF SITE EMERGENCY OPERATIONS CENTRE (EUB only)

The Alberta Energy and Utilities Board may establish this centre if the emergency is likely to significantly impact the public. This centre provides a central location for addressing queries and coordinating the services of various government agencies. It also provides a centre for public and media interaction. If an Off Site EOC is established, Total dispatches representatives to the centre to represent the company's views on management, technical and public affairs issues. The OCP must quickly confirm where the EUB decides to set up, which would likely be in Fort McMurray.

SECTION 2 – EMERGENCY RESPONSE ORGANIZATION

FIG. 2-2 EMERGENCY OPERATIONS CENTRE LAYOUT (REACTION CELL)

Conference Room 19C, Calgary Head Office



SECTION 3 – ROLES & RESPONSIBILITIES

3.0 OVERVIEW

As described in Section 2 – Emergency Response Organization, there are four major incident management centres in the Total E&P Emergency Response Organization:

- Crisis Management Cell (CMC)
- Emergency Operations Centre (EOC)
- On Site Command Post (OCP)
- Incident Command Post (ICP)

This section will outline the following roles and responsibilities:

EOC (Reaction Cell):
- Emergency Manager
- Senior Safety Advisor
- HR Manager
- Engineering Manager (Thermal)
- Civil Construction Coordinator (Thermal)
- Senior Communications Advisor
- Administrative Assistant

EOC (Strategy Cell):
- President
- HSE Manager
- VP Finance and CFO
- VP General Counsel & Corp. Secretary
- Asset
- VP HR, Communications, and Administration

OCP
- On Site Commander

ICP
- Incident Response Leader

SECTION 3 – ROLES & RESPONSIBILITIES

3.1 EMERGENCY OPERATIONS CENTRE (REACTION CELL)

3.1.1 EMERGENCY MANAGER

LOCATION EOC

ASSIGNED General Manager Operations (Thermal)

ALTERNATE Engineering Manager (Thermal)
Duty Officer

ROLE Manages the response to ensure responder safety, public Safety, as well as the control and containment of any hazardous excursions. Provides support to site, information to next of kin, and liaises with authorities.

RESPONSIBILITIES

- □ Activate the affiliate emergency response plan.
- □ Activate the Emergency Operations Centre.
- □ Confirm that there is an adequate communication link between the EOC, On Site Command Post and Incident Command Post.
- □ Provide the overall management direction to EOC staff for response and recovery activities
- □ Confirm the Emergency Level in conjunction with the EUB.
- □ Confirm the emergency planning zone
- □ Evaluate broad impacts of emergency on:
  - ➢ Public, employee, contractor safety
  - ➢ Environment
  - ➢ Risk to production and integrity of installations
- □ Develop goals and objectives for the EOC, including long term planning goals for recovery.
- □ Establish or confirm priorities for response and recovery activities.
- □ Ensure an EOC action plan is developed.
- □ Approve the EOC action plan.
- □ Ensure notification of EOC Strategy Cell and keeps them informed and updated of developments.
- □ Ensure prompt notification of all external agencies.
- □ Review the actions being taken to protect public safety.
- □ Determine the need to advise the public to shelter or evacuate.
- □ Support the On Site Commander in the preparation of an incident control and containment action plan.
- □ Monitor the overall response. Evaluate the need for support

services and assistance.

- □ Conduct regular briefings to keep all EOC members apprised of on-going response efforts and developments
- □ Coordinate with Admin Assistant to ensure adequate documentation is being compiled.
- □ If an Alberta EUB Off-site Emergency Control Centre (off-site EOC) is established, dispatch representatives to represent Total management, technical and public affairs issues.
- □ Review ignition criteria and give approval for ignition if relevant.
- □ Downgrade the emergency in conjunction with the EUB.
- □ Maintain a Time and Event Log
- □ Initiate and coordinate post-incident activities. e.g., Incident Debriefing.
- □ Gather all incident documentation and prepare post-incident reports.

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.2 SENIOR SAFETY ADVISOR

LOCATION EOC

ASSIGNED Senior Safety Advisor

ALTERNATE Senior Environmental Specialist

ROLE Ensures that HSE policy is being adhered to during the response and interfaces with key government agencies involved in the emergency.

RESPONSIBILITIES

- □ Communicate with the On Site Commander and HSE Advisor at the Joslyn site to ensure that protection of people, the public, and the environment are at the forefront of the emergency response.
- □ Communicate with the HSE Manager in the Strategy Cell.
- □ Provide technical support to responders for:
  - groundwater, soil, water, and waste sampling.
  - Spill prevention and control.
  - Etc.
- □ Monitors operations activities during the emergency response.
- □ Assist the On Site Commander in defining control zones, and in determining the need to evacuate non-responders from the control zones and to establish safe approach guidelines.
- □ Act in an advisory capacity in situations/incidents where human health may be impacted.
- □ Advise on environmental matters.
- □ Assist the On Site Command Post regarding plume dispersion, air monitoring and evacuation priority.
- □ Act as the primary point of contact and conduct notifications to the following government agencies and authorities:
  - EUB (Alberta)
  - Alberta Environment
  - Alberta Emergency Management Agency
  - Local authorities (counties/municipalities)
  - Government agencies outlined on the Notification Matrix in Section 4.0
- □ Coordinate the flow of information to and from the government agencies and authorities.
- □ Address inquiries and obtain the information required by the government agencies and authorities.
- □ Coordinate the use of expertise and services available through

the government agencies and authorities.

- □ Recommend appropriate Personal Protective Equipment for post event remediation when hazardous chemicals or substances are present in consultation with Industrial Hygienist;
- □ Request occupational health sampling and monitoring for workers during both the incident and post event remediation;
- □ Participate in the debriefing following the emergency.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.3 HR MANAGER

LOCATION EOC

ASSIGNED HR Manager

ALTERNATE Senior Advisor Training & Development

ROLE Coordinates information about victims and organizes support to next of kin.

RESPONSIBILITIES

- □ Identify and facilitate expert HR support resources (e.g. industrial relations, union negotiations, list of Total key contacts and phone numbers).
- □ Provide expert advice on HR strategies / policies / processes / programs (e.g. union/management, indemnification policy, business conduct policy).
- □ Establish liaison between family and company (e.g. support ongoing communications, provide support and assistance to family).
- □ Ensure availability of current profiles for employees and families.
- □ Facilitate access to all personnel records.
- □ Monitor and support employee relations strategies.
- □ Ensure coordination with CMC Head Office Human Resources Specialist.
- □ Meet with families in the event of an employee death.
- □ Coordinate a reception centre for families, if necessary.
- □ Liaise with Contracting companies for next of kin information.
- □ Participate in the debriefing following the emergency.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.4 ENGINEERING MANAGER (THERMAL)

LOCATION EOC

ASSIGNED Engineering Manager (Thermal)

ALTERNATE Process Engineer

ROLE To advise the EOC team with regards to the definition and implementation of technical measures during an emergency.

RESPONSIBILITIES

- □ Provide EOC with expertise related to technical points and ensure that measures undertaken are suitable with facility constraints.
- □ Provides technical support and expertise (drawings, technical data, vapor cloud release modeling) to assist EOC in response and recovery planning.
- □ Maintain updated process area diagrams piping, sewer and drainage points and an updated list of resources within the engineering group.
- □ Coordinate data and perform any technical calculations required to understand and solve the problem.
- □ Coordinate assistance from internal and external technical experts (Drill Emergency Response Group, Oil Spill Clean-up resources, etc.).
- □ Determine the need for any specialized resources in support to the incident.
- □ Ensure the synthesis of technical needs and interventions.
- □ Coordinate the use of expertise and services available through the government agencies and authorities.
- □ Participate in the debriefing following the emergency.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.5 CIVIL CONSTRUCTION COORDINATOR (THERMAL)

LOCATION EOC

ASSIGNED Civil Construction Coordinator (Thermal)

ALTERNATE Land Administrator

ROLE Provide logistical support to affected site and underlying infrastructure. Assists the On Site Commander with procuring the necessary equipment, services, and manpower to support the response to an emergency.

RESPONSIBILITIES

- □ Provide input and advice to the Emergency Manager.
- □ Ensure telecommunication systems are operating effectively.
- □ Monitor logistics support to the emergency response.
- □ Provide up to date lists of available resources on and off site;
- □ Provides maintenance requirements (site electrical / communications etc.)
- □ Identifies additional maintenance and manpower planning
- □ Support the On Site Command Post emergency response operations by::
  - o Facilitating acquisition of materials, services and supplies through the issue of purchase orders, credit cards and/or cash as required
  - o Manage the timely supply and delivery of materials, equipment, personnel and services to the site
  - o Arranging for airlift support
  - o Arranging ground transportation and heavy equipment needs
  - o Ensuring effective communication systems, e.g. field radios, fax are in place
  - o Provides for emergency responder needs (e.g. food, travel arrangements, etc.)
  - o Liaison with Oil spill cooperatives and WCSS equipment
  - o Catering services for the response team and service crews
  - o Making arrangements for temporary accommodations off site
- □ Assemble assistants as required to contact and procure equipment and services for the response team.
- □ Provides support to the Recovery stage following the emergency
- □ Maintain a Time and Event Log

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.6 SENIOR COMMUNICATIONS ADVISOR

LOCATION EOC

ASSIGNED Senior Communications Advisor

ALTERNATE Public Affairs Coordinator

ROLE Manage strategic communications during emergency situations.

RESPONSIBILITIES

- □ Establish single information center for all media enquiries.
- □ Obtain regular briefings from the Emergency Manager and keep the EOC informed of all news concerning the emergency as reported by the news media by monitoring news reporting.
- □ Notifies and involves corporate Public Affairs, as required
- □ Work with EOC Emergency Manager to input/update messages on the Total Information Line for broader stakeholders
- □ Update the Total E&P Canada website to reflect information on the incident and the response and recovery efforts
- □ Consults with the Emergency Manager to develop company statements (e.g. standby, media release, internal electronic communication) during emergencies
- □ Develop a communications strategy related to the particular incident.
- □ Oversee release of information on the incident, response, and recovery operations.
- □ Obtaining approval for release of information to the key stakeholders, public, media and employees
- □ Prepare written material for communications releases to employees, public and media
- □ Provide advice and direction for on site media relations.
- □ Collect and assign required resources to manage information needs.
- □ Draft news releases for Total E&P Canada's Head Office approval.
- □ Advises Reception of need to forward public/media inquiries to the Communications Officer in the EOC or to check the Total E&P Information Line
- □ Identify and set up location for media interviews
- □ Brief the designated Total spokespersons prior to media briefings or interviews.

SECTION 3 – ROLES & RESPONSIBILITIES

- □ Maintain a record of all newspaper articles, radio and television broadcasts, press conferences and briefings.
- □ Coordinate information release with public information officers from other agencies, i.e. AEUB, Regional Municipality of Wood Buffalo, etc.
- □ Participate in post incident debriefings and follow up activities.
- □ Ensure records of Public Information activities are documented and maintained.
- □ Maintain a Time and Event Log

SECTION 3 – ROLES & RESPONSIBILITIES

3.1.7 ADMINISTRATIVE ASSISTANT

LOCATION EOC

ASSIGNED Administrative Assistant

ALTERNATE Thermal Administrative Assistant

ROLE Maintains the Master Records of Events log and assists the Emergency Manager with clerical issues.

RESPONSIBILITIES

- □ Provides required clerical and administrative support and supplies to the EOC
- □ Chronologically document all actions, decisions, contacts and requests on a Master Record of Events Log.(written or electronic record)
- □ Ensures the appropriate site security is maintained for the EOC
- □ Set up of the EOC (phones, flipchart, status boards, time & event logs, supplies
- □ Coordinates the distribution of information throughout the EOC
- □ Update and maintain all status boards.
- □ Assist the Emergency Manager as necessary. This will include documenting events and telephone calls and providing clerical support.
- □ Maintain a filing system for all documentation.
- □ Remind EOC team members to document their actions and decisions taken.
- □ Get assistance when necessary.
- □ Provide for administrative needs of the EOC team.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2 EMERGENCY OPERATIONS CENTRE (STRATEGY CELL)

3.2.1 PRESIDENT

LOCATION President's Office

ASSIGNED President

ALTERNATE VP Thermal

ROLE Overall responsibility for the response to the emergency. The President defines the overall emergency strategy and ensures that sufficient resources are made available and is the primary spokesperson for Total E&P Canada.

RESPONSIBILITIES

- □ Provide strategic and policy guidance
- □ For major incidents (fatalities or severe injuries, major pollution, 1 week production loss, material damage above $2M or high media attention), alerts the CMC in Paris within one hour.
- □ Communicates with the Emergency Manager on a consistent basis.
- □ Ensure that all information and assistance required is clearly expressed to the CMC.
- □ Define the emergency response strategy with the Emergency Manager.
- □ Select a strategy, in consultation with the Emergency Manager, for dealing with the media, public and regulatory agencies
- □ Is the Total spokesperson for media communications.
- □ Define the communication strategy and control the diffusion of information inside and outside the Head Office.
- □ Ensure that the necessary resources are assigned to the response.
- □ Notify and assemble the necessary financial, legal, contract and insurance specialists to ensure all major company concerns are addressed.
- □ After the crisis, take part in debriefing.
- □ Monitor constant improvement of the Affiliate Emergency Response Plan, with the assistance of the HSE Manager, making sure that this document is congruent with Total policy.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2.2 HSE MANAGER

LOCATION President's Office

ASSIGNED HSE Manager

ALTERNATE Senior Safety Advisor

ROLE Provides advice directly to the President. Coordinates with the HSE representative in the Reaction Cell to ensure that the protection of employees, the public, and protection of the environment are primary objectives in the management of an emergency.

RESPONSIBILITIES

- □ Oversee management of safety & environmental issues.
- □ Communicate with the President on a consistent basis.
- □ Communicate with the Senior Safety Advisor (Reaction Cell) to monitor the effectiveness of emergency response activities.
- □ Assist the Senior Safety Advisor (Reaction Cell) when necessary.
- □ Monitor the operational response to the emergency response.
- □ Ensure compliance with all relevant government and environmental safety regulations.
- □ Ensure compliance with all relevant government and environmental safety regulations.
- □ Provide members of the Strategy Cell with information on regulatory requirements.
- □ Keep informed on regulatory issues and requirements related to the conduct of response operations.
- □ Participate in the debriefing following the emergency.
- □ Maintain a Time and Event log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2.3 VP FINANCE AND CFO

LOCATION President's Office

ASSIGNED VP Finance and CFO

ALTERNATE Controller

ROLE Provide advice to the EOC Strategy Cell on all matters pertaining to Finance and Contracts.

RESPONSIBILITIES

- □ Manage all costs and accounting and insurance-related issues that develop as a result of the emergency.
- □ Offer strategic business support to the President. Provide information and advise on the following areas:
  - o Reputation
  - o Contractual impacts
  - o Financial Obligations
  - o Insurance
  - o Cash Flow
  - o Regulatory implications
- □ Expedite the execution of agreements needed for long-term responses.
- □ Evaluate the total cost of the crisis.
- □ Provide financial cost analysis information as requested
- □ Ensure all response and recovery costs are tracked and that financial documentation is accurately maintained
- □ Ensure that cash and/or credit is available to the emergency site to acquire goods and services as necessary to carry out response and recovery activities
- □ Ensure critical financial functions are carried out during emergencies, e.g. bond interest payments
- □ Participate in the debriefing following the emergency.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2.4 VP GENERAL COUNSEL & CORP. SECRETARY

LOCATION President's Office

ASSIGNED VP General Counsel & Corp. Secretary

ALTERNATE Paralegal & Contracts Coordinator

ROLE Provide advice to the EOC Strategy Cell on all legal matters pertaining to emergency operations.

RESPONSIBILITIES

- □ Identify and prepare to manage all legal considerations associated with emergency response operations.
- □ Develop and implement legal guidelines.
- □ Provide guidance to the Emergency Manager and Strategy Cell on the company's role in emergency response operations.
- □ Advise the Total Emergency Response Organization on the type of documentation needed to support the company in incident-related litigation.
- □ Advise on the gathering, handling and preservation of information that may be relevant to the defense and/or settlement of future claims.
- □ Review contracts.
- □ Provide legal advice on external damage assessments and handling of claims.
- □ Identify steps to be taken to reduce exposure to legal risks.
- □ Review and approve written communications with government departments, mass media, regulatory agencies, and mass media.
- □ Maintain a Time and Event Log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2.5 ASSET

LOCATION President's Office

ASSIGNED To be determined

ALTERNATE To be determined

ROLE Provide advice to the EOC Strategy Cell on all matters pertaining Total assets.

RESPONSIBILITIES

- □ Provide information and advice regarding the impact on Total assets.
- □ Monitor information regarding assets.
- □ Consider potential impacts and consequences towards assets.
- □ Participate in post incident debriefs.
- □ Maintain a Time and Event log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.2.6 VP HR, COMMUNICATIONS, AND ADMINISTRATION

LOCATION President's Office

ASSIGNED VP HR, Communications, and Administration

ALTERNATE HR Manager

ROLE Provide advice to the EOC Strategy Cell on all matters pertaining Human Resources, Administration, and Public Affairs.

RESPONSIBILITIES

- □ Offer strategic business support to President. Advise on:
  - HR functions associated with personnel, EAP, fatality notifications
  - Strategic communications
- □ Liaise with and assist the corresponding representatives in the Reaction Cell.
- □ Provide updates to the Strategy Cell on a consistent basis.
- □ Acts as the principal advisor to the Emergency Manager on communications and interactions with key stakeholders including media, government, community and employees.
- □ Develops communications strategy for response and recovery activities for the EOC and emergency site
- □ Coordinates Corporate communication and media releases with the Communications Officer in the Reaction Cell and the President
- □ Participate in post incident debriefs.
- □ Maintain a Time and Event log.

SECTION 3 – ROLES & RESPONSIBILITIES

3.3 ON SITE COMMAND POST

3.3.1 ON SITE COMMANDER

LOCATION Total Joslyn Site

ASSIGNED Superintendent on Site

ALTERNATE Off Site Superintendent

ROLE Manages activities at the site of the emergency and ensures responder safety, public safety, and control/containment of the hazard

RESPONSIBILITIES

- □ Document the incident on an Incident Notification Report form and forward to the EOC Emergency Manager (in person or by telephone).
- □ Chronologically document all actions, decisions, contacts and requests on a Time and Event Log.
- □ Confirm the level of Emergency with the Incident Response Leader.
- □ Account for all personnel at the site of the emergency.

Responsibilities - Level One Emergencies and above

- □ Mobilize the On Site Command Post.
- □ Ensure there is effective communication between the OCP and ICP.
- □ Develop a plan to respond to the emergency and ensure the plan is communicated to all ICP and OCP staff.
- □ Conduct an initial brief and subsequent update briefs.
- □ Provide direction and guidance to the Incident Response Leader and to OCP staff.
- □ If the incident poses an actual or potential danger to public, ensure that public protection activities are addressed.
- □ With the assistance of the Incident Response Leader, procure the necessary on-site equipment.
- □ Update the EOC Emergency Manager about the situation.
- □ Total will begin evacuating members of the public, beginning with "special needs", within the emergency planning zone during a Level One Emergency if:

- conditions are deteriorating,
- the problem is becoming progressively more complex and is not

likely to be corrected in the near future, and
- significant time is going to be required to completely evacuate and secure the emergency planning zone.

Additional Responsibilities - Level Two Emergency

□ Ensure members of the public who are inside the emergency planning zone are evacuated and manned roadblocks must be set up to isolate the emergency planning zone.
□ If required, ensure an Ignition Team is chosen, duties discussed and ignition equipment is on-site and checked in case the incident escalates to a Level Three Emergency.

Additional Responsibilities - Level Three Emergency

□ If any ignition criteria are met, ignite the release.
□ Prepare support (meals, rest periods, etc.) for responders or relief staff.

SECTION 3 – ROLES & RESPONSIBILITIES

3.4 INCIDENT COMMAND POST

3.4.1 INCIDENT RESPONSE LEADER

LOCATION Total Joslyn Site

ASSIGNED Production Foreman

ALTERNATE To be confirmed

ROLE The role of the Incident Response Leader is to evaluate the technical damage and to supervise the shutdown of the installations. The Incident Response Leader also coordinates the on scene intervention.

RESPONSIBILITIES

- □ Stand by to receive instructions from the On Site Commander.
- □ Activate the Incident Command Post if required.
- □ Carry out a site assessment that includes the following activities:
  - Identify hazardous materials.
  - Evaluate the risk to worker and public safety.
  - Determine the potential for the incident to escalate.
  - Identify safety concerns.
- □ Ensures safety of all personnel before commencing other emergency procedures.
- □ Ensures all response team members understand the nature and extent of the emergency and are aware of any hazardous materials associated with the incident.
- □ Recommends to the On Site Commander if the emergency is at an Alert State, Level 1, 2 or 3.
- □ Coordinates activities of personnel with all emergency services on site
- □ Ensures that the responsible system/component has been shutdown/isolated/bypassed and made safe.
- □ Ensures site security has been established.
- □ Maintains contact with the On Site Commander, keeping him/her apprised of the situation.
- □ Assesses and Identifies resource needs in monitoring and controlling the emergency
- □ Coordinate the incident site control and containment activities.
- □ Clear nonessential personnel from the incident site.
- □ Assess the requirements for on-site safety supervision, personnel and equipment.

SECTION 3 – ROLES & RESPONSIBILITIES

- □ Controls the condition of the facilities and particularly of the damaged unit.
- □ Gives relevant instructions to control room for the shutdown of all hazardous process units.
- □ Ensures the closest units are secure.
- □ Takes into account the environmental threats (accidental spills, gas releases..)
- □ Supervise Intervention Team tactics.
- □ Asks for medical assistance if needed.
- □ Anticipates the escalation of the events in the concerned units.

SECTION 4 – ALERTING & ACTIVATION

4.1 EMERGENCY LEVELS

4.1.1 OVERVIEW

Total E&P Canada categorizes emergencies according to the EUB Directive 071 Criteria Matrix for Classifying Incidents (Dir. 071 Appendix 3, dated December 2006).

In order to implement an effective and timely response, Total must evaluate the extent of the emergency and assess the threat the incident poses to the public, to workers or to the environment. The Incident Response Leader and the On Site Commander are initially responsible for evaluating the situation and determining the type of response.

One of the first steps in the response is to assign a Level of Emergency. The purpose of labeling the emergency is to be able to quickly and clearly communicate the severity of the incident to the response team members.

This plan is based on an alert level and three emergency levels. Each progressive level describes a more serious incident that requires a greater degree of response. The following key issues must be considered when assessing the level of alert:

- Is the situation likely to escalate?
- What is the likely size or extent of the area affected?
- Are members of the public likely to be affected?
- What are the environmental impacts?
- Can the situation be handled entirely by company personnel?
- Does sufficient danger/complications exist (or potentially exist) to justify alerting outside services, e.g. emergency services such as fire, RCMP/local police?

