



## SCL Pipeline

Operated by Sarnia Manufacturing Centre

Emergency Response Procedures



Version 16

March 2020

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## Section 1

### Directions for Use

Shell Canada Products at its Sarnia Manufacturing Centre (SMC) has a comprehensive response organization that provides for a management structure and process towards effectively responding to pipeline emergencies involving the SCL Pipeline. These Procedures describe how the SMC organization would respond to incidents involving the SCL in accordance with the Incident Command System organization approach.

The primary purposes of the procedures are to:

- Assist the responding personnel in preparation for, and in quickly, safely and effectively responding to, emergency situations.
- To prevent injury or damage to the company's employees and facilities, and to the public and the environment.

Other purposes of the Procedures include:

- Define the ICS-based Emergency Response Management System that SMC has adopted for managing emergency response operations.
- Describe how the organizations personnel would be notified, activated and mobilized.
- Provide the components and relationships within the SMC Response Organization (e.g. Local Response Personnel, Rapid Response Teams, Crisis Management Team, Rapid Action Team, and the Shell Emergency Response Team System) during an emergency response.
- List procedures for obtaining equipment, manpower, response tools and resources needed to assist with emergency response activities.

#### Common acronyms found in the Procedures

CANUTEC	Canadian Transport Emergency Centre
CVECO	Chemical Valley Emergency Coordinating Organization
ESD	Emergency Shut Down
ICS	Incident Command System
ICT	Incident Command Team
LPG	Liquefied Petroleum Gas
CER	Canadian Energy Regulator
PTL	Production Team Lead
PS	Production Specialist
RAT	Rapid Action Team
RRT	Rapid Response Teams
SCL	SCL Pipeline
SERTS	Shell Emergency Response Team System
SMC	Sarnia Manufacturing Centre
SOTIS	Shell Operations Training & Information System
TPH	Transfer Pump House

## Section 2

### Facility Information

The present purpose of the SCL formerly known as the Salmon Pipeline is to transport liquefied gas (butane) from the Marysville Underground Storage Terminal located at Marysville, Michigan to the Shell's SMC located at Corunna, Ontario. The butane is piped from underground storage caverns in Marysville to SMC's storage spheres in Corunna.

The SCL crosses under the St. Clair River and, being part of the international boundary between the United States and Canada, are under the jurisdiction of Canadian Energy Regulator (CER) for its Canadian portion.

The SCL was built in 1989 and it comprises of a single pipe bundle containing four 168.3 mm (6.625 inches) individual pipelines. This single pipe bundle was fabricated prior to its underground installation; and it was pulled backwards by a boring machine situated on the Michigan side of the St. Clair River. The bored line is at a depth approximately 12 meters (40 feet) below the River's bottom.

The installation bundle containing four pipelines—known as pipelines "A", "B", "C" and "D" is approximately 900 meters (3,000 feet) long and is equipped with manually operated block valves. See below for further technical data. The total SCL volume (if all four pipelines were filled) is approximately 100 m<sup>3</sup> (629 barrels).

Currently Pipeline "A" is actively used to transport butane. For Pipeline "B", which had been used for propane, SMC has de-inventoried, depressurized and removed it from service. Pipelines "C" and "D" have remained capped, and are under nitrogen purge, since the original installation in 1989. The SCL is inspected internally every five (5) years.

#### **Marysville Underground Storage Terminal consists of:**

1. Meter facilities equipped with meter proving facilities. There is a 24 hour manned computer assisted central control facility.
2. Underground storage caverns and wells of approximately 2.0 x 10<sup>5</sup> cubic meters (5.0 million barrels) capacity with brine pits and system to keep caverns liquid filled.
3. A 168.3 mm (6.625 inches) pipeline approximately 4 kilometres (2.2 miles) long from the St. Clair River to the Marysville Underground Storage Terminal, with a manually operated block valve at the river and one remote operated valve at Marysville.
4. The maximum operating pressure for this pipeline is 1440 psig; however, as per (CER)NEBorder GPL0-S70-6-89, the maximum operating pressure under the St. Clair River is 1405 psig.

#### **SMC (at Corunna) consists of:**

1. Meter facilities and one remote operated block valve on the 168.3 mm (6.625 inches) "SCL A" (formerly the Salmon pipeline) into the refinery. There is a 24 hour manned computer assisted central control facility.
2. Approximately 900m (3000 ft.) of 168.3 mm (6.625 inches) pipeline from the pump bypass area to the St. Clair River complete with a manually operated block valve at the river.
3. The typical transfer rate is 300 barrels per hour @ 250 psi.

## Owners/Operators

- The owner and operator of the SCL in the Canadian portion is Shell Canada Products.
- The owner of the SCL in the USA portion is Buckeye Pipelines.

## Regulatory Authorities

### Canada

- The SCL (aka Salmon line) was built in accordance with the *Onshore Pipeline Regulations* (1988) under the (CER) NEB Order XG-23-88, and is operated under (CER) NEB Order GPLO-S70-6-89. The Procedures have been updated to the (CER) *Onshore Pipeline Regulations, 1999* (SOR/99-294).

### United States

- The SCL was built to the *Michigan Gas Safety Code (1986)*, and is operated under a Presidential Permit issued by the United States Department of State - March 21, 1989. (Note: on December 6, 1999, the Michigan Public Service Commission rescinded the *Michigan Gas Safety Code* and replaced it with the *Michigan Gas Safety Standards*. The *Michigan Gas Safety Standards*, which adopt the minimum federal safety standards by reference, took effect on January 6, 2000.)

## TECHNICAL DATA ON SCL

Table 1. Pipeline - Canadian Portion

Technical Data	Pump Station to St Clair River	St. Clair River to Int. Border
Pipeline code	ASTM B31.3	CSA 2.183-M86 & <i>Onshore Pipeline Regulations (1988)</i>
Location Class	HVP- Zone 2	HVP- Zone 2
Line Diameter (O.D.)	168.275 mm (6.625")	168.275 mm (6.625")
Wall Thickness	0.28"	0.25"
Material Grade	A-53-B Seamless	API-SL-42-II ERW
Coating	High Build Epoxy Paint	Fusion Bond Epoxy
Pipe Length	--- Meters	682 meters (2240 feet)
Line Fill	---	---
Installation	Pipe rack	Buried min. 1.5 meters (5 feet)
Field test Pressure	2160 psi	2195 psi
Max. Operating Press.	1440 psi	1405 psi
Radiography	10%	100%
Corrosion Control	None	Impressed current

**Table 2. Pipeline - United States Portion**

	<b>St. Clair River to Int. Border</b>	<b>Int. Border to Marysville Underground Storage fence</b>	<b>Marysville Underground Storage fence to meter Building</b>
Pipeline code	<i>Michigan Gas Safety Code (1986)</i>	<i>Michigan Gas Safety Code (1986)</i>	ASTM B31.3
Location Class	Class III	Class III	----
Line Diameter O.D.	168.275 mm (6.625")	168.275 mm (6.625")	168.275 mm (6.625")
Wall thickness	0.25"	0.25"	0.28"
Material Grade	API-5L-4-II-ERW	API-5L-42-ERW	A-53B Smls
Coating	Fusion bond epoxy	Fusion bond epoxy	Paint
Pipe Length	424 meters (1392 feet)	--- Meters	--- Meters
Line Fill	---	---	---
Installation	Buried min. 1.5 meters (5 feet)		Pipe rack
Field test pressure	2195 psi	2160 psi	2160 psi
Max. Operating Press.	1440 psi *	1440 psi	1440 psi
Radiography	100%	100%	10%
Corrosion Control	impressed current	anode beds	None

\* Will be limited to 1405 psi by Canadian portion

**Table 3. Main Line Pump**

Model	Sundyne LMV-311
Serial No.	
Design Suction Pressure	320 psig
Design Discharge Pressure	1060 psig
Design Flow	6500 B/D
Minimum Flow	2100 B/D
Liquid Specific Gravity	0.55
Electric Driver Horsepower	200 HP @ 575 V-3-60

**Table 4. Meter Facilities**

	<b>Canada</b>	<b>United States</b>
Meter Model	Daniels 2"	Daniels 2"
Meter Range		
Pressure Transmitter	Rosemount	Rosemount
Temperature Transmitter	Rosemount	Rosemount
Density Transmitter	Solatron	Solatron
Meter Corrected to		

## Section 3 Emergency Preparedness and Response Policy

### *Health, Safety and Environment Policy*

#### **Shell Canada is committed to:**

- Pursue the goal of no harm to people.
- Protect the environment and pursue the goal of prevention of pollution.
- Use material and energy efficiently to provide our products and services.
- Develop energy resources, products and services consistent with these aims.
- Publicly report on our performance and engage in stakeholder consultation.
- Play a leading role in promoting best practice in our industry.
- Manage health, safety and sustainable development as any other critical business activity.
- Promote a culture in which all Shell employees share this commitment.

#### **Shell Canada Limited:**

- Has a systematic approach to health, safety and environmental management designed to ensure compliance with the law and to achieve continuous performance improvement?
- Sets targets for improvement and measures, appraises and reports performance.
- Requires contractors to manage in accordance with this policy.
- Requires joint ventures under its operational control to apply this policy and uses its influence to promote this policy in its other ventures.
- Includes health, safety and environmental performance in the appraisal of all staff and rewards accordingly.

We strive to achieve a health, safety and environmental performance that we are proud of, to earn the confidence of customers, shareholders and society at large, to be a good neighbour and to contribute to sustainable development



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March 26, 2020



## Section 4

### Hazard Identification and Risk Assessment

#### Butane (C<sub>3</sub>H<sub>10</sub>) - Pipeline Leaks and Hazards

- The degree and extent of the hazard from a pipeline failure will vary with the rate of leakage, the type of product and the atmospheric conditions. An outflow of high vapour pressure material such as butane will expand over the ground and into depressions, creating an extreme hazard.
- The greatest danger to persons and property will result from the flash burning, following delayed ignition of the vapour air plume formed from a large leak. If ignition is delayed, there may be sufficient confinement to cause detonation of the flammable vapour plume and increased damage in the area.
- If the flammable plume is not ignited, mixing with air continues and the vapour becomes diluted below the lower flammability limit.
- The butane stream will form a colourless, nearly odourless gas heavier than air at N.T.P. Some critical characteristics of butane are:

Density	~0.5942 Kg/L
Boiling Point	<1 °C (Deg C)
Critical Temperature	287 degrees C
Vapour Pressure (absolute)	1823 mm Hg @ 25 °C
Flammability Limits	1.9% and 8.5%

- Butane is highly flammable within the flammability limits. Escaping butane is an extreme fire hazard. In addition to the fire hazard, there is also a health hazard due to the low temperatures that develop when the liquid is released. A serious hazard may also develop from oxygen deficiency when the rapidly expanding gas displaces air.
- A small leak of butane will not usually present a serious hazard in open air, but will if the vapour can collect in a confined space and mix with air. A small butane leak is usually detected from reports of discoloured or dying vegetation or frost forming at the leak location over the pipeline.
- Detection of a small leak is difficult and a "gas sniffer" should be used in any suspicious area. A system volume balance will not detect small leaks until over 24 hours. Butane has only a faint odour and small quantities cannot be reliably detected by smell.
- A small to medium size leak of butane will be detected by killed vegetation and frost at the leak location. Condensed water vapour surrounding the butane vapour may also be visible. A medium sized leak may be indicated by a large enough difference in the pipeline volume balance to initiate investigation for leakage.
- Any leaks of a size such that the vapour forming from escaping liquid does not disperse within a small area, create a very hazardous condition. The cold vapour, being heavier than air, will tend to flow downwind and into low areas and form flammable mixtures.
- The area downwind of a leak or adjacent lower areas should be approached only with an explosion meter to avoid flammable concentrations of vapour mixtures. A weak gas smell should be regarded as a warning of the presence of some butane gas.
- If a quantity of liquid has escaped and vaporized, all sources of ignition, such as car and truck engines, must be kept well away from the probable hazard area.
- The area for approximately .8 km (½ mile) downwind of the leak should be evacuated of all persons until it can be checked out with an explosion meter as having no indication of gas present.

- A large leak of butane probably caused by damage to the pipe by external sources should show at the control centre by changes in the operating pressure and through put volume.
- Shutdown time after the occurrence of the failure is critical to limit the duration of the hazard. There will be an immediate outflow of liquid at the failure followed by intermittent slugs of liquid and vapour. About  $\frac{1}{3}$  of the liquid will flash into vapour. The remainder will form a pool of super cooled liquid and vaporize as rapidly as the heat flow from the surrounding air and ground will permit.
- If the vapour-air plume from the leak ignited immediately, all efforts should be directed to minimizing fire damage and keeping the public out of danger until the line fill that can flow to the leak is exhausted and the fire dies from lack of fuel.
- If the flammable vapour-air plume formed at the leak has not ignited, it will have reached its greatest size within the first  $\frac{1}{2}$  hour from the time the leak occurred. Every effort should be made to prevent ignition of the vapour-air plume while the line fill available to the leak is depleted and the plume becomes diluted below the lower flammability limit.
- The danger exists of detonation of the flammable part of the vapour-air plume from any source of ignition and all persons should be kept will away from the area to avoid injury.
- The extent of the flammable plume will vary from approximately 600 meters (1968 feet) downwind of the failure site, under stable atmospheric conditions, (as at night with less than 3 km wind) to less than 300 meters (984 feet) under neutral conditions, (as during the day with 9 km winds or better). Unstable conditions, (as in daytime with light winds) will produce a lesser plume length. Due to the wide variation in conditions governing plume length and size, a downwind flammability length of approximately .8 km ( $\frac{1}{2}$  mile) should be assumed until the actual limits can be determined.
- The area for .8 km ( $\frac{1}{2}$  mile) downwind of the leak may contain flammable vapour-air mixture. This area should be evacuated as much as possible without men entering any area indicating any gas content approaching the lower flammability limits on an explosion meter.
- The area .8 km ( $\frac{1}{2}$  mile) downwind of the leak must not be re-entered until the leak is under control and explosion meter readings show there is not gas concentration approaching the lower flammability limit.

### **Control of a Butane Leak Hazard with Fire**

Accidental Ignition of Butane Leak:

1. The hazard from a butane leak is reduced and controlled if the vapour is ignited when the leak occurs. The fire should be allowed to burn itself out and not be prematurely extinguished.
2. Planned Firing of Butane Vapour Plume. Firing of a vapour plume to reduce the hazard must only be done after careful evaluation of the situation and with the explicit AUTHORIZATION of the Incident Command Team.
3. The flammable plume formed from a butane leak will probably reach its greatest extent with the first half hour. The beneficial effect of firing is limited to reducing or eliminating the potential hazard due to changing conditions such as:
  - A. shifting wind direction, which would tend to drift the vapour plume over houses or other buildings.
  - B. changing of atmospheric conditions to a stable state, which would enlarge the area covered by a plume and endanger persons. Intentional firing of a butane vapour cloud must only be considered:
  - C. the area of the flammable plume has been determined accurately with explosion meter.
  - D. there is no persons within the plume area or within 300 meters (984 feet) of the periphery of the plume.
  - E. there is no apparent danger of detonation of the flammable plume when ignited.
  - F. ignition would definitely reduce the potential hazard
  - G. the firing is authorized by the respective Operations Manager.

The actual firing of a vapour plume may be carried out by using a shotgun flare shell from upwind of the vapour plume and with all other persons well removed from the periphery of the plume.

### **Explosive Limits & Auto-Ignition Point for Butane**

	% Vol (in air) Explosion Limits		Auto Ignition Temp. °C
	LDL	UEL	
Normal Butane	1.6	8.5	405
Iso Butane	1.9	8.5	507

See **Appendix E** for the Hazard Bow Tie Diagrams and HSE Critical Tasks applicable to SCL emergencies.

## Section 5

# Description of Initial Responses to Incident Calls

### Initial Responses

#### **First Employee(s) on Site**

One or more pipeline employees may be near the pipeline failure site when the failure occurs. This is more probable when a pipeline is damaged by construction activities in the area. The employee(s) on site will take action to:

- a) Evacuate all persons from the potential hazardous area.
- b) Evaluate the hazard and notify the Control Centre.
- c) Close manual block valves adjacent to the leak.
- d) Carry out further instructions of the Control Centre.

#### **Evacuation of Persons**

The first employee(s) at the leak site should, if there is any significant degree of hazard from the leak, endeavour to evacuate the immediate area around the leak and downwind of this area. If the leak is significant to large, an area of 90 meters (300 feet) wide for .8 km (½ mile) downwind of the leak should be evacuated as rapidly as possible. A second stage evacuation of an area 150 meters (500 feet) wide around the original 90 meters (300 feet) by .8 km (½ mile) area should be evacuated to guard against injury in the event of accidental ignition of the vapour plume results in detonation of the flammable liquid/gas. All roads entering the general vapour plume area must be blocked outside the hazardous area.

To the extent possible, with safety, sources of ignition near the leak site or vapour plume should be eliminated; e.g. turn off running vehicle engines, turn off furnace pilot lights, turn off power sources.

At no time can anyone enter the vapour plume. There is an extreme hazard from:

- Oxygen deficiency when the vapour is expanding but has not ignited.
- Fire and possibly explosion if the vapour plume is accidentally ignited.

#### **Evaluation and Advice**

Evaluate leak hazard as:

- a) Small leak - little or no danger.
- b) Significant leak - potential dangers to persons and property.
- c) Large leak - substantial to extreme hazard.

Notify the Control Centre by the most rapid means of communication regarding the leak, including the evaluation of the hazard, the location, safe route to the location, assistance required at the leak site, etc. If the leak is significant or greater, request shutdown of the affected pipeline section as a preliminary to closure of block valves adjacent to the leak.

#### **Closure of Block Valve**

If the leak is significant or greater, proceed to close manual block valves adjacent to the leak starting at the upstream valve. Notification to the Control Centre and confirmation of pipeline shutdown must precede closure of block valves.