4.1.2 EMERGENCY LEVELS

There is an Alert state followed by three emergency levels. The emergency levels range in ascending order of severity from Level 1 to Level 2 to Level 3. Each level has a different implication for the response and amount of resources required to resolve the emergency event.

Level 0 Alert
A Level 0 Alert does not require external resources. The incident is already controlled by company personnel, and there is no threat to public safety. The threat of escalation is very low. Emergency crews and the Incident Response Leader may be activated or put on standby for a Level 0 Alert.

SECTION 4 – ALERTING & ACTIVATION

Level 1 Emergency
A Level One emergency applies to any emergency that is confined to company property. There must not be any immediate threat to public safety, worker safety or the environment. The incident must have the potential to escalate. A Level One Emergency can usually be handled entirely by company personnel with assistance of local fire brigade and medical team. Total will begin evacuating members of the public, beginning with "special needs", within the emergency planning zone during a Level One Emergency if:

- conditions are deteriorating, has slight potential for trans-boundary impact
- the problem is becoming progressively more complex and is not likely to be corrected in the near future
- significant time is going to be required to completely evacuate and secure the emergency planning zone

An Incident Command Post and the On Site Command Post will be activated for a Level 1 Emergency.

Level 2 Emergency
A Level Two Emergency is a situation that has the potential to affect the public/significantly threaten the environment. The emergency extends beyond the control, scope and authority of field personnel. Justification exists for alerting outside assistance and/or emergency services. Once a Level Two Emergency has been declared, all members of the public within the emergency planning zone will be advised to evacuate. Manned roadblocks will be established to prevent entry into the emergency planning zone.

An Incident Command Post and the On Site Command Post will be activated for a Level 2 Emergency. The Emergency Operations Centre will be activated; it will be the Emergency Manager's discretion as to whether or not to activate the entire Emergency Operations Centre organization.

Level 3 Emergency
A Level Three Emergency is a situation that poses a serious threat to public safety or the environment. Substantial outside assistance is required. A Level Three Emergency is declared for any emergency where safe operating control has been lost and serious consequences are likely. Sheltering and/or public evacuation and/or ignition and local road closures are required.

An Incident Command Post and the On Site Command Post will be activated for a Level 3 Emergency. The entire Emergency Operations Centre organization will also be activated.

SECTION 4 – ALERTING & ACTIVATION

Compound Emergencies
An incident could involve more than one emergency. For example, an ongoing well control problem could create an oil spill or cause an uncontrolled bush fire. Compound emergencies are best handled by assigning separate response teams to each incident under the direction of the on-site Commander.

Regardless of their classification, emergencies are fluid events and may evolve rapidly from one level to another.

4.1.3 ESTABLISHING/ DOWNGRADING EMERGENCY LEVELS

The EUB must always be consulted when establishing and downgrading the Emergency Level. The Fort McMurray EUB Field Office is the closest office to the Joslyn site. The EUB phone numbers are listed in Section 7 – Resources of this manual.

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

SECTION 4 – ALERTING & ACTIVATION

4.1.4 CLASSIFYING EMERGENCY LEVELS

The following Risk Assessment Matrix For Classifying Incidents from EUB Directive 071 Appendix 3 will be referred to when classifying emergency levels at the Joslyn Site:

Summary of Qualitative Measures of Consequences or Impact		
Level	**Descriptor**	**Example of Detail Description**
1	Minor	No injuries, limited and localized environmental impact, low financial loss ($50,000), nil press interest. First aid treatment, on-site release contained with outside assistance, short-term, temporary environmental impact, low press interest.
2	Moderate	Medical treatment required, on-site release contained with outside assistance, medium environmental impact, local and possibly regional media interest publicity.
3	Major	Public Safety jeopardized, off-site release with significant and ongoing environmental impact, adverse national publicity.
4	Catastrophic	Fatality, toxic pollution, and off-site contamination with long-term environmental impact, national and international publicity.

Qualitative Measures of Likelihood		
Level	**Descriptor**	**Description**
1	Unlikely	Incident contained/controlled No chance of additional hazards Ongoing monitoring required
2	Moderate	Imminent control of the hazard probable
3	Likely	Uncontrolled incident Operator has capability to manage and control incident
4	Almost Certain or Currently Occurring	Uncontrolled incident Little chance hazard will be controlled in the near future Assistance from outside parties required

What is the likelihood that the incident will escalate, resulting in an increased exposure to public health, safety, or the environment?

Risk Levels based on likelihood and Consequences					
Risk Assessment Map					
Consequences	Minor (1)	2	3	4	5
	Moderate (2)	3	4	5	6
	Major (3)	4	5	6	7
	Catastrophic (4)	5	6	7	8
		Unlikely (1)	Moderate (2)	Likely (3)	Almost Certain (4)
		Likelihood			

Control Considerations	
Risk Level	**Assessment Results**
Very Low 2-3	**Level 0 (Alert)** No Action Required
Low 4-5	**Level 1 Emergency** There is no danger outside company property or right-of-way. The situation can be handled entirely by company personnel. • Immediate control of the hazard/source is possible • No threat to the public • Minimal environmental impact • Little or not media interest
Medium 6	**Level 2 Emergency** Potential for the emergency to extend beyond company property. Imminent control of the situation is probable; some threat to the public; moderate environmental impact; local regional media interest.
High 7-8	**Level 3 Emergency** • Uncontrolled hazard • Public safety jeopardized • Significant ongoing environmental impact • Significant media interest • Immediate municipal and provincial government involvement • Assistance from outside parties required

SECTION 4 – ALERTING & ACTIVATION

4.1.5 RESPONSES The following Responses for Specified Incidents Matrix from EUB Directive 071 Appendix 3 will be referred to when determining responses to the different emergencies at the Joslyn site:

	Incident	Emergency		
Responses	**Alert**	**Level 1**	**Level 2**	**Level 3**
Communications				
Internal	Discretionary, depending on licensee policy	Discretionary, depending on licensee policy	Immediate notification of off-site management	Immediate notification of off-site management
External Public	Courtesy at licensee discretion	Mandatory for individuals within the EPZ requiring notification	Planned and instructive as per the specific ERP	Planned and instructive as per the specific ERP
Media	Reactive, as required	Reactive, as required	Proactive – media management to local or regional interest	Proactive – media management to local or regional interest
Government	Notify EUB if public contacted	Notify EUB. Call local authority and RHA, if public or media is contacted	Notify EUB and local authority	Notify EUB and local authority
Actions				
Internal	On site, as required, by licensee	On site, as required by licensee. Initial response undertaken in accordance with the specific or corporate-level ERP	Predetermined public safety actions are under way. Corporate management team alerted and may be appropriately engaged to support on-scene responders	Full implementation of incident management system
External	On site, as required by licensee	On site, as required by licensee	Potential for multi-agency (operator, municipal, provincial, or federal) response	Immediate multi-agency (operator, municipal, provincial, or federal) response
Resources				
Internal	Immediate and local. No additional personnel required	Establish what resources would be required	Limited supplemental resources or personnel required	Significant incremental resources required
External	None	Begin to establish resources that may be required.	Possible assistance from government agencies and external support services, as required	Assistance from government agencies and external support services, as required

SECTION 4 – ALERTING & ACTIVATION

4.1.6 RESPONSE PRIORITIES

Response actions are always prioritized as follows:

- Worker and Public Safety
- Environmental Protection
- Asset Protection
- Clean up and Effect Mitigation

In order to evaluate the situation and identify the actions to be taken, a number of issues must be considered. The following list of questions is provided as a guide for each of the response priorities to ensure the key issues are addressed:

Worker and Public Safety

Worker Safety: Has anyone been injured or killed?

- What precautions must be taken to safeguard the workers? Is there a risk of explosion or fire? Have all hazardous materials been identified?

Public Safety: Is there anyone within the emergency planning zone?

Total will begin evacuating members of the public, beginning with "special needs", within the emergency planning zone during a Level One Alert if:

- conditions are deteriorating,
- the problem is becoming progressively more complex and is not likely to be corrected in the near future, and
- significant time is going to be required to completely evacuate and secure the emergency planning zone.
- How can the emergency planning zone be isolated? Are roadblocks required? Will major roads be blocked? Are detours required?
- Can all members of the public within the emergency planning zone be easily located and contacted? If not, what additional personnel and equipment are required, e.g. area rovers, helicopter support?
- If a potential or actual release of H2S or hazardous or toxic vapour occurs:
- Are there any river valleys or topographical features that could create special hazards or restrict the dispersion of the gas?
- What is the direction and strength of the wind?
- Is there a significant danger to the public that can be reduced by igniting the plume?
- What fire hazards or problems could be created by igniting the plume, e.g. forest or ground fires, explosion of adjacent fuel storage facilities
- A mobile downwind air monitoring unit will be mobilized (H2S emergency).

Environmental Protection

- Has a spill occurred? If so, is a body of water threatened? Should oil spill cooperative or WCSS equipment be mobilized?
- What environmental monitoring is required - air, water, soil?

Asset Protection

- What is the current damage assessment?
- What buildings are still threatened? What buildings are priority over others?
- What infrastructure is still threatened?

Clean up and Effect Mitigation

Response efforts should include actions that will help to control or minimize negative impacts of the incident. The following issues should be considered:

- What media attention is the incident likely to attract? Has a news release been prepared?
- Has the Manager, Community Engagement been notified and prepared?
- Do residents in the area perceive there is a greater risk than warranted? (This may be the situation during a sour gas release.) Can the media be used to help clarify the risk or alleviate fears.
- Are response efforts and decisions being documented? Thorough records of the incident are required for insurance and legal, purposes. An Incident Event Log (located in Section 7.0) must be maintained during the incident - recording times, people involved, and actions taken.
- How has property damage been documented - photographs, aerial photographs, sketches, written explanations?
- Have stakeholder agencies, joint interest partners, clients and other affected parties been notified of the incident and any subsequent delays or interruptions to delivery quotas?
- What must be cleaned first to allow for the quickest transition back to operations?
- How long will the clean up effort take?

SECTION 4 – ALERTING & ACTIVATION

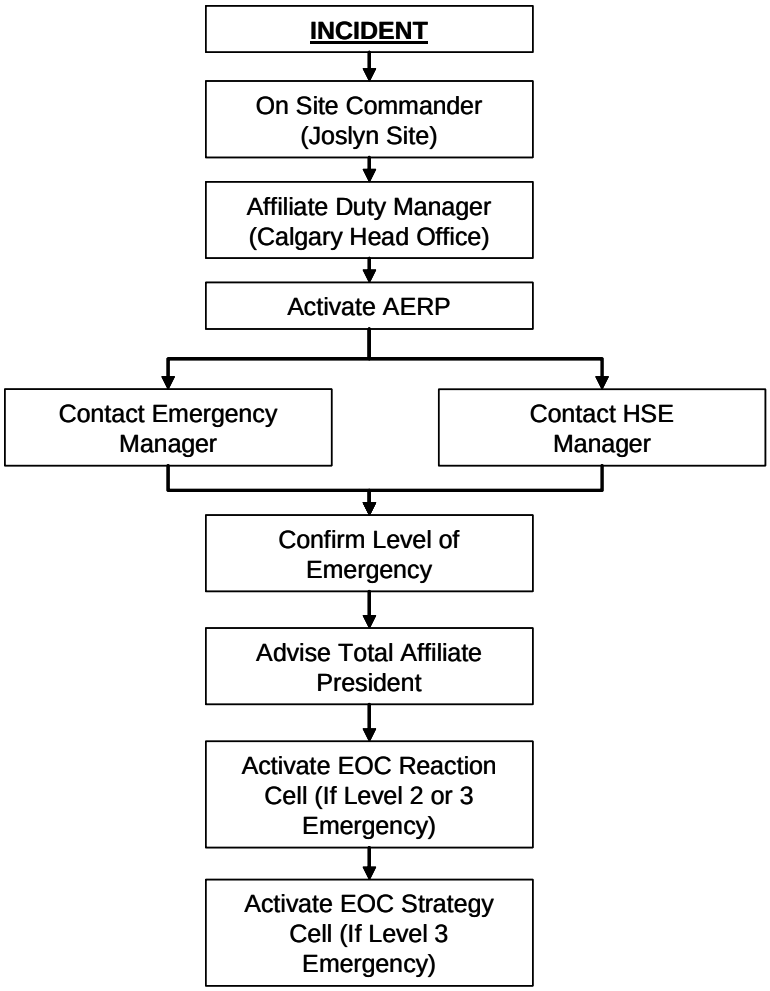
4.2 ALERTING, ACTIVATION, AND NOTIFICATION – INTERNAL

Figures 4-1 and 4-2 outline the alerting, activation, and notification requirements when an incident occurs at the Joslyn site.

FIG. 4-1 TOTAL E&P ACTIVATION MATRIX

Level	OCP		EOC – REACTION CELL		EOC – STRATEGY CELL		R.M. of WOOD BUFFALO		MUTUAL AID	
-	Notify	Activate	Notify	Activate	Notify	Activate	Notify	Activate	Notify	Activate
Alert	Yes	No	No	No	No	No	No	No	No	No
1	Yes	Yes	Yes	No	Yes	No	No	No	No	No
2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

FIG. 4-2 TOTAL E&P AERP ACTIVATION



SECTION 4 – ALERTING & ACTIVATION

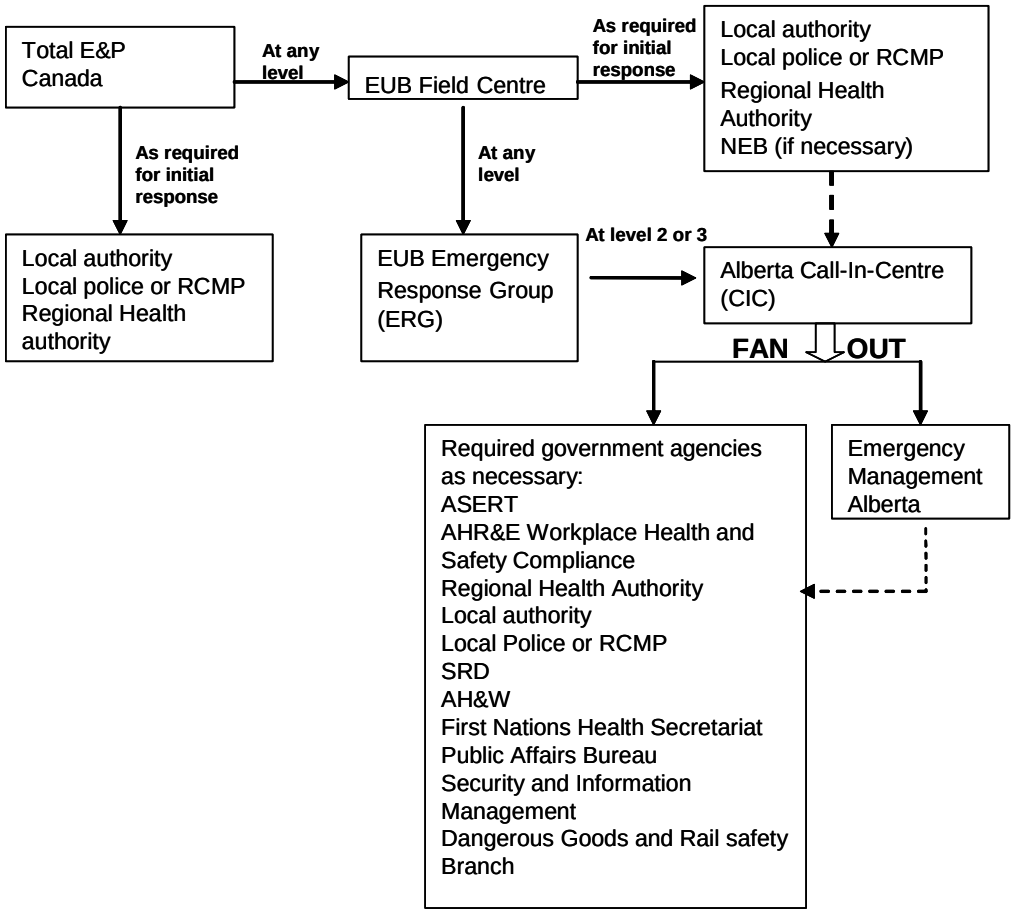
4.3 ALERTING/ACTIVATION - EXTERNAL

Fig 4-3 is the Fan-Out Procedures for Emergencies, as extracted from EUB Dir. 071 Appendix 10. It outlines who Total is to contact during an incident.

When an emergency takes place at the Joslyn site and Mutual Aid is required, the OCP will call the Regional Municipality of Wood Buffalo (which is the local authority). When emergency services are required (fire, police, ambulance), they can be accessed by calling 911.

For any Level 1 to Level 3 Emergency, Total must contact the EUB. It is the responsibility of the On Site Commander at the OCP to ensure this is completed, and that the call is made to the EUB Field Office at Fort McMurray. The Fan Out procedures below outline who the EUB calls in turn. That stated, Total will still remain proactive in its notification process.

FIG. 4-3 FAN-OUT PROCEDURES FOR EMERGENCIES - EXTERNAL



SECTION 4 – ALERTING & ACTIVATION

4.4 NOTIFICATIONS - EXTERNAL

4.4.1 GENERAL

Calls to notify external agencies will be coordinated at the EOC by the Senior Safety Advisor. All contact phone numbers are found in Section 6 – Resources.

4.4.2 CONTACTS

In accordance with the activation procedure outlined in Section 4.3, notifications will be made with the following external organizations:

Regional Municipality of Wood Buffalo:

- Fire – As required to assist in the response to an incident
- RCMP – As required to assist in the response to an incident
- Ambulance – As required to assist in the response to an incident

Alberta Government:

- Alberta Energy and Utilities Board (EUB) – Level 1, 2, and 3 Emergencies

Notifications will also be made to the following organizations. While the EUB may contact them as well, Total will contact the following:

- Regional Municipality of Wood Buffalo Council – For any Level 2 or 3 Emergency
- Alberta Emergency Management Agency – For any Level 2 or 3 Emergency
- Environment Canada – if the emergency affects the air quality, soil, water, land, or other aspect of the natural environment.
- Transport Canada – if the emergency affects a highway or Provincial road, or an air corridor
- Worker's Compensation Board (WBC) – If there are personnel related issues stemming from the emergency (particularly injury or death)
- Occupational Health and Safety (OH&S) – If there are personnel related issues stemming from the emergency

SECTION 4 – ALERTING & ACTIVATION

FIG. 4-4 NOTIFICATION MATRIX

The below matrix supplements the information in Section 4.4.2 (Notifications – External), presenting the material in a chart format. The Incident Types correspond to potential incidents identified in Section 5 – Specific Function Plans.

	AGENCY OR RESOURCE													
	First Responders			Lead Agencies			Supporting Agencies							
INCIDENT TYPE (May be more than one)	EMS/Ambulance	Fire Departments	RCMP/Local Police	Alberta Energy & Utilities Board (EUB)	Alberta Emergency Management Agency (AEMA)	Local Authorities (R.M. of Wood Buffalo	Environment Canada	Transport Canada (CANUTEC)	Worker's Compensation Board	Occupational Health & Safety	Human Resources	Ministry of Agriculture	Ministry of Indian & Northern Affairs	
Fire or Explosion	a	√	√	√	c	d	e	f	g	g	g	h	i	
Sour Gas Release	a	b	√	√	c	d	e	f	g	g	g	h	i	
Out of Control Well	a	b	√	√	c	d	e		g	g	g	h	i	
Steam Release	a	b	√	√	c	d	e		g	g	g	h	i	
Spill/Pipeline Rupture	a	b	√	√	c	d	e		g	g	g	h	i	
Blowout	a	b	√	√	c	d	e		g	g	g	h	i	
Wildfire	a	√	√	√	c	d	e	f	g	g	g	h	i	
Security Incident (ie. Bomb Threat)	a		√	√	c	d		f	g	g	g	h	i	
Serious Injury/Fatality	a		√	√		d			√	√	√			

√ - Compulsory Contact
a – Contact if support is required beyond the capacity of the site medic.
b – Contact if support is required beyond site means or if there is potential for secondary fires
c – Contact if Level 2 or 3 Emergency is declared.
d – Contact if Level 2 or 3 Emergency is declared.
e – Contact if incident affects air quality, soil, water, land, or other aspect of the Natural Environment.
f – Contact if Provincial roads or traffic is affected.
g – Contact if personnel related issues stem from the incident.
h – Contact if agricultural land or industry is affected.
i – Contact if Community of Fort MacKay will be impacted.

SECTION 4 – ALERTING & ACTIVATION

4.4.3 PUBLIC

The table below indicates when notification of the public will take place after it is determined that there is a possible threat to the public.

Note: A list of individuals requesting early notification must be located at each incident management centre. The list must also be maintained.

EN –Individuals requesting early notification
N – Individuals not requesting early notification

Level	IIZ		PAZ		EPZ		EAZ	
-	EN	N	EN	N	EN	N	EN	N
Alert	Yes	No	Yes	No	Yes	No	No	No
1	Yes	Yes	Yes	Yes	Yes	No	Yes	No
2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

IIZ	Initial Isolation Zone – an area in close proximity to a hazardous release in which the public may be exposed to dangerous (upwind) and life threatening (downwind) concentration levels.
PAZ	Protective Action Zone – Area downwind of a hazardous release where outdoor concentration levels may result in life threatening or serious and possibly irreversible health effects to the public.
EPZ	Emergency Planning Zone - the geographical area surrounding the facility containing hazards product (s) that requires specific emergency response planning by the operator.
EAZ	Emergency Awareness Zone – the distance outside the EPZ where public protection measures may be required due to poor dispersion conditions of the hazard.

SECTION 4 – ALERTING & ACTIVATION

4.4.4 PUBLIC INFORMATION GUIDELINE

The following information must be released to the general public when there is an incident. This is to be done when contacting the public, as per the matrix in Section 4.4.

These guidelines are extracted from EUB Directive 071, Appendix 11 – Information Disseminated to the Public Immediately and During an Incident:

To the affected public – immediately	To the general public – during
• Type and status of incident	• Type and status of incident
• Location and proximity of the incident to people in the vicinity	• Location of the incident
• Public protection measures to follow, evacuation direction, and any other emergency response measures to consider	• Areas impacted by the incident
• Actions being taken to respond to the situation and time period anticipated	• Description of the products involved
• Contacts for additional information	• Contacts for additional information

To the affected public – during
• Description of the products involved and their short term and long term effects
• Effects the impact may have on people in the vicinity
• Areas impacted by the incident
• Actions the affected public should take if they experience adverse effects

4.5 DEACTIVATION OF THE OCP & EOC

The OCP and EOC will continue to manage emergency related issues until such time that normal management processes will suffice. The decision to stand down the OCP is made by the On Site Commander, while the decision to stand down the EOC is made by the Emergency Manager. Personnel will be released to return to normal duties when the OCP & EOC are shut down.

Post-incident reporting and recovery operations will be undertaken as soon as possible to return the situation to normal.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.0 OVERVIEW / INDEX

Specific Function Plans are established to address problems, issues, and procedures unique to emergency operations. They are intended to provide guidelines for carrying out activities that are not specifically addressed in the overall emergency response or within the roles and responsibilities of individuals within Total's ERO.

In some cases, the emergency actions described in this section are in a condensed form that reflects more extensive procedures that have been developed or have been put in place by Total personnel.

The following sections apply primarily to the EOC in Calgary:

The following sections apply primarily to Joslyn Site staff:

SECTION 5 – SPECIFIC FUNCTION PLANS

5.1 EVACUATION – CALGARY HEAD OFFICE

5.1.1 GENERAL

Evacuation of the Calgary Head Office may become necessary due to unforecasted events. Possibilities include bomb threats or a fire. This section aims to capture key activities that must take place prior to evacuation of the building.

5.1.2 SPECIFIC PROCEDURES

If there is a need to evacuate the Total Calgary Head Office, the following activities must take place:

- Advise the Total CMC in Paris of the situation, and provide temporary point of contact information
- Advise Joslyn Site staff of the situation and provide temporary point of contact information
- Ensure sensitive information and material is either secured or removed
- If necessary, determine a location to establish an EOC to gather the Reaction Cell and Strategy Cell

5.1.3 FIRE WARDEN

In addition to standard fire warden duties, the Fire Warden must report updates to the Calgary RSES on a regular basis following evacuation of the building.

5.1.4 NOTIFICATION

In the event that personnel are evacuated, it is likely due to a large scale event. This event may become news and broadcast via the media. Total must be prepared to notify next of kin as to the status of evacuated personnel.

The VP HR, Communications, and Administration will coordinate with the applicable staff to confirm who has been evacuated. This information must be communicated to staff next of kin to identify the status of all Total personnel.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.2 PUBLIC RELATIONS AND DEALING WITH THE MEDIA

5.2.1 GENERAL

Total's objective is to see that all reports of any emergency are factual and represent the company's position fairly and accurately. Total recognizes that news agencies have a legitimate interest in the company's activities and are our best liaison with the public. Cooperation with news media representatives is the most reliable guarantee that this objective will be met.

5.2.2 MEDIA SPOKESPERSONS

The President, Senior Communications Advisor, or designate based at the EOC at the Calgary Head Office work directly with the media.

Media contact at the Joslyn site will only be authorized after a briefing by the Senior Communications Advisor or the President of TEPC.

Key Guidelines for Media Spokespersons:

- Return media calls promptly and courteously.
- Restrict comments to facts. Do not speculate.
- Keep messages consistent and non-technical.
- Cooperate with the media, but do not allow them to influence your actions or decisions.
- Note the reporter's name, organization and telephone number on your Time and Event Log.

5.2.3 GENERAL GUIDELINES FOR TOTAL PERSONNEL

Media representatives shall not be allowed on site until Total's Head Office has given clearance. All reporters, if authorized to be on the emergency site, must be accompanied at all times and will, for their own safety, be denied access to dangerous areas. If allowed on site, Total must ensure that all reporters have personal protective equipment appropriate to the situation.

If a media representative arrives without permission to enter the site, they are to be given the number to the Senior Communications Advisor at the Calgary Head Office.

Under no circumstances is anyone authorized to speak to reporters either officially or unofficially. If a request is made of you by the media, refer them to the Senior Communications Advisor in Calgary (the number is found in Section 6 – Resources).

SECTION 5 – SPECIFIC FUNCTION PLANS

5.2.4 GUIDELINES FOR MEDIA LIAISON

In addition to the Key Guidelines for Spokespersons, below is a list of 'do's' and 'don'ts' for interacting with the media.

DO:

1. Show Total's ability and willingness to respond to the emergency.
2. Show compassion for people before concern for equipment, operations, and production.
3. Say that you don't know if you don't know an answer.
4. Prepare written notes prior to any interviews or media briefings.
5. Ensure that information you are releasing is consistent with what other organizations are releasing.
6. Conduct joint briefings as much as possible.
7. Keep notes of all questions asked by reporters and public during interviews and briefings.

DO NOT:

1. Lie.
2. Get personal with reporters or public. Remain professional and objective at all times.
3. Provide names of injured or deceased persons before authority to do so is received from Total's management and the medical examiner / police.
4. Speculate about future effects of the emergency or spill.
5. Engage in casual conversation with reporters. Nothing is ever "Off the record."

5.2.5 GOOD PRACTICES

- Tell the reporters where they can safely get pictures/video of the site. If it is safe, show them what is being done to contain the emergency and let them take photos/video of our actions.
- Always assume that TV cameras and microphones are on and possibly recording your words, actions, and expressions. Be conscious that this may embarrass you and Total. Be serious; any attempt at humor will invariably fail with some readers, viewers, or listeners.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.2.6 TIPS FOR INTERVIEWS & BRIEFINGS

Any person assigned to speak on behalf of Total must be as well prepared as possible. The following tips will help in this regard:

- Prepare yourself mentally for the interview or briefing.
- Stay relaxed. You are the expert.
- Have your media relations' objectives ready. Your media relations objectives should be to provide the following information:
  - The actions you are taking to contain the emergency.
  - Whether the situation is a danger to the community.
  - Information about the emergency.
- Bridge questions to your media relations objectives at every opportunity.
- Try to anticipate questions that may be asked, and prepare answers for them.
- Talk to the real audience. The real audience is the people at home, not the reporter or the camera crew.
- State the most important facts first:
  - Who; What; When; Where; Why; How

5.2.7 MEDIA RELEASES

The Communications representative at the Calgary Head Office will be responsible for distributing media releases. If the communications representative asks for information towards this aim, On Site Command Post staff are to comply.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.3 NOTIFICATION OF NEXT OF KIN

5.3.1 GENERAL

The next of kin of a deceased or seriously injured person will be notified as soon as possible, but not before information is as complete as possible. Personal information about Total and secondee staff can be found in the employee files located in the Total Head office in Calgary.

5.3.2 COMPANY PERSONNEL AND CONTRACT EMPLOYEES

The VP Human Resources, Communication, and Administration at the EOC in Calgary is responsible for ensuring that notification of next of kin is completed promptly. In situations where there is a death, it must first be confirmed by a medical doctor.

Next of kin must be notified when an employee or secondee is missing, seriously injured, or dies while working for Total. Whenever possible, notifications regarding employees should be conducted in person by a senior company representative, accompanied by a co-worker, a family friend, or the RCMP/local police.

Notifications regarding contractors should be made by their employers, in coordination with Total.

If a member of the public is injured or killed as a result of company operations, notification should be coordinated through the RCMP/local police.

5.3.3 GUIDELINES

- Do not release the names of casualties or missing persons before the next of kin are notified.
- Make the notification in person, not by telephone or through an intermediary.
- Identify the time and location of the accident and the present location of the victim or body.
- Keep statements to the facts and do not speculate. Do not discuss potential perceptions of liability or fault.
- Advise the next of kin that a senior company representative will be contacting them to discuss any immediate needs and to provide information on insurance coverage and benefits support. Follow up on this commitment.
- Leave your name and telephone number with family members.
- Offer assistance, such as transportation to the hospital.
- Do not leave next of kin alone. Offer to contact a neighbour, friend or relative. Ensure the next of kin are protected from media harassment.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.4 SERIOUS INJURY / FATALITY

5.4.1 GENERAL

Serious injuries or fatalities may occur at the Joslyn site. The EOC must be prepared to assist site staff in responding to these situations.

5.4.2 EMERGENCY LEVEL – SITE ACTIONS

The On Site Commander notifies the Emergency Manager at the Calgary Head Office. The Emergency Manager ensures the following:

- A person is not declared dead unless by a doctor.
- The site where the incident occurred is not disrupted.
- An investigation is started as soon as possible.

5.4.3 EOC INVOLVEMENT

- If required, prompt the site for information.
- Make efforts to validate the information whenever possible.
- Ensure the VP HR, Communications, and Administration is advised, to allow him to contact next of kin.
- The HSE Manager is to be intimately involved in the investigation.
- Ensure that Occupational Health & Safety (OH&S) has been notified.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.5 BOMB THREAT/ANONYMOUS TELEPHONE CALL

Note: The form for recording bomb threats and anonymous telephone calls can be found in Annex A – Forms.

5.5.1 GENERAL

Individuals usually receive a bomb threat by telephone during normal working hours. While a threat may be received by mail, fax or e-mail, it is very uncommon. Most often, the purpose of a bomb threat is to disrupt the operations of the target organization.

Whether there is actually a bomb or not, if the threat causes an organization to cease operations, evacuate or disrupt activities in some other way, then the person making the threat has accomplished their purpose. It is therefore important to respond appropriately to bomb threats.

5.5.2 EVALUATING THE THREAT

In general, it has been found that a real bomb threat has several characteristics.

- It is almost invariably the work of a deranged person.
- The bomber, in placing the call, tends to prolong the call and be willing to furnish some details as to the location of the device, reasons for calling, etc.
- The call is frequently repeated.

On the other hand, the prank caller:

- Tends to be abrupt and hurried in giving the message and seldom can or will provide details regarding the type of device, the location, reasons, etc.
- Less frequently repeats the call for fear of tracing, etc.

5.5.3 PROCEDURE

Any bomb threat must be taken seriously. The person receiving the call must remain calm and attempt to obtain as much information as possible. Find out if the caller has any demands. See the Bomb Threat Call Report form in Annex A.

Person receiving the call:

- Remain calm
- Immediately after the call, notify the On Site Commander.
- Complete a Bomb Threat Call Report form (found in Annex A). Forward the completed form to the On Site Commander or nearest supervisor as soon as possible.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.5.4 RESPONDING TO A THREAT

Any Bomb Threat should be treated as genuine and the following actions must be taken:

EOC Emergency Manager or Joslyn On Site Commander:

- Immediately evacuate personnel that may potentially be affected.
- Declare a Level 2 Emergency.
- Ensure information is as complete as possible.
- Contact Police.
- Forward information to the CMC in Paris.

Under the Direction of Police:

- If asked, assist police in the search of the premises. The extent and involvement in the search will be determined by the police evaluation of the threat.
- If a bomb is not discovered during the search, wait in a safe location until the bomb detonation time has passed.
- If a bomb is discovered, DO THIS:
  - ISOLATE the immediate area.
  - DO NOT TOUCH, DISARM or MOVE the device.
  - EVACUATE area immediately.
  - ALERT local emergency services to stand by.

5.5.5 SUSPICIOUS PACKAGE

Whenever a suspicious object is found that cannot be accounted for, it should be reported immediately to immediate supervisor or manager for the area.

UNDER NO CIRCUMSTANCES SHOULD YOU TOUCH OR TRY TO MOVE THE PACKAGE!

Do the following:

1. CHECK to see if the object can be accounted for.
2. NOTIFY others in the facility.
3. NOTIFY police.
4. EVACUATE immediate area of the object.
5. AWAIT further instructions from the police.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.6 GOVERNMENT LIAISON

5.6.1 GENERAL

When an incident occurs, it must be clear who contacts which organizations when an incident occurs. Specifically, it must be clear how contact is maintained with Government Agencies.

5.6.2 ALBERTA ENERGEY AND UTILITIES BOARD

For any Level 1 to Level 3 Emergency, Total must contact the EUB.

The Senior Safety Advisor at the EOC will contact the Fort McMurray EUB field office. The EOC will be responsible for contacting the EUB head office in Calgary. The Senior Safety Advisor will be the point of contact at the EOC with the EUB.

When contacting the EUB, they must be told of the existing Emergency Level. The EUB must be involved with the process of establishing the Emergency Level. The EUB must also be consulted whenever the Emergency Level is being escalated or downgraded, as they must be involved in that decision process as well. If there is no change in the emergency level, Total will maintain contact with the EUB as a courtesy.

5.6.3 LOCAL AUTHORITY (R.M. OF WOOD BUFFALO)

The Regional Municipality of Wood Buffalo must be contacted for any Level 2 or 3 Emergency.

The HSE Coordinator at the OCP will be the initial contact to the Council at the Regional Municipality of Wood Buffalo. This is because activating emergency response resources from the Regional Municipality or Mutual Aid will alert the Council, and the OCP can quickly clarify the situation.

After initial contact is made, contact with Council will be maintained by the EOC. The Senior Safety Advisor will be the point of contact at the EOC with the Council.

5.6.4 ALBERTA EMERGENCY MANAGEMENT AGENCY (AEMA)

AEMA represents the Government of Alberta during an emergency. Total will maintain contact with the EOC at AEMA during any Level 2 or 3 Emergency. The Senior Safety Advisor at the Total EOC is responsible for maintaining contact.

5.6.5 OTHER AGENCIES

It is the responsibility of the Senior Safety Advisor at the EOC to contact other government agencies. These agencies and the criteria to contact them are found in Section 4 – Alerting and Activation.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.7 EVACUATION - SITE

5.7.1 GENERAL

Site evacuation must be considered if an emergency situation occurs that can potentially create a dangerous situation to Total personnel and any non-Total personnel on site.

In addition to this section, also refer to the Shelter-In-Place Decision Tree found in Section 5.7.

5.7.2 EMERGENCY PLANNING ZONES (EPZ, EAZ, IIZ, AND PAZ)

The Emergency Planning Zone (EPZ), Emergency Awareness Zone (EAZ), Initial Isolation Zone (IIZ), and Protective Action Zone (PAZ) are geographical areas in the Joslyn site that requires specific emergency response planning in an emergency situation (descriptions of each are in Section 4.4 and the Section 9 Glossary). Specific scenarios will dictate what the size of each zone will be.

The below chart indicates when evacuation is to take place for the following situations in each respective zone:

- Fires or Explosions
- Sour Gas Release
- Blowout
- Out of Control Well
- Steam Release
- Spill/Pipeline Rupture
- Ignition
- Air Quality Monitoring
- Natural Disaster/Extreme Weather Emergencies
- Wildfires

EVACUATION – TOTAL SITE STAFF

Level	IIZ	PAZ	EPZ	EAZ
Alert	Yes	No	No	No
1	Yes	Yes	No	No
2	Yes	Yes	Yes	No
3	Yes	Yes	Yes	Yes

5.7.3 MUSTER POINTS

Staff is to use the designated Muster Points on site. There are Muster Points at each of the Pads, and at the Phase 1 and Phase 2 locations.

The primary Muster Point is at Phase 2. The Muster Officer will be located here.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.7.4 AUTHORITY

The On Site Commander has the authority to order evacuation or partial evacuation of all personnel from the site.

The On Site Commander must notify the EOC in Calgary when any degree of evacuation is to take place. Ideally, the EOC is notified prior to the decision is made.

5.7.5 COMMUNICATION/ NOTIFICATION

When a decision is made to evacuate the site, staff is notified through their supervisors. Supervising staff are to indicate to the On Site Command Post that their personnel have been advised, or if there are staff that have yet to be contacted. Rovers will seek out Total staff that supervisors have not been able to get in touch with. The On Site Command Post must update the Muster Officer in order to assist in accounting for personnel.

Rovers are also dispatched to the known locations of non-Total staff on site. They will give the recommendation to evacuate verbally, and if personnel are not present, then notices will be left. Rovers must indicate back to the On Site Command Post who has been notified in person, and who a notice was left for.

5.7.6 TRANSPORTATION

Transportation must be available for up to 300 personnel. Total will contact a bus company if mass transport is required.

In the event that there is not enough transport immediately available, on site resources will be used to ferry staff to a location outside of the protective zones (EPZ, EAZ, IIZ, PAZ) until other transportation can arrive. The location must be indicated to OCP this situation. The Muster Officer must coordinate closely with the On Site Commander to ensure that all personnel are accounted for.

If the CNRL airfield becomes available for use, site personnel could be transported there to be evacuated. Coordination of flights will be done through the EOC in Calgary.

If the CNRL highway or Highway 63 is closed off due to the emergency, and transport south is blocked off, staff will have to be evacuated north. If no Evacuation Centre is available, The On Site Commander will coordinate with CNRL (the site to the north) to confirm where personnel can be directed to.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.7.7 EVACUATION CENTRE

If there is a requirement to evacuate site personnel, the OCP will determine if an Evacuation Centre is to be established. This is where personnel would be evacuated to. The setup of the Evacuation Centre is the responsibility of the Evacuation Centre Leader, who will be in place at the Centre prior to the arrival of evacuated site staff.

The primary evacuation centre is to be determined.

The secondary evacuation centre is to be determined.

5.7.8 ESSENTIAL PERSONNEL

In the event that the On Site Commander gives direction to evacuate site personnel, the On Site Commander may direct certain personnel (other than On Site Command Post personnel) to remain on site. This direction will only be given if conditions remain safe to do so. These individuals may have specific skills that the On Site Commander requires to assist in the response to an emergency.

Members of the On Site Command Post are expected to remain on site with the On Site Commander until the On Site Commander determines that it is no longer safe to remain.

5.7.9 EVACUATION OF ON SITE COMMAND POST

Should it become necessary to evacuate the site, and hence the Control Room where the OCP operates, the OCP must reconvene at another location. If an evacuation centre is established, the OCP will be allocated a room to operate from. If no evacuation centre is established, the OCP will communicate with CNRL and ask to operate from their existing Emergency Operations Centre.

5.7.10 NOTIFICATION

In the event that personnel are evacuated, it is likely due to a large scale event. This event may become news and broadcast via the media. Total must be prepared to notify next of kin as to the status of evacuated personnel.

The Muster Officer will coordinate with the Evacuation Centre Leader (if applicable) to confirm who has been evacuated. The OCP will communicate this information to the VP HR, Communications, and Administration, who will coordinate efforts to contact next of kin.

SECTION 5 – SPECIFIC FUNCTION PLANS

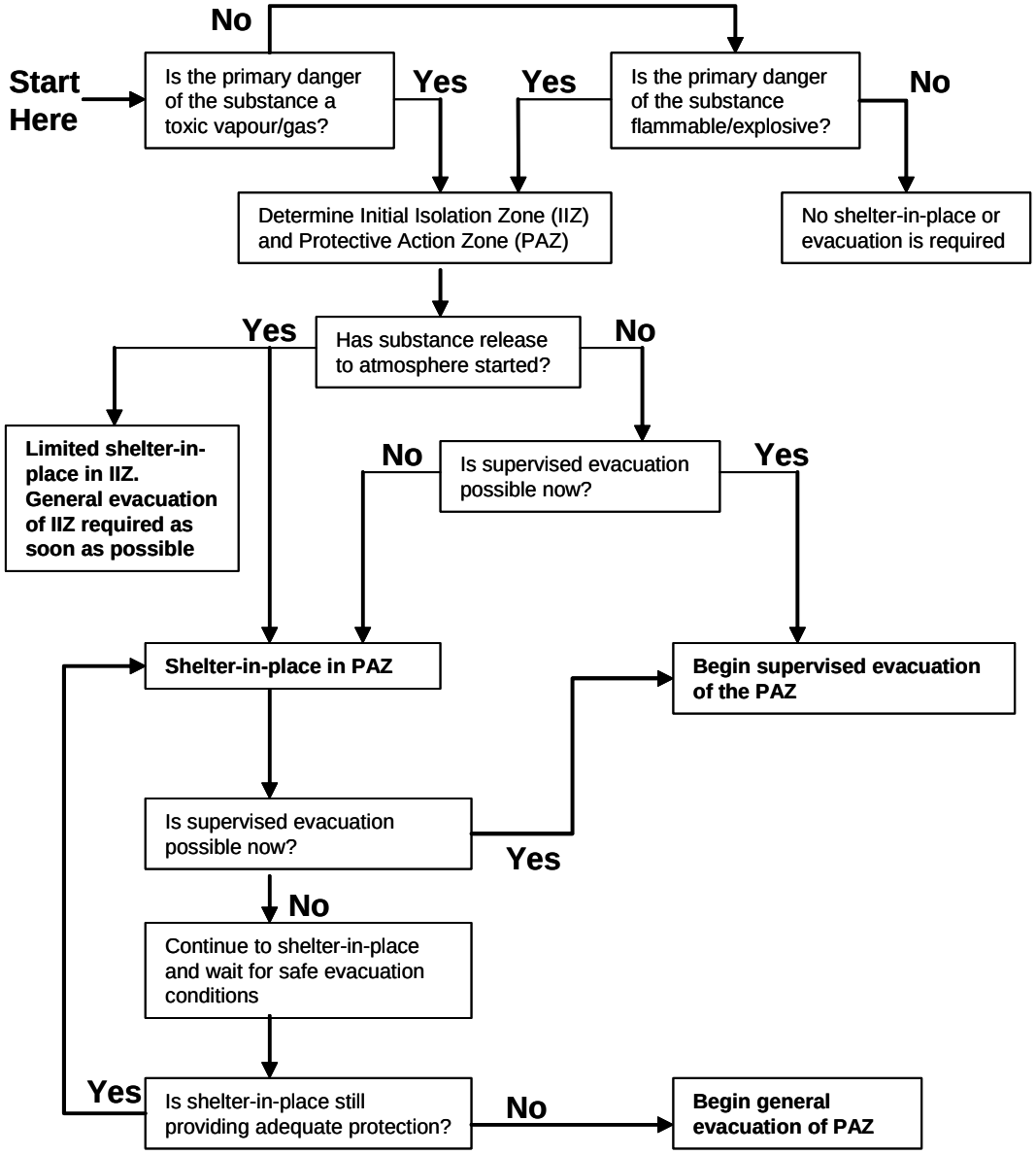
5.8 SHELTER IN PLACE - SITE

5.8.1 GENERAL

Shelter in place is a protective measure used in an emergency. An event at the Total site may cause a hazardous release. If it is not safe or possible to evacuate the site, Total may direct staff or other personnel on site to shelter in place.

5.8.2 DECISION TREE

The following Sheltering Decision Tree for Sour Well Releases is extracted from EUB Directive 071 Appendix 8a. Total will reference this decision tree when considering evacuation and shelter-in-place.



SECTION 5 – SPECIFIC FUNCTION PLANS

5.8.3 SITUATIONS

There may be situations other than sour gas releases that direction to shelter in place may be given. Examples include smoke from a wildfire or blizzard conditions.

5.8.4 AUTHORITY

The On Site Commander has the authority to give direction to shelter in place. However, individuals directly impacted by a release or adverse situation can also make the decision for themselves.

5.8.5 COMMUNICATION/ NOTIFICATION

When the decision is made to shelter in place, staff is notified through their supervising staff. Supervising staff are to identify to the On Site Command Post that their personnel have been advised, or if there are staff that have yet to be contacted. Rovers can be used to find personnel who have not been updated. The On Site Command Post must update the Muster Officer.