## **Actions to Be Taken**

### A. Leak Location Unknown

1. When an alarm is generated by the Leak Detection System and the Operator is satisfied that the variance is real, an emergency shutdown (ESD) is to be initiated. This will close all motorized block valves on the pipeline, which has a leak, and stop all pumps delivering product to the line.
2. Monitor pressure on the pipeline system to determine the general location of the leak.
3. Arrange for aerial patrol and ground patrol to cover the control sections of the line in question.
4. Initiate the Cascade System of Notification

### B. Leak Location Known

1. Determine the control section involved.
2. Initiate the isolation procedure for the control section involved.
3. Immediately dispatch personnel to the leak location.

## **Notification of Emergency**

The SMC dispatching operator at the Transfer Pump House would, upon first notification of leak, communicate with the Marysville operator using the following method. Marysville operator would respond in a similar fashion during an incident for the American side of the pipeline.

## Communications

There are operations personnel (on a 24-hr/7 day basis) at both SMC's Transfer Pump House (TPH) and the Buckeye Pipelines (MUST) Control Center. SMC's Main gate is also staffed on a 24-hr/7 day basis.

Communications between the TPH and Buckeye Pipelines is provided in two ways:

- 1) Direct voice communication between operations personnel by telephone - Buckeye Pipelines can be reached from the TPH by "speed call 076" (autodials 1-810-364-8100); or by direct-dialling this number, or a second "Emergency" number 1-810-364-8855. SMC's TPH can be reached at 1-519-481-1233, and its Main Gate can be reached at 1-519-481-1245.
- 2) A radio link is also provided, and is dedicated to providing critical SCL "A" pipeline flow, pressure and temperature data from MUST, to the leak detection software located on TDC-3000 software in the Shell Transfer Pump house.

### **Coordination with Production Team Lead**

The employee(s) at the site must communicate with the PTL either directly or through the Control Centre as soon as possible for instructions.

On arrival of the Investigating Crew at the failure site, inform PTL fully of status of emergency and carry out any further instructions as requested.

Employee(s) at the site should refrain from making statements to the Press or other Media Representatives and refer all requests for information to the Senior Shell - Buckeye Pipelines employee at the site.

Until the facts are known, the News Media should be told that: *"A statement will be issued by the Company as soon as we get the facts. Until then, there is no information available."*

After the facts are known, the News Media may be given the following verbal information:

Time, place, number known injured or killed (no names).

General description of what happened. For example:

"WAREHOUSE FIRE"  
OR  
"FLASH EXPLOSION AT PUMP STATION"

Progress Report. For example:

"FIRE UNDER CONTROL"  
OR  
"GAS IS COMPLETELY DISPERSED"

The News Media **should not be** given the following information:

- i. The cause of disaster or speculation on the cause. If necessary, it can be reported that:

"CAUSE IS UNKNOWN"  
OR  
"CAUSE IS BEING INVESTIGATED"

- ii. An estimate of damage to Company property or equipment.
- iii. Any statement that might infer Company negligence.
- iv. Names of dead or injured personnel. Adequate time should be permitted to notify next of kin before names are released.

## Reporting

### **Internal Leak Report**

Internal leak reporting will come from the computerized leak detection system at SMC's Corunna Control Centre. This system monitors the flow in to and out of the pipeline, and generates an alarm when the variation exceeds pre-set limits.

### **External Leak Report**

#### Investigation

All reports of a leak will be thoroughly investigated. The source of the information and magnitude of the leak will determine the immediate action to be taken.

#### Information to be obtained from person reporting a leak

1. Name and telephone number
2. Location
3. Nature of Leak
4. Involvement
5. Any Deaths or Injuries?
6. What kind of surroundings?
  - Residential
  - Industrial
  - Rural
  - Forestry
  - Railroad
7. When was it discovered?
8. When did it occur?
9. How did it happen?
10. What kind of weather?
  - Wind Velocity and Direction
  - Temperature
  - Cloud Cover
  - Storm, etc.
11. What kind of equipment and personnel on site?
12. What action was taken?
13. Other pertinent information.
14. Others notified previously.

#### Instructions to those reporting leaks

The objective of the person(s) on the scene, who are not SMC employees but are qualified to control the situation safely, should be to prevent loss of human life and further damage to property through unsound acts.

1. Evacuate people from the immediate area, including workers and public.
2. Eliminate sources of ignition.
3. Remain at a safe distance from the spill.
4. Do not attempt to remove construction equipment where this movement could cause ignition.
5. Alert local authorities that may aid in setting up roadblocks, etc.
6. The "danger zone" area is to be evacuated. Only qualified company personnel and those directly under the instruction of qualified personnel, are to enter the area.

## Section 6 Management of Threat Information

### Defining Emergency Roles

#### EOC Manager

- Ensure the proper level of communication is maintained with the Incident Commander (IC).
- In co-operation with the Incident Commander and the Operations and Planning section Chiefs, develop, approve and implement the Incident Action Plan (IAP).
- Initiate discussion and implement incident management by objectives. Assign to appropriate Section Chief.
- Determine the need for 24/7 EOC Staffing.
- Ensure that senior company and elected officials are kept informed.
- Monitor the Incident Command Post and EOC activities to ensure that appropriate activities are initiated and maintained.
- Authorize media releases.
- Ensure that a proper level of support for Incident Command is maintained.
- Authorize media releases.
- Ensure that a proper level of support for Incident Command is maintained.
- Work with the IC and Operations Section Chief to determine the conditions which will allow demobilization.

#### Operations Section Chief

- Conduct Operations Briefings and assign operations personnel in accordance with the IAP.
- Ensure that all section personnel are maintaining individual position logs.
- Assess life safety & ensure that appropriate safety precautions are implemented.
- Evaluate situation with the IC and provide updates.
- Ensure that Operations Section activity logs are maintained.
- Ensure that resource ordering and logistical support needs are passed on to the Logistics section in a timely fashion.
- Keep the Planning Section up-to-date on resource and situation status.
- Notify General Staff of issues which may impact the community.
- Ensure the Safety Officer is involved in tactical decision-making.
- Keep the IC apprised of the status of operational efforts.
- Attend Planning meetings.

#### Planning Section Chief

- Compile & display incident status summary information.
- Establish a weather data collection system. Provide periodic predictions on the impact on response operations.
- Prepare contingency plans.
- Conduct planning meetings.
- Ensure the Emergency Information / Liaison Officer has immediate access to status reports & displays
- Identify needs for specialized resources. Facilitate needs with Logistics.



### Logistics Section Chief

- Meet with the General Staff (EOC) to identify immediate resource needs.
- Develop objectives for the section and the plans to accomplish within the first operational period.
- Provide periodic Logistics status reports to Command.
- Confirm resource ordering process.
- Attend planning meetings
- Participate in the preparation of the IAP.
- Ensure co-ordination between Logistics and other General Staff.
- Ensure all Logistics functions are documenting their actions.
- Submit section documentation to the Documentation Unit
- Determine the use on consumables by Shell and mutual aid companies. Plan to replace these as soon as possible.

### Finance / Administration Section Chief

- Ensure all sections are aware of the charge code.
- Attend Planning meetings and contribute as required.
- Gather continuing information from all Sections.
- Meet with all assisting and supporting organizations as required to determine any cost share agreements or financial obligation.
- Initiate, maintain and ensure completeness of documentation needed to support claims for emergency funds.
- Initiate, maintain and ensure completeness of documentation needed to support claims for injury and property damage.
- Assist Logistics in resource procurement.
- Ensure coordination between Finance/Admin and other General Staff.
- Submit all Section documentation to the Documentation unit.

## HSSE Section Chief

- Nurse to call hospital to notify of pending fax
- Obtain Work and PO #'s for call outs.
- Is IH Unit required to set up portable safer units where required
- Have Industrial Hygiene Unit obtain any relevant MSDS related to exposure at the incident.
- Notify Lambton EMS if required.
- Notify Bluewater Health of possible patients if required.
- Fax Bluewater Health a copy of relevant MSDS sheets if required
- Ensure any employees requiring medical treatment are adequately decontaminated and changed into disposable coveralls prior to transport
- Have Safety / Security / Medical Unit located any missing personnel from initial head count.
- Notify IC of any missing persons.
- Notify IC to initiate search and rescue if we have credible information that the missing persons may have been impacted by the incident
- Dispatch Safety / Security / Medical Unit to the scene to assess and observe.
- Have Safety / Security / Medical Unit set up internal road blocks as directed by IC.
- Have Safety / Security / Medical Unit dispatch any other required ER equipment
- Have logistics call in Acklands Laborers to fill Scott Air Bottles. If unavailable call HSE.
- Assess if any Muster Locations are or will be impacted by this incident.
- Do we need to evacuate any muster locations and what is the best route of evacuation.
- Notify OPP / Sarnia Police if required.
- Are appropriate external road blocks in place to manage the incident?
- Have gate entrances been secured
- Is patrol guard stationed back at the main gate to manage traffic and EMS support vehicles?
- Contact Dockside Industrial Park Inc. of the incident.
- Has a staging area been identified
- Have evacuation routes been identified.
- Is an alternate route required for employees coming to or leaving the facility?
- Brief Environmental Support Unit on notifications that have already been issued.
- Have Environmental Support Unit contact environmental agencies as required by Federal, Ontario and Shell regulations
- Have Environmental Support Unit document times and content of discussions with agencies
- Have Environmental Support Unit run any applicable pre planned Safer Scenarios on the overhead projector
- Initiate river response plan if spill at the dock
- If possible offsite exposures are possible ensure the relevant downwind personnel are notified.
- Ensure Public Information Officer has forwarded necessary information to First Nations Environmental Department and Chief
- Do we need to notify St Clair Township mayor
- Do we need to notify City of Sarnia Mayor
- Do we need to notify the First Nations Chief
- Do we need to notify St Clair Township Fire Chief
- Do we need to notify City of Sarnia Fire Chief
- Have we communicated updates to muster locations
- Have we issued an internal communications for Shell and Contract employees
- Ensure a field debrief has occurred with ERT.
- Ensure all ERT equipment is restocked and put away
- Notify [EnergyOilNotifications@ontario.ca](mailto:EnergyOilNotifications@ontario.ca) for any significant incidents that would have impact on oil supply or may affect the health and safety of citizens.
- Ensure an EOC debrief is scheduled.

### Incident Commander

- Ensure that the Operations and Emergency Response activities are under the control of the OPS & ER Team Leads.
- Work with other members of the Unified Command to ensure they have sufficient information to allow them to perform their function.
- Ensure that the Accountability Officer is requesting PAR's on a regular basis and that the Accountability Board is kept up-to-date.
- Maintain communications with the Safety Officer to ensure that you have an up-to-date picture of responder safety.
- While at the Incident Command Post, step back a bit from the response & provide more complete briefing to the Ops Section Chief.
- Work with the OSC.
- In consultation with the Operations & ER Team Leads, anticipate the response duration & request any supplies needed.
- Provide input to the OSC on conditions which would allow demobilization.

### Accountability Officer

- Operate on the Emergency radio frequency.
- Request that any sector personnel changes be relayed immediately to the AO from the Sector Officers.
- Ensure that the accountability board is updated with the passports from any municipal or mutual aid companies called in from Staging to the hot zone.
- Issue a PAR request in accordance with the established frequency
- After any unusual occurrence or on the request of the IC, issue a PAR request.
- Maintain the accuracy of the accountability board at all times by maintaining communication the Team Leads

### Field Safety Officer

- Operate on the Emergency radio frequency.
- Monitor the entire hot zone for safety issues. Appoint an assistant if the area is large.
- Monitor all use of specialized PPE such as SCBA. In any sector where SCBA is in use, appoint an assistant to monitor those responders-who they are, when they started on SCBA and when they are due to come off.
- Work through the IC or Sector Officers to correct safety issues. Directly & immediately correct any IDLH situations
- Establish a decontamination area with sufficient resources to handle any expected decon issues
- Remove any unauthorized personnel from the hot zone.

### Operations Team Lead

- Monitor Operations radio frequency.
- Maintain communications with Process Specialist / Board Operator
- Advise Operations on established objectives & provide feedback to IC on current status. Establish priorities.
- Maintain close contact with ER Team Lead.
- Maintain close contact with the IC to ensure that they are made immediately aware of any adverse unit operating conditions which may impact populations in the refinery or community.
- Monitor & direct unit operations to ensure compliance with established objectives
- Ensure the Operations are complying with the Accountability System.
- Think ahead to potential process conditions & plan contingencies & resources to mitigate. Advise Command Staff.
- Discuss conditions required for demobilization with Command Staff.

### Emergency Response Team Lead

- Set up response sectors as appropriate for the level of the response. Modify sectors as response expands or contracts
- Ensure that span of control is followed in all response sectors.
- For responder safety & response efficiency, maintain close communication with Ops Team Lead to ensure that unit conditions are constantly known.
- Ensure that all response sectors are placed on the Accountability Board and that any changes in personnel are noted.
- Keep Command Staff apprised of response status.
- Provide input to the IC regarding use of consumable by mutual aid response companies. Information to be forwarded to Logistics.
- Monitor & direct ER operations to ensure compliance with established objectives.
- Ensure that all ER personnel are complying with the Accountability System.
- Work with command Staff to determine conditions required for demobilization.
- 

### Public Information Officer

- Obtain policy guidance from EOC Manager with regards to media releases.
- Contact & correspond with local jurisdictions to coordinate emergency information activities.
- Co-ordinate with Logistics, the activation and staffing of message centre “rumour control” lines to receive requests and answer questions from the public.

### Human Resources

- Handle all HR issues that may arise during the conduct of emergency response.
- Establish a Crisis Communication system to handle and process telephone inquiries concerning the status of personnel if an incident results in injuries and/or fatalities.
- Co-ordinate the notification of the family of any person seriously or fatally injured as the result of an incident or during emergency response operations through the HR Department.
- Follow the status of hospitalized personnel and co-ordinate/prepare required administrative paperwork on all injuries or deaths.
- Handle “hardship “problems for Company employees assigned to the incident
- Work with Public Affairs Officer to ensure names of personnel injured or killed are not released prior to contacting next of kin.

### Legal Services

- Determine the need for compensation for injury and claims specialist. Request additional personnel as necessary.
- Establish procedures with Public Information Officer and Human Resources on prompt notification of injuries or deaths.
- Ensure that all witness statements and statements from Safety Office and Medical Unit are reviewed for completeness.
- Coordinate with the Safety Officer to provide analysis of injury circumstances if possible.
- Maintain copies of hazardous materials and other medical debriefings and ensure they are included as part of the final incident package

### Communications Officer

- Maintain awareness of incident objectives and current situation
- Determine and anticipate your support needs and forward to the PTL
- Log all radio transmission to/from the EOC
- Provide information on log entries as requested

## Operations Support

- Maintain awareness of incident objectives and current situation.
- Provide information and advice within your area of expertise as required.
- Ensure that all recommendations are documented
- Participate in the development of the Incident Action Plan as requested
- Keep the Operations Section Chief advised of your status, activity and any problem areas.
- Anticipate potential situation changes & think of appropriate contingencies or considerations that may be required.
- Be prepared to participate in planning meetings as requested.
- Provide periodic situation or status reports to your Section Chief
- Determine staffing requirement and make required personnel assignments for the Emergency Information Centre as necessary
- Contact Air Products to provide some information on the nature of the event
- Participate in briefings to senior officials
- Determine the constraints on information process
- Establish a schedule for news briefings
- Obtain current incident status reports from Planning Section. Co-ordinate a schedule for updates.
- Obtain approval for information releases from the EOC Manager
- Confirm details to ensure no conflicting information is released
- Identify offsite location & time for media briefings, and confirm participation by other members of the Incident Management Team
- Establish contact with local, provincial and national media representatives as appropriate.
- Release approved emergency information to media. Post information at the EOC.
- Record all interviews and copy all news releases.
- Contact media to correct erroneous or misleading information being circulated.
- Provide all news releases, bulletins and summaries to the Documentation Unit.
- Confirm with all concerned, the process for the release on information concerning incident-related injuries or deaths

## Documentation / Scribe

- Establish work area. For large scale events, ensure adequate duplication facilities.
- Establish & organize incident files.
- Determine the number of Incident Action Plan copies required copy and distribute.
- Retain & files duplicate copies of official forms & reports.
- Collect all completed Activity Logs from staff assigned to the incident
- Compile a final incident package, including all relevant documents from each section.
- Check the accuracy & completeness of records submitted for filing.
- Ensure that legal restrictions on public & exempt records are observed
- Submit completed incident files to Planning Section Chief.

## Economics & Scheduling

- Obtain the expected duration of the event from the Operations Section to determine the potential impacts and provide input into the IAP.
- As soon as possible, start planning the recovery portion of the IAP
- Keep the Planning section Chief advised of your status and activity and on any problem areas.

### Planning Support

- Maintain awareness of incident objectives and current situation.
- Provide information and advice within your area of expertise as required.
- Ensure that all recommendations are documented.
- Participate in the development of the Incident Action Plan as requested.
- Keep the Planning section Chief advised of your status, activity and any problem areas.
- Anticipate potential situation changes & think of appropriate contingencies or considerations that may be required.
- Be prepared to participate in planning meetings as requested.
- Provide periodic situation or status reports to your Section Chief.

### Contract & Procurement

- Develop Incident Procurement Plan:
- Prepare & sign contracts as necessary
- Establish contact with supply vendors as needed.
- Determine if additional vendor-service agreements will be necessary
- Interpret contracts/agreements and resolve claims or disputes within delegated authority.
- Verify invoices
- Maintain final incident receiving documents.
- Provide cost data from rental agreements, contracts, etc. to the Finance / Administration Section Chief according to the reporting time frames established.

### Staging Area Coordinator

- As each responding company arrives, make down their information as indicated on the log sheets.
- Inform the Logistics Section Chief of each arrival.
- Brief each responding company on the nature of the event.
- Keep the apparatus at the staging area until it is specifically requested by the LSC.
- When requested indicate the location where Security will receive the apparatus and escort it to the scene.
- Notify the LSC when apparatus has been dispatched.

### Logistics Support

- Maintain awareness of incident objectives and current situation.
- Provide information and advice within your area of expertise as required.
- Ensure that all recommendations are documented.
- Participate in the development of the Incident Action Plan as requested.
- Keep the Logistics Section Chief advised of your status, activity and any problem areas.
- Anticipate potential situation changes & think of appropriate contingencies or considerations that may be required
- Be prepared to participate in planning meetings as requested.
- Provide periodic situation or status reports to your Section Chief

### Safety / Security / Medical

- Maintain awareness of incident objectives and current situation
- Anticipate hazardous situations associated with the emergency event and the response.
- Anticipate potential situation changes and think of appropriate contingencies that may be required.
- Ensure adequate sanitation and safety in regards to food & water
- Investigate & document accidents that have occurred within the incident area.
- Perform traffic control at the Main Gate
- Escort any emergency traffic as requested by the Incident Commander or the HSSE SC.
- Respond to requests for medical treatment and transportation.
- Request / supervise ambulance support
- Prepare medical reports; provide copies to Documentation Unit.
- Coordinate critical incident stress and other debriefings as necessary
- Determine and anticipate your support need and forward to the HSSE Section Chief
- Be prepared to participate in planning meetings if requested.
- Provide information and advice as required.
- Ensure all recommendations are properly documented.
- Keep the HSSE SC advised of your status and activity and on any problem areas

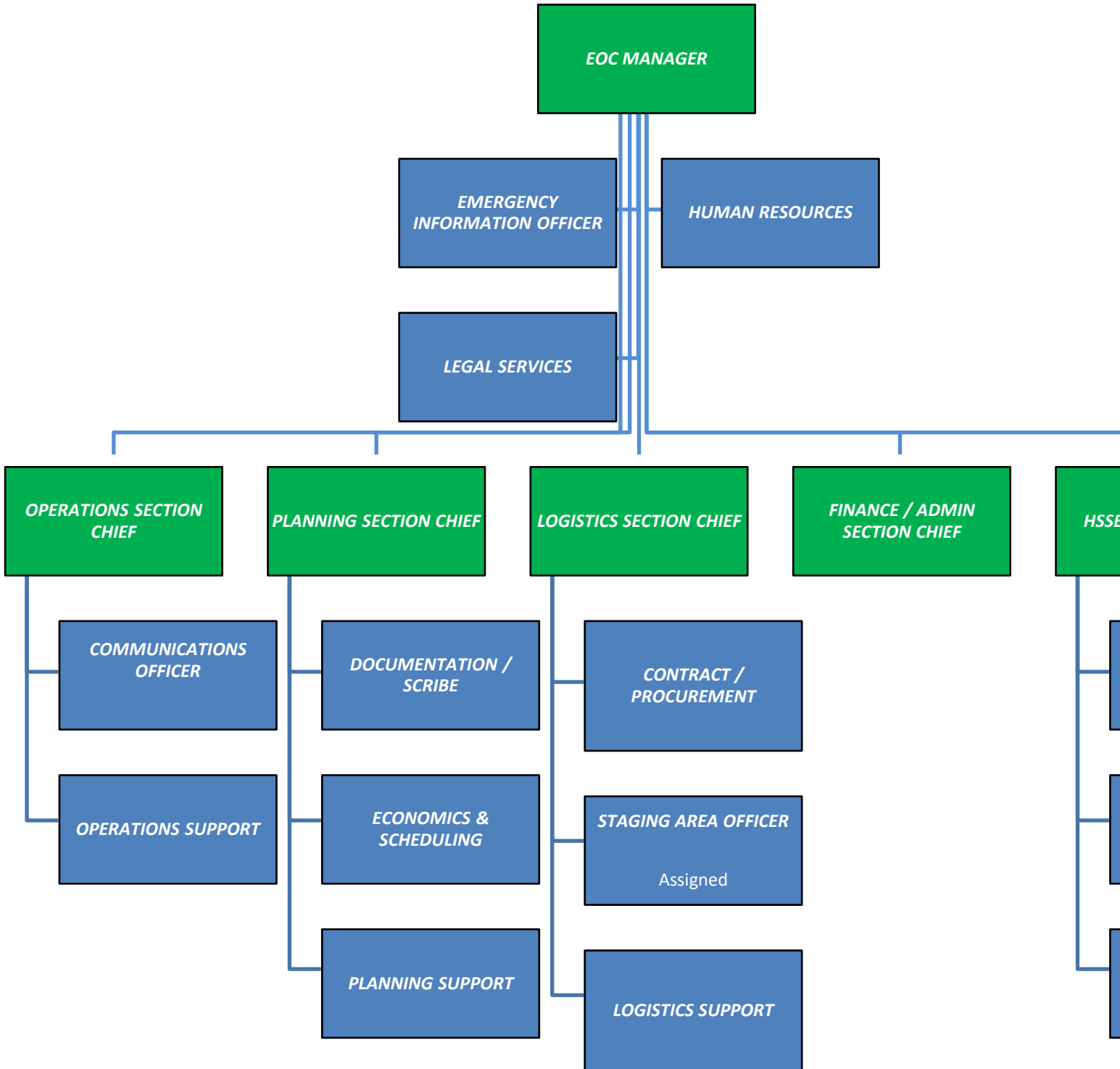
### Environmental Unit

- Participate in the development of the Incident Action Plan
- Maintain awareness of incident objectives and current situation.
- Anticipate potential situation changes and think of appropriate contingencies that may be required.
- Determine and anticipate your support need and forward to the HSSE Section Chief
- Be prepared to participate in Planning meetings and policy discussions if required.
- Provide information and advice as required.
- Ensure all recommendations are properly documented.
- Keep the OSC advised of your status and activity and on any problem areas.

### Industrial Hygiene Unit

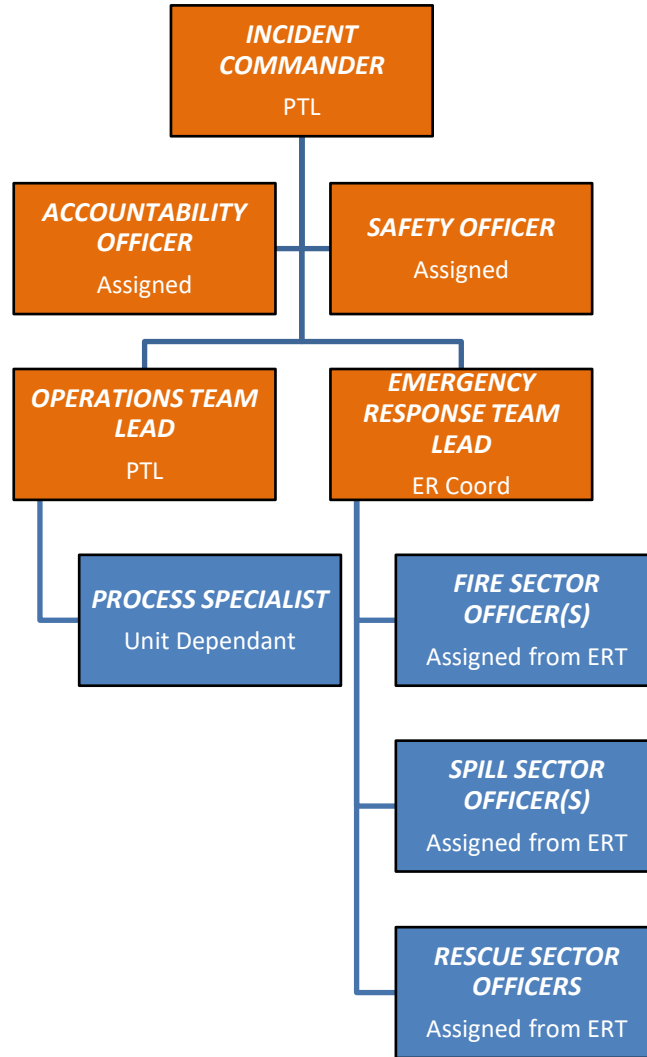
- Participate in the development of the Incident Action Plan
- Maintain awareness of incident objectives and current situation.
- Anticipate potential situation changes and think of appropriate contingencies that may be required.
- Determine and anticipate your support need and forward to the HSSE Section Chief
- Be prepared to participate in Planning meetings and policy discussions if requested
- Provide information and advice as required.
- Ensure all recommendations are properly documented.
- Keep the OSC advised of your status and activity and on any problem areas.

# Section 7 Corporate and Operational Chains of Command

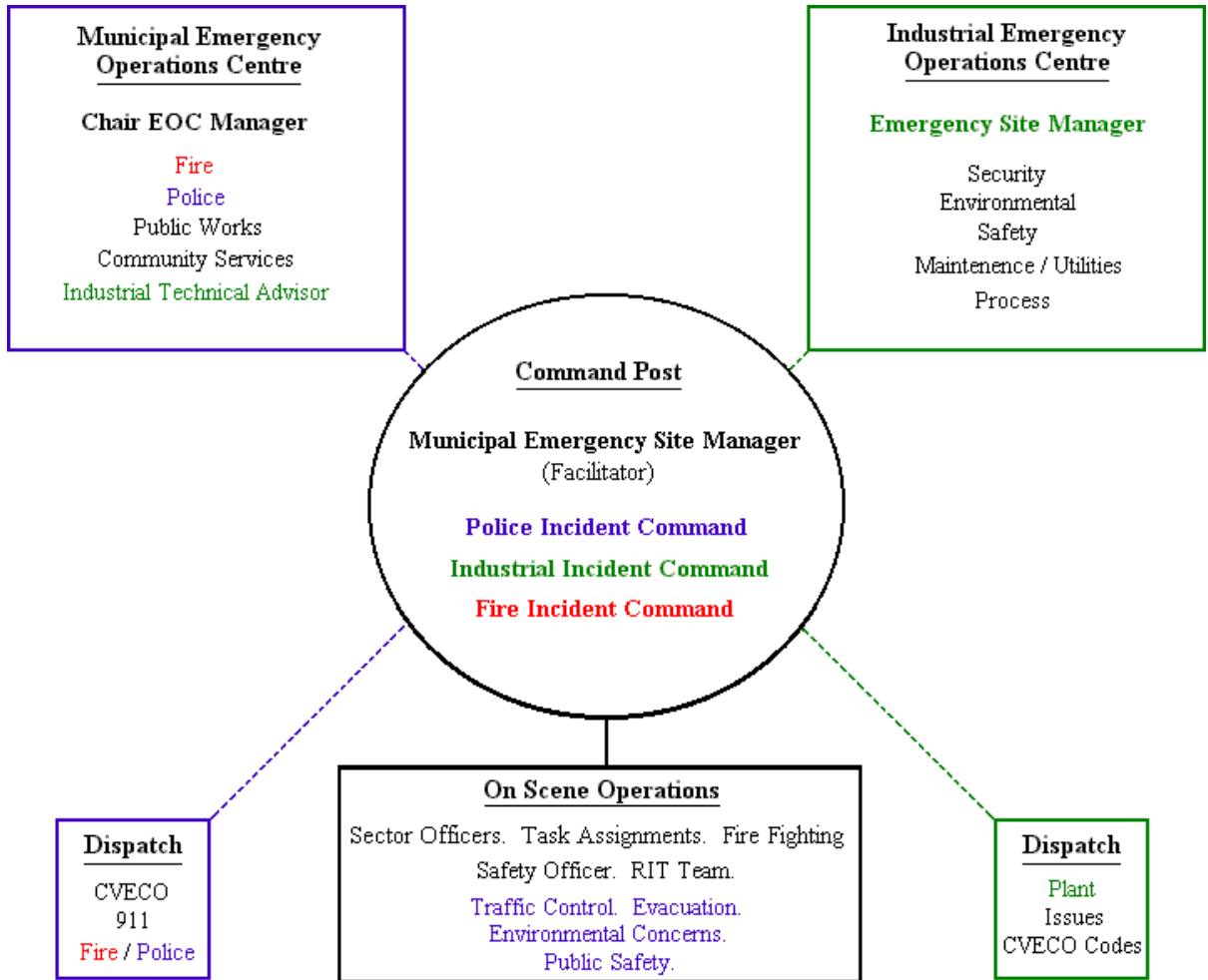




## Corporate and Operational Chains of Command



Overall CVECO Incident Management

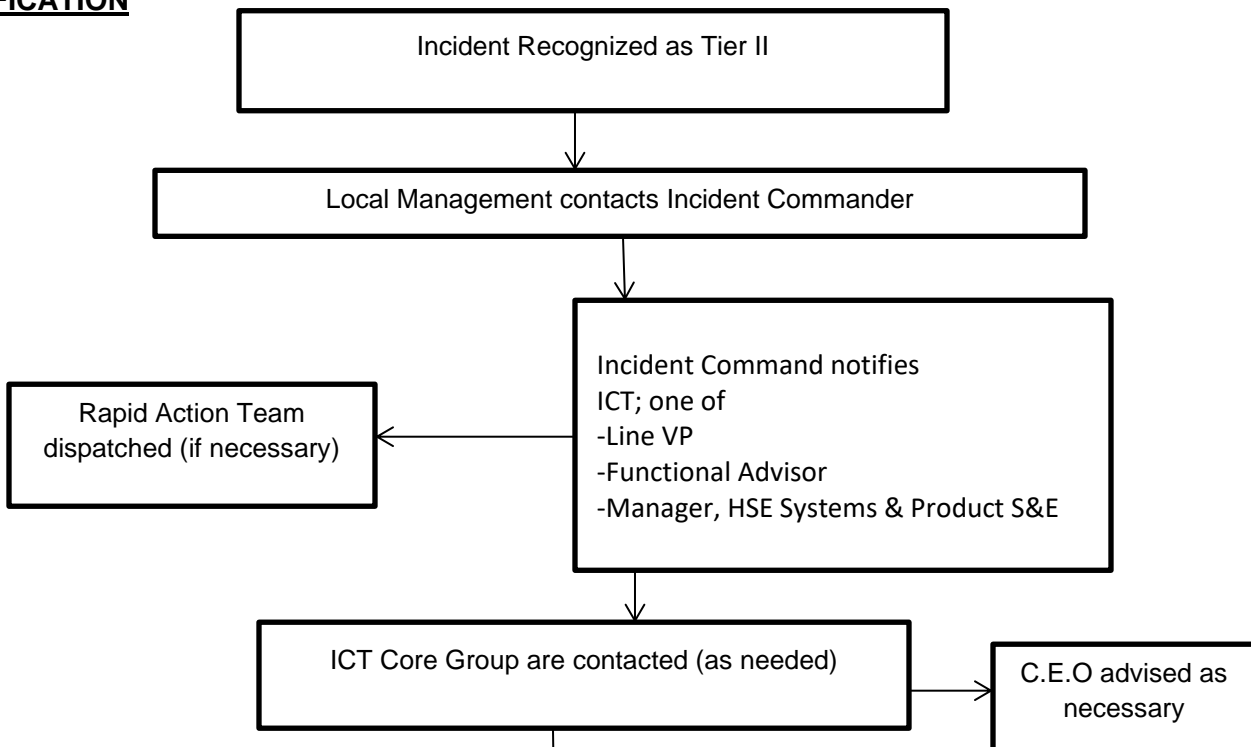


Color	Function
Green	Industry
Red	Municipal Fire/Rescue Departments
Blue	Police Or Municipal Officials
Black	Unified Command functions.

## Notification/ Activation Procedures

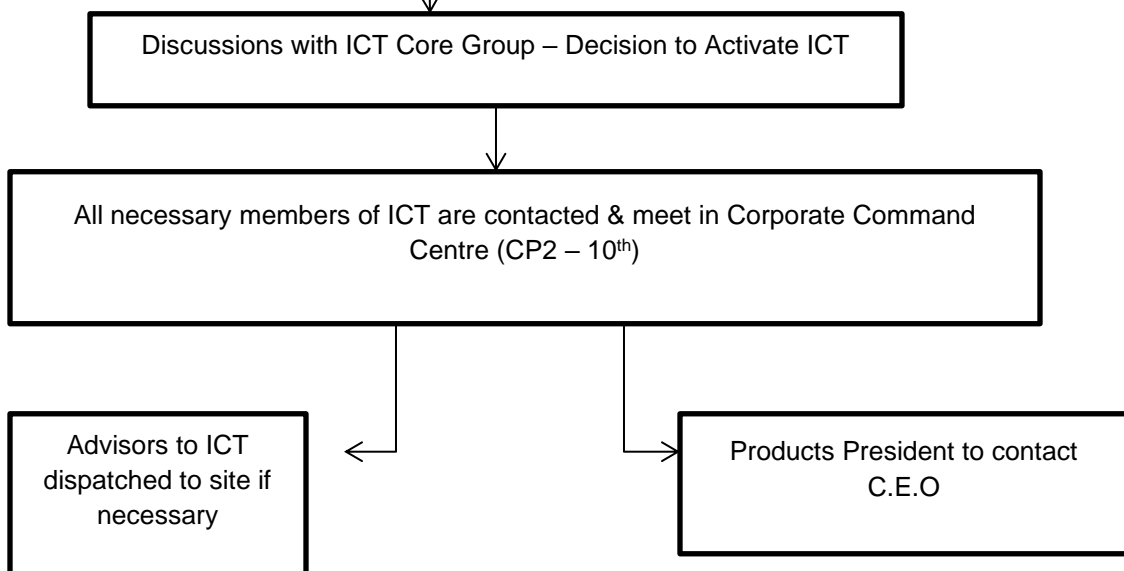
SMC's Incident Command Team (ICT) could be activated during an incident by the Incident Commander or designate who would notify the "Line Vice-President", designate or person on duty. The ICT would then be activated by the "Line Vice-President", designate or person on duty.

### NOTIFICATION



### INCIDENT ESCALATES TIER III

### ACTIVATION



## Section 8

### Description of Levels of Emergency

#### 1. Emergency Definition

For the purpose of the Procedures, an emergency is any potential or real developing situation that may result in serious injury, loss of life, property damage and/or potential impact on the environment, which calls for immediate action.

#### 2. Tiered Response

The SMC Emergency Response Organization is based upon a three-tiered response structure. Incidents would be identified and categorized into one of three tiers depending upon the nature and severity of the incident. Each tier would be managed by an escalating degree of management seniority and assistance from outside the department. The ICS based Emergency Response System provides the flexibility to tailor the size of response organization to the specifics of the incident and allows for rapid adjustments as the incident evolves.