Rovers are also dispatched to other non-Total personnel on site to provide updates to a situation.

5.8.6 LOCATION

The following are the only buildings that are to be considered as locations for Shelter in Place. This is because other buildings may not provide as safe conditions as the ones listed below. Staff are to make their way to one of the following locations if directed to shelter in place:

- Rig Camp (1 km east of Main Gate)
- Phase 2 Main Office

5.8.7 SHELTER IN PLACE GUIDELINE

- Immediately gather everyone indoors and stay there
- Close and lock all windows and outside doors
- Turn off appliances or equipment that either:
    - Blows out or uses indoor air, such as
        - Bathroom and kitchen exhaust fans
        - Built-in vacuum systems
        - Clothes dryers
        - Gas fireplaces
        - Gas stoves
    - Sucks in outside air, such as:
        - Heating ventilation and air conditioning (HVAC) systems
        - Fans for heat recovery ventilators or energy recovery ventilators (HRV / ERV)
- Turn down furnace thermostats to the minimum setting and turn off air conditioners
- Leave all inside doors open
- Even if you see people outside, do not leave until told to do so
- After the hazardous substance has passed through the area you will receive an "all-clear" message from Total emergency response personnel.

- After a prolonged period of time, you may also receive instructions to:
    - Ventilate your building by opening all windows and doors; turning on fans and turning up thermostats. During this time the air outside may be fresher and you may choose to leave your building while ventilating.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.9 EVACUATION – OFF SITE

5.9.1 GENERAL

If an emergency situation occurs that creates or has the potential to create a dangerous situation to general public outside of Total property, Total will determine in consultation with the Regional Municipality of Wood Buffalo and the EUB if evacuation is to be considered.

In addition to this section, also refer to the Shelter In Place Decision Tree in Section 5.9.2.

5.9.2 EMERGENCY PLANNING ZONES (EPZ, EAZ, IIZ, AND PAZ)

The Emergency Planning Zone (EPZ), Emergency Awareness Zone (EAZ), Initial Isolation Zone (IIZ), and Protective Action Zone (PAZ) are geographical areas in the Joslyn site that requires specific emergency response planning in an emergency situation (Descriptions of each are in Section 4.4 and the Section 9 Glossary).

Total will begin evacuating “special needs” members of the public within the emergency planning zones during a Level One Emergency if:

- Conditions are deteriorating
- The problem is becoming progressively more complex and is not likely to be corrected in the near future
- Significant time is going to be required to completely evacuate and secure the emergency planning zone

The below chart indicates at what Level of Emergency to recommend evacuation to the public within each of the respective zones. Note that it is to be used in conjunction with the Notification Matrix in Section 4.4.

EVACUATION – RECOMMENDATION TO PUBLIC

Level	IIZ	PAZ	EPZ	EAZ
Alert	No	No	No	No
1	Yes	No	No	No
2	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes

SECTION 5 – SPECIFIC FUNCTION PLANS

5.9.3 COMMUNICATION/ NOTIFICATION

The OCP must have a list available identifying members of the public surrounding Total property. Members of the public are notified of an emergency and of the need to evacuate by the Rovers. They are not to be directed to evacuate; they are only given the recommendation.

In addition to notifying the public, Total must notify neighbouring companies. Immediate neighbours are CNRL (north), Syncrude (South and East) and Shell (East). The OCP will notify the Control Rooms of each company, while the EOC will contact the head offices.

Rovers will verbally give the message to evacuate to the public; if individuals are not present, then notices will be left.

5.9.4 TRANSPORTATION

In the event that members of the public cannot evacuate themselves, and if Total is requested to assist, then the site must be prepared to provide transportation. The On Site Commander must coordinate this.

If the CNRL highway or Highway 63 is closed off due to the emergency, and transport south is blocked off, members of the public will have to be evacuated north. The On Site Commander will coordinate with CNRL (the site to the north) to confirm where personnel can be directed to.

5.9.5 EVACUATION CENTRE

If there is a requirement to evacuate the public, there may be a need to set up the Evacuation Centre. The Evacuation Centre Leader must be prepared to accommodate the public. This may be in addition to accommodating site staff who have been evacuated.

The primary evacuation centre is

The secondary evacuation centre is

SECTION 5 – SPECIFIC FUNCTION PLANS

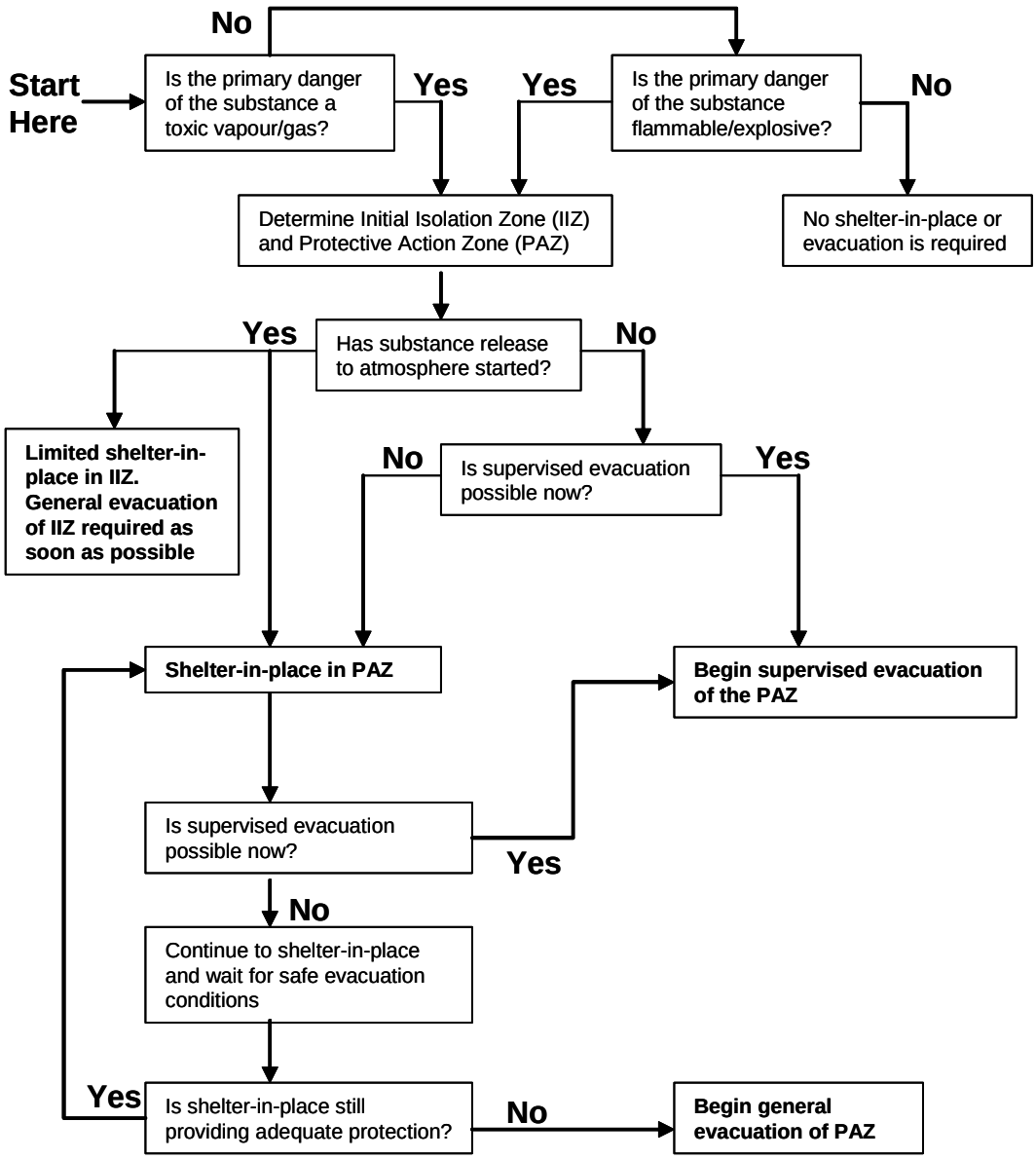
5.10 SHELTER IN PLACE – OFF SITE

5.10.1 GENERAL

Shelter in place is a preferred public protective measure in an emergency. An event at the Total site may cause a hazardous release or incident that goes beyond company property. As a result, Total may request members of the public to shelter in place.

5.10.2 DECISION TREE

The following Sheltering Decision Tree for Sour Well Releases is extracted from EUB Directive 071 Appendix 8a. Total will reference this decision tree when considering evacuation and shelter-in-place.



SECTION 5 – SPECIFIC FUNCTION PLANS

5.10.3 COMMUNICATION/ NOTIFICATION

The OCP must have a list of members of the public occupying territory surrounding Total property. Members of the public are notified of an emergency and of the recommendation to shelter in place by the Rovers. Rovers will verbally give the message to evacuate to the public; if individuals are not present, then notices will be left.

5.10.4 SHELTER IN PLACE GUIDELINE

- Immediately gather everyone indoors and stay there
- Close and lock all windows and outside doors
    - If convenient, tape gaps around exterior door frames
- Extinguish indoor wood burning fires
    - If possible, close flue dampers
- Turn off appliances or equipment that either:
    - Blows out or uses indoor air, such as
        - Bathroom and kitchen exhaust fans
        - Built-in vacuum systems
        - Clothes dryers
        - Gas fireplaces
        - Gas stoves
    - Sucks in outside air, such as:
        - Heating ventilation and air conditioning (HVAC) systems for apartments, commercial or public facilities
        - Fans for heat recovery ventilators or energy recovery ventilators (HRV / ERV)
- Turn down furnace thermostats and turn off air conditioners
- Leave all inside doors open
- Avoid using the telephone, except for emergencies, so that you can be contacted by Total emergency Inc. response personnel
    - Call the Total emergency numbers:
        - If you are experiencing symptoms or smelling odours (so that we can address your concerns and adjust our response priorities)
        - If you have contacted fire, police or ambulance (so that we can coordinate our response)
- Stay tuned to radio and television for information updates
- Even if people are seen outside, do not leave until told to do so
- If you are unable to follow these instructions, please notify (licensee / public agency name) emergency response personnel
- After the hazardous substance has passed through the area you will receive an "all-clear" message from Total emergency response personnel. You may also receive, if required, instructions to:
    - Ventilate your building by opening all windows and doors; turning on fans and turning up thermostats. During this time the air outside may be fresher and you may choose to leave your building while ventilating.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.11 INCIDENT AREA TACTICS

5.11.1 GENERAL

The following guidelines apply in varying degrees to sections 5.11 to 5.17. This section is to be considered in conjunction with the applicable situation in the other sections. Those sections are as follows:

5.11 Fires or Explosions
5.12 Natural Gas Liquid (NGL) Release
5.13 Sour Gas Release
5.14 Out of Control Well
5.15 Steam Release
5.16 Spill/Pipeline Rupture
5.17 Blowout

5.11.2 SEVEN GUIDELINES

1. **Rescue any injured personnel only if it is confirmed safe to do so.**
   a. Protect yourself as a rescuer before assisting others.
   b. If air monitoring indicates SCBA is to be worn, do not enter hazard area until air packs are available and ensure that the "buddy system" is used.
   c. Move those rescued beyond containment / isolation area.
   d. Administer emergency first aid.
   e. Transfer people to medical care, as appropriate.

2. **Protection of Exposures**
   a. Evacuate immediate danger area.
   b. Determine and evacuate extended hazardous area.

3. **Eliminate Ignition Sources**
   a. Coordinate with supplying gas company operations to shut off all pilot lights at meters or curb boxes.
   b. Knock on doors to alert residents. Do not use doorbells or telephones because they may generate a spark.
   c. Identify buildings where service has been shut off and residents notified.
   d. Do not start vehicles within danger area.
   e. Alert electrical utility for broad-based power shut off, if needed.

4. **Evacuation**
   a. Evacuate from the side of buildings facing away from the incident, where possible.
   b. Direct evacuees to a location beyond danger area.
   c. If safe evacuation is impossible, direct people to the part of the building farthest from the incident.
   d. Open temporary shelters for evacuees.

SECTION 5 – SPECIFIC FUNCTION PLANS

5. Traffic Control / Containment

a. Law enforcement personnel should reroute traffic away from hazardous areas.
b. Law enforcement personnel should patrol the perimeter of hazardous area to ensure security of area.
c. Trained pipeline personnel, equipped with gas or vapor detectors, should patrol danger areas to detect spread of gas and vapors and should inform local officials of concentrations detected.

6. Controlling Liquid Spills

1. Use sand, dirt or other suitable materials for dams and dikes.
2. Redirect spills away from waterways, sewers and other structures.
3. When possible, suction spills into tanks for containment or recovery.

7. Extinguishing Pipeline Fires

a. Shut off the flow (pipeline personnel).
b. Allow to burn out if fire is contained and infrastructure is protected.
c. Extinguish fires when amount of gas or liquid is deemed controllable.
d. Attempt to extinguish if necessary to aid in rescue, evacuation and protection of exposures.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.12 FIRES OR EXPLOSIONS

5.12.1 GENERAL

Fires or explosions could occur at multiple locations at the Joslyn site. These situations could create other issues and cause significant damage if not addressed timely and effectively.

5.12.2 GUIDELINES

- Do not extinguish burning leaks if the leak or supply to the leak cannot be stopped.
- Fires in proximity to pressurized vessels are extremely dangerous and can result in tremendous explosions. Evacuate an adequate area around the incident.
- Identify the products involved before an attempt is made to extinguish a fire.
- Professional firefighters should deal with extensive fires or uncontrolled facility fires. Only attempt to control small fires.
- UNDER NO CIRCUMSTANCE SHOULD ANY PERSONNEL PUT THEMSELVES IN A DANGEROUS SITUATION. IF THERE IS ANY DOUBT IN EXTINGUISHING THE FIRE WITH THE ONSITE RESOURCES ALL PERSONNEL SHALL RETREAT TO A SAFE LOCATION.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.13 SOUR GAS H2S RELEASE

5.13.1 GENERAL

There is the possibility of a sour gas release on site, particularly as time passes and the percentage of sour rises. Total staff must be prepared to address this situation if it arises.

5.13.2 GUIDELINES

- All workers must have accredited H2S training before being dispatched to the incident site.
- Workers should be dispatched in pairs to investigate.
- Responders must be equipped with breathing apparatus and H2S monitors. First responders such as the RCMP/local police, fire departments or ambulance services are to be informed of the presence and dangers of H2S. They will not be allowed to enter the emergency planning zone without the appropriate protection.
- Downwind air monitoring is essential. A mobile air monitoring unit will be mobilized to the area at the declaration of any level of alert. H2S levels downwind of the location will be monitored with hand-held H2S detectors until the mobile air monitoring unit arrives. Sour gas may accumulate in river valleys, coulees or other low-lying areas.
- If a potential or actual sour gas release threatens public safety, the public will be protected through evacuation, sheltering and/or ignition. (If you can not remove the public from the danger [evacuation/sheltering], you remove the danger from the public [ignition].)
- Weather conditions such as temperature inversions, fog and wind will affect plume dispersions.
- Refer to H2S and SO2 toxicity tables in Section 7.0 of the plan for concentration levels, their effects and expanding the emergency planning zone.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.14 OUT OF CONTROL WELL

5.14.1 GENERAL

There is the possibility of a situation to arise whereby there is an out-of-control well. Total staff must be prepared to address this situation if it arises.

5.14.2 GUIDELINES

- Don't approach the well without appropriate backup and safety equipment. Always approach from upwind or crosswind direction.
- Ensure all workers have proper training and are equipped with appropriate personal safety equipment.
- Inform first responders such as RCMP/local police, fire department or ambulance services about any hazards associated with the well. Do not allow them entry to the hazard area without appropriate protection.
- Evacuate the area around the incident if the public is at risk.
- Control access to the area.
- Assess the nature of the problem. Prepare appropriate responses to bring well under control.
- Consider a well control expert if necessary.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.15 STEAM RELEASE

5.15.1 GENERAL

A steam release at any pressure has the potential to inflict serious injury on personnel or damage to equipment. Steam like any gas or vapor expands very rapidly when the containing pressure is released, even under controlled conditions.

5.15.2 THREAT

Water is converted to steam through the addition of significant quantities of heat in a controlled environment. The generated steam may be under low to very high pressure and temperature.

This very rapid release of heat and pressure will cause burns or scalds when coming in contact with the human body and can cause significant damage to equipment under certain conditions of the release. As steam often carries a percentage of water with it that is caustic in nature, persons with sensitive skin should be aware they could experience rashes or irritation upon contact with the water.

5.15.3 GUIDELINES

- Protect yourself and secure the safety of others
- Source the release and enact procedures to shut it in
- Shut down the generating source if valving is not available or accessible
- Investigate and determine the root cause of the release
- Prepare and file appropriate injury and damage reports
- Prepare and enact the appropriate procedures and, if applicable, equipment changes to mitigate future incidents
- Conduct post mortem of incident, ensuring all personnel are informed of issues and preventative measures

SECTION 5 – SPECIFIC FUNCTION PLANS

5.16 SPILL/PIPELINE RUPTURE

5.16.1 GENERAL

There is the possibility of a spill or pipeline rupture to occur on Total diluent lines, steam lines, and low pressure fuel gas lines. In each circumstance, Total staff must manage the response with caution.

5.16.2 GUIDELINES

- Understand the type of product and its immediate hazards, e.g. toxic vapours, fire hazards before initiating cleanup operations. Approach the site from an upwind or crosswind direction.
- Ensure workers have proper training and are equipped with appropriate clothing, monitors and a means of communicating before being sent to site.
- Inform first responders such as the RCMP/local police, fire departments or ambulance services about any hazards associated with the spill. Forbid entry to the hazard area unless properly equipped with safety gear.
- Evacuate the area around the incident if necessary. Establish a safe perimeter.
- If possible, isolate or shut in the leak, e.g. emergency shutdown, while additional help is organized.
- Prevent fluids from entering a waterway or other sensitive areas.
- Mobilize the area oil spill co-op and WCSS equipment if necessary.

5.16.3 INFORMATION TO OBTAIN

When a leak is reported to the Control Centre, by telephone, follow the procedures listed below to obtain information and initiate action.

- Name, telephone number, address
- Type of leak.
  - Size of leak – small discharge of gas or large outflow.
  - Is the gas burning?
  - Is frost apparent at the leak or is a gas cloud forming?
- Location of Leak
  - Distance from town and direction.
  - Distance from a highway and direction.
  - Section, township, range, etc. if known.
  - Prominent land features nearby, e.g. river, lake, hill. Any injuries or deaths?
- Surroundings at leak site – proximity of houses and name of residents, other buildings, roads, railroad, power lines, etc.
- Weather – particularly wind direction and velocity.
- Are vapours or a gas cloud forming and drifting toward inhabited buildings?
- Have others been notified – police, local authorities, etc.?
- What occurred to start the leak and equipment involved, if any?
- Has any other action been taken?
- Note time of call.

- Have caller move to safe location away from area prior to using cell phone (if used) as they become an ignition source.

Safety

- Know where you are at all times and update the Total EOC.
- Ensure that you are a safe distance from the pipeline at all times – 1 km or more, as wind may be blowing a vapor cloud towards you. Make note of wind direction in planning approach.

Sight & Sound

- A major leak will produce significant noise, which may be heard 1 km to 3 km away. Stop the vehicle, roll down the window at 1 km intervals and listen for escaping gas noise.
- A large pipeline leak will produce a visible vapor cloud. This vapor cloud may reach significant downwind distances and may not be visible to the outer extremity of the explosive limit.

Confirmation

- When a leak location is confirmed, relay all information back to the Total EOC and restrict travel into the area where possible until municipal services arrive.
- Supply the local authorities with any resident information (i.e. telephone numbers) we have in the immediate area utilizing PipeInfo and/or local resources for information.

The following emergency response procedures shall be adhered to:

- Establish Incident Command Post at least 500 metres from rupture or leak along a line at a right angle to the pipeline.

- In conjunction with local emergency services, establish traffic control by blocking off roads leading to incident site. Direct all back-up emergency services vehicles to a pre-determined staging area until they are needed at the scene. Citizens must not be permitted to walk to the scene.

- Establish communications controls to the Pipeline Team Leader for use in coordinating response operations.

- Notify appropriate local and provincial authorities.

- Verify response of pipeline personnel.

- Invoke mutual aid agreements, if needed.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.17 BLOWOUT

5.17.1 GENERAL

In thermal / SAGD projects steam is put into the reservoir through wells designed for the injection of the steam under pressure. A situation may occur whereby the steam will find a way to come to surface in an uncontrolled flow (blowout).

5.17.2 THREAT

The blowout has a devastating effect on the surface area in close proximity to the release. The blowout can also destroy equipment if it occurs in or close to surface facilities. Personnel can be subjected to harm and injury if they are caught close to a release or venture into the area.

The blowout will rapidly vent steam, debris (soil, rocks, and sticks) and possibly water and oil / tar to the surface and surroundings. A mound of debris or crater in the ground may be created by the activity. This uncontrolled release of fluids and solids can create a serious environmental issue.

5.17.3 GUIDELINES

- Protect yourself and secure the safety of others.
- Shut down the generator / steam source
- Identify, cordon off and isolate disturbed area
- Investigate and determine the root cause of the blowout
- Prepare and file appropriate injury and damage reports
- Prepare and enact the appropriate procedures and, if applicable, equipment changes to mitigate future incidents
- Conduct post mortem of incident, ensuring all personnel are informed of issues and preventative measures

SECTION 5 – SPECIFIC FUNCTION PLANS

5.18 IGNITION

5.18.1 GENERAL

The ignition criteria for this facility is designed into the process and includes automatic flaring and control measures which are the accepted safety measures for large fixed facilities.

The planned ignition (burning) of a release is a method of protecting the public or the environment from a hazard. Total will make the decision for ignition based on the EUB Assessment and Criteria Flowchart below. Ignition is used when any H2S ignition criteria are met or when public safety cannot be assured through evacuation and sheltering procedures. Furthermore, environmental damage may be minimized through ignition if conventional cleanup procedures are not effective.

Deliberate ignition of an NGL or sour gas release is a drastic measure. The consequences of igniting a gas plume must be considered. The resulting explosion may create other serious hazards or situations. Ignition may not be possible if NGL or other explosive gases have accumulated near the public or areas with serious fire hazards.

5.18.2 IGNITION CRITERIA

Normal and emergency conditions are engineered to negate the requirement for manual ignition. The exception to this condition would be the failure for the auto ignition device on a flare stack which may require manual ignition and if such ignition is performed, a formal command decision must be made in conjunction with the EUB and must follow Dir. 071 Appendix 9 – Assessment and Ignition Criteria flowchart.

5.18.3 IGNITION PROCEDURE

If manual ignition is performed, the following criteria will be followed:

- Secure and isolate the area with roadblocks
- Monitor the wind direction
- Ensure there is fire control equipment available
- Ensure proper PPE is being used
- According to the EPZ, notify neighbours of the decision to ignite
- Ensure contingency plans are in place to manage the effects of ignition
- Ensure adequate equipment, supplies, and medical support are available

Ignition Procedures

Ignition of an NGL or sour gas release is a hazardous procedure and should be conducted with caution by trained personnel following safe-work procedures. The ideal ignition team has four members. Never attempt the procedure with fewer than two people, so that there is one person for rescue backup.

1. The On Site Commander ensures that on-site personnel have retreated to a safe upwind location.

2. The Ignition Team, made up of the Intervention team leader, the Safety Supervisor and two backup personnel, wear protective equipment, including flame resistant work wear and are equipped with self-contained breathing apparatus. The Intervention team leader and Safety Supervisor wear harnesses equipped with lanyards (retrieval ropes). The Intervention team leader should review the manufacturer's loading instructions and specifications for the flare gun.

3. The two backup personnel are positioned by a radio-equipped vehicle located at a safe distance upwind from the release. They stand by to rescue the Intervention team leader and the Safety Supervisor with the lanyards if necessary.

4. The Intervention team leader, equipped with the flare gun and flares, and the Safety Supervisor, monitoring with a lower explosive limit and H2S gas detector (if appropriate), approach to within 100 meters of the suspected outside edge of the gas plume.

5. They position themselves at a location that:
   - allows for safe retreat,
   - is upwind or crosswind from the release,
   - is free of explosive mixtures, and
   - is no closer than necessary (The flare should be aimed to just reach the outside edge of the explosive gas plume.)
   - NOTE: A 12-gauge pistol flare has an approximate altitude of 80 m and a 4-caliber pistol flare has an approximate altitude of 120 m.

6. The Intervention team leader aims and fires the flare gun, choosing the firing position, either standing or prone, that is most comfortable and suitable for the circumstances.

7. After the gun is fired, uncovered skin should not be exposed toward the flare.

8. If the gas does not ignite, the Intervention team leader and Safety Supervisor move a few meters closer to the suspected edge of the plume (Do not move any closer to the plume than the launcher's range, probably about 60 m.) and repeat steps 5, 6, 7 and 8.

5.18.4 NGL IGNITION

As previously identified, there is currently no NGL on site. If Total expands, and NGL is incorporated into operations, it must adhere to the following approach to ignition.

The hazard area created by a plume of NGL vapors can be difficult to identify and is prone to unexpected and explosive ignition. The advantages of deliberately igniting an NGL release include the following:

1. the spread of NGL vapors and the associated fire hazard is reduced,
2. once ignited the hazardous area would be contained, visible and easily identified,
3. ignited NGL vapors are far less responsive to changes in wind direction,
4. limited evacuation would be required.

However, ignition may have serious consequences if gas has accumulated in basements, forests or low-lying areas.

5.18.5 SOUR GAS IGNITION

For sour facilities, the potential volume of sour gas that could escape is limited by emergency shutdown (ESD) valves. However, under certain conditions, there may be a possibility for a sustained, uncontrolled flow of sour gas. In order to protect the public under these circumstances, it may be necessary to ignite the sour gas release. When sour gas is ignited, the H2S is converted to SO2 and is carried higher into the atmosphere by the heat of combustion. This causes any toxic gases to disperse over a larger area and reduces the risk of hazardous ground level concentrations.

If the operator does not agree to ignite a release, the decision to ignition decision will be made by the EUB. Ignition does not negate the need for continuing with evacuation, but it could lessen the impact on the urgency of notification or evacuation activities being carried out.

The authority to ignite the well must be assigned to a senior company representative on site.

5.18.6 IGNITION EQUIPMENT

The following equipment is located at the main Total control room.

- Remote ignition system back up
- Flare Gun
- Approved PPE

A four-man ignition team requires the following equipment:

2	flare guns with three dozen flares
2	rescue harnesses (d-ring in front or safety belt with d-ring in the back) with 30m (100 ft) flame-resistant retrieval ropes
4	pairs of flame-resistant coveralls
4	sets of ear protection (ear muff or expendable)
4	hard hats (with face shields, if available, for protection against flashbacks)
4	flame-resistant balaclava hard hat liners or flame-resistant regular hard hat liners for use with SCBA
1	Lower explosive limit gas detector
1	H2S gas detector (for sour gas ignition)
4	1.3 m3 (45 ft) self-contained positive pressure breathing apparatus with 30-minute air supply

SECTION 5 – SPECIFIC FUNCTION PLANS

1 vehicle with communication to the Remote Command Post or the Emergency Command Centre

5.18.7 POST IGNITION

After igniting the plume, Intervention Team Leader:

- advises the On Site Commander of the status,
- ensures the downwind monitoring equipment is adjusted to monitor SO2 as well as H2S if sour gas is involved.

EUB Directive 071 Appendix 9 - Assessment and Ignition Criteria Flowchart

During a release of H2S assess the following
- **Risk of exposure/injury to the public or response workers**
- **Proximity to residences, public facilities, towns or urban centres**
- **Status of evacuations**
- **Fire hazard after ignition in relation to adjacent forested or cropland area**
- **Safety of Ignition Team (hazard area identification, protective gear)**

↓

Ignition must take place when one of the following conditions has been met
- **The release cannot be brought under control in the short term (ignition decision will be made in consultation with the EUB)**
- **Although required, evacuation of the IIZ and/or the PAZ has not taken place**
- **Monitoring results indicate H2S concentrations in excess of 10ppm over a 3-minute average in unevacuated parts of the EPZ**
- **Monitored H2S concentrations exceed 1ppm in urban density developments**
- **Monitoring is not taking place due to weather or unforeseen circumstances**

Once any of the above criteria has been met, ignition must occur within 15 minutes of the decision to ignite.

↓

- **Carry out pre-ignition planning**
- **Attempt Ignition**

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5.19 AIR QUALITY MONITORING

5.19.1 GENERAL

Air monitoring will be initiated at any event level when there is a suspected release. Direction to initiate air monitoring will originate from the OCP. Air monitoring will continue until the On Site Commander gives direction to cease monitoring.

Total currently uses a contractor to fulfill air monitoring requirements.

5.19.2 GUIDELINES

Air monitoring is performed in order to track and record the presence and concentrations of H2S and SO2 during a sour gas or sour multiphase product release and following ignition of a release.
Air quality monitoring equipment is used to effectively:

- Track the plume.
- Determine whether evacuation and/or sheltering criteria have been met, particularly beyond the EPZ.
- Assist in determining when the emergency can be downgraded,
- Determine road block locations.
- Determine concentrations in areas being evacuated to ensure that evacuation is safe.

Mobile air quality monitoring units will be dispatched when it is evident that the sour gas release may extend beyond the lease boundary. This monitoring must occur downwind, and be placed nearest to areas where people may be present. All information on air monitoring must be made available to Alberta Environment or the EUB.

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5.20 NATURAL DISASTER/ EXTREME WEATHER EMERGENCIES

5.20.1 PURPOSE

The protocols described in this section are designed to provide guidance for developing a planned response to natural disasters. Severe thunderstorm or winter storms have the highest probability of occurring in areas where Total facilities and pipelines operate. However, because other disasters can occur, this section will identify emergency procedures for:

- Earthquake
- Severe Thunderstorm/Tornado
- Winter Storms

Each of the above mentioned events may cause power outages, blocked roads and damage to facilities and facility systems, which can affect the safety of people.

5.20.2 INITIATION

In all cases of impending natural disasters, Total staff will be informed through site security that monitors weather broadcasts. The site and EOC in Calgary will assemble to determine a course of action. Any natural disasters that could significantly impact people, plant or property will be classified as a Level 2 Emergency.

5.20.3 EARTHQUAKE

The actual movement of the ground in an earthquake or tremor is seldom the direct cause of injury or death. Most casualties result from falling materials.

If an earthquake or significant tremor should occur, a Level 2 will be declared. Employees should:

- Stay indoors, if already there.
- Take cover under sturdy furniture (e.g. work tables, desks) or in doorways, halls or against inside walls.
- Stay near the center of the building.
- Wear a hard hat.
- Stay away from glass windows and doors.
- Avoid running through or near buildings where there is danger of falling debris.
- If already outside, stay in the open away from buildings and structures, and a safe distance from utility wires.

After the tremors have stopped, employees must stay away from, and not go inside damaged buildings and structures. All entry into work areas and buildings will be approved by the respective Incident Response Leader after gas leaks, electrical hazards and structural damage has been assessed

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5.20.4 SEVERE THUNDERSTORM / TORNADO

Tornadoes are violent local storms with winds of tremendous speeds that can reach 320 - 640 kph. The individual tornado appears as a rotation, funnel shaped cloud, which extends toward the ground from the base of a thundercloud. It varies from gray to black in color. These small short-lived storms are the most violent of all atmospheric phenomena and over small areas are the most destructive. The Weather Bureau still cannot give much advance warning or pinpoint the area in which a tornado will strike. What can be done is to offer categories of weather watch, which assists those individuals who must prepare to initiate planning.

Weather Warnings Are Issued Under The Following Terms

- Severe Thunderstorm - Indicates the possibility of frequent lightning and/or damaging winds greater than 80 kph, hail and/or heavy rain.
- Severe Thunderstorm Watch - Indicates the possibility of tornadoes, thunderstorms, frequent lightning, hail and winds greater than 110 kph.

5.20.5 TORNADO WATCH

Tornado Watch: Means that conditions are right for tornadoes to develop.

When A Tornado Watch Is Announced:

- The OCP will be mobilized and preparation activity initiated.
- Communications with the weather office will be established and monitoring will commence over public radio channels.
- Tornado watch monitors will be identified to observe sky conditions.
- Communications will be made to site personnel on the status.

5.20.6 TORNADO WARNING

Tornado Warning: Means that a tornado has actually been sighted in the area or has been indicated on weather radar.

When A Tornado Warning Is Announced:

- A Level 2 Emergency will be declared.
- Personnel will be directed to protective areas of substantial steel framed or reinforced concrete building. Building Coordinators will direct personnel to those areas.
- Personnel indoors and unable to get to protected areas, are advised to take shelter in ditches, excavations, culverts or ravines.
- No personnel should re-enter buildings or process areas until damage has been assessed and the approval to return given by the Incident Response Leader.

5.20.7 WINTER

The On Site Commander must use personal judgment when deciding

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STORMS

if they will challenge road conditions based on personal driving experience/ability and vehicle performance on winter roads.

Winter storms vary in size and intensity. They range from a minor ice storm to a full-blown blizzard. To assist in determining effective emergency planning requirements, the following classifications will be used for types of warning:

- **Snow Flurries**: Means snow falling for short durations at intermittent periods, which may reduce visibility to less than an eighth of a mile. There may be small accumulations of snow.
- **Heavy Snow:** Warning given when a snowfall of 10 cm or more is expected in a 12 hour period or a fall of 15 cm or more in a 24 hour period.
- **Blizzard Warning:** Issued when blizzards of extreme proportions are expected and indicate winds of at least 70 kph, a great density of falling or blowing snow.
- **Hazardous Driving:** Warning to travelers that driving has been made difficult due to weather conditions. May result in road closures.

During any of the above situations, the On Site Commander will make decisions based on conditions.

When roads are officially closed due to winter storms, personnel should be advised not to come to work. Depending on the situation, convoys may be arranged through the OCP.

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5.21 WILDFIRE

5.21.1 GENERAL

There is a high potential that wildfires may occur in the area of the Joslyn site. Consequently, the impact of a wildfire would also be high. The OCP must be prepared to respond to the threat of a wildfire.

5.21.2 PROCEDURE

There are four stages of alert for a wildfire:

WHITE – Conduct normal operations. There are no 'out of control' fires in the area.

YELLOW – No immediate threats. There is an 'out of control' fire in the region (ie. north of Fort McMurray)

Actions:

- Declare a Level 1 Emergency.
- Dedicate resources to monitor on a full time basis the activity of the fire.
- The OCP will prepare a contingency plan to be able to respond if the fire reaches AMBER or RED status.
- Maintain 24 hour contact with ASRD Industry Liaison.
- The On Site Commander will contact and update the Emergency Manager at the EOC in Calgary.
- Joslyn Creek camp and Deer Creek Operations camp to provide HSE Department with a daily head count
- HSE Department will provide daily updates to the Reaction Cell at the EOC in Calgary, and to all site personnel regarding the status of the fire.

AMBER – Immediate threat. There is an 'out of control' threat in the vicinity (ie North of 94-12-W4 to 94-11-S4, East of 95-13-W4, South of 96-11-W4)

Actions:

- Declare a Level 2 Emergency.
- The On Site Commander will contact and update the Emergency Manager at the EOC in Calgary.
- Evacuation of non-essential personnel (contractors, administration, projects, camp staff, operations, and maintenance)
- The following staff will be required to stay:
  1. Maintenance: 1 x Instrument Mechanic, 1 x Electrician, 1 x Millwright
  2. Operations: 1 x Panel Operator, 1 x Field Operator
  3. Supervision: All OCP staff

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RED – Immediate Threat. An 'out of control' fire and/or smoke is on Total property (ie. North of 94-12-W4, South of 94-11-W4, East of 95-13-W4).

Actions:

- Declare a Level 3 Emergency.
- On Site Commander to contact the Reaction Cell in the EOC at Calgary to indicate the Level of Emergency, verify the evacuation, and confirm which operations to shut in.
- If first responders are on site, advise them of the hazards that are on Total property.
- Evacuate all personnel after attempts are made to shut in the plant and pads.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.22 INCIDENT AT NEIGHBOURING FACILITIES

5.22.1 GENERAL

If an emergency situation occurs at a neighbouring facility, Total may be called to assist. This is because there may be a hazard that causes or has the potential to create a dangerous situation to personnel at the Total site, or because they simply want assistance. it may require Total to activate the OCP to mitigate the impact towards on site operations.

5.22.2 HAZARDS

Possible hazards include, but are not limited to, the following:

- Chemical or gas release onto Total property
- Vehicle accident on or close to Total property

5.22.3 ACTIVATION

The Total site will have copies of the neighbouring Emergency Response Plans. These plans, like the Total Site Contingency Plan, will contain their emergency response procedures and emergency contact information.

If the plant site is not contacted, and there is reason to suspect an incident has originated at another site, it is the On Site Commander's responsibility to contact the neighbouring companies to get more information.

If an emergency is confirmed to be taking place at another site, and/or personnel at the Total site are being impacted, the On Site Commander will initiate actions.

5.22.4 RESPONSE

The Total On Site Commander will support the request to an extent such that redundant resources will remain available to address any potential situation that could arise at the Joslyn site.

SECTION 5 – SPECIFIC FUNCTION PLANS

5.23 POWER OUTAGE

5.23.1 OVERVIEW

The Joslyn site periodically experiences power outages. When a power outage occurs, the site must endeavour to re-establish power while minimizing the impact on personnel and operations.

5.23.2 ACTIONS

If there is a power outage at the site, the following actions will be taken:

- The RSES will determine the source of the problem. If necessary, the Incident Response Leader will be dispatched to determine the problem.
- Confirm the location of downed power lines, if any.
- Confirm the impact of the power outage on personnel and operations.
- Contact the power company responsible for providing power, explain the current situation, and confirm the company's estimate as to when it will have the problem resolved.
- Create an action plan as to how to address the impact of the outage on personnel and operations.
- Take necessary actions to ensure personnel are protected (ie. tell them the location of downed lines, move to a warm location if heat is an issue…).
- Advise the EOC Emergency Manager in Calgary of the situation.

5.23.3 EQUIPMENT

The following equipment will be available to the Control Room during a power outage:

- Backup generator
- Flashlights
- Battery powered radio
- Battery powered clock
- Spare Batteries
- DO NOT: use candles

SECTION 5 – SPECIFIC FUNCTION PLANS

5.24 STAKEHOLDER INTERVENTION

5.24.1 OVERVIEW

There is the possibility that members of the public may attempt to disrupt operations at the Joslyn site. Site personnel must be prepared to respond to these situations

5.24.2 CRITERIA

Organizations or members of the public may attempt to disrupt site operations. The following are examples of activities that may be conducted:

- Roadblocks.
- Protests.
- Vandalism.
- Arson.

5.24.3 ACTIONS

In the event of stakeholder intervention disrupting operations, the following actions will be taken:

- If there is a threat to safety, ensure that site personnel are moved to or remain in a safe location.
- Confirm the impact of the intervention, if any, on operations of the site.
- Contact the RCMP in Wood Buffalo and advise them of the situation.
- Advise the EOC Emergency Manager in Calgary of the situation and ask for guidance.
- Consult with the Senior Communications Advisor in Calgary to confirm how to the situation will be addressed with both the interveners and the general public.
- Establish regular patrols of the site.
- Advise contractors and suppliers of the situation and determine how to arrange service delivery.

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6.1 CRISIS MANAGEMENT CELL - PARIS

TITLE	NAME	WORK #	CELL/ALTERNATE #
Duty Manager*			

*Emergency Operations Centre (Strategy Cell) staff have CMC numbers, including the CMC Duty Manager.

6.2 EMERGENCY OPERATIONS CENTRE

6.2.1 EMERGENCY OPERATIONS CENTRE (REACTION CELL)

TITLE	NAME	WORK #	CELL #	HOME #
Emergency Manager	John Foulkes	[redacted]		
Alternate	Dave Zebak			
Senior Safety Advisor	Kelly Wisoley			
Alternate	Stan McBride			
HR Manager	Albert Elliott			
Alternate	Vanita Haining			
Engineering Manager (Thermal)	John Foulkes			
Alternate	Jose Contrares			
Civil Construction Coordinator (Thermal)	Leonard Ruud			
Alternate	Bob Cox			
Senior Communications Advisor	Christianne Wile			
Alternate	Derek Rogers			
Administrative Asst.	Sheri LeDrew			
Alternate	Christin Bell			

6.2.2 EMERGENCY OPERATIONS CENTRE (STRATEGY CELL)

TITLE	NAME	WORK #	CELL #	HOME #
President	Mike Borrell	[redacted]		
Alternate	Andre DeLeebeeck			
HSE Manager	Hugh Campbell			
Alternate	Kelly Wisoley			
VP Finance & CFO	John Kowal			
Alternate	Shyam Mohamed			
VP General Counsel & Corp. Secretary	Anita O'Brien			
Alternate	Suzzi Sethi			
VP HR, Comm., Admin.	Thierry Renard			
Alternate	Albert Elliott			

SECTION 6 - RESOURCES

6.3 ON SITE COMMAND POST

TITLE	POSITION	WORK #	ALTERNATE #	FAX #
On Site Commander	RSES	[redacted]	[redacted]	[redacted]
Alternate				
HSE Advisor	HSE Advisor			
Alternate				
Control Room Operator	Control Room Operator			
Alternate	Assistant Control Room Operator			
Event Logger	Administrative Assistant			
Alternate				
Medical Coordinator	Site Paramedic			
Alternate				
Muster Officer	Steam Chief			
Alternate				
Rover & Roadblock Coordinator	Maintenance Foreman			
Alternate				

6.4 INCIDENT COMMAND POST

TITLE	POSITION	WORK #	ALTERNATE #	FAX #
Incident Response Leader	Production Foreman	[redacted]	[redacted]	[redacted]
Alternate				
Intervention Teams				

Note: blank spaces indicate that no alternate contact numbers exist for these positions. Contact will be made either personally or by plant radio.