Most incidents are not severe enough to warrant classification and would be handled in the normal course of business by local personnel. Local management would make the initial determination of the classification of the event when notified with input from other personnel. However, the event could be subsequently reclassified upon review. It is essential to define as quickly as possible the level of response required always erring on the high side if any uncertainty exists. The following definitions provide guidance in the early classifications of incidents.

<b><u>Tier I</u></b>	A Tier One response is one in which the potential public and environmental exposure is moderate, and the problem can be primarily corrected with local resources and some third party assistance. Although the incident is managed by local management and resources, the SERTS and members of the RAT may be called upon to provide necessary response and expertise in certain emergency situations. Government involvement and media interest would be relatively low and would be restricted to the local level during a Tier One incident.
<b><u>Tier II</u></b>	If the incident is beyond the control of the local management, it becomes a Tier Two Incident. A Tier Two incident is one with regional implications and potentially significant public and environmental exposure. Government involvement and media interest would be moderately high, but primarily at the regional level.  The ICT Incident Commander would manage a Tier Two incident with support from RRT and local personnel. The Incident Commander may also call on other technical groups for assistance (e.g., SERTS) if the incident warrants. The Incident Commander would be in communication with the appropriate Business Function Manager, and may call upon more specific technical advice from members of CMT.
<b><u>Tier III</u></b>	A Tier Three incident is one with national or global implications, where potential public or environmental exposure is significant and media interest is intense. An employee or third party fatality would automatically become a Tier Three incident. Maximum Shell and third party resources would be activated to respond to a Tier Three incident.  In the event of a Tier Three incident, the CMT would be activated. However, the RRT's would continue to manage the incident, with support, guidance and specialist advice from the CMT.

Criteria of Determining Levels of Emergency

Tier I	Tier II	Tier III
<ul style="list-style-type: none"> <li>• Small incident (a few hours)</li> <li>• Managed by site operations, site ERT or local authorities</li> <li>• No impact outside of the Shell fence</li> <li>• Usually no engagement with media</li> </ul>	<ul style="list-style-type: none"> <li>• Medium incident (more than a few hours and less than 2 or 3 days)</li> <li>• Managed by site ICT or regional IRT, includes local authorities</li> <li>• Impact outside of the Shell fence to local stakeholders</li> <li>• External parties engaged, reputation issues, cost issues</li> <li>• Notification to Country Chair required</li> </ul>	<ul style="list-style-type: none"> <li>• Large incident (weeks or months)</li> <li>• Managed by site ICT or National Response Team</li> <li>• Significant impact outside of the Shell fence to many stakeholders, population and economy.</li> <li>• National or International impact, media highly involved, including social medias.</li> <li>• Significant cost and reputation issues</li> <li>• Fatality</li> <li>• County CMT activated, Group Crisis notified and /or activated.</li> </ul>

## Section 9

### Mutual Aid Agreements

SMC has two types of Mutual Aid arrangements. The first is with the Chemical Valley Emergency Coordinating Organization, and the second is through the Canadian Transport Emergency Centre (Department of Transport).

#### **1. Chemical Valley Emergency Coordinating Organization (CVECO)**

**NOTE: (i) CVECO radio tested daily (at 7:00 a.m.) and is logged at SMC's Main gate; and (ii) refer to CVECO Manual for detailed information.**

The CVECO is comprised of industry, municipal police and fire departments and representatives from the RCMP, the City of Sarnia and the St. Clair Township. Membership with CVECO is obtained yearly for a fee. Membership must be renewed every year, and paid in full. Membership at Shell is looked after by the Safety Specialist. No actual membership card is provided, simply a receipt as proof of payment is sufficient to maintain good standing in the organization.

Under a mutual aid agreement between its members, a company requiring additional fire equipment and manpower may obtain this assistance by calling a code 9. An updated list of equipment available from each industry member is kept in CVECO manual.

As a member, Shell is prepared to help other CVECO members, such as in the form of equipment. While Shell does not normally send manpower, one or two people can be sent to deliver the requested equipment.

If the request is received during normal working hours, the Environment/Safety/Manager or their designate will decide what equipment (and manpower) can be spared. If the request is received outside of normal working hours, the PTL will decide what equipment can be spared and if manpower is available to deliver it.

<b>CVECO Assistance Codes</b>	
CODE 5	Accident emergency outside of member's industry that may require Industrial or CVECO assistance
CODE 6	Full traffic control in whatever area requested.
CODE 7	Bomb Treat.
CODE 8	Advice by any member of a potential problem - but no action required by CVECO
CODE 9	Request for Municipal Fire Department assistance by CVECO

#### *Response Procedures for Codes 8 & 9*

**CODE 8** - After issuing a code 8, the Guard must call 911 within 10 minutes, using the completed CVECO Notification Checklist.

#### **CODE 9**

A CVECO member issues a "Code 9" over the CVECO radio system and remains on the system until their call has been acknowledged. (If member has no CVECO radio or the radio is inoperable, call "911")

Communication Centre acknowledges the message and confirms details with the caller.

Communications Centre notifies the appropriate Fire Department by radio or pager system or telephone.

Communication Centre advises over the CVECO radio network "There is a Code 9 at...."

The Fire Department responds to the call with pre-determined equipment.

From CVECO's point of view, this ends the Communication Center's involvement until the "All Clear" is advised. The time of the initial call is recorded.

The member who issued the Code 9 must give "All Clear" to the Communication Centre. The Communication Centre will then broadcast the "All Clear" over the CVECO radio network.

#### **Traffic Controls**

- AREA 1 Sarnia to Indian Road and Confederation
- AREA 2 OPP - LaSalle Road and St Clair Parkway (As appropriate for wind direction & plant site involved)
- AREA 3 Campbell Street and Indian Road
- AREA 4 To be determined based on circumstances of the incident

## **2. Canadian Transport Emergency Centre (CANUTEC)**

CANUTEC is the Canadian Transport Emergency Centre operated by Transport Canada to assist emergency response personnel in handling dangerous goods emergencies. This national bilingual advisory centre is part of the Transportation of Dangerous Goods Directorate. It has the mandate to regulate the handling, offering for transport and the transport of dangerous goods by all modes in order to ensure public safety. CANUTEC offers a 24-hour emergency telephone service for those registered. Shell Canada Limited is a registered at this Centre.

### **Information Sources**

CANUTEC's data bank consists of information on more than 750,000 commercial products. In addition to its data sources, CANUTEC has access to the following resources:

- a) an extensive emergency response reference library
- b) directories of Canadian and foreign chemical manufacturers, shippers and transporters
- c) directories of emergency response groups across the country including public agencies both federal and provincial, medical facilities and health specialists
- d) list of specialized equipment suppliers

### **Services**

Taking into consideration the characteristics of the dangerous goods involved and the particular conditions at the emergency site, CANUTEC's professional staff can provide immediate advice on:

- a) chemical, physical and toxicological properties and incompatibilities of the dangerous goods
- b) health hazards and first aid;
- c) fire, explosion, spill or leak hazards;
- d) remedial actions for the protection of life, property and the environment;
- e) evacuation distances;
- f) Personal protective clothing and decontamination.

CANUTEC staff does not go to the site of an incident; instead, they provide advice and information by telephone.

### **For SMC**

Anyone needing to report an incident or requiring emergency assistance related to dangerous goods will call CANUTEC at **(613) 996-6666**. For general information purposes, like questions, call CANUTEC at (613) 992-4624.

Notify CANUTEC for an incident involving a railway vehicle or aircraft. For an incident involving a ship, notify CANUTEC, a Vessel Traffic Services Centre or a Canadian Coast Guard radio station.

The *Transportation of Dangerous Goods Regulations* (Part 8 in 8.1) has specific requirements for immediately reporting an accidental release of dangerous goods if the quantity is greater than a threshold amount. For Class 3 (Flammable Liquid), the quantity is 200 litres. An imminent accidental release of dangerous goods must also be reported immediately.

Reporting obligations include notifying the appropriate provincial authority, which, for Ontario, are the local police. The consignor of the dangerous goods must also be notified.

The SMC site contact person for dangerous goods is the Dispatching Production Specialist. For further information, please refer to the SERT's Manual ("**Shell Emergency Response Team**" Manual).

### **[SMC Personnel List](#)**

See Appendix B at the end of the manual.

### **[SERTS Response \(Incident Escalation Process\)](#)**

See Appendix C at the end of the manual.

## Section 10

### Communication Information

(CWP-014 – Media Relations from the CVECO Manual)

#### 1. GENERAL INFORMATION

- 1.1 The purpose of this section is to facilitate the availability of clear and accurate information to the public.  

NOTE: One of the primary considerations in making this happen is to ensure that the same information is provided to the media through the Industrial and Municipal emergency Operations Centres. The source of this information must be the Mobile Command Post, where both industrial and municipal representatives are located. All information pertinent to managing the response is concentrated here.
- 1.2 Most Chemical incidents are fast breaking, and there is immediate media interest. The goal is to provide all media personnel with equal information at the same time, as the incident proceeds.
- 1.3 CVECO understands that the media is part of the overall response since they have the responsibility to keep the public accurately informed on a timely basis.
- 1.4 The industry at which an incident occurs will make arrangements for the issuing of media releases.
- 1.5 To protect media personnel, access or movement may be restricted. In particular, media personnel should expect an inner perimeter around an incident through which only actual emergency responders may pass while the incident proceeds.
- 1.6 Depending upon the severity and length of the incident, the media information centre may be at the Municipal Emergency Operations Centre, or at a designated Industry Media Centre.
- 1.7 Freedom of movement will be allowed to media representatives, where practical. Observer safety, rescue operations, response activities or other circumstances may limit allowable movement

#### 2 INDUSTRY RELATED DUTIES

- 2.1 The CVECO member will identify a Site Media Centre.
- 2.2 The Industrial Emergency Site Manager (IESM) will advise the Municipal Emergency Site Manager (MESM) of the location of the Media Centre, as quickly as possible.
- 2.3 The IESM will either be personally present, or appoint a delegate to be present at the media centre.
- 2.4 Relocate the site media centre, as necessary, and inform the MESM of the new location.
- 2.5 The IESM will authorize the use of a bus, through or near the incident site, to accommodate photographers, if necessary.



### **3 MEDIA PERIMETER ACCESS**

3.1 Under the direction of the Industrial Emergency Site Manager, to allow a person bearing a Media Identification Car to pass through an outer perimeter to some designated Media Centre.

### **4 MUNICIPAL & INDUSTRY MEDIA CENTRES**

4.1 The Media Centre will be as near the incident as the Site Emergency Co-ordinator will allow, to ensure the safety of responding and media personnel.

4.2 Industries are encouraged to identify "Site Emergency Media Centres" in advance of need.

4.3 Media Centres will be established at the Sarnia Police Headquarters or the St Clair Township offices, for scheduled media conferences.

## St Clair Township / South Sarnia Community Siren Alert

**When Used:** The sirens will be sounded when there is a need to advise the public to take immediate action in response to an event which poses a threat to their health and safety - e.g., take shelter, vapour release. The sirens may be sounded on the advice of industry in the event of a chemical release, which has the potential to have a harmful impact on nearby residents.

**Who Activates:**

- 1) Sarnia 911 on duty N.C.O., or
- 2) St. Clair Township Fire Department (back up only).
- 3) Sarnia Airport (back up only).

### **How it's activated:**

A request to activate the community alert system may be made by placing a telephone call to 519-344-8881 ext. 5200 or by broadcasting over the C.V.E.C.O. radio channel. The Sarnia dispatch operator receiving the call will accept all information provided by the caller (in an industrial incident it will be the industrial incident site commander, a senior manager or an individual acting on their behalf) and immediately relay the information to the Sarnia Police N.C.O. on duty.

### **Required Information**

The caller from industry will provide an emergency contact name and telephone number (the industrial person who is in charge of the situation and has decision-making authority), state the nature of the emergency, identify the affected areas and the recommended course of action.

Upon receipt of a recommendation from industry to activate the alert system, the Sarnia Police N.C.O. will review the information and make a determination whether to activate the sirens and alert residents in the area identified to be at risk. The N.C.O. will base their decision on the information provided and may expand the alert area if such action is felt to be warranted (including into Aamjiwnaang, Point Edward and St. Clair). As a precautionary measure, the siren system may also be used to alert residents (prior to receiving information from industry) if there is evidence that a release has occurred and there is impact on the community.

### **Changing Situation:**

If after the initial siren sounding the situation changes requiring further action, the sirens are to be sounded again alerting the community to again monitor their radio for additional instructions. The Sarnia Police N.C.O. will, in collaboration with Unified Command, arrange to have the appropriate new message broadcast.

**Siren Locations:**

Point Edward	-	Arthur & Michigan
Sarnia	-	Vidal & Campbell
	-	Bright & Russell
	-	Indian & Lansdowne
	-	Sherwood Park
Aamjiwnaang	-	Virgil & Chippewa
Area	-	Tashmoo & Christopher
	-	Scott & Christopher
St. Clair Twp.	-	Fire Hall (Hill Street)
	-	St. Clair & Bentinck
	-	Behind the Corunna Legion

**Siren Alerts:** Sirens will alert the public to tune their radio to:  
-1070 CHOK AM, or  
- 99.9 FOX FM, or  
-106.3 CHKS FM  
-103.9 CHOK FM

**All Clear:** is to be given by radio and television broadcasts by Sarnia Police, NOT by Siren.

### **ST CLAIR TOWNSHIP TELEPHONE '1-CALL' SYSTEM**

Use of the St. Clair Township Telephone 1-Call System to approx. 2400 residents of St Clair Township must be initiated through the Township Fire Chief / Emergency Services Director or his/her delegate. This system can be split into two different areas of notification alerting Corunna or Froomfield separately or both at the same time. A full notification of all areas can take up to 20 minutes.

Prime responsibility for initiating the 1-Call System rests with the Incident Commander or Deputy.

### **Aamjiwnaang COMMUNITY 1-CALL SYSTEM**

Use of the 1-Call telephone system for the Aamjiwnaang Community (owned and operated by the Aamjiwnaang) is initiated by contacting those in authority with the Chippewa. This contact should be processed through contact with the Sarnia Police who will alert the Aamjiwnaang Emergency coordinator and provide details of Sarnia's response.

**NOTE: EVACUATION OF THE COMMUNITY IS THE RESPONSIBILITY OF CITY / TOWNSHIP AND INSTRUCTIONS TO DO SO MUST BE LEFT TO THE PROPER MUNICIPAL AUTHORITY.**

## **Communication System**

### **Chemical Valley Emergency Coordinating Organization (C.V.E.C.O.)**

A special radio system, with a base station at the main gate, is in use for emergencies which require the Chemical Valley Traffic Control Plan to be put into operation or for use on occasions when member companies in the Chemical Valley require mutual aid. Details of the plan can be obtained from the CVECO manual on this subject; however, the following is a summary of those aspects involving communications.

In the event of an "emergency" (Fire, explosion, or hazardous situation) or an "alert" (potential emergency) at Sarnia Refinery, the guard at the main gate will inform the Sarnia Police Department (using the special radio system for this purpose) whether there is an "Emergency" or an "Alert", following the "Shell Canada - Sarnia Refinery" and our radio call letters "X.J.F.-737". Sarnia Police will relay the message to the other companies involved. Upon termination of the Emergency or Alert the guard will radio "All Clear" to the City Police who will, in turn, inform the remaining companies.

If an emergency occurs at one of the other companies, Sarnia Police will contact Shell by this radio system giving details.

Refinery communication systems include: Telephones, Alarm and P.A. system, Emergency radio channel, Process radio channel, Maintenance radio channel, Guards and Safety Radio Channel, Project radio channel, Inspection radio channel, Shutdown radio channel, and C.V.E.C.O. radio. (2 undedicated radio channels are also available)

Communications in effect during normal operations: Process, Dispatching and Utilities communications will be conducted on the operations dedicated channels (2, 3, 4, 5, 6, and 9). The Emergency Channel 7 will not be in use. Maintenance Dept. communications will be on the Maintenance frequency Channel 12.

In the event of an emergency the Fire Chief will decide who will switch to the Emergency Channel and when. It would most likely be those directly concerned with the emergency (e.g. the unit in question and the fire or emergency crew.) Others would remain on their normal channel to keep the Emergency channel as clear as possible. Emergency channels are monitored in the Control Rooms.

The Security Guard at the Main Gate can relay messages to Maintenance personnel and the Laboratory on the maintenance radio. With the C.V.E.C.O. radio he can contact City Police and, through them, City fire Departments, O.P.P. and other industries.

The Security Guard at the Chemical Plant Main Gate can monitor the Emergency channel since it is shared by both locations.

## *CVECO Communications*

### *Radio Communications*

There are two radio frequencies utilized within the CVECO Organization:

- 1) CVECO Notification
  - a. Notify the municipality and other CVECO members of emergencies.
  - b. VHF -159.12MHz
  - c. Operates over a large area on repeaters
- 2) CVECO Training/operational
  - a. Fire ground communications between responders.
  - b. UHF – 458.93750MHz
  - c. Operates locally with no repeaters

The Sarnia Fire/Police Service Communications Center will be the central control for all CVECO communications on this channel. However, each CVECO code will be handled by the policing agency in the area of the industry initiating the call.

Area 1 – Sarnia Police

Area 2 – Ontario Provincial Police (OPP)

Area 3 – Sarnia Police

Area 4 – Sarnia Police, however Pt. Edward OPP are dispatched

Area 5 – OPP

## *Public Relations and Media*

Keeping the public informed and having a good report with our neighbours always remains a priority. Managing the spread of correct information between our organization and the public remains a top concern.

The Holding Statement is updated by the Communications Advisor and approved by the Incident Commander as more information becomes available. Pre-scripted responses typically are not available as each scenario and incident is unique and varies and we pride ourselves in providing the most up-to-date information as possible.

All local media outlets carry CVECO pagers. They are all notified of an unplanned event/emergency immediately as part of the CVECO notification process. Media receives the same information as emergency responders receive on the pagers. Communication with local media outlets is immediate. It typically happens in the first moments of the unplanned event. When the media outlet receives the initial CVECO page, it will make contact via telephone with the Shell Communications Advisor, who issues a verbal statement.

Shell utilizes local media, both newspaper and radio, to issue statements. From there, the statements are often “tweeted” and posted on the media outlet’s website. In the case of radio, the information is broadcast. Shell also forwards the statement to the Aamjiwnaang First Nation, which posts it on the Band’s Facebook page. Shell Canada has a Facebook and Twitter feed which we can also utilize, via access from a company focal in Calgary.

## *Alternative Communication*

In case of serious emergency, Shell can access alternative means of communications above and beyond our usual means.

In addition to social media sites, the local media, including newspaper and radio can also be used. Shell is also a member of a newly implemented St Clair Township Telephone '1-Call' System.

Additionally, residents and passerbies may report any concerns, or possible incidents to Shell. A 24/7 phone number is provided via the Shell main gate. Shell Security takes the reports and they are immediately communicated to the Production Team Leader and/or Communications Advisor for investigation/further follow-up.

The Communications Advisor, with approval from the Incident Commander controls the information released to the public. During an unplanned event, it is established early on who the media spokesperson for the incident is.

## Section 11

### External Contact List and Communication Information

#### Outside Agencies and Phone Numbers

Reference **Appendix A** at the end of the manual for complete list.

## Section 12 Monitoring

### Leak Detection System Description of Operation

**NOTE: This procedure has been identified as a Health, Safety and Environmental Critical Task (SGHSE001)**

#### **The SCL “A” leak detection program is owned and operated by Buckeye development and logistics**

Buckeye’s Leak Detection system monitors, the metered volume exchange and calculates a change in line pack between the refinery and Marysville. The difference between the volume exchange and change in line pack is considered an imbalance. That imbalance is monitored over several time windows ranging from 3 minutes to 24 hours. For each time window, we have a threshold wherein an alarm is generated if the imbalance exceeds that threshold. That threshold level’s percentage of total flow progressively tightens as we move from the shorter duration time windows to the longer duration windows. In general, the system is designed to detect large leaks and ruptures in the shorter time windows, and smaller leaks in the longer time windows.

The Controller (Buckeye) will receive an alarm that the specific Leak warn is beyond the Threshold. At that point the Controller will start to investigate the cause of the alarm. There are certain plot trends that are specifically characteristic to a leak and some that are not. If it is typical indication, the Controller will immediately shut down the line and notify local personnel for further trouble shooting and/ or to mobilize Emergency Response personnel. The second phone call will be to

[REDACTED]  
Buckeye Development and Logistics  
Mont Belvieu Control Center Group Leader

[REDACTED]

Or [REDACTED]  
Senior Operations Manager  
Buckeye Development & Logistics

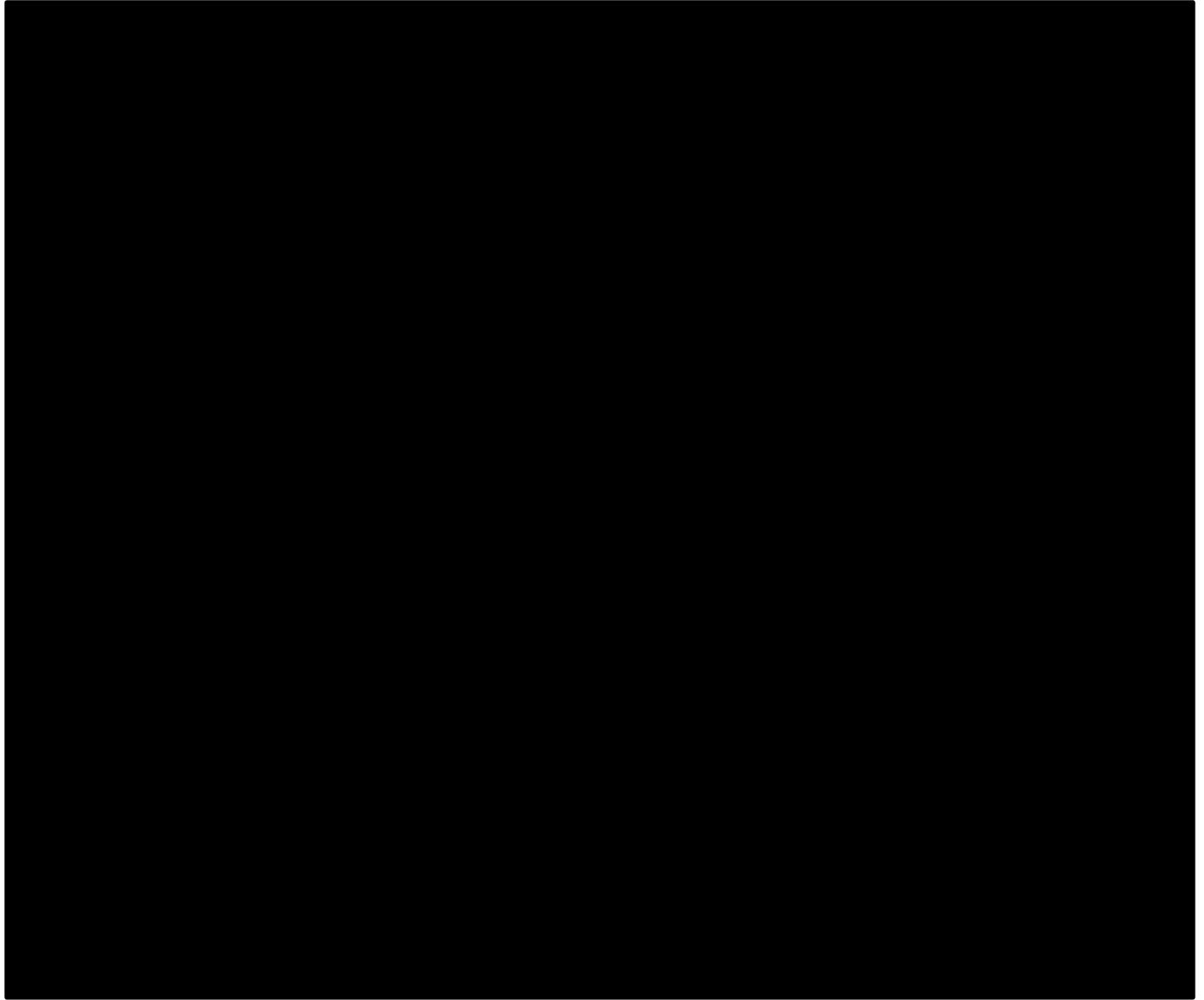
[REDACTED]  
[REDACTED]

If it is not a typical indication of a leak, then the Controller will still call local personnel to help investigate the cause of the imbalance. This is part of Buckeye’s initial training for new employees and we have ongoing training throughout employment.

[individual’s name, personal information]

## Buckeye / Shell Leak Detection System

[technical drawing; security risk]



Once the pipeline is running **any alarm that is received should be checked and verified right away (communicated to refinery by controller)**. **If unsure; shutdown the pipeline and isolate until the cause of the alarm has been checked.** Check the line from 3<sup>rd</sup> & F St. to the river crossing and notify Marysville (MUST) that the pipeline has been isolated and checked, they should check their side. If no reason for the alarm can be found and the alarm is still ON then call in an instrument man to check out. When satisfied then restart the pipeline.

Flow trends should be checked periodically to see that the Shell flow (GF622) and the Marysville flow (GF 612A) are tracking together **especially if a Leak Detect alarm has sounded.**

Factors that could cause the shortage alarms:

- a) Sudden pressure swing on one side but not the other causing a product imbalance (e.g.: t/c swings)
- b) Not resetting both the Shell and the Marysville totalizer at the same time (beginning) can cause a large difference of total, which is interpreted as a loss of product.
- c) Leak in the line causing a shortage of product to be detected at the alarm intervals



## ROUTINE AREA CHECKS

The field assistant performs routine visual checks of the piping/equipment associated with the SCL twice each 12 hour shift. Findings are noted in the "Field Assistant Shift Report".

### Abnormal Emissions - General Action

Abnormal emissions of any kind should be reported to the operator of the area concerned. If the Main gate Security Guard notices an abnormal emission they must notify Operations and the PTL by radio.

List of available gas testing equipment onsite.

<i>Location of Instrument</i>	<i>Chemical Agent it Detects</i>						
	Total Hydrocarbon	Benzene	Hydrogen Sulphide	Oxygen	LEL	Carbon Monoxide	Sulphur Dioxide
<b>Permit Issuers: P1, P2, TPH</b>							
TMX			0-999 ppm	0-30%	0-100%	0-999 ppm	
MiniRae THC	0-4000 ppm						
Personal clip-on monitors			0-90 ppm				0-90 ppm
UltraRae		0-200 ppm					
<b>Permit Issuers: Steam Plt &amp; CO Boiler</b>							
TMX			0-999 ppm	0-30%	0-100%	0-999 ppm	
ITX			0-999 ppm	0-30%	0-100%	0-999 ppm	0.2-99 ppm
Personal clip-on monitors			0-90 ppm			0-900 ppm	0-90 ppm
<b>OSC's Office:</b>							
TMX			0-999 ppm	0-30%	0-100%	0-999 ppm	
<b>"B" Building:</b>							
⇒ Industrial Hygiene Lab							
Drager CMS		0.2 - 10ppm					
ToxiRae	0-2000 ppm						
UltraRae		0-200 ppm					
PPBRae	0-9999 ppb						
Personal clip-on monitors			0-90 ppm			0-900 ppm	0-90 ppm
⇒ Emergency Response Case (in I.H. Lab)							
MultiRae	0-2000 ppm		0-100 ppm	0-30%	0-100%		0-20 ppm
Drager CMS		0.2 - 10ppm					
UltraRae		0-200 ppm					
⇒ Safety Inspectors							
TMX			0-999 ppm	0-30%	0-100%	0-999 ppm	

## Section 13 Response Procedures

### Emergency Checklist

#### PERSONNEL RESPONSIBILITIES

##### 1. Control Centre Operator - Sarnia/Marysville

###### A. External Leak Report

1. Determine location of leak.
2. Shut down the pipeline as required.
3. Initiate isolation procedure for control section involved.
4. Initiate Cascade System of Notification.
5. Dispatch personnel and equipment to leak location.
6. Act as central communications centre and coordinate emergency activities until Operation's Coordinator arrives.
7. Keep a log of events as they occur.

###### B. Internal Leak Report

1. Decide if leak detection alarm is real.
2. Initiate emergency shutdown on system involved.
3. Initiate aerial and ground patrol.
4. Initiate Cascade system of Notification.
5. Act as Central Communications Centre and coordinate emergency activities until Operation's Coordinator arrives.
6. Keep a log of events as they occur.

##### 2. PTL

1. Determine the magnitude of the emergency.
2. Continue Cascade System of Notification.
3. Review actions taken by control Centre Operator.
4. Ensure that the pipeline has been shut down safely and rapidly at origin and close valves as required.
5. Assume responsibility for directing emergency activities.
6. Check profile and maps.
7. Dispatch personnel and equipment to leak location if this has not already been done
8. Assess the need for outside help and notify local police.
9. Enlist Contractor's personnel and equipment.
10. Coordinate communications with Regulatory and Public authorities and Shell Personnel
11. Re-examine plan as action proceeds.
12. After the emergency situation has been resolved, return line to service.
13. Maintain a log of all pertinent data, times of notifications, valve closures, bleed-down time, etc.

##### 3. Operations Coordinator

1. Continue Cascade System of Notification.
2. Alert and instruct personnel who are needed for technical or administrative assistance.
3. Direct the execution of major functions where a spill of major severity may require total Company effort and close cooperation with Governmental or other Outside Agencies.
4. Act as liaison officer to coordinate proceeding with other affected Company Departments.
5. Coordinate press release with Public Relations and Legal Departments.

## Vapour Release Response Matrix

Areas to be closed off according to wind direction and size of vapour release.

Wind Direction	Size	Areas Affected	Defined Boundary	Route of Safe Approach	Staging Area	Command Location	Who is notified and by what method (After the required CVECO notification) Large Industries will be Notified by CVECO Radio	
South	Sm.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Indian Rd (east) St. Clair river west	Highway 40 - Hill St - St. Clair Parkway South	Front Gate	A Building	South Sarnia Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
	Med.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Indian Rd (east) St. Clair River west	Highway 40 - Hill St - St. Clair Parkway South	Corunna Fire Hall	A Building	South Sarnia Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
	Lg.	1, 2, Aamj., 4, St. Clair County, St. Clair River	Beckwith St. (south) - Lake Huron(north) - Highway 40 and Indian Rd (east) - St. Clair County (west)	Highway 40 - Hill St - St. Clair Parkway South	Corunna Fire Hall	A Building	West Sarnia Froomfield Aamjiwnaang St. Clair River Traffic St. Clair County US Point Edward	Call to Township FC By Sarnia Police
South East	Sm.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Indian Rd (east) St. Clair River (west bank)	Highway 40 - Hill St - St. Clair Parkway South	Front Gate	A Building	South Sarnia Froomfield Aamjiwnaang St. Clair River Traffic	Call to Township FC By Sarnia Police
	Med.	1, 2, Aamj., St. Clair County, St. Clair River	Beckwith St. (south) - Lake Huron(north) - Highway 40 and Indian Rd (east) - St. Clair County (west)	Highway 40 - Hill St - St. Clair Parkway South	Corunna Fire Hall	A Building	South Sarnia Froomfield Aamjiwnaang St. Clair River Traffic St. Clair County US	Call to Township FC By Sarnia Police
	Lg.	1, 2, Aamj., 4, St. Clair County, St. Clair River	Beckwith St. (south) - Lake Huron(north) - Highway 40 and Indian Rd (east) - St. Clair County (west)	Highway 40 - Hill St - St. Clair Parkway South	Corunna Fire Hall	A Building	South Sarnia Froomfield Aamjiwnaang St. Clair River Traffic St. Clair County US Point Edward	Call to Township FC By Sarnia Police

Wind Direction	Size	Areas Affected	Defined Boundary	Route of Safe Approach	Staging Area	Command Location	Who is notified and by what method (After the required CVECO notification) Large Industries will be Notified by CVECO Radio	
East	Sm.	Area 2, St. Clair River	Beckwith St. (south) - LaSalle Rd (north) - Highway 40 (east) St. Clair River (west bank)	Highway 40 - LaSalle Rd E - Chem. Site	Chem. Site Fire Hall	FW Building	North Corunna Froomfield St. Clair River Traffic	Call to Township FC By Sarnia Police
	Med.	Area 2, St. Clair County, St. Clair River	Beckwith St. (south) - LaSalle Rd (north) - Highway 40 (east) St. Clair County (west)	Highway 40 - LaSalle Rd E - Chem. Site - Foster Wheeler Building	Chem. Site Fire Hall	FW Building	Froomfield North Corunna St. Clair River Traffic St. Clair County US	Call to Township FC By Sarnia Police
	Lg.	Area 1, 2, Aamj. St. Clair County, St. Clair River	Beckwith St. (south) - LaSalle Rd (north) - Highway 40 (east) St. Clair County (west)	Highway 40 - LaSalle Rd E - Chem. Site - Foster Wheeler Building	Chem. Site Construction Parking Lot	FW Building	South Sarnia North Corunna Froomfield Aamjiwnaang St. Clair River Traffic St. Clair County US	Call to Township FC By Sarnia Police
North East	Sm.	Area 2, St. Clair River	Beckwith St. (south) - LaSalle Rd (north) - Highway 40 (east) St. Clair River (west bank)	LaSalle Rd- St. Clair Parkway north	Chem. Site Fire Hall	A Building	North Corunna Froomfield St. Clair River Traffic	Call to Township FC By Sarnia Police
	Med.	Area 2 expanded, St. Clair County, St. Clair River	Hill St. (south) - LaSalle Rd (north) - Highway 40 (east) - St. Clair County (west)	LaSalle Rd - Chem. Site - Foster Wheeler Building	Chem. Site Fire Hall	FW Building	North Half Corunna Froomfield St. Clair River Traffic St. Clair County US	Call to Township FC By Sarnia Police
	Lg.	Area 2 expanded, St. Clair County, St. Clair River	Rokeby Line (south) - LaSalle Rd (north) - Highway 40 (east) - St. Clair County (west)	LaSalle Rd - Chem. Site - Foster Wheeler Building	Chem. Site Construction Parking Lot	FW Building	Corunna Froomfield St. Clair River Traffic St. Clair County US	Call to Township FC By Sarnia Police

Wind Direction	Size	Areas Affected	Defined Boundary	Route of Safe Approach	Staging Area	Command Center Location	Who is notified and by what method (After the required CVECO notification)	
							Large Industries will be Notified by CVECO	
North	Sm.	Area 2	Beckwith St. (south) - Lasalle Rd (north) - Highway 40 (east) - St. Clair River (west)	Lasalle Rd- St. Clair Parkway north	Front Gate	A Building	North Corunna Froomfield	Call to Township FC Call to Township FC
	Med.	Area 2 expanded	Rokeby Line (south) - Lasalle Rd (north) - Highway 40 (east) - St. Clair River (west)	Lasalle Rd- St. Clair Parkway north	Chem. Site Construction Parking Lot	A Building	Corunna Froomfield	Call to Township FC Call to Township FC
	Lg.	Area 2 expanded, Area 5 as defined, St. Clair River, St. Clair County	Moore Line (south) - Lasalle Rd (north) - Highway 40 (east) - St. Clair County (west)	Lasalle Rd- St. Clair Parkway north	Chem. Site Construction Parking Lot	A Building	St. Clair Township Corunna Froomfield St. Clair River Traffic St. Clair County US	Call to Township FC Call to Township FC Call to Township FC By Sarnia Police By Sarnia Police
North West	Sm.	Area 2,	Beckwith St. (south) - Lasalle Rd (north) - Highway 40 (east) - St. Clair River (west)	Lasalle Rd- St. Clair Parkway north	Front Gate	A Building	North Corunna Froomfield	Call to Township FC Call to Township FC
	Med.	Area 2 expanded	RokebyLine (south) - Lasalle Rd (north) - Highway 40 (east) - St. Clair River (west)	Lasalle Rd- St. Clair Parkway north	Chem. Site Construction Parking Lot	A Building	Corunna Froomfield	Call to Township FC Call to Township FC
	Lg.	Area 2 expanded, Area 5 as defined, St. Clair River, St. Clair County	Moore Line (south) - Lasalle Rd (north) - Kimball Road (east) - St. Clair River (west)	Lasalle Rd- St. Clair Parkway north	Chem. Site Construction Parking Lot	A Building	St. Clair Township Corunna Froomfield	Call to Township FC Call to Township FC Call to Township FC