SECTION 6 - RESOURCES

6.5 CONTRACTORS AND MISCELLANEOUS – SITE

6.5.1 SITE CONTACTS

CONTACT	MAIN	ALTERNATE	FAX
Phase 2 Control Room (24 Hours)	[redacted]		[redacted]
Phase 2 Main Office			
Duty Manager			
Joslyn Creek Camp			
Deer Creek Lodge			
Well Completions			
Alberta Fuel Distributors			
Community Development			
Community Development			
Shipping - Enbridge			

6.5.2 EMERGENCY PHONES (In case of power outage)

CONTACT	MAIN	ALTERNATE	FAX
Superintendent's Office	[redacted]		[redacted]
Reception			
Control Room			

6.5.3 CONTRACTORS

CONTACT	MAIN	ALTERNATE
Phase II First Aid Emergency Medical Services Air and Ground	Radio Channel 1 Main Office: 538-6324 Flint MTC (Bag Phone): 780-903-9589 ACLS Ambulance: 403-507-9094	Bag Phone: 881-1844
FIRE, RCMP, Fort McMurray 911 will dispatch both air and ground rescue ambulance services	From DCEL Site office, dial: 7-790-3912	Cell Phone – 911
ATCO Electric (24 hours)	1-800-668-5506	1-800-668-2248
ATCO Local (Chris)	780-715-5966	
ATCO Gas	1-877-924-9381	
Environment Monitoring		
Bus Company	780-743-2244 (Diversified Bus Lines)	

SECTION 6 - RESOURCES

6.6 PROVINCIAL GOVERNMENT CONTACTS

MINISTRY / DEPARTMENT	EMERGENCY TELEPHONE #	FAX	INFORMATION
Agriculture			
Edmonton	(780) 427-2727		1-866-882-7677
Alberta Energy & Utilities Board (EUB)			
Fort McMurray Office	(780) 743-7214	780-743-7141	
Fort McMurray (24 hours)	(780) 881-1283		
Calgary Head Office	(403) 297-8311	(403) 297-7336	
Alberta Infrastructure & Transportation			
General Inquiries	(403) 310-0000	(780) 466-3166	(780) 427-2731
Dangerous Goods	1-800-272-9600		
Alberta Environment			
General Inquiries	(780) 427-7617	(780) 427-7824	
Incident Reporting Number	(780) 422-4505		
Public Complaints & Environmental Emergencies	1-800-222-6514		
Environmental Protection			
Forest Fire	(780) 427-3473	780-743-7125	
Pollution Emergency Response Team (24 Hour)	1-800-222-6514		
Pollution Control Investigation – Edmonton	(780) 427-7617		
Pollution Control Investigation – Calgary	(403) 297-8271		
Information Centre	(780) 944-0313		
Health Authorities			
Alberta Health and Wellness	310 0000, then (780) 427 1432.		
Capital Health Region – Edmonton	(780) 407-8004		
Human Resource Services Offices			
Edmonton & Area Headquarters	(780) 422-3971		(780) 422-3971

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MINISTRY / DEPARTMENT	EMERGENCY TELEPHONE #	FAX	INFORMATION
Municipal Affairs and Housing			
General Inquiries	(780) 427-2732		
Alberta Emergency Management Agency (All Alberta)	1-800-272-9600 (24 hr)		
Transportation of Dangerous Goods			
Edmonton Compliance Centre	1-800-272-9600 (24 hr)		1-800-272-9600 (24 hr)
Occupational Health & Safety (OH&S)			
General Inquiries	1-866-415-8690 (24 hr)		1-866-415-8690 (24 hr)
Edmonton & surrounding area	(780) 415-8690	(780) 422-3730	
Workers' Compensation Board (WCB)			
All Alberta	780-498-3999; 1-800-661-9608	780-498-7999	

6.7 FEDERAL GOVERNMENT CONTACTS

MINISTRY / DEPARTMENT	EMERGENCY TELEPHONE #	FAX	INFORMATION
Emergency Preparedness			
Public Safety & Emergency Preparedness Canada (PSEPC)	(780) 495-3005		
Environment Canada			
24 Hr Spill Reporting- Industry Reporting Line	(780) 422-4505 1-800-222-6514		
Weather Offices - Edmonton	(780) 468-4940		
- Rocky Mountain House	(403) 845-3183		
- Red Deer	(403) 342-7474		
- Calgary	(403) 299-7878		
Indian & Northern Affairs			
Alberta Region	(780) 495-2773		
Indian Oil & Gas	(403) 292-5625		

SECTION 6 - RESOURCES

6.8 REGIONAL MUNICIPALITY OF WOOD BUFFALO CONTACTS		
(Note: R.M. of Wood Buffalo staff/services are not separate from Fort McMurray; they are the same)	Fort McMurray – main switchboard	(780) 743-7000 1-800-973-9663
	Fort McMurray – emergency management enquiries	(780) 799-8055
	Fort MacKay	(780) 828-4220

6.9 EMERGENCY SERVICES – REGIONAL MUNICIPALITY OF WOOD BUFFALO		
(Note: If emergency services cannot be reached, contact the Fort McMurray numbers in Section 6.8)	RCMP	911 Non-Emergency: 780-799-8850
	Fire departments	911 Non-Emergency: 780-792-5500
	Ambulances	911
	If 911 does not work for any of the above services:	780-790-3912
	STARS Air Ambulance (Edmonton based; Dispatch Call Centre in Calgary)	403-299-0932
	Northern Lights Regional Health Care Centre (Fort McMurray)	780-460-6228

6.10 NEARBY INDUSTRY CONTACTS		
	CNRL Head Office	(403) 517-6700
	CNRL Horizon Site Control room - 24 hours	1-800-998-2251
	Syncrude Front Gate Security (contact to Control Room and Head Office)	780-790-5094
	Syncrude Main Switchboard	780-790-5911

SECTION 6 - RESOURCES

6.11 MEDIA CONTACTS – FORT MCMURRAY

CONTACT	MAIN	ALTERNATE	FAX
CFRN-TV	780-790-2061		
CBC (Television) (Edmonton)	780-468-7555		(780) 468-7510
Fort McMurray Today (Newspaper)	780-743-8186		(780) 715-3820
ROCK 97.9 (Radio)	780-743-0980		(780) 791-7250
CKUA-11 96.9 (Radio)	780-428-7595		(780) 428-7624
CBC Radio 1 (Radio)	780-468-7401		(780) 468-7419

6.12 MEDIA CONTACTS – CALGARY & EDMONTON

		Phone		Title
EDMONTON TELEVISION				
City TV		(780) 424-2222		Producer - Breakfast Television
City TV		(780) 412-2783		Assignment Editor
CFRN-TV		(780) 483-3311		News Director
CFRN-TV		(780) 532-4370		Grand Prairie
CFRN-TV		(403) 346-5270		Red Deer
GLOBAL-TV		(780) 989-4683		Assignment Editor
CALGARY TELEVISION				
ROB TV		(403)-240-5742		Reporter
CBC Television		(403)-521-6017		Assignment Editor
CFCN		(403) 240-5600		Assignment Editor
City TV		(403) 508-3333		Assignment Editor
Global		(403) 235-7777		Assignment Editor
Shaw		(403) 539-6649		Assignment Editor
EDMONTON RADIO				
CBC Radio News		(780) 468-7401		Assignment Desk
CBC		(403) 521-6215		Regional Director - TV/Radio
CBC		(780) 468-2390		Producer of Programming - TV/Radio
CFCW 790 AM		(780) 468-3939		Program Director
CFCW 790 AM		(780) 468-0750		Director of News Programming - Alberta Radio Group
Power 92 and 630 CHED News		(780) 469-6992		News Director
630 CHED Programming		(780) 440-6300		Program Director
630 CHED News		(780) 440-6300		News Anchor
CISN FM & CHQT or Cool 880 AM		(780) 469-6992		News Director
CIRK or K-Rock 97.3 FM		(780) 437-9214		News Editor
CFMG or EZ-Rock 104.9		(780) 431-5351		News Director
CKRA or The Mix 96.3 FM		(780) 437-4996		Program Manager
CFBR or The Bear 100.3 FM		780) 486-2800		Program Director
CALGARY RADIO				
CBC 1010		(403) 521-6197		Assignment Editor
CBC 1010		(403) 521-6000		Drive Home Show
QR77		(403)262.6397		News Director

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AFFILIATE EMERGENCY RESPONSE PLAN

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		Phone		Title
EDMONTON PRINT				
Biz Edmonton		(780) 454-0210		Publisher
Edmonton Journal		(780) 429-5201		Editor-In-Chief
Edmonton Journal		(780) 498-5669		Business Editor
Edmonton Journal		(780) 429-5557		Oil and Gas Reporter
Edmonton Sun		(780) 468-0281		City Editor
Edmonton Sun		(780) 468-0283		Business Editor
Edmonton Sun		(780) 468-0273		Business Columnist
Edmonton Examiner		(780) 453-9001		News Editor
Alberta Venture		(866) 227-4276		Managing Editor
Alberta Weekly Newspapers Association		(800) 282-6903		One System Coordinator
ASET Technology Alberta		(780) 425-0626		Editor
Canadian Oil & Gas Review		(780) 875-7771		Publisher/owner
Native Journal		(866) 526-8688		Editor
Edson Leader		(780) 723-3301		Ad Sales
St. Albert Gazette		(780) 460.5526		Reporter
Redwater Tribune		(780) 939.2133		Reporter
Redwater Review		(780) 942-2023		Reporter
CALGARY PRINT				
Alberta Views		(403) 243-8599		Executive Editor
Alberta Construction		(403) 265-3700		
Alberta Oil Magazine		(403) 663-0083		Editor
Bloomberg		(403) 232-8188		Energy Reporter
Business Edge		(403) 219-3343		Editor
Business in Calgary		(403) 264-3270 x224		Editor
Calgary Herald		(403) 235-7100		Assignment Editor
Calgary Herald		(403) 235-7533		Petroleum & Gas Senior Writer
Calgary Herald		(403) 235-7489		Energy Reporter
Calgary Herald		(403) 235-7370		Business Editor
Calgary Inc.		(403) 240-9055 x222		Editor in Chief
Calgary Sun		(403) 250-4122		Assignment Editor
Calgary Sun		(403) 410-1010		Business Editor
Canadian Press		(403) 233-7004		Business Reporter
Doig's Digest		(403) 254-8057		Energy Reporter/Editor
Enviroline		(403) 263-3280		Reporter
Financial Post/National Post		(403) 264-8103		Calgary Bureau
Globe and Mail		(403) 215-8025		Reporter
Globe and Mail		(403) 215-8025		Business Columnist
Globe and Mail		(403) 215-8025		Bureau Chief
National Post		(403) 264-8103		Energy Reporter
Reuters		(403) 531-1622		
Reuters		(403) 531-1624		Bureau Chief - Energy

		Phone		Title
TRADES				
Canadian Oil Driller (CAODC)		(403) 264-4311		Publications Coordinator
Canadian Reclamation		(403) 638-3499		Editor
Downhomer Magazine		(709) 726-5113		Editor
Energy Analects		(403) 209-3522		Editor in Chief
Energy Processing Canada		(403) 263-6881		Managing Editor

SECTION 6 - RESOURCES

Hot Topics - CAPP		(403) 267-1117		Editor
JCPT (Jounal of Canadian Petroleum Technology)		(403) 750-5450		Energy Editor
JPT		(713) 779-9595		Petroleum & Gas Editor
New Technology Magazine		(403) 209-3500		Editor
Nickle's Daily Oil Bulletin		(403) 209-3502		Petroleum & Gas Editor
Nickle's Daily Oil Bulletin		(403) 209-3539		Petroleum & Gas Editor
Oilweek/Octane		(403) 265-3700 x126		Petroleum & Gas Editor
Oilweek/Octane		(403) 266-8700 x122		Petroleum & Gas Editor
Oil & Gas Inquirer		(403) 265-3700 x125		Publisher/president
Oil & Gas Journal		(713) 963-6232		Petroleum & Gas Editor
Oil & Gas Network		(403) 539-1165		Editor
Oil & Gas Product News		(604) 291-9900		Editor
On Stream and FAST-Line		(403) 781-7388		Manager
Petroleum Explorer		(403) 209-3500		Editor in Chief
Pipeline & Gas Journal		(281) 558-6930 x218		Editor
Pipeline News		(780) 808-2398		Staff Columnist and Photographer
Small Explorer (SEPAC)				Executive Director
The Canadian Oildriller		(403) 264-4311		Economic Analyst
The Roughneck Magazine		(403) 263-6886		Editor
The Source		(403) 730-5022		Freelance Desktop Publisher

SECTION 6 - RESOURCES

6.13 EMERGENCY RESPONSE EQUIPMENT ON SITE

The below list of equipment is in development. Total continues to evaluate its equipment needs, and will work with its Mutual Aid partners in developing this list.

TYPE	LOCATION	NUMBER	COMMENTS
Ansul 450/100 Combination Skid Unit Dry Chem/AFF Foam with Trailer	Phase 2	1	
Ansul 900/100 Combination Skid Unit Dry Chem/AFF Foam with Trailer	Phase 2	1	
Fire Fighter backpacks	Phase 2	10	
Fire Pump with c/w suction hose and strainer	Phase 2	1	
Forestry hose – 400 feet	Phase 2	1	
Assorted nozzles and fittings	Phase 2		
Shovels and axes	Phase 2		
Fire extinguishers in all buildings and vehicles	Phase 2		
Fire Fighter Air Packs.	Phase 2	4	
Fire Fighter Bunker Gear	Phase 2	4	
Ambulance	Phase 2	1	
Spill Response Kits	Phase 2		
	Phase 2		

SECTION 7 - RECOVERY

7.1 RECOVERY

Post incident Recovery activities should be initiated as soon as possible, preferably while response operations are still underway.

7.2 AUTHORITY TO DOWNGRADE EMERGENCY LEVELS

Only the On Site Commander at the Joslyn site, with input from the EOC Emergency, can downgrade the Emergency Level from a Level 2 or Level 3 Emergency. The Alberta EUB must be consulted when downgrading from all Level 2 and Level 3 emergencies as per EUB Directive 71 Section 3.1.2.3.

7.3 PUBLIC INFORMATION

When an incident creates off-site impacts, it will be necessary to carry out public relations activities. The priority is to demonstrate to the public that Total E&P is concerned for the safety of its neighbours. Public Relations activities may include:

- Repairing to structures damaged by the incident
- Cleaning up debris or environmental damage
- Conducting meetings to inform the public about the cause of the incident and what the Total E&P is doing to prevent a recurrence.
- Establishing counseling services to Total E&P personnel and the public affected by the incident.

All information and announcements released by Total E&P to the public will be authorized by the Head Office (VP - Human Resources, Administration, and Communications – Strategy Cell).

Any time a decision is made to downgrade a Level of Emergency or to provide the “All Clear”, residents and media must be advised (if originally contacted).

7.4 LITIGATION/INSURANCE

The Total E&P Legal Department is responsible for all litigation and insurance issues. Any queries, request for compensation and/or insurance claims by third parties should be directed to the EOC VP General Counsel and Corp. Secretary at the Head Office in Calgary. Insurance claims made by Total E&P employees will be made through the normal company insurance procedures.

SECTION 7 - RECOVERY

7.5 CUSTOMER DELIVERIES

An emergency incident may adversely affect meeting delivery agreements. This effect may be experienced for an extended period of time, depending on the severity of the incident. Impairment may be as a result of injury to personnel, damage to the physical plant, loss of records, or government regulatory action.

Total must be prepared to speak to this issue with its clients. Joslyn site staff must coordinate with the EOC in Calgary to ensure that logistical matters relating to customer deliveries are managed as effectively as possible.

7.6 RESUMPTION OF BUSINESS

Issues that must be considered are:

- Replacing personnel
- Repairing on site and off site infrastructure
- Off site storage of critical records
- Obligations to customers
- Post incident investigations, conducted as follows:
  - Internal – Total E&P
  - External – Government regulators and Insurers
  - External – Insurance Companies

7.7 EMPLOYEE ASSISTANCE

7.7.1 GENERAL

There may be delayed or long-term reactions resulting from an incident. These effects may include:

- Loss of employment due to destruction of work place. The loss may be real or perceived by workers.
- Critical Incident Stress:
  - Critical Incident Stress Debriefings (CISD) will be initiated for affected staff and their families as required.

7.7.2 LOSS OF WORK EMPLOYMENT

Total's priority is to protect the safety and well-being of its personnel. This includes preserving their jobs. Wherever possible Total will take all reasonable steps to ensure that personnel are able to continue working following an emergency incident.

7.7.3 CRITICAL INCIDENT STRESS DEBRIEFING

Critical incident stress is the reaction, emotional and psychological, that a person has to an emergency. While not all people are affected in the same way, some are affected to the point that it impairs their ability to function properly.

SECTION 7 - RECOVERY

Total will engage the services of a contract firm to provide Critical Incident Stress Debriefing services to employees and family members, as necessary. The Total Calgary Head Office is responsible for organizing these services.

The objectives of Critical Incident Stress Debriefings are to:

- Minimize the severity and duration of the trauma.
- Normalize feelings and reactions.
- Acknowledge each individual's personal experience.
- Reassure that recovery is possible.
- Provide support.
- Provide information on crisis reactions and stress management.
- Refer those needing individual counseling

A Critical Incident Stress Debriefing should occur within 24 - 72 hours after an incident, when those affected are most open-minded towards receiving help. In addition, it may be necessary to conduct an intervention while emergency operations are underway. An intervention will be necessary when it becomes obvious that an individual is not coping with the events that they are experiencing.

7.8 REPORTING

7.8.1 GENERAL

All emergencies shall be reported to the necessary authorities in order to:

- Ensure public safety;
- Satisfy legal requirements;
- Comply with Total's Responsible Care commitments; and
- Satisfy insurance requirements

The nature of the emergency will dictate what external and internal reporting is required in the aftermath of an emergency.

The Emergency Manager at the EOC will determine the types of reporting that is required and will assign responsibility for these reports to various individuals within the company.

7.8.2 GOVERNMENT REPORTING

Following the resolution of the incident response and clean-up, reports must be submitted to the regulatory agencies as required by provincial regulations and under various permits/approvals/licenses.

7.8.2.1 ALBERTA EUB

Directive 071 Appendix 5, "Forms for Operator Incident Summary and Incident Data Gathering and Communications", provides a guideline for completion of the Incident Summary required by the Alberta EUB within 30 days of the end of a level 2 or level 3 incidents.

SECTION 7 - RECOVERY

7.8.2.2 ENVIRONMENT CANADA (through Environment Alberta)

Environment Canada

A verbal notification is to be made by telephone as soon as possible after a substance release. This can be done through Environment Alberta.

Verbal Notification:

The verbal report should include as much of the following information as is known at the time of the report:

- The reporting person's name and telephone number at which the person can be immediately contacted;
- The name of the person who owns or has the charge, management or control of the substance immediately before the environmental emergency;
- The date and time of the release;
- The location of the release;
- The name/UN number of the substance released;
- The estimated quantity of the substance released;
- The means of containment (from which the substance was released) and a description of its condition;
- The number of deaths and injuries resulting from the environmental emergency;
- The surrounding area/environment affected and potential impact of the release (mobility of release and weather or geographic conditions at the site);
- A brief description of the circumstances leading to the release;
- The cause of the release (if known);
- Details of the actions taken or further actions contemplated (to contain, recover, clean up and dispose of the substance involved);
- The names of agencies notified or on-scene; and
- Other pertinent information.

Verbal Notification/24-hour telephone line:
(780) 422-4505 (Alberta)
(800) 222-6514 (toll free - accessible within province)

Written Report:

A written report should be made within 30 days to the following address:

Director, Enforcement and Monitoring Branch
Alberta Environment
11th Floor, Oxbridge Place
9820 106th Street
Edmonton, AB
T5K 2J6

The following information should be included in the written report, if possible:

- □ The name and address of the person who owns or has the charge, management or control of the substance involved in the environmental emergency and the telephone number, including the area code, at which the person may be contacted;
- □ The date, time and exact location of the release;
- □ The name/UN number of the substance released;
- □ The composition of the substance released showing, with respect to each substance involved, its concentration and total weight;
- □ The estimated quantity of the substance released and the total quantity of substance in the means of containment before the release;
- □ The duration of the release of the substance and its release rate;
- □ The means of containment (from which the substance was released) and a description of its condition;
- □ The number of deaths and injuries resulting from the environmental emergency;
- □ The surrounding area/environment affected and potential impact of release (mobility of release, weather or geographic conditions at the site, long-term environmental impacts);
- □ A complete sequence of events before and after the environmental emergency (including the cause of the release, if known);
- □ The names of agencies notified or on-scene at the time of the release;
- □ All measures taken pursuant to CEPA 1999 paragraph 201(1)(b) and (c) (regarding protection of the environment and public safety and notification to any member of the public adversely affected by the environmental emergency); and
- □ All measures to be taken to prevent similar releases.

7.8.2.3 ALBERTA OCCUPATIONAL HEALTH & SAFETY ACT

The Alberta Occupational Health and Safety (OH&S) Act, Section 18, comes into effect whenever there is a serious injury on a worksite, or an accident that has the potential for causing serious injury occurs. If an injury or incident listed below occurs at a worksite, an Alberta Labour OH&S Director of Inspection must be notified as soon as possible:

- An injury or accident that results in death
- An injury or accident that results in a worker being admitted to a hospital for more than two days
- An unplanned or uncontrolled explosion, fire or flood that causes a serious injury or that has the potential of causing a serious injury
- The collapse or upset of a crane, derrick or hoist
- The collapse or failure of any component of a building or structure necessary for the structural integrity of the building or structure

Section 18.3 of the OH&S Act also requires the employer responsible for the worksite to carry out an investigation of the above injuries and incidents.

In addition, the employer is required to investigate any other serious injury or any other incident that has the potential for serious injury. Since these "other" serious injuries and incidents are not defined in the Act, it is important that the company investigation policy clearly define them.

For any accident covered by the Act, you must:

- Notify an Alberta Labour OH&S Division Director of Inspection, reporting the time and place the accident occurred, and the type of serious injury or accident involved
- Except as directed by an Alberta Labour OH&S Division Inspector, keep the scene of the accident undisturbed other than to attend to an injured person, prevent further injuries, or protect property that was endangered by the accident
- Write a report of your investigation and have a copy of the report available for inspection by an Alberta Labour OH&S Division Inspector
- When authorities having jurisdiction are notified, make sure you note on your report:
  - Who was notified (name of organization)
  - What person you contacted (name and position)
  - When they were notified (time and date)
  - Where the accident/incident took place (location)
  - Why they were notified (in general terms, describe the reason for notification)

Notification of OH&S will be by the Total Senior Safety Advisor. This notification will take place immediately when the EOC Manager is informed of an occurrence, which warrants this action.

7.8.2.4 WORKER'S COMPENSATION ACT REQUIREMENTS - ALBERTA

Under the Worker's Compensation Act, whenever a worker suffers personal injury on the work site or is entitled to medical aid as a result of an accident or is likely to be disabled for more than the day of the incident, you must:

- Report the accident to the Worker's Compensation Board within 72 hours
- Notify the Board, within 24 hours, when you learn that the worker has returned to work or is able to do so

7.8.2.5 ALBERTA ENVIRONMENT PROTECTION & ENHANCEMENT ACT

AEPEA Release Reporting Regulations deals with the release of substance into the environment and sets out requirements for reporting of such releases to the Director of Pollution control. The regulations specify the minimum reportable quantities at which there is deemed potential for

(AEPEA)

an actual “adverse effect”. Other applicable government acts are “Transportation of Dangerous Goods Act” and the “Canadian Environmental Protection Act”.

7.9 POST INCIDENT INVESTIGATIONS

7.9.1 OVERVIEW

Any incident where there is a Level of Emergency assigned (including Level 0 Alert) will be investigated. As soon as possible after an incident, personnel designated by leadership will mobilize and depart for the incident site to conduct an investigation into the incident. The HSE Advisor at the Site will conduct all Level 0 Alert and Level 1 Emergency investigations and report them weekly to the HSE Manager at the EOC in Calgary. Level 2 or Level 3 Emergency investigations will be conducted by the HSE Manger at the EOC.

PARTICULAR CARE MUST BE EXERCISED TO ENSURE THAT ALL EVIDENCE IS PRESERVED IN ITS ORIGINAL STATE. Where loss or damage to Total’s property, evidence will not be disturbed until permission has been received from the Total HSE Manager, Insurance Company adjuster or any government agencies involved.

Awareness sessions will be provided to Joslyn staff regarding investigation procedures. In particular, the difference between the approaches of the Total, RCMP, and OH&S will be identified and discussed.

7.9.2 SERIOUS INJURY / FATALITY INVESTIGATIONS

Following an incident where a fatality or a serious injury has occurred, government agency representatives will likely decide to carry out an investigation into either the extent or cause of the injury/fatality. In all cases, a Total representative will work with that agency. After presenting their credentials, the representatives are to be afforded full co-operation in the performance of their duties.

Work at the scene of the injury/fatality may not be resumed until permission has been obtained from the Medical Examiner, the Local Police and any provincial government agency with jurisdiction. Resumption of work may be permitted on a restricted basis to facilitate rescue operations or when failure to resume operations may endanger the lives of others.

SECTION 7 - RECOVERY

7.9.3 OTHER 3RD PARTY INVESTIGATIONS

Third party agencies, such as Police, Government and Insurance Companies may be required to investigate an incident site. It is important to cooperate with third party investigators. However, Total's personnel should be aware of the corresponding Corporate guidelines:

1. Obtain the name, title, address and telephone number of all inspectors and immediately inform the site supervisor before proceeding with the investigation.
2. Ensure a Total representative accompanies the Inspector at all times. Never leave an Inspector unattended.
3. Only give the Inspectors the information they request. Avoid offering additional information. Limit the tour to the specific area the inspector wishes to investigate.
4. Always tell the truth.
5. Document all items of evidence that the Inspector has retained. Where possible, keep copies of the evidence provided to the Inspectors.
6. Wait until legal counsel is present before answering questions where the Inspector indicates that any statements may be used as evidence or indicates that you have the right to counsel.