Wind Direction	Size	Areas Affected	Defined Boundary	Route of Safe Approach	Staging Area	Command Location	Who is notified and by what method (After the required CVECO notification) Large Industries will be Notified by CVECO Radio	
West	Sm.	Area 2	Beckwith St. (south) - LaSalle Rd (north) - Highway 40 (east) St. Clair River (west)	Hill St. or LaSalle Rd- St. Clair Parkway	Front Gate	A Building	North Corunna Froomfield	Call to Township FC By Sarnia Police
	Med.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Indian Rd (east) St. Clair River (west)	Hill St. or LaSalle Rd- St. Clair Parkway	Corunna Fire Hall	A Building	North Corunna Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
	Lg.	1, 2, 3, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Kimball Rd (east) St. Clair River (west)	Hill St. or LaSalle Rd- St. Clair Parkway	Corunna Fire Hall	A Building	South Sarnia Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
South West	Sm.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 (east) St. Clair River (west)	Hill St. - St. Clair Parkway	Front Gate	A Building	South Sarnia Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
	Med.	1, 2, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 (east) St. Clair River (west)	Hill St. - St. Clair Parkway	Corunna Fire Hall	A Building	South Sarnia Froomfield Aamjiwnaang	Call to Township FC By Sarnia Police
	Lg.	1, 2, 3, Aamj.	Beckwith St. (south) - Confederation(north) - Highway 40 and Kimball Rd (east) St. Clair River (west)	Hill St. - St. Clair Parkway	Corunna Fire Hall	A Building		Call to Township FC By Sarnia Police

# Section 14

## Site Specific Emergency Information and Response Equipment

### CONTROL SECTIONS

#### **Procedures for Specific Control Sections**

The following procedures are to be utilized after a definite leak location has been confirmed or assumed by either the leak detection system or by other notification. These procedures assume that it is known which pipeline section a leak is on:

<b>Control Section #1</b> (Corunna - Canadian ESD to St. Clair River Canadian block valve.)	<ol style="list-style-type: none"> <li>1. Shut the St. Clair River Canadian block valve.</li> <li>2. Depressure the section to flare at Corunna (The Canadian ESD will have to be reopened).</li> </ol>
<b>Control Section #2</b> (St. Clair River Canadian block valve to St. Clair River US block valve)	<ol style="list-style-type: none"> <li>1. Shut the St. Clair River US block valve</li> <li>2. Depressure the section to flare at Corunna (The Canadian ESD will have to be reopened).</li> </ol>
<b>Control Section #3</b> (St. Clair River US block valve to US ESD)	<ol style="list-style-type: none"> <li>1. Shut the St. Clair River US block valve.</li> <li>2. Depressure the section to flare at Marysville.</li> </ol>

### MUTUAL AID - CVECO

#### **TRAFFIC CONTROL**

- AREA 1 Sarnia to Indian Road and Confederation
- AREA 2 OPP - LaSalle Road and St Clair Parkway  
As appropriate for wind direction and plant site involved
- AREA 3 Campbell Street and Indian Road
- AREA 4 Point Edward

#### **STAGING AREA**

#### **MUTUAL AID - INTO SMC**

Incoming mutual aid will remain at the main gate until someone arrives to escort them to the scene. It is the responsibility of the Fire Chief requesting assistance to ensure there is someone at the Gate to meet the incoming fire fighters.

#### **COMMAND CENTER**

SMC sets up its Incident Command Center in the lunchroom located on the second floor of "A" building. Any additional mobile Command Posts (OPP, Fire Department) are located in the parking area west of the main gate.

#### **Response Equipment**

SMC has on its location various firefighting equipment including a foam monitor, foam tanker, foam pumper truck, extra high volume hoses carts, and, an aerial pumper,






Emergency Response Equipment

CVECO Mutual Aid Inventory







<b>2 - PUMPERS</b>			
Picture & Identification	Water		Owner
	Pump (USGPM)	Tank (USG)	
 <p><b>Engine 1</b></p>	1,900	500	 Chief John Kingyens
	L/MIN	LITRES	
	7,000 (Class A & B foam system)	1,900	
 <p><b>Engine 5</b></p>	1,900	500	
	L/MIN	LITRES	
	7,000 (Class A & B foam system)	1,900	
 <p><b>Rescue 1</b></p>	1,250	500	
	L/MIN	LITRES	
	4,500	1,900	
 <p><b>Engine 3</b></p>	1,585	750	
	L/MIN	LITRES	
	6,000	2,839	



## 2 - PUMPERS

Picture & Identification	Water		Owner
	Pump (USGPM)	Tank (USG)	
 No. 31 - Courtright	1,500	800	 Chief Walt Anderson
	<b>L/MIN</b>	<b>LITRES</b>	
	5,700	3,000	
 No. 38 - Courtright	1,250	1,000	
	<b>L/MIN</b>	<b>LITRES</b>	
	4,500	3,800	
 No. 11 - Brigden	1,000	1,000	
	<b>L/MIN</b>	<b>LITRES</b>	
	3,800	3,800	
 No. 54 - Port Lambton	1,500	800	
	<b>L/MIN</b>	<b>LITRES</b>	
	5,700	3,000	

## 2 - PUMPERS





Picture & Identification	Water		Owner
	Pump (USGPM)	Tank (USG)	
 <p>No. 41 - Wilksport</p>	1,250	800	 <p>Chief Walt Anderson</p>
	<b>L/MIN</b>	<b>LITRES</b>	
	4,500	3,800	
 <p>No. 23 - Corunna</p>	1,800	1,000	 <p>Chief Walt Anderson</p>
	<b>L/MIN</b>	<b>LITRES</b>	
	5,700	3,000	
 <p>No. 1</p>	1,750	700	 <p>Chief Doug MacKenzie</p>
	<b>L/MIN</b>	<b>LITRES</b>	
	6,600	2,700	

### 3 – FOAM PUMPERS

Picture & Identification	Water		Foam		Owner
	Pump (USGPM)	Tank (USG)	Type	Tank (USG)	
 <p>Unit 175</p>	1,250	N/A	AR AFFF	1,000	 <p>LANXESS </p> <p>Bruce Morrison</p>
	L/MIN			LITRES	
	3,800			3,800	
 <p>Unit 237</p>	1,000	N/A	AR AFFF	350	<p><b>NOTE</b> Unit 237 has additional water &amp; foam solution flow capability of 2,000 USGPM from the deck monitor when directly connected to a high pressure hydrant.</p>
	L/MIN			LITRES	
	4,800			1150	
 <p>#2</p>	1,800	N/A	AFFF	1,000	 <p>Imperial Oil FIRE</p> <p>Jim Belrose</p>
	L/MIN			LITRES	
	7,000			3,800	
 <p>#1</p>	3,800	N/A	AR AFFF	1,000	
	L/MIN			LITRES	
	13,250			3,800	

3 – FOAM PUMPER					
Picture & Identification	Water		Foam		Owner
	Pump (USGPM)	Tank (USG)	Type	Tank (USG)	
 <p>Pumper #4</p>	1,250	N/A	AR AFFF	1,000	 Nick Robichaud
	L/MIN			LITRES	
	4,700			3,800	
	2,000	N/A	AFFF/ ATC	1,200	 Justin Hagan
	L/MIN			LITRES	
	7,570			4,500	
	L/MIN			LITRES	
 <p>FT1</p>	3,800	N/A	AR AFFF	1,200	 Jamie Armstrong
	L/MIN			LITRES	
	13,250			4,500	

#### 4 - TELESQUIRTS





Picture & Identification	Aerial Ladder (Ft)	Water		Foam	
		Pump (USGPM)	Tank (USG)	Type	Tank (USG)
 <p>Reserve 1</p>	50'	1,800	500	N/A	N/A
		L/MIN	LITRES		LITRES
		7,000	1,900		N/A
 <p>Reserve 2</p>	50'	1,800	500	N/A	N/A
		L/MIN	LITRES		LITRES
		7,000	1,900		N/A
 <p>Ladder 2</p>	75'	2,000	440	AR FFFP	40
		L/MIN	LITRES		LITRES
		7,600	1,651		150
 <p>Ladder 4</p>	75'	2,000	440	AR FFFP	40
		L/MIN	LITRES		LITRES
		7,600	1,651		150





Chief John Kingyens



#### 4 - TELESQUIRTS

Picture & Identification	Aerial Ladder (Ft)	Water		Foam		
		Pump (USGPM)	Tank (USG)	Type	Tank (USG)	
 <p>Ladder 4</p>	75'	2,000	440	AR AFFF	40	 Chief John Kingyens
		L/MIN	LITRES		LITRES	
		7,600	1,651		150	
 <p>#3</p>	54'	1,500	N/A	AR AFFF	1,000	 Jim Belrose
		L/MIN	LITRES		LITRES	
		5,800	N/A		3,800	
 <p>No. 21 (Corunna)</p>	75'	1,250	400	N/A	N/A	 Chief Walt Anderson
		L/MIN	LITRES		LITRES	
		4,700	1,500		N/A	
 <p>Ladder 2</p>	75'	1,500	500	N/A	N/A	 Chief Doug MacKenzie
		L/MIN	LITRES		LITRES	
		5,800	1,900		N/A	







4 - TELESQUIRTS						
Picture & Identification	Aerial Ladder (Ft)	Water		Foam		
		Pump (USGPM)	Tank (USG)	Type	Tank (USG)	
 <p>FT4</p>	75'	1,800	N/A	AR AFFF	1,200	 Jamie Armstrong
		L/MIN	LITRES		LITRES	
		7,000	N/A		4,550	
	75'	2,000	N/A	1 X 3 AFFF ATC	500	 Justin Hagan
		L/MIM	LITRES		LITRES	
		7,570	N/A		1,8907	

5 - AERIAL PLATFORMS						
Picture & Identification	Aerial Ladder (Ft)	Water		Foam		Owner
		Pump (USGPM)	Tank (USG)	Type	Tank (USG)	
 <p>Tower 4</p>	104'	2,000	350	N/A	N/A	 Chief John Kingyens
		L/MIN	LITRES		LITRES	
		7,600	1,325		N/A	

## 6 – Quick Response Units





Picture & Identification	Dry Chemical		Foam Solution		
	Tank (lbs)	Type	Tank (USG)	Type	
 #3	450	Purple K BC Rated	100	3% AFFF	 Nick Robichaud
	<b>KILOS</b>		<b>LITRES</b>		
	205		380		

## 7 – FOAM TANKERS

Picture & Identification	Type	FOAM		Owner
		Tank (USG)	Pump (USGPM)	
 #91	AR AFFF	1,800	150	 Jim Belrose
		<b>LITRES</b>	<b>L/MIN</b>	
		6,800	570	
 R257	AFFF ATC 1% x 3%	3,500	200	 Justin Hagan
		<b>LITRES</b>	<b>L/MIN</b>	
		13,250	760	
 CVECO Foam Tanker	AR AFFF	6,200	N/A	
		<b>LITRES</b>	<b>L/MIN</b>	
		23,470	N/A	



## 8 – WATER TANKERS

Picture & Identification	Water		Owner
	Tank (USG)	Pump (USGPM)	
 <b>Tanker 4</b>	2,100	750	 Chief John Kingyens
	L/MIN	LITRES	
	7,950	2,850	
 <b>No. 12 (Brigden)</b>	1,800	300	 Chief Walt Anderson
	L/MIN	LITRES	
	6,800	1,140	

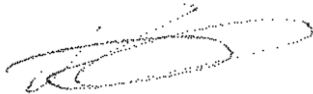
## Section 15

### Lists of Persons Residing Within Emergency Planning Zones

Shell Sarnia Manufacturing Centre's external notification process during unplanned events is made up of several components. Shell is a member of the Sarnia Lambton CAER/CVECO organization, which oversees public notifications and emergency response for local industries. Tactics utilized include strategically placed community sirens (tested every Monday), radio and television interruptions to programming, coordination of shelter-in-place or evacuation plans and traffic control when required. Shell also supports the Alert FM notification system in St. Clair Township and Aamjiwnaang First Nation. The device sounds an alert during an emergency and displays a message for the recipient. Alert FM is tested the first Monday of every month. Shell is also one of 11 local industries which use the CAER call-in 1-800 telephone line which residents can call to hear recorded messages related to planned and unplanned industrial events. As well, if there was an event where neighbours needed to take action Shell would work with local municipalities to reach them through CAER's new call-out program, MyCNN.

Shell does not maintain lists containing contact information for each household in our surrounding communities. In addition to the CAER/CVECO process, we have identified specific community stakeholders to provide information to during an unplanned event. The Aamjiwnaang First Nation Environment Department is one of those stakeholders, and they will post a message on the Band's Facebook page, which has a high rate of readership. The Mayors of St. Clair Township and Sarnia, Sarnia's Emergency Response Planner and the Chief and Band Administrator at Aamjiwnaang First Nation are all notified by Shell's Communications Manager early on in an unplanned event. The CA is responsible for keeping the contact information updated, and this is done on a bi-annual basis. The contact information can be found in the CA Emergency Response booklet in the Incident Command Centre.

Regards,



[Redacted]

Communications Manager,

Shell Canada Sarnia Manufacturing Centre

[Redacted]

[individual's name; personal information]

## **Section 16**

### **Environmental or Other Areas Requiring Special Consideration or Protection**

Refer to Appendix G: Environmental Sensitivity Atlas for St. Clair River, Lake St. Clair and Detroit River Shorelines

## Section 17

### Detailed Product Information

MSDS# D0027077CW

BUTANE - FIELD GRADE D0027077CW

## Shell Canada Limited

### Material Safety Data Sheet

Class A Compressed  
Gas  
Class B1 Flammable  
Gas

#### 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: **BUTANE - FIELD GRADE**

SYNONYMS: Methylethylmethane

PRODUCT USE: Fuel

MSDS Number: D0027077CW

#### SUPPLIER TELEPHONE NUMBERS

**Shell Canada Limited Shell Emergency Number** 1-800-661-7378

P.O. Box 100, Station M **CANUTEC 24 HOUR EMERGENCY NUMBER** 613-996-6666

400-4th Ave. S.W.

Calgary, AB Canada For general information: 1-800-661-1600

T2P 2H5 For MSDS information:

(From 7:30 to 4:30 Mountain Time)

403-691-3982

403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

\*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Component Name CAS Number % Range WHMIS Controlled**

Butane (n-Butane) 106-97-8: > 84% Yes

IsoButane 75-28-5: <7% Yes

Lighter Hydrocarbons (C1-C3) 68527-16-2: < 7% Yes

Heavier Hydrocarbons (C5+): < 2 Yes

See Section 8 for Occupational Exposure Guidelines.

#### 3. HAZARDS IDENTIFICATION

**Physical Description:** Liquefied Compressed Gas Colourless Mercaptan Odour.

**Routes of Exposure:** Exposure will most likely occur through skin contact or inhalation.

#### Hazards:

Compressed Gas.

Flammable Gas.

The gas is an asphyxiant and may also have a mild narcotic effect. Direct contact with liquefied gas can result in burns to skin and eyes. Product causes suffocation if present at levels that reduce oxygen to below safe breathing levels. As a gas, is non-irritating to the throat. While there is no evidence that exposure to industrially acceptable levels of hydrocarbons have produced cardiac effects in humans, animal studies have shown that inhalation of high vapour levels of low molecular weight hydrocarbons has produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms.

**Handling:** Eliminate all ignition sources. Wear insulated gloves to avoid freezing burns from liquid. Wear an approved respirator to prevent overexposure. Bond and ground transfer containers and equipment to avoid static

accumulation. Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames. For further information on health effects, see Section 11.

#### 4. FIRST AID

**Eyes:** Flush eyes with water for at least 15 minutes while holding eyelids open. If frostbite or burn occurs, get medical attention.

**Skin:** If victim has received cold burns, treat by immersing in lukewarm water (32 to 43 deg C) for 30-45 minutes. Remove contaminated clothing unless stuck to a burn area in which case cut around it. Obtain medical attention as soon as possible after first aid has been initiated and completed.

**Ingestion:** Not applicable (unlikely). Obtain medical attention if so.

**Inhalation:** Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

**Notes to Physician:** Inhalation of product may have a narcotic effect. Assess central nervous system and cardio-respiratory status.

#### 5. FIRE FIGHTING MEASURES

**Extinguishing Media:** Foam, water fog, or water spray for major fires.

Dry chemical powder, sand, earth, CO2 for minor fires.

##### **Firefighting Instructions:**

Extremely flammable. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Evacuate hazard area. Vapours may travel along ground and flashback along vapour trail may occur. Containers exposed to intense heat may rupture. Allow gas to burn if flow cannot be shut off safely. Use water fog to disperse vapours. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up this could result in container rupture. Always stay away from ends of containers due to explosive potential. Fight fire from maximum distance. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Shut off source of gas. Do not use direct fire jets; this could cause a steam explosion.

##### **Hazardous Combustion**

##### **Products:**

Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

#### 6. ACCIDENTAL RELEASE MEASURES

Issue warning "Flammable". Evacuate personnel not equipped with protective clothing and NIOSH approved respiratory protection. Isolate hazard area and restrict access. Avoid direct contact with material. Stop leak only if safe to do so. Eliminate all ignition sources. Handling equipment must be grounded. Use water fog to knock down vapours; contain runoff.

#### 7. HANDLING AND STORAGE

**Handling:** Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Vapours are heavier than air and will settle and collect in low areas and pits, displacing breathing air.

**Storage:** Store cylinders upright, secured in position with cylinder valve cap on. Store in a cool, dry, well-ventilated area, away from heat and ignition sources. Protect against physical damage to containers.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THIS PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE. OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):**

Aliphatic Hydrocarbon Gases Alkane (C1 - C4): 1000 ppm

Pentane: 600 ppm

**Mechanical Ventilation:** Use explosion-proof ventilation as required to control vapour concentrations. Make up air should always be supplied to balance air exhausted (either generally or locally). For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.

**PERSONAL PROTECTIVE EQUIPMENT:**

**Eye Protection:** Chemical safety goggles should be worn. Provide an eyewash station in the area.

**Skin Protection:** Due to cryogenic properties of liquid product wear insulated gloves suitable for low temperatures, and coveralls. Safety showers should be available for emergency use.

**Respiratory Protection:**

If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

## 9. PHYSICAL DATA

**Physical State:** Liquefied Compressed Gas

**Appearance:** Colourless

**Odour:** Mercaptan Odour.

**Odour Threshold:** Not available

**Freezing/Pour Point:** -138 degrees C

**Boiling Point:** < 1 degrees C

**Density:** Not available

**Vapour Density (Air = 1):** 2

**Vapour Pressure (absolute):** > 1823 mm Hg @ 25 degrees C

**pH:** Not applicable

**Flash Point:** Method Tag Closed Cup -60 degrees C

**Lower Explosion Limit:** 1.9 % (vol.)

**Upper Explosion Limit:** 8.5 % (vol.)

**Auto ignition Temperature:** 287 degrees C

**Viscosity:** Not applicable

**Evaporation Rate (n-BuAc = 1):** Not available

**Partition Coefficient (K<sub>ow</sub>):** 776

**Water Solubility:** Slight

**Other Solvents:** Alcohol, Ether

**Molecular Weight:** 58.1 grams

**Formula:** CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>

## 10. STABILITY AND REACTIVITY

**Chemically Stable:** Yes

**Hazardous Polymerization:** No

**Sensitive to Mechanical Impact:** No

**Sensitive to Static Discharge:** Yes

**Incompatible Materials:** Avoid strong oxidizing agents.

**Conditions of Reactivity:** Avoid excessive heat, open flames and all ignition sources. May explode if ignited in an enclosed area.

## 11. TOXICOLOGICAL INFORMATION

### Ingredient (or Product if not specified) Toxicological Data

Butane (n-Butane) LC<sub>50</sub> Inhalation Rat = 658000 mg/m<sup>3</sup> for 4hours

LC<sub>50</sub> Inhalation Mouse = 680000 mg/m<sup>3</sup> for 2 hours

IsoButane and lighter hydrocarbons

Pentanes and heavier hydrocarbons

**Routes of Exposure:** Exposure will most likely occur through skin contact or inhalation.

**Formulation:** No adverse effects of long-term exposure have been reported and are not expected in view of the general inertness of the product.

**Irritancy:** No irritation effects with the gas have been reported but in liquid form contact with skin or eyes may result in freezing burns.

## 12. ECOLOGICAL INFORMATION

Page 4 of 6

BUTANE - FIELD GRADE D0027077CW

### Environmental

#### Effects:

Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident.

**Biodegradability:** Not available. Rapid volatilization.

## 13. DISPOSAL CONSIDERATIONS

Incinerate at a licensed waste disposal site with approval of environmental authority.

## 14. TRANSPORTATION INFORMATION

### Canadian Road and Rail Shipping Classification:

UN Number UN1075

Proper Shipping Name LIQUEFIED PETROLEUM GAS

Hazard Class 2.1 Flammable Gases

Shipping Description LIQUEFIED PETROLEUM GAS Class 2.1 UN1075

## 15. REGULATORY INFORMATION

**This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations (CPR)* and the MSDS contains all the information required by the CPR.**

**WHMIS Class:** Class A Compressed Gas

Class B1 Flammable Gas

**DSL/NDL Status:** This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.

**Other Regulatory Status:** No Canadian federal standards.

## Section 18 Reporting

### Internal Reporting

#### **Actual incidents can be reported by:**

Inside Dispatching Operator (alerted by leak detection system alarm).  
Outside Dispatching Operator (alerted by abnormal odour or visual vapour release).  
Other Outside Personnel (alerted by abnormal odour or visual vapour release).  
Outside Public Protection Agency (police/fire departments) (alerted by abnormal odour, visual vapour release, area resident or passer-by notification).  
Area Resident/Passer-By (alerted by abnormal odour or visual vapour release).

#### **Potential incidents can be reported by:**

Outside Dispatching Operator (alerted by abnormal pipeline, piping operation, appearance, etc).  
Other Outside Personnel (alerted by abnormal pipeline, piping operation, appearance, etc.)  
Inspection Department (alerted by abnormal pipeline, piping visual appearance, physical inspection by x-ray or corrosion inspections).

#### **Actual Incidents Reported and Documented by SMC:**

Refer to SOTIS Manual Area 9 Subsection 4.04 Emergency Procedures for detail on leak response, reporting and notification. Also see SMC's Community Liaison Officer and Environmental Department for details.

### External Reporting

#### **Incident report for CER**

Effective **1 January 2015**, regulated companies are directed to follow the *CER Event Reporting Guidelines* and report the events listed below to OERS located at the following web address: <https://apps.cer-rec.gc.ca/ers>

In the event that OERS is unavailable, companies are directed to report events to the TSB Reporting Hotline at **819-997-7887** (collect calls accepted).

The events that are reportable using the online reporting system are:

- Incidents under the *National Energy Board Onshore Pipeline Regulations (OPR)*, *National Energy Board Processing Plant regulations (PPR)*, and *Canada Oil and Gas drilling and Production Regulations (DPR)/Oil and Gas Drilling Regulations*;
- Unauthorized activities under the *National Energy Board Pipeline Crossing Regulations Part II*;
- Emergency burning or flaring under the PPR;
- Suspension of operations under the PPR;
- Near misses under the DPR;
- Serious accidents or incidents under the *Canada Oil and Gas Geophysical Operations Regulations/Oil and Gas Geophysical Operations Regulations*;
- Emergencies or accidents under either *Canada Oil and Gas Installation Regulations/Oil and Gas Installation Regulations*; and
- Accidents, illnesses, and incidents under the *Canada Oil and Gas Diving Regulations/Oil and Gas Diving Regulations*.

Reference: (CER) Detailed Incident Report included in Appendix I of the OPR-99 Guidance Notes (reference Q12.2)  
[http://www/neb-one.gc.ca/clf-si/rpblctn/rrggngmpnb/nshrppln/incident\\_e.pdf](http://www/neb-one.gc.ca/clf-si/rpblctn/rrggngmpnb/nshrppln/incident_e.pdf)(CER)



## Definition of an incident, release and serious injury as defined by the CER.

### From Onshore Pipeline Regulations 1999,

“**Incident**” means an occurrence that results in:

- (a) the death of or serious injury to a person;
- (b) a significant adverse effect on the environment;
- (c) an unintended fire or explosion;
- (d) an unintended or uncontained release of LVP hydrocarbons in excess of 1.5 m<sup>3</sup>;
- (e) an unintended or uncontrolled release of gas or HVP hydrocarbons;
- (f) the operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board. (*incident*)

“**release**” includes discharge, spray, spill, leak, seep, pour, emit, dump and exhaust. (*rejet*)

“**serious injury**” includes an injury that results in

- (a) the fracture of a major bone;
- (b) the amputation of a body part;
- (c) the loss of sight in one or both eyes;
- (d) internal hemorrhage;
- (e) third degree burns;
- (f) unconsciousness; or
- (g) the loss of a body part or function of a body part. (*blesure grave*)

### From Transportation Safety Board Act and Regulations

“**reportable incident**” means a reportable marine incident, a reportable railway incident, a reportable commodity pipeline incident or a reportable aviation incident; (*incident à signaler*)

“**reportable commodity pipeline incident**” means an incident resulting directly from the operation of a commodity pipeline, where

- (a) an uncontained and uncontrolled release of a commodity occurs,
- (b) the commodity pipeline is operated beyond design limits,
- (c) the commodity pipeline causes an obstruction to a ship or to a surface vehicle owing to a disturbance of its supporting environment,
- (d) any abnormality reduces the structural integrity of the commodity pipeline below design limits,
- (e) any activity in the immediate vicinity of the commodity pipeline poses a threat to the structural integrity of the commodity pipeline, or

- (f) the commodity pipeline, or a portion thereof, sustains a precautionary or emergency shut-down for reasons that relate to or create a hazard to the safe transportation of a commodity; (*incident de productoduc à signaler*)

“**serious injury**” means an injury that is likely to require admission to a hospital; (*blesure grave*)

### **Immediate reporting to Transport Canada**

The *Transportation of Dangerous Goods Regulations* (Part 8 in 8.1) has specific requirements for immediately reporting an accidental release of dangerous goods if the quantity is greater than a threshold amount. For Class 3 (Flammable Liquid), the quantity is 200 litres. (Also refer to Table 6.1 in the Environment Manual EVOM 6.03.05.) An imminent accidental release of dangerous goods must also be reported immediately.

## Section 19 Area Maps

See **Appendix F** for area maps and CER Responsibility zone.

## Section 20

### Training Requirements

SMC's Dispatching personnel are trained in a time-framed progressing step fashion. Beginning at entrance level phase one, the new employee is trained by an employee qualified to operate that specific area. After a standardized length the trainee enters a testing/qualifying period when he/she writes a standardized exam for the specific area. Once written the test is passed the employee normally operates the specific area by himself or herself, with the already qualified operator at arm's length ready to assist if required. SCL operation/set-up would fall within this phase five range. An employee would normally have four to six years' experience prior to training/qualifying for this specific phase.

Employees also receive specialized training both on and off-site (which are in addition to site-based training specific to the operation of the Dispatching Area). Examples of off-site training include the Lambton Fire School, GRIP (rescue training), Transportation of Dangerous Goods, and Workplace Hazardous Materials Information System. Examples of on-site training exercises include weekend fire drills that are carried out throughout the year and give the operators hands-on involvement in simulated incidents. These exercises range from tabletop reviews to full dress practice dry runs similar to the RRT exercises, which occur at least once each year.

To ensure a standard knowledge level of response equipment location/condition and operational awareness of this equipment is maintained, the SMC site has established a routine weekend/weekly checkout/test schedule. This schedule ensures that on a weekly basis all emergency response equipment is checked (for availability and operating condition) or test run, as required, to verify its operability when required. These checks include weekly safety checks.

Scheduled yearly preventive maintenance (PM) maintenance/performance testing on the fire pumps and the fire trucks ensures this equipment is maintained to established regulatory/industrial standards.

## Section 21

### Role of Government Departments

#### **Canadian Energy Regulators**

The CER is an independent federal agency that regulates several aspects of Canada's energy industry. Its purpose is to promote safety and security, environmental protection and efficient energy infrastructure and markets in the Canadian Public Interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade.

The CER's role and responsibilities generally includes:

- The CER's top priority in any emergency is to make sure that people are safe and secure, and that property and the environment are protected. Any time there is a serious incident; CER Inspectors may attend the site to oversee a company's immediate response. The CER will require that all reasonable actions be taken to protect employees, the public and the environment. Further, the CER will verify that the regulated company conducts adequate and appropriate clean up and remediation of any environmental effects caused by the incident

And/or

As the lead regulatory agency, the CER:

- Monitors, observes and assesses the overall effectiveness of the company's emergency response in terms of:
  - Emergency Management
  - Safety
  - Security
  - Environment
  - Integrity of operation and facilities; and
  - Energy Supply.
- Investigates the event, either in cooperation with the Transportation Safety Board of Canada, under the Canada Labour Code, or as per the National Energy Board Act or Canada Oil and Gas Operations Act (whichever is applicable).
- Inspects the pipeline and facility.
- Examines the integrity of the pipeline or facility.
- Requires appropriate repair methods are used.
- Requires appropriate environmental remediation of contaminated areas is conducted.
- Coordinates stakeholder and Aboriginal community feedback regarding environmental clean-up and remediation.
- Confirms that a company is following its Emergency Procedure Manuals, commitments, plans, procedures, CER regulations and identifies non-compliances.
- Initiates enforcement actions as required.
- Approves the restart of the pipeline.
- 

Refer to Appendix F for location of CER's responsibility.

#### **Canadian Coast Guard**

The Coast Guard serves a broad stakeholder group from the general public, to commercial shippers, ferry operators, fishers, recreational boaters, coastal communities, other riparian interests, other government departments, other levels of government and international organizations. The Coast Guard's program objective contains five fundamental roles:

- a) maritime safety;
- b) protection of the marine and freshwater environment;
- c) facilitation of maritime trade and commerce and maritime accessibility;
- d) support to marine science; and
- e) support to Canada's federal maritime priorities.

## **Fisheries and Oceans Canada**

Fisheries and Oceans Canada is the lead federal government department responsible for developing and implementing policies and programs in support of Canada's economic, ecological and scientific interests in oceans and inland waters. This mandate includes responsibility for the conservation and sustainable use of Canada's fisheries resources while continuing to provide safe, effective and environmentally sound marine services that are responsive to the needs of Canadians in a global economy.

## **Transport Canada**

- Transport Canada's mission is to develop and administer policies, regulations and services for the transportation system for Canada and Canadians. Transport Canada's groups and regions work to:
- Set policies, regulations and standards to protect the safety, security and efficiency of Canada's rail, marine, road and air transportation systems, including the transportation of dangerous goods and sustainable development.
- Work in partnership with other federal, provincial, territorial and municipal departments and organizations, the Transportation Safety Board, the Canadian Transportation Agency, NAV Canada other private organizations, stakeholders, and members of the transportation industry.
- Promote and enforce departmental policies, regulations and standards through inspection, education and consultation.
- Monitor and assess the performance of the transportation system.
- Administer the transfer of ports, harbours and airports to communities and other interests and operate the facilities not yet divested.

## **Transportation Safety Board**

The Canadian Transportation Accident Investigation and Safety Board Act provide the legal framework that governs TSB activities. Their mandate is to advance transportation safety in the marine, pipeline, rail and air modes of transportation by

- conducting independent investigations, including public inquiries when necessary, into selected transportation occurrences in order to make findings as to their causes and contributing factors;
- identifying safety deficiencies, as evidenced by transportation occurrences;
- making recommendations designed to eliminate or reduce any such safety deficiencies; and
- reporting publicly on their investigations and on the findings in relation thereto.

As part of its ongoing investigations, the TSB also reviews developments in transportation safety and identifies safety risks that it believes government and the transportation industry should address to reduce injury and loss.

To instill confidence in the public regarding the transportation accident investigation process, it is essential that an investigating agency be independent and free from any conflicts of interest when investigating accidents, identifying safety deficiencies, and making safety recommendations. As such, the TSB is an independent agency, separate from other government agencies and departments, which reports to Parliament through the President of the Queen's Privy Council for Canada. Their independence enables them to be fully objective in making findings as to causes and contributing factors, and in making transportation safety recommendations.

In making its findings as to the causes and contributing factors of a transportation occurrence, it is not the function of the Board to assign fault or determine civil or criminal liability. However, the Board does not refrain from fully reporting on the causes and contributing factors merely because fault or liability might be inferred from the Board's findings. No finding of the Board should be construed as assigning fault or determining civil or criminal liability. Findings of the Board are not binding on the parties to any legal, disciplinary, or other proceedings.

## **The TSB and Other Organizations**

The TSB's mandate is distinct from those of other organizations such as Transport Canada (TC), the National Energy Board (CER), the Royal Canadian Mounted Police (RCMP), the Canadian Coast Guard (CCG), and the Department

of National Defense (DND), all of whom play a role in the transportation field. As an independent federal agency, the TSB is not associated with any of these organizations, although they do work in cooperation with them when conducting investigations and making safety recommendations.

Transport Canada is concerned with developing and administering policies, regulations and services for transportation systems in Canada with respect to federally regulated marine, rail and aviation transportation modes. The National Energy Board is responsible for regulating pipelines under federal jurisdiction. This differs from the TSB's mandate of advancing transportation safety in the marine, pipeline, rail and air modes of transportation through the conduct of independent investigations, the identification of safety deficiencies, and the making of recommendations to eliminate or reduce such deficiencies.

When the TSB investigates an accident, no other federal department (except the Department of National Defense and the Royal Canadian Mounted Police) may investigate for the purpose of making findings as to the causes and contributing factors of the accident. Transport Canada and the National Energy Board may investigate for any other purpose, such as regulatory infractions.

### **Environment Canada**

Environment Canada's mandate is to preserve and enhance the quality of the natural environment, including water, air and soil quality; conserve Canada's renewable resources, including migratory birds and other non-domestic flora and fauna; conserve and protect Canada's water resources; carry out meteorology; enforce the rules relating to boundary waters; and to coordinate environmental policies and programs for the federal government.

### **Ontario Ministry of the Environment**

The Ministry of the Environment's mandate is to protect, restore and enhance the province's natural environment through legislation and enforcement, innovative programs and initiatives, strong partnerships, and public engagement.

## **Section 22 Procedures**

### **Updating Procedure and Schedule**

Updating of all pipeline procedures is the responsibility of the Dispatching Trainer, who reports directly to the Production Specialist.

All procedures related to the SCL would be reviewed according to SMC's established safeguarding review process. Any change in the physical structure of the pipeline equipment, operation of the pipeline or equipment would require a complete review, revision and re-approval of all related documentation.

### **Updating of the Internal and External Communication Lists**

Updating of the internal and external communication lists is the responsibility of the Community Liaison Officer and/or Safety Department. The internal communication document is updated when a new individual fills position. The external communication document is updated yearly.

### **Procedure Distribution List**

**SCL Emergency Response Procedure                      (Electronically Available in SOTIS @ SMC)**

**SCL Emergency Response Procedure                      (3 Hard Copies to CER)**



## **Section 23**

### **Audit, Forms, and Record Keeping**

Copies of all Weekly Fire and Safety Audits, Insurance Audits, Ontario Fire Marshall Audits, Joint Health and Safety Committee Audits are maintained in secure storage by Shell Canada for later reference as required. Additionally the Dispatching department maintains copies of weekend equipment audits for later reference as required which are stored electronically within Shell.