7.10 POST INCIDENT DEBRIEFS

7.10.1 RESPONDER DEBRIEFING

Immediately after the emergency or an exercise, the Incident Commander and On Site Commander should review and evaluate the response with the personnel involved. This review should focus on improvements to emergency response procedures and equipment used, as well as the effectiveness of the lines of communication. The review should include response agencies or other industry personnel who assisted with the emergency.

The debriefing itself must include:

- Cause of the incident
- Adequacy of resources responding to the incident
- Whether personnel were properly trained and responded effectively and timely according to predefined procedures
- Whether the equipment was effective and adequate
- How a reoccurrence can be prevented
- Recommendations on procedures that will improve Total's emergency response efforts in the future

SECTION 7 - RECOVERY

7.10.2POST INCIDENT APPRAISAL REPORT

The post incident appraisal report should include:

1. A review of the events leading up to the incident
2. A description of the incident and it's cause
3. An analysis of the on-scene response procedures, including an evaluation of the safety standards that were applied
4. An appraisal of the Total's shelter / evacuation response for the affected public (if applicable)
5. An evaluation of the effectiveness of the coordination of incident activities with municipal responding agencies
6. An evaluation of the effectiveness of the notification and communication systems between the incident site and the Total's EOC
7. An appraisal of the effectives of any media or public relations efforts
8. An assessment of any potential legal or environmental issues that may be raised as a result of the incident or as a result of the Company's response efforts
9. A summary of current and future costs
10. Recommendations for preventative or mitigating measures to prevent future incidents
11. Any changes that may be required in the Emergency Response Plans to improve future response
12. Any additional training of personnel required to improve response capability

The post incident appraisal report should outline the strengths and weaknesses of the Total's emergency response. This report will be directed to the attention of the Total HSE Manager. It will be this person's responsibility to ensure all recommendations for improvements to the Total's Affiliate Emergency Response Plan and Site Contingency Plan are incorporated where applicable, and promptly communicated to the appropriate Total personnel.

SECTION 8 – EMERGENCY PREPAREDNESS

8.1 HEALTH, SAFETY AND ENVIRONMENT POLICY

The Total Group and Total E&P Canada Ltd have a non-compromising attitude towards health, safety, and environment.

Total E&P Canada is committed to protecting, in priority:

- Health and safety of our employees, contractors, and communities in which we work and operate.
- The environment in the area in which we work and operate.
- Our production facilities and assets

The complete HSE policy can be referenced in manual “Total E&P Canada L1-POL-HSE-01, Revision 1”.

8.2 PLAN DEVELOPMENT

Senior management at Total is responsible for the development and planning for Total Affiliate Emergency Response Plan. The primary leads are the following personnel:

- Senior Safety Advisor (Reaction Cell)
- HSE Manager (Strategy Cell)

8.3 EMERGENCY PREPAREDNESS

The main functions emergency preparedness are:

1. Ensuring the Affiliate ERP and supporting documents are up to date.
2. Ensuring provisions of the Affiliate ERP are in concert with other Total ERPs i.e. the Joslyn Site Contingency Plan.
3. Publishing and communicating information on the Affiliate ERP as necessary to:
    a) Total’s Field Operations
    b) Total’s Head Office
    c) Municipal authorities
    d) Industry partners
    e) Government Regulators
4. Conducting training on the Affiliate ERP.
5. Planning and execute exercises to validate the Affiliate ERP.
6. Reviewing applicable exercises and incident reports.
7. Liaising with outside agencies and municipalities who may have a role in emergency response involving Total operations.
8. Ensuring a regular audit of the emergency response system is carried out.
9. Ensuring the Total Emergency Response Organization has the appropriate resources and equipment available.

SECTION 8 – EMERGENCY PREPAREDNESS

8.4 CONDUCT – EMERGENCY PREPAREDNESS

1. The Affiliate ERP will be reviewed on an ongoing basis and updated yearly, no later than by March 31 of each year.
2. Utilize the existing Hazard Analysis in the emergency planning process and update the Hazard Analysis an annual basis.
3. Should an emergency occur in the time between scheduled meetings, examine the incident and all facets of the response to it. The expected outcomes are:
   a) An audit of the actual response versus the ERP
   b) Identification of areas to improve the emergency response system
   c) A plan to implement these improvements
3. Establish a training program for emergency response personnel. Identify resources for this training. Training will include general awareness and familiarization for those personnel not directly involved in emergency response operations.
4. Ensure training records are maintained.
5. Plan and execute exercises to validate the Affiliate ERP. Representatives from the affected areas will be asked to assist with exercise planning.
6. Take advantage of opportunities to conduct joint training and exercises with other agencies with which Total may conduct emergency operations.
7. Communicate emergency planning information to Total personnel, mutual aid & industrial partners, government regulatory agencies, local government and the public that may be affected by this plan.

SECTION 8 – EMERGENCY PREPAREDNESS

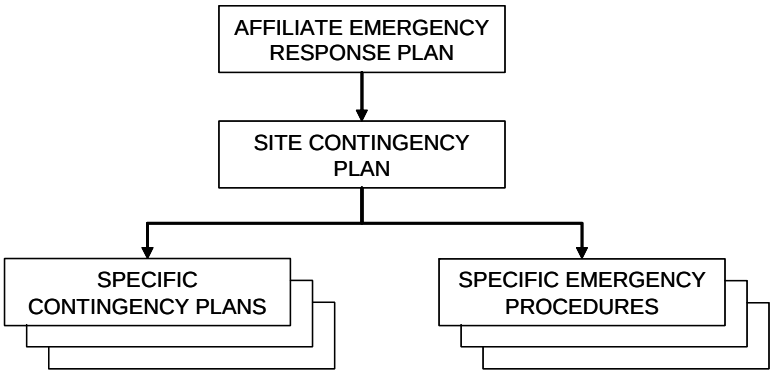
8.5 TOTAL E&P PLAN INTEGRATION

8.5.1 OVERVIEW

Total E&P Canada's emergency management program is based on the coordination of the Affiliate Emergency Response Plan (AERP) with subordinate plans (reference: Total E&P GM HSE EP 091 – Guidelines for Affiliate Emergency Response Plan). The plans are as follows:

- Affiliate Emergency Response Plan (this document)
- Site Contingency Plan
- Specific Contingency Plans
- Specific Emergency Procedures

The AERP lists the key decisions to be taken and strategies to apply to control the crisis with an overall view of the events. The goal of the AERP is not to determine intervention tactics to control an incident. This information can be found in the Site Contingency Plan and other plans.



8.5.2 AFFILIATE EMERGENCY RESPONSE PLAN

The AERP provides the affiliate Head Office in Calgary the organization principles and practical guides for the management of an emergency situation involving the organization and its employees.

8.5.3 SITE CONTINGENCY PLAN

The Site Contingency Plan provides directives for crisis management at operational sites. In this case, the Site Contingency Plan pertains to the Joslyn site.

8.5.4 SPECIFIC CONTINGENCY PLANS

Specific Contingency Plans are detailed plans covering specific issues. Examples are Wildfires and Blowouts.

8.5.5 SPECIFIC EMERGENCY PROCEDURES

Specific Emergency Procedures are primarily used by operators. They are detailed procedures pertaining to particular situations. Examples are medical evacuation (MEDEVAC) and shut down procedures.

SECTION 8 – EMERGENCY PREPAREDNESS

8.6 RISK ASSESSMENT

8.6.1 GENERAL

The Affiliate ERP describes the procedures that will be implemented (in whole or in part) in response and support to emergencies arising at the different Total sites. The purpose of the risk assessment is to identify potentially hazardous situations, the probability of occurrence, and the impacts in the event of an occurrence. A result of this analysis may be to identify individual hazards that would warrant further, more detailed investigation and may necessitate specific response procedures. Another result is to identify and minimize particular hazards that are common.

SECTION 8 – EMERGENCY PREPAREDNESS

8.6.2 POTENTIAL HAZARDS

Effective emergency response planning is dependent on knowledge of the types of situations that will cause emergencies affecting the safety of Total personnel and operations. This information is used to develop the response actions and procedures. Once these are developed, the hazards are again reviewed in conjunction with the actions and procedures to verify that the plans address the response and recovery requirements of each of the most significant hazards and associated risks. A standing agenda item at the Total emergency preparedness meetings will be the assessment of emerging risks.

Risk analysis refers to a qualitative assessment of the risks present at the site and at the surrounding municipality. By identifying and acknowledging potential risks, appropriate steps can be taken to plan and prepare for them.

For this subjective high level analysis, the following scales were used for describing the Potential of Occurrence and Consequence of Impact in classifying the different hazards:

Probability of Occurrence

- High Occurrence probable within the next 0-3 years
- Moderate Likely to have an occurrence within the next 3-10 years
- Low Event not likely to occur within the next 10-20 years

Consequence of Impact

The potential impact of an occurrence is evaluated considering:

Life Safety = whether there are injuries, fatalities, the number of personnel affected (employees and public)
Environment = what consequence are there on the environment?
Operations = what is the impact to the business operations?
Company = How is the Total image impacted? Regionally? Nationally?

Natural

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
Forest Fire (Spring – Fall Risk, high in Summer)	**High**	♦ Smoke hazard ♦ Fire/Heat – risk to operations ♦ Potential to close-off access to site ♦ OH&S impact – may require cartridge respirator to get away ♦ Tank farm (bermed). Buffer zone may not be sufficient. ♦ Virtually no buffer zone around camp. (Can SRD mandate buffer zones around sites?)

SECTION 8 – EMERGENCY PREPAREDNESS

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
		♦ Only 1 entrance/egress route **Consequence of impact = High**
FLOOD	**Moderate**	♦ Possibility of creeks (Deer creek, others) flooding out (1 in 10 year chance) ♦ Possibly 1-2 days production impact (could use a Bailey Bridge) **Consequence of impact = Low**
ICE STORM	**Low**	♦ Ice fog a concern ♦ Build-up of ice on power pylons ♦ Back-up power will last possibly 5-7 days. Impact increases as duration continues ♦ Operations are primarily outside of the building ♦ Transportation issues, both in and out **Consequence of impact = High**
WINDSTORM / TORNADO	**Low** (20 -25 tornados per year in Alberta. Windstorms in area every 2-5 years)	♦ Damaging wind put derricks at risk ♦ Possible lost-time injury ♦ Operations could be compromised as long as storm lasts ♦ Camps/buildings could be at risk **Consequence of impact = Low**
EXTREME COLD (-40° C for 2 weeks or longer)	**Moderate**	♦ Safety – if people have to be outside **Consequence of impact = Low**
INFECTIOUS DISEASE / ILLNESS	**Moderate**	♦ Large number of people live together in camp, increases the risk of spreading the disease ♦ Estimates are 40% of workers would be affected, 25% acute ♦ Contractors moving from site to site can impact the spread of disease ♦ Risk to operations is high ♦ Suppliers and contractors may not come to the site as a prevention move ♦ Currently there is no pandemic plan **Consequence of impact = High**
LOSS OF WATER (3 -4 months)	**Low**	♦ Highly dependent on river water ♦ Operations impact - reduced output to possible

SECTION 8 – EMERGENCY PREPAREDNESS

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
		shutdown ♦ Increased risk of fire **Consequence of impact = Moderate**
ELECTRICAL STORM	**Moderate**	♦ Loss of operating control **Consequence of impact = Moderate**
WILDLIFE ENCOUNTER	**Low**	**Consequence of impact = Moderate**

Man-Made – Joslyn Site

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
FIRE - PLANT SITE (tank fires, etc)	**Moderate**	♦ No fire suppression ♦ No sprinkler system **Consequence of impact = High**
FIRE – CAMPS (One on site, one at Joslyn Creek)	**Moderate**	♦ Both camps operated by Denman. Denman has a plan, but Total has limited knowledge of plan ♦ Closed camp (Operator Camp) is fed by natural gas for the plant. **Consequence of impact = High**
EXPLOSION (gas release causing an explosion or over-pressure of a system)	**Low**	♦ Pressure protection devices are in place ♦ Some doubts of the HazOp that was done by previous owner ♦ Issue with EUB concerns the ignition of H2S on a plant site **Consequence of impact = High**
GAS RELEASE	**Moderate**	♦ Greater risk for gas release off the top of the tanks **Consequence of impact = High**
VESSEL FAILURE (Possibly treaters, pressurized & unpressurized containers, storage)	**Low**	**Consequence of impact = High**

SECTION 8 – EMERGENCY PREPAREDNESS

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
STEAM RELEASE	**Low**	♦ Could blow steam, rock debris 300 m in all directions ♦ Risk of residual natural fractures ♦ Process – reduce steam pressure ♦ Reputation issue should it happen a second time – could result in shutdown by EUB **Consequence of impact = High**
WELLHEAD / VALVING / CASING / CEMENTING FAILURE	**High**	♦ Probability is High for existing wells ♦ New wells incorporate new technology (flexible cementing) which should reduce the probability ♦ Likely to start as a slow release ♦ Very high cost to operations ♦ Moderate safety impact ♦ Loss of safe operating control **Consequence of impact = High**
PONDS / DYKE FAILURES	**Moderate**	♦ There are above ground ponds ♦ Environment impact – Low ♦ Safety to personnel - Low **Consequence of impact = Moderate**
PHYSICAL SECURITY BREACH	**Low**	♦ Wide range of impacts from nuisance to very serious. **Consequence of impact = Moderate**
COMMUNICATIONS FAILURE	**Moderate**	♦ Limited redundancy. Cell tower is being erected ♦ Communications with outside world is the prime concern ♦ Mutual aid call to CNRL would result in 13-14 min response **Consequence of impact = Low**
STAKEHOLDER INTERVENTION (special interest groups)	**Moderate**	♦ Safety – moderate impact ♦ Reputation – possible high impact ♦ Operations – Low impact (logistics impact)
PIPELINE FAILURE (export / import)	**Low**	♦ Chance of a pipeline failure or event will occur over the life of the plant **Consequence of impact = High**
PIPELINE FAILURE (Infield gathering lines)	**Moderate**	♦ Infield gathering lines (above ground) have insulating cladding on them

SECTION 8 – EMERGENCY PREPAREDNESS

HAZARD	PROBABILITY OF OCCURRENCE	IMPACT ON TOTAL E & P
		♦ Chance of a pipeline failure or event will occur over the life of the plant **Consequence of impact = High**
LOSS OF POWER	**High**	♦ Safety – High impact ♦ Environment – Low impact ♦ Operations – High impact, possibly shutdown the plant **Consequence of impact = High**
LOSS OF GAS	**Low**	♦ Operations – High impact, lose steam generator **Consequence of impact = High**

Transportation Accidents

GROUND TRANSPORT VEHICLE ACCIDENT– involving hazardous materials	**Moderate**	♦ Tanker trucks regularly coming in/out of plant. ♦ Even with a pipeline in place, there will be hazardous materials hauled away (volume will be lower) **Consequence of impact = High**
AIR TRANSPORT ACCIDENT	**Low**	♦ Crews are brought in via aircraft (Dash 8) ♦ Crash would directly impact operations (loss of personnel) ♦ Possible reputation issue **Consequence of impact = High**
GROUND TRANSPORT VEHICLE ACCIDENT - PASSENGERS	**Low**	♦ Crews are brought in via aircraft (Dash 8), then brought by van to the site ♦ More than one van required to transport personnel from airport to Joslyn. ♦ Crash would directly impact operations (loss of personnel) ♦ Possible reputation issue **Consequence of impact = Moderate**

Drilling – Development & Core-hole (Close to proximity of plant. More remote drilling locations do not have the blow-out risks, too shallow (~100 m). Do not have concern with gas or steam release. Transportation of rigs will be on-going for 3months in winter for the next 5 years.)

SECTION 8 – EMERGENCY PREPAREDNESS

TRANSPORTATION OF RIGS ACCIDENT	**Low**	**Consequence of impact = High**

Drilling – Exploration (Down to 600 metres. Small possibility of blowout. Transportation over ice-roads, remote locations – access more difficult)

WINTER HAZARDS IN REMOTE AREAS	**Moderate**	♦ Survival training is not provided ♦ Journey management is questionable ♦ High impact – fatality ♦ Moderate impact on company image **Consequence of impact = Moderate**
BLOWOUT	**Low**	♦ Environmental impact – gas release **Consequence of impact = Moderate**
TRANSPORTATION ON ICE ROADS ACCIDENT (over land or water)	**High**	**Consequence of impact = Moderate**
SEISMIC EVENT	**Low**	♦ Very shallow, but explosive risk, **Consequence of impact = Moderate**

8.7 TRAINING

8.7.1 GENERAL

Training is essential to ensure that each employee is familiar with the emergency procedures, with what is expected of him, and with how he will have to have to act as a team with others.

The reactions of each employee will vary depending on their assignment and location at the time of emergency. The level of

training is adapted for the missions and the responsibilities of each employee.

The HSE representative from the Reaction Cell is responsible for:

- Development and implementation of training plans
- EOC staffing
- Training staff that may have a role in ERP
- Presentation of the major principles of the Emergency Response Plan to every newcomer and new contracting company brought to work with the affiliate
- Providing all new EOC members with a copy of the ERP, making sure he/she understands the contents and responsibilities.

Training is a basic requirement of any effective emergency response organization. Training is a continuous process and must be delivered in varying degrees to company personnel, depending on their responsibilities. All training will reference company rules, guidelines and manuals, procedures, roles and responsibilities, equipment, hazards, regulatory requirements, and lessons learned from previous training or operations scenarios.

The following are types of training that can be conducted for EOC staff:

- Plan Familiarization Training
- EOC Training (Managing Emergency Operations)
- Incident Command Training
- Media and Public Relations Training

Different levels of organization are required for these various types of drills and exercises. Thus, a full-scale exercise will only be carried out once a year because of the complex organization it requires. Other simpler simulations can be carried out several times a year (for example the “tabletop” exercise in particular).

Training will be carried out on a regular basis according **Section 8.8 Training/Exercising Schedule**.

8.7.2 PLAN FAMILIARIZATION

Basic information about the emergency plan is provided to key personnel that will have an active role in an emergency. The training consists of an overview of the plan and the specific actions that are expected of those personnel in an emergency.

Training will be provided to all Total employees having a role in the EOC or the AERP.

8.7.3 EOC

Any Total personnel assigned with EOC responsibilities will be provided with the following training:

- Basic Corporate familiarization as identified above
- Techniques of managing emergency operations (EOC/CEC Training)

8.7.4 INCIDENT COMMAND

Total personnel with Field Command responsibilities will receive the following training:

- Basic Site ERP familiarization as identified above, to include familiarity with resident information within the EPZ and EAZ
- Incident Command Training

8.7.5 PUBLIC AND MEDIA RELATIONS TRAINING

Public Media Relations

Personnel that are designated with the responsibility of conducting communications with the Public and/or Media will be provided with Public and Media Relations Training. This training will provide the participant with the skills to manage public and media relations in en emergency.

The following personnel should receive this training:

- Emergency Manager – EOC
- Communications Coordinator – EOC
- On Site Commander – On Site Command Post
- HSE Coordinator – On Site Command Post

Basic Public and Media Relations

All other personnel not directly having a role in communications with the public and/or the media will receive Basic Public and Media Relations Training. This training will provide the participants with the basic knowledge on what 'to say' and what 'not to say' in an emergency. It will also provide the participants with direction on who in the Total organization will manage these issues.

The following personnel should receive this training:

- EOC personnel
- Staging Area personnel
- Evacuation Centre personnel
- On Site Command Post personnel (not including On Scene Commander)
- Remote Command Post personnel

8.7.6 CONTRACTORS

Joint training with contractors will be conducted whenever the opportunity presents itself.
Contractors will be offered the opportunity to:

- Review the ERP
- Participate in training activities

SECTION 8 – EMERGENCY PREPAREDNESS

- Participate in emergency simulations

8.7.7 OFF SITE RESOURCES

Joint training with off-site resources will be conducted whenever the opportunity presents itself. Off-site resources will be offered the opportunity to:

- Tour the Total facilities
- Review the Site Contingency Plan
- Participate in training activities

Basic information about the layout and methods of conducting response operation will be shared with off site resources deemed applicable to this Affiliate ERP.

SECTION 8 – EMERGENCY PREPAREDNESS

8.8 EXERCISES

8.8.1 GENERAL

Although exercises are used for training purposes, their primary function is to test the adequacy of the plan, the resources of the affiliate, the equipment, and the level of preparation of the personnel. The exercises are a very effective way to check the efficiency of training and to bring improvements by correcting the deficiencies found while practising. Regular exercises must be carried out in order to involve a maximum of people, in various situations. Prior to exercises, briefings could be organized to remind the major principles and to highlight the latest modifications which were made.

Regular exercises must be carried out in order to involve a maximum of people, in various situations.

Exercises are intended to accomplish a number of purposes. They:

1. Validate the Affiliate ERP.
2. Validate facility resources.
3. Validate emergency response equipment.
4. Increase familiarity with the Affiliate ERP.
5. Increase confidence in the Affiliate ERP.
6. Maintain awareness of the Affiliate ERP within Total personnel.

A program of validating the Affiliate ERP has been established in the form of various types of exercises and an annual audit initiated by the emergency preparedness planners. Each exercise will be evaluated and documented for maximum value.

Five different types of drills and exercises can be organized:

- Table Top exercise
- Initiation drill
- Functional drill
- Evacuation drill
- Full-scale exercise

Exercises will be carried out on a regular basis according **Section 8.8 Training/Exercising Schedule**.

Different levels of organization are required for these various types of drills and exercises. Thus, a full-scale exercise will only be carried out once a year because of the complex organization it requires. Other simpler simulations can be carried out several times a year (for example the “tabletop” exercise in particular).

SECTION 8 – EMERGENCY PREPAREDNESS

8.8.2 TABLE TOP EXERCISES

Table Top Exercises are the most effective in training personnel on their responsibilities and using plans and procedures. The participants are seated in a conference room, or the EOC, and are presented with a scenario. They are asked to use the means at their disposal to describe how they would respond to the scenario. All participants describe their activities, thus allowing the sharing of ideas.
The participants should be able to identify possible overlapping of responsibilities between staff or flaws in the organization.

This exercise is conducted in a non-threatening manner. No emergency response equipment and no site requirement is required to simulate a response to an incident. This exercise takes between 1 to 3 hours, depending on the objective, number of participants and number of scenarios. The exercise is a theoretical exercise.

8.8.3 INITIATION DRILL

This exercise concentrates on the acquisition of new procedures or the use of equipment. The participants are not supposed to carry out the exercise perfectly or with full knowledge of the procedure or the equipment. They are asked to take their time to understand and become familiar with the procedure or the equipment.

8.8.4 FUNCTIONAL DRILL

A drill designed to test one or more components of an emergency response system without involving other elements. This is an effective drill for communication systems, or warning systems. People are expected to perform the exercises correctly and within the appropriate time frames. It is meant to test one AERP function at a time.

8.8.5 EVACUATION DRILL

Can be considered a functional drill, but if completed by the entire t is a category by itself. This is a very specific drill which is to be completed within a prescribed time frame. It may be combined with another type of exercise but has also great value on its own.
Exercise to be carried out for example at the time of team change.

8.8.6 FULL SCALE EXERCISE

Full scale simulations test the complete emergency response organization. An actual incident is staged and the complete organization is mobilized to deal with it. A simulation centre is used to generate the outside world. Community resources are invited to participate in the exercise simulation.

A full simulation should involve participation from local emergency services, mutual aid, and any contractors that would respond to an emergency at the Total sites. This exercise requires significant of planning and coordination, as both the Joslyn Site and Calgary Head Office are involved.

SECTION 8 – EMERGENCY PREPAREDNESS

8.9 TRAINING/EXERCISE SCHEDULE

ACTIVITIES	Year 1	Year 2	Year 3
TRAINING			
Plan Familiarization Training	X	X	X
Incident Command Training	X	X	X
EOC Training	X		X
Public and Media Relations Training	X		X
EXERCISES			
Table Top Exercise	X	X	X
Initiation Drill	X	X	X
Functional Drill	X	X	X
Evacuation Drill		X	X
Full Simulation Exercise *	X	X	X

* GM HSE 091 “Guidelines for Affiliate Emergency Response Plan” Section MA indicates that a full simulation exercise will occur every year.

SECTION 9 - ADMINISTRATION

9.1 ADMINISTRATION

This section describes the administrative procedures involved with keeping this plan updated and relevant. These procedures are in place to assist the Total Emergency Response Organization in remaining prepared to manage emergencies.

9.2 PURPOSE

The purpose of the Affiliate Emergency Response Plan is to:

- Assist Total personnel in determining the appropriate responses to emergency situations.
- Provide Total personnel with established procedures and guidelines.
- Minimize the effects disruptive events have on company operations by reducing recovery times and costs.
- Serve as an information guide to inform Total and contract personnel as to their responsibilities in implementing the appropriate response to emergency conditions.
- Promote inter-departmental communications through training and exercises.

9.3 REVIEW

9.3.1 INTERNAL

The Affiliate ERP will be reviewed as follows:

- Annually
- After an emergency
- As directed by the HSE Manager or Senior Safety Advisor

9.3.2 EUB

The Affiliate ERP must be registered with and approved by the EUB's Compliance and Operations Management System. Changes to the plan must also made aware to the EUB, and copies of the plan must be made available to the EUB upon request. If a change in ownership occurs, the revised plan must be submitted no later than 60 days after the change.

The Affiliate ERP must be submitted annually to the EUB for review. Subsequent annual updates must be submitted no later than 12 months of the date of the last submitted update.

9.3.3 PUBLIC

Members of the public must be consulted every two years on emergency response procedures, regardless if revisions have been made or not.

SECTION 9 - ADMINISTRATION

9.4 REVISIONS

9.4.1 REVISIONS REQUEST

To initiate changes or add new text material, manual holders must:

- Complete a Revision Request Form (Annex A).
- Email or mail to: Total HSE Manager.

The Total HSE Manager acknowledges, reviews and considers all material for inclusion in the Affiliate ERP. Originators will be advised of the final disposition of the request. Approval material is published as a revision.

Approved revisions must be distributed to each individual manual holder, who will be responsible for incorporating these as they are received. A record of all revisions will be maintained using the Revision sheet, which is found in Annex A - Forms.

9.4.2 REVISION IDENTIFICATION

When changes are made to a page, a revised date is shown, preceded by the letters “Rev”. for example: “Rev August 21, 2001”.

9.4.3 CONTROL SHEET

Each revision is accompanied by a numbered control sheet which:

- Lists the section, subject and page numbers of the pages being superseded.
- Briefly describes the reason for the change.

The Control Sheet is found in Annex A – Forms.

9.4.4 FILING REVISIONS

When a revision is received:

- Check the Revision List to ensure all the listed pages have been received.
- Read the content of the revision carefully.
- Remove and destroy the superseded pages.
- Insert the revised pages in the proper place.

SECTION 9 - ADMINISTRATION

9.5 AUDITING - EUB ASSESSMENT PROGRAM

In addition to training and exercises, the EUB has developed an audit-style system called the Emergency Response (ER) Assessment Program in order to assess a licensee's ability to effectively implement its corporate and site level ERP (Affiliate and Joslyn Creek plans).

The objectives of the program are to:

- assess the capability of a licensee to effectively implement its ERPs;
- verify that the licensee has appropriately addressed components/procedures detailed in the ERPs
- ensure that emergency response procedures are coordinated between all persons
- field verification of the accuracy of key identified components of the ERPs

An individual assessment is comprised of three components: a document review stage, on-site interviews with key plan responders, and verification of emergency response planning information contained within the plan.

SECTION 9 - ADMINISTRATION

9.6 GLOSSARY & ABBREVIATIONS

AEUB	Alberta Energy & Utilities Board
AEMA	Alberta Emergency Management Agency
CEOC	Corporate Emergency Operations Centre
CMC	Crisis Management Cell (Paris)
Emergency	A present or imminent event outside the scope of normal operations that requires prompt coordination of resources to protect the health, safety, and welfare of people and to limit damage to property and the environment.
Emergency Site	The location where the emergency takes place
EOC	Emergency Operations Centre (Calgary)
EAZ	Emergency Awareness Zone – the distance outside the EPZ where public protection measures may be required due to poor dispersion conditions of the hazard.
EPZ	Emergency Planning Zone - the geographical area surrounding the facility containing hazards product (s) that requires specific emergency response planning by the operator.
ERO	Emergency Response Organization
ERP	Emergency Response Plan – A comprehensive plan to protect the public, including criteria for assessing an emergency situation and procedures for mobilizing response personnel and agencies and establishing communications and coordination which is to be followed by all persons in the event of an incident.
ERT	Emergency Response Team
ICP	Incident Command Post (Joslyn Site)
IIZ	Initial Isolation Zone – an area in close proximity to a hazardous release in which the public may be exposed to dangerous (upwind) and life threatening (downwind) concentration levels
Incident	An unexpected occurrence or event that requires action by emergency personnel to prevent or minimize the impact on the safety and health of people on property and the environment.
OCP	On Site Command Post (Joslyn Site)
PAZ	Protective Action Zone – Area downwind of a hazardous release where outdoor concentration levels may result in life threatening or serious and possibly irreversible health effects to the public
Residence	Full or part time dwelling
R.M. of Wood Buffalo	Regional Municipality of Wood Buffalo

SECTION 9 - ADMINISTRATION

9.7 ERP DISTRIBUTION

Copies of the Affiliate ERP are distributed according to the following distribution list. Each copy is numbered and the person responsible for it is shown beside its location.

Overall responsibility for the manuals and their distribution rests with the Joslyn Site HSE Coordinator.

MANUAL #	LOCATION	RESPONSIBLE POSITION	FORMAT
1.	Calgary Head Office	President	Hard Copy
2.	Calgary Head Office	HSE Manager	Hard Copy Electronic Copy
3.	Calgary Head Office	VP Finance& CFO	Hard Copy
4.	Calgary Head Office	VP General Counsel & Corp. Secretary	Hard Copy
5.	Calgary Head Office	VP Geosciences	Hard Copy
6.	Calgary Head Office	VP Business Development and Planning	Hard Copy
7.	Calgary Head Office	VP Mining	Hard Copy
8.	Calgary Head Office	VP Thermal	Hard Copy
9.	Calgary Head Office	VP Midstream and Downstream	Hard Copy
10.	Calgary Head Office	VP HR, Comm. & Administration	Hard Copy
11.	Calgary Head Office	General Manager (Thermal)	Hard Copy
12.	Calgary Head Office	Drilling Manager (Thermal)	Hard Copy
13.	Calgary Head Office	Duty Manager	Hard Copy
14.	Calgary Head Office	Senior Safety Advisor	Hard Copy Electronic Copy
15.	Calgary Head Office	Engineering Manager (Thermal)	Hard Copy
16.	Calgary Head Office	Civil Construction Coordinator (Thermal)	Hard Copy
17.	Calgary Head Office	Senior Communications Advisor	Hard Copy
18.	Calgary Head Office	Administrative Assistant	Hard Copy
19.	Calgary Head Office	Spare	Hard Copy
20.	Joslyn Site	RSES	Hard Copy
21.	Joslyn Site	HSE Advisor	Hard Copy
22.	Regional Municipality of Wood Buffalo	Mutual Aid Organization	Hard Copy
23.	Regional Municipality of Wood Buffalo	Public Records	Hard Copy
24.	Alberta Energy and Utilities Board	Calgary Office	Hard Copy
25.	Alberta Energy and Utilities Board	Fort McMurray Office	Hard Copy

SECTION 9 - ADMINISTRATION

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

FORM A1 - BOMB THREAT/ANONYMOUS TELEPHONE CALL RECORD

This form is used to note as much information as possible at the time of a phone call concerning a terrorist alert. A copy of this sheet could be available in the radio room and at the switchboard.

In every case, remain calm and courteous, avoid panic.

Your name: Your occupation:	Date: Your Phone #

Time:
Exact Words of the Caller:
Name of the person the caller requested:
What you answered him:

ANNEX A - FORMS

When will the bomb explode? (date and hour, record exact words)
Where is it exactly? (record exact words)
Note the number and the appearance of the suspicious objects:
What type of detonator has been used?
Other statements (record exact words):
Time caller hung up: ***(Let him hang up first)***

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

The caller:		
Sex: Male - Female		
Approximate Age:		
Local call? Long distance call?		
Voice was: Note all the characteristics		
◻ Fast	◻ Distinct	◻ Disguised
◻ Slow	◻ Stutter	◻ Other:
Language was: Note all the characteristics		
◻ Educated	◻ Simple	◻ International ◻ Cursing
◻ Local accent	◻ Foreign Accent	◻ Speech Impediment
Manner:		
◻ Calm	◻ Emotional	◻ Furious/Angry
◻ Laughing	◻ Deliberate	◻ Other:
I can / I cannot imitate unusual characteristics of the caller's voice.		
His voice was / was not familiar to me.		
Note the background voices or sounds if any:		

This alert was transmitted to:
Time:

ANNEX A - FORMS

Other:

Visa:

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

FORM A2 - REVISION REQUEST FORM

TO: Total HSE Manager

Request Form # ☐

PLAN SECTION NUMBER: _____

PARAGRAPH NUMBER: _____

DESCRIPTION OF REVISION: _____

_____

_____

_____

_____

REQUESTED BY: _____

ADDRESS: _____

_____

MANUAL NUMBER: _____

O	Request Acknowledgment	O	Approval Date
O	Request Numbered and Logged	O	Revision Number
O	Review Date	O	Revision Date
O	Correspondence Required	O	Issue Date

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

FORM A3- REVISION CONTROL SHEET

No.	Date of Revision	Revision (Including Section, Page, & Subject)	Revised By

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

FORM A4 – EMERGENCY SITUATION REPORT

REPORT NUMBER:

FROM	TO
Affiliate:	CMC DGEP
Fax #:	CMC fax: 33 (0) 1.47.44.30.66
Email:	CMC Email: amont.cmc@total.com
Manager Name:	CMC Manager Name:

Event Description:

Location (precise offshore/onshore):

Date/Time (Local) of the event

- ☐ Equipment Breakdown
- ☐ Fire
- ☐ Collision, Logistical accident
- ☐ HC Liquid Leakage
- ☐ Explosion
- ☐ Other
- ☐ Gas Leak
- ☐ Blow out
- ☐ Victim (s)
- ☐ Toxic Leak
- ☐ Pollution
- ☐ Dead:
- ☐ Injured:
- ☐ Missing:

Details:

Identification of the Causes

Details:

	Current Situation		Possible Evolution	Ongoing actions/
Weather Conditions:	Details (wind, current, swell)		Forecast:	
Location	Details (accessibility/secured area):			
Stability of structure	Details (damages, stability):			
Fire:	☐ Put Out	☐ Controlled / ☐ Uncontrolled		
	Details:			
Liquid Pollution	☐ Controlled	☐ Fed / ☐ On Fire		
	Details (released quantities):			
Gas Leak	☐ Controlled	☐ Fed / ☐ On Fire		
	Details (quantity and toxicity):			
Impacted Zones	Description and location:			
Impact on Production	Details (damages, production loss):			
Media Impact	Details (reactions, press release)			

ANNEX A - FORMS

FORM A5 – TRANSMITTAL SHEET

From (Name, Company, Contact):

Subject:

To:
-
-
-
-
-
-

Message:

Follow Up (Who? When?):

ANNEX A - FORMS

FORM A6 – LOG SHEET

Incident Title:

Date:

Page No /

Time	Message		Message Details / Events	Comments
	From:	To:		

TOTAL E&P CANADA
AFFILIATE EMERGENCY RESPONSE PLAN

ANNEX A - FORMS

FORM A7 – ACTIONS LIST

Date/Time	Descriptions	Responsible	Deadline	Status

TOTAL EXPLORATION AND PRODUCTION CANADA
SITE CONTINGENCY PLAN – JOSLYN SITE

ANNEX A - FORMS

FORM A8 – VICTIM MONITORING SHEET

Identification of Victims				Condition				Next of Kin Management**				Comments
									Next of Kin Informed?			
Name/First Name	Age	Nationality	Company	Main Symptons	Pr. *	Time	Destination	Country of Residence	Y	N	By	

ANNEX A - FORMS

FORM A9 – INTERVENTION MEANS MOBILIZATION SHEET

Type	Implementation Means		Remaining Available means		Requested External Means		
	Time	Type/Quantity/Comments	Time	Type/Quantity/Comments	Requested Time	Type/Quantity/Comments	Planned Availabitlity

ANNEX B – GENERAL INFORMATION

B1 - OVERVIEW

Deer Creek Energy Limited, a wholly owned subsidiary of Total E&P Canada Ltd., is the operator of the Joslyn lease, with a 74 per cent participating interest. Joslyn is located 65 km northwest of Fort McMurray in the Athabasca oil sands. The Joslyn Lease is expected to yield two billion barrels of bitumen over 30 years. Steam Assisted Gravity Drainage commercial production on the site began in the 4th quarter of 2006 and will plateau at 10,000 barrels per day by 2009.

Deer Creek is currently in the regulatory approval process to construct and operate the proposed Joslyn North Mine project. The North Mine will reach a production rate of 100,000 barrels per day by 2012/2013. A second mine, to be located on the southern part of the Joslyn Lease, is in the project definition phase. The south mine will likely produce an additional 100,000 barrels per day, with start-up projected four years after the north mine is in operation.

The location of the Joslyn Site is LSD 14-29-95-12-W4M (Control Room).

C1 - OVERVIEW

This section includes all information pertaining to EPZ background information and calculations for operations at the Joslyn site.

EMERGENCY PLANNING ZONE ANALYSIS
FOR TOTAL
JOSLYN CREEK FACILITY
ON BEHALF OF
EMERGENCY RESPONSE MANAGEMENT CONSULTING

DRAFT

DENDRITIC CONSULTING LTD.
AUGUST 2007

ANNEX C – EPZ INFORMATION

Executive Summary:

Based on information currently available for the Joslyn Creek SAGD facility Emergency Planning Zone (EPZ) distances have been estimated. This estimate indicates that an EPZ distance on the order of 4 km is likely appropriate for this facility. The approach utilized in this study considered the two primary pipelines connected to this facility along with onsite tank storage volumes. The calculations have been conducted in a manner that approximates the methodology given in the April 2005 version of EUB Directive 71. As more information becomes available, particularly with respect to the pipeline licenses, these calculations will need to be updated.

Author Contact Information

Fred Henselwood
Dendritic Consulting Ltd.
19 Mount Alberta Green SE
Calgary, Alta.

Fred@dendritic.com

ANNEX C – EPZ INFORMATION

Emergency Planning Zone Assessment:

The determination of Emergency Planning Zone (EPZ) distances for sour facilities is governed by EUB Directive 71. Within this document Section 2.1.2 gives a high-level description of the approach to be utilized in the determination of EPZ values.

Section 2.1.2

"The EPZ for a sour production facility is calculated by using the largest H_2S release volume from any pipeline entering or leaving the facility"

At this point in time license information with regards to the two main pipelines that will be associated with this facility have not been established.

The first pipeline is an 8-inch pipeline that is approximately 62 km in length and will be used to bring diluent to the Joslyn Creek facility. The second pipeline is a 12-inch pipeline that is also approximately 62 km in length and will be used to transport a mixture of bitumen and diluent (dil-bit) away from the site.

The diluent material at this point in time has not been determined. Currently two potential materials are being considered. One proposed diluent contains 0.1% H_2S and the other proposed diluent contains less than 5 ppm H_2S. In the interest of ensuring that the calculations presented are conservative the 0.1% H_2S diluent material has been utilized in the calculations presented. If the 5 ppm H_2S diluent is ultimately the material selected the EPZ distances presented in this document will likely significantly overstate the required EPZ values.

As per Directive 71 the EPZ calculations are based on the maximum H_2S volume that could be released in a single event, which is to be determined through the following equation:

$$V=2.232 \times 10^{-6} \times D^2 \times L(P+101.325) \times H/(Z \times (T+273))$$

Where: V = Maximum potential H_2S release in m^3
D = Internal Diameter of pipe in millimeters (mm)
L = Length of pipeline between block valves (km)
P = licensed maximum operating pressure in kilopascals (kPa)
H = Licensed H_2S content (moles/kilomole) for the pipeline
Z = Compressibility factor at Pr and Tr
T = pipeline minimum operating temperature (degrees C)

As license information is not available the following equation has been used:

$$V = \pi \times R^2 \times L \times Dp \times \%H / Dh$$

Where: V = Maximum potential H_2S release volume (m^3)
R = Internal radius of pipe in meters (m)
L = Length of pipeline between block valves (m)
Dp = Density of the material (kg/m^3)
%H = % H_2S content
Dh = Density of H_2S (kg/m^3)

ANNEX C – EPZ INFORMATION

Using this approach for the 8-inch pipeline with the following parameters:

R = 0.1016 m
L = 61,662 m
Dp = 770 kg/m^3
%H = 0.1%
1/Dh = 0.699 m^3/kg

A maximum release volume of 1,076 m^3 of H_2S can be estimated. (In completing this assessment it has been assumed that the pipelines do not contain any emergency block valves. The use of emergency block values could reduce the maximum H_2S release volume and would result in small EPZ values.)

Using Figure 4 in Appendix 4 of Directive 71 the determined H_2S release volume corresponds to an EPZ distance of approximately 2.5 km.

For the 12-inch pipeline with the following parameters:

pi = 3.1415
R = 0.1524 m
L = 61,665 m
Dp = 770 kg/m^3
%H = 0.1%
1/Dh = 0.699 m^3/kg

A maximum release volume of 2,421 m^3 of H_2S can be estimated.

Using Figure 4 in Appendix 4 of Directive 71 this release volume corresponds to an EPZ distance of approximately 4 km.

For both pipelines a concentration of 0.1% H_2S has been used. In reality the dil-bit line will likely have a lower H_2S concentration than the diluent line. However, in the interest of being conservative the H_2S concentration of the diluent has been used for both pipelines. Ultimately license conditions will determine what the actual EPZ distances should be with the above calculations giving approximate values.

In addition to hazards associated with the pipeline infrastructure the Joslyn Creek facility also contains a number of large storage tanks. The largest of these tanks is 1,600 m^3 in volume and from a theoretical worst-case perspective also creates a risk to the surrounding area. Using a methodology similar to that used for the pipelines the volume of H_2S present in any one tank can be estimated using the following formula:

$$V = Tv \times Dp \times \%H / Dh$$

Where: V = Maximum potential H_2S release volume (m^3)
Tv = Tank Volume (m^3)
Dp = Density of the stored material (kg/m^3)

ANNEX C – EPZ INFORMATION

%H = % H_2S content of the stored material
Dh = Density of H_2S (kg/m^3)

Using the following parameters:

Tv = 1,600 m^3
Dp = 770 kg/m^3
%H = 0.1%
1/Dh = 0.699 m^3/kg

A maximum release volume of 861 m^3 of H_2S can be estimated for any one of the large storage tanks. As with the 12-inch pipeline it is unlikely that any one storage tank will contain pure diluent with the dil-bit material exhibiting a lower H_2S concentration. However, in order to ensure that the assessment is conservative the diluent H_2S concentration has been used in these calculations. Further, if the diluent ultimately selected contains significantly lower H_2S concentrations the estimated maximum H_2S release volume will be significantly overstated.

Using Figure 4 in Appendix 4 of Directive 71 this release volume corresponds to an EPZ distance of approximately 2.25 km.

In addition to the threat to the surrounding area created by the presence of H_2S the flammable nature of the stored materials also creates a potential concern.

Using the US EPA Risk Management Program Comp. version 1.07 the approximate worst-case hazard distance for a 1,600 m^3 tank within a 4,000 m^2 dyke can be estimated to create a hazard out to a distance of 500 m (at 1 psi). Pentane was used to represent the tank materials in this modeling as it represents one of the most volatile components within the diluent mixture. Appendix A gives further details on the US EPA Risk Management Program calculations.

Based on the data currently available the following EPZ values were calculated:

Scenario	Estimated EPZ Distance
8-inch Pipeline	2.5 km
12-inch Pipeline	4.0 km
1,600 m^3 Storage Tank (H_2S)	2.25 km
1,600 m^3 Storage Tank (Pentane)	0.5 km

This would suggest than an EPZ distance on the order of 4.0 km is reasonable for this facility based on the use of diluent material containing up to 0.1% H_2S. It should be noted that the actual license conditions for the two pipelines will better establish the exact EPZ values.

ANNEX C – EPZ INFORMATION

Appendix A

RMP*Comp Ver. 1.07
Results of Consequence Analysis

Chemical: Pentane
CAS #: 109-66-0
Category: Flammable Liquid
Scenario: Worst-case
Quantity Released: 1600 cubic meters
Release Type: Vapor Cloud Explosion
Liquid Temperature: 25 C

Mitigation Measures:
Diked area: 4000 square meters
Dike height: 2 meters

Release Rate to Outside Air: 6030 pounds per minute
Quantity Evaporated in 10 Minutes: 60300 pounds
Estimated Distance to 1 psi overpressure: .3 miles (.5 kilometers)

--------Assumptions About This Scenario---------
Wind Speed: 1.5 meters/second (3.4 miles/hour)
Stability Class: F
Air Temperature: 77 degrees F (25 degrees C)