## Section 24

### Safe Work Practices and Procedures for Leak Repair

#### 1 Objectives

- i Prevent personal injury and property damage.
- ii Contain and recover spilled product.
- iii Protect the environment.
- iv Return the pipeline to operation as quickly as possible at the minimum of cost.

#### 2 General Safe Practices (*not necessarily listed in order of importance*)

- i Evacuate - set up roadblocks as necessary.
- ii Vehicles and work equipment, which could cause ignition, should be parked on the windward side of the hazardous area at a safe distance and on higher ground if possible. A car should not be started in the vicinity of a leak until a combustible gas meter test indicates no vapours.
- iii Check the area with an "explosive mixture" detector. It must be recognized that a serious NGL leak will give off large volumes of vapour, which will be invisible, the only adequate test being with a combustible gas indicator.
- iv Check first aid equipment, fire extinguishers, fire blankets, breathing apparatus, safety harness and life line.
- v Contain the spill - tank trucks are usually sufficient for small spills, but larger spills may require that a pit be dug or dams constructed across ditches and creeks to contain the product.
- vi Survey the area to check the presence of overhead and underground foreign facilities, such as electric power lines, communication lines and pipelines. Notify their owners or authorized agents of the emergency.
- vii Do not commence excavation of any kind until appropriate precautions have been taken to prevent damage to foreign facilities or to the Company facilities.
- viii Limit the number of men and pieces of equipment allowed into the hazardous area to a minimum.
- ix Employ every precaution to prevent a spark and remove all potential sources of ignition. There shall be NO SMOKING or open lights unless approved for Class I areas.
- x Be alert for wind shifts by erecting a flag indicator.
- xi When spilled product has been contained to the extent that further damage to property and facilities will not increase, it may be advisable to remove all personnel from the area until the vapours have dispersed.
- xii Do not allow equipment to work over HOT lines.
- xiii Instruct and caution all workers of the hazards. Remember that vapours are heavier than air. Carefully consider wind direction, velocity, terrain, and heavy vegetation; then approach from uphill and upwind, if possible.
- xiv Post NO SMOKING and DANGER signs.
- xv Keep spectators away.
- xvi Confirm that shutdown is complete all pumps off and valves closed and locked and tagged before commencing work.
- xvii Turn off all cathodic protection rectifiers.
- xviii Wear protective clothing, be aware of the cooling effects of escaping LPG.
- xix LPG will freeze quickly upon pressure release and can exist as a liquid at atmospheric pressure. Small pools of liquid in the vicinity of the leak may be LPG and not water. The temperature of the liquid and surrounding earth will be minus 40 Deg. F (Propane) that will cause instant frostbite on exposed skin and severe personal injury.
- xx Because of the low temperatures, which are associated with LPG leaks, care must be taken not to further break or rupture surrounding steel and other materials, which will be very brittle.
- xxi Pipelines, associated fittings and valves should not be hammered if under pressure because the shock pressure created could cause further rupture.
- xxii Depressuring of the line must be done slowly to avoid shock pressure and possible freezing resulting in ice plugs. The sudden release of pressure from an LPG liquid will cause evaporation and rapid cooling resulting in the formation of ice plugs, which can be very dangerous:

They can plug a line and/or vent and give a false indication that the pressure has been removed from the section being depressured. Therefore, allow time for ice plugs to thaw before commencing any work.

## Section 25

### The Review and Learn Process

Each significant activation of the Incident Command System (ICS) will require a Post Incident Critique. The ICT ICS critique should be initiated by the EOC Manager. The HSSE Manager will coordinate the session and assign the Post Emergency Critique Facilitator (P.E.C.F.).

- Post-Emergency Response Critiques should take place as soon as practical but in no case past 7 days following the actual event. NOTE: ample time should be provided for the PTL to complete the “Field Response” critique.
- For all ICS activation, if the Post Incident Critique includes action items, those action items should be assigned to an action holder with a completion date and added to the site “Audit Tracking Database”.

The Post-Emergency Critique Facilitator should follow the checklist below to ensure the following items and/or personnel are available at the critique session:

- Comfortable classroom/conference area large enough to conduct a Post-Emergency Critique;
- Map of Response Area;
- Copy of Incident Log and all other Response and Briefing Forms;
- Blank copy of Post-Emergency Critique Form (ICS Form EMOM 29.02 & 29.03)
- Any Video Tape and/or Photos of the incident that may be helpful during the critique;
- If videotape is used, secure a video player and monitor.
- Flip chart or white board;
  - Masking tape to hang flip chart pages.
  - Drawing markers (various colors).
- Copy of Sarnia Pipeline’s Emergency Response Plan (ERP);
- Note-taking materials for attendees (pads, writing instruments);
- Copies of any incident planning cycle plan(s);
- Copies of Daily Site-Specific Safety and Health Plans;

**Note:** Ensure all attendees receive and complete individual copies of Post-Emergency Critique Form (ICS Form EMOM 29.02 & 29.03) **prior** to the critique.

Request critique participants bring the completed (ICS EMOM 2901) with them to the critique session.

The following provides some session guides:

- Objective of meeting.
- Introduce outside participants and the organizations they represent i.e. Location & Role
- Need for openness and honesty.
- Emphasize that the critique is to provide learning's and response improvement opportunities - not fault finding.
- Conduct in a non-confrontational manner.
- Allow everyone involved in the response to have an opportunity for input.
- Have a Recorder available to document comments and action items.
- Do not solve the issues but record as action items to be reviewed and addressed later.
- Participants should not try to justify their actions but can provide clarification if requested by the IC.
- Conclude the meeting by communicating future action plans i.e. "where do we go from here?"

## Notification and Mobilization

- Was the Incident Management Team notified in a timely manner?
- Was the message clear as to what was required from the members?
- Did all members required receive the message?
- Did the proper number of responders come to the Emergency Operations Center?
- Did any members have any issues getting to the EOC?
- Did all members sign in on the white boards provided?
- Was the EOC set up in a timely manner?
- Were all the phones connected and operational?
- Were all other required facilities available and operational?
- Were all positions of the EOC identified by the vests provided?
- Was the EOC secured from unauthorized visitors?
- Were the Incident Commander and the main gate notified when the EOC was operational?

## Incident Briefing

Was ICS terminology implemented early on during the incident and utilized throughout the incident?

- Was the information available from the field on what was happening?
  - Incident description?
  - Current actions taken in response?
  - Resources involved?
  - IC structure?
  - Means of communication between IC and EOC?
  - Field Command Post location?
  - Any injuries?
  - Notifications that have been made?
- Was the CVECO Code fax sheet available?
- Was a weather forecast provided?
- Was the SAFER model utilized?
- Was the meeting brief and concise?
- Were objectives identified?
- Were strategies developed?
- Were actions assigned to each section?
- Was the meeting properly documented?
  - Who was present?
  - Objectives, strategies?
  - Action Items. What? Who?
- Was a time established for the next meeting?

## Incident Manager

- Were the resources available that you required to act as Incident Manager?
- Were the strategies and tactics employed in the field reviewed by the EOC?
- Were clear objectives and strategies identified by the EOC?
- Were these objectives and strategies the basis for the tactics used to manage the incident?
- Were the objectives, strategies and tactics reviewed and updated at each update meeting?
- Is the documentation of the EOC's activities sufficient to satisfy legal requirements?
- Were requests from the IC managed with the proper priority?
- Did the EOC have a good understanding of what was happening in the field?
- Were meeting times set at appropriate intervals?
- Was head office notified promptly?

- Did you establish contact with the Municipal EOC?
- Was the stand down of the EOC properly communicated to the site?

### **Operations Section Chief**

- Were the resources available that you required to act as Operations Section Chief?
- Did the EOC develop operating plans for the IC in the field?
- Did you have a good communications link with the IC?
- Did you expand your organization as required by the complexity of the incident?
- Were the directions received from the update meetings adequate?
- Did you receive the support you required from the other sections of the EOC?
- Were there any communication issues inside the EOC?
- Did you have the resources you required for this incident?(Equipment, Personnel)
- Was your group's activity in this incident properly documented?

### **Planning Section Chief**

- Were the resources available that you required to act as Planning Section Chief?
- Did you expand your organization as required by the complexity of the incident?
- Did your group develop the operating plans for the next operational period?
- Were the directions received from the update meetings adequate?
- Did you receive the support you required from the other sections of the EOC?
- Were there any communication issues inside the EOC?
- Do we have adequate information on product properties?
- Was your group's activity in this incident properly documented?

### **Logistic Section Chief**

- Were the resources available that you required to act as Logistic Section Chief?
- Did you expand your organization as required by the complexity of the incident?
- Were you able to manage the request from the response in a timely manner?
- Were there any resources you could not get?
- Were the directions received from the update meetings adequate?
- Did you receive the support you required from the other sections of the EOC?
- Were there any communication issues inside the EOC?
- Did you set up a staging area for resources coming onto our site?
- Was your group's activity in this incident properly documented?

### **Finance Section Chief**

- Were the resources available that you required to act as Finance Section Chief?
- Did you need to expand your organization due to the complexity of the incident?
- Were you able to manage the requests from the response in a timely manner?
- Were the directions received from the update meetings adequate?
- Did you receive the support you required from the other sections of the EOC?
- Were there any communication issues inside the EOC?
- Was your group's activity in this incident properly documented?

## **HSSE Section Chief**

- Were the resources available that you required to act as HSSE Section Chief?
- Did you need to expand your organization due to the complexity of the incident?
- Were you able to manage the requests from the response in a timely manner?
- Were the directions received from the update meetings adequate?
- Did you receive the support you required from the other sections of the EOC?
- Were there any communication issues inside the EOC?
- Did you develop a safety plan?
- Did you develop an environmental plan?
- Did you receive the information you required from the field?
- Was the environmental monitoring completed adequate?
- Is the environmental monitoring that was collected properly documented?
- Were there any security issues?
- Were the proper notifications made to government agencies?
- Were there any environmental issues that could have been managed better?
- Were there other resources we need to have on hand for an incident of this nature?
- Is there any additional fire or safety equipment we require for an incident of this nature?
- Was your group's activity in this incident properly documented?

## **Community Relations**

- Were the resources available that you required to act as CX person?
- Did you need to expand your organization due to the complexity of the incident?
- Did the proper message get to the public in a timely manner?
- Were you able to properly manage the external requests for information?
- Did all external requests for information get directed to you or your delegate?
- Did you receive the information you required in a timely manner?
- Were there any complaints from the municipality or public on our response?
- Did you receive the support you required from the other sections of the EOC?
- Was your group's activity in this incident properly documented?

## **Human Relations**

- Were the resources available that you required to act as HR person?
- Did you need to expand your organization due to the complexity of the incident?
- Did the proper message get to the site in a timely manner?
- Were periodic updates provided?
- Were you able to properly manage the requests for information from relatives?
- Did you receive the information you required in a timely manner?
- Were you able to manage the needs of the employees and contractors?
- Did you receive the support you required from the other sections of the EOC?
- Was your group's activity in this incident properly documented?

## **MEDICAL RESPONSE**

- Were incident victims quickly identified?
- Was victim care and personnel safety the top priority?
- Was the victim(s) condition properly monitored and recorded in the field?
- Was this information provided to secondary medical personnel (nurse/EMTs)?
- Was secondary medical treatment provided as soon as possible?

- Were all victims properly decontaminated prior to proceeding to the next level of care?
- Were there any issues preparing and transporting the victim to hospital?
- Was the victim's emergency contact notified promptly and provided with support?

For Roles and Responsibilities, refer back to Section 6: Defining Roles and Responsibilities.

## **Section 26**

### **Exercises**

#### **Testing of Commitments and Procedures**

The SCL was the focus of a joint mutual aid exercise in 2005.

Refer to Appendix I for Emergency Response Drill Schedule



**Section 26**  
**Revision log**

<b>Revision</b>	<b>Author</b>	<b>Date</b>	<b>Implementation Date</b>	<b>Next Review</b>	<b>Summary</b>
1	M. Wedemire	03.01.2017	04.15.2017		Multiple changes as per NEB Review
2	M Wedemire	03.01.2018	03.01.2018	Fall 2018	No changes
3	M Wedemire	03.01.2019	03.01.2019	Fall 2019	No changes
4	J. Hagan M. Wedemire Brad Law Macy Gauvin	03/01.2020	03/01/2020	Fall 2021	Multiple changes due to NEB changed to CER Emergency drills



	Spills Action Centre (SAC)	1-800-268-6060
Ministry of Labour	London District Office	1-800-265-1676
	Normal Business Hours	1-877-202-0008
	Outside Business Hours	1-800-268-6060
Environment Canada		800-268-6060 416-346-1971
OPP Communications (London)		888-310-1122
OPP Pt. Edward		519-336-8691
Petrolia OPP		519-882-1011
Poison Control Centre		1-800-268-9017
POLICE		911
Radiation Response & Cleanup Team		1-800-665-7736
RCMP (London)		1-800-387-0020 519-645-4329
Sarnia Lambton Medical Director of Health		519-383-8331
St. Clair County USA		810-989-6956 810-340-2925
	911 Dispatch	810-985-8115
U.S. Coast Guard		1 313 568-9580
Transport Canada		519-464-5118 800-268-0600
ECRC Port Party Agreement (refer CVECO manual sec IX)		862-2281/2 ext. 0
Lambton Fire School		336-4552
Shell National Emergency		1-800-661-7378
Shell Marine 24 Hour Emergency Number		1-713-241-2532
STASCO (backup for global shipping advice and services)		
National Energy Board	24hour hotline	819-997-7887
CABOT		519-336-2261
CLEAN HARBORS		519-864-1021

CSX RAIL LINE	518-383-6131
DUPONT	519-862-6811
DockSide	519-862-4444
H. C. STARCK	519-346-4300
IMPERIAL OIL	519-339-2000
INDEPENDANT MARKET OPERATOR (IESA)	905-855-6410
Lambton Generating Station	519-867-2663
LANXESS	519-337-8251
ONTARIO HYDRO	1-800-434-1235
PRAXAIR	519-332-1311
SARNIA ENVIRONMENT ASSOCIATION	519-332-2010
SUNCOR ENERGY PRODUCTS	519-383-3601
SUNOCO	519-337-2301
TERRA INDUSTRIES	519-867-2739 - push "8"
WASTE MANAGEMENT	800-265-7505
Marysville Pipelines- Shift Supervisor	810-388-2146
- Plant Manager	810-388-2102
- Operations Supt.	810-388-2107
- HSE Coordinator	810-364-8855
<b>OUTSIDE LABORATORIES</b>	
CANADIAN ORTECH ENVIRONMENTAL	519 -336-3327
ORTEC / EARS	Pager 464-9168
POLLUTECH ENVIROQUATICS LIMITED	519-339-8787
TSC - LAMBTON SCIENTIFIC	519-344-3628

Buckeye Contacts	Phone	E-Mail/Mailing Address	Salmon/Marysville/ Shell Contacts	E-Mail/Mailing Address
<b>Field Operations</b>  			Marysville Operations Phone Work Phone Charles Markel Work Phone – Process Engineer (PPrimary Contact) Work Phone Shell – WWTP/pipelines Coordinator	
<b>Marketing Lead</b>  		Buckeye Partners, L.P. One Greenway Plaza Suite #600 Houston, TX 77046		
<b>District Manager</b>  		Buckeye Partners L.P. 933 Braodhead Road Suite #100 Moon Township, PA 15108	– Plant Manager 2510 Busha Highway Marysville, MI. 48040 Shell – Production Manager – DUCP	Shell Canada Products 150 St. Clair Parkway Corunna, Ontario N0N 1G0

<p><b>Accounting (Administration)</b></p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>Buckeye Partners L.P.</p> <p>One Greenway Plaza</p> <p>Suite #600</p> <p>Houston, TX 77046</p>	
<p><b>Safety and Training / environmental Support</b></p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>Buckeye Partners L.P.</p> <p>4800 49<sup>th</sup> Street</p> <p>Cleveland, Ohio 44125</p>	<p>[REDACTED]</p> <p>Regulatory Consultant</p> <p>RCP</p> <p>3975 O'Neal Lane</p> <p>Suite A</p> <p>Baton Rouge, LA</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
<p><b>Regulatory Compliance</b></p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>Buckeye Partners L.P.</p> <p>9999 Hamilton Boulevard</p> <p>5 Tek Park</p> <p>Breinigsville, PA 18031</p>	
<p><b>Control Center</b></p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>[REDACTED]</p>	<p>[REDACTED]</p> <p>9811 Eagle Drive</p> <p>Baytown, TX 77520</p>	<p><b>Shell - Dispatching Control Room</b> [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>

<p><b>SCADA Systems Supervisor</b></p> <p>██████████ ██████████</p>	<p>██████████ ██████████</p>	<p>██████████ Buckeye Partners L.P. 9999 Hamilton Boulevard 5 Tek Park Breinigsville, PA 18031</p>	<p>SCADA/Leakwarn System <b>Shell - Leak Detection Technical</b> ██████████ Instrument /Electrical ██████████ ██████████</p>	<p>██████████ <b>Shell Canada Products</b> 150 St. Clair Parkway Corunna, Ontario NON 1G0</p>
<p><b>Right of Way Specialist &amp; Public Awareness</b> - ██████████ ██████████</p>	<p>██████████ ██████████ ██████████</p>	<p>██████████</p>	<p>Shell - ██████████ ██████████ ██████████ ██████████</p>	<p>██████████ <b>Shell Canada Products</b> 150 St. Clair Parkway Corunna, Ontario NON 1G0</p>
<p><b>Communications/Network/PC</b></p> <p><i>Todd Gehringer</i></p>	<p>██████████</p>	<p>██████████ Buckeye Partners L.P. 9999 Hamilton Boulevard 5 Tek Park Breinigsville, PA 18031</p>	<p>Shell - ██████████ ██████████ Instrument Engineer ██████████ ██████████</p>	<p>██████████ <b>Shell Canada Products</b> 150 St. Clair Parkway Corunna, Ontario NON 1G0</p>
<p><b>Field Technician Support</b></p> <p>██████████</p>	<p>██████████ ██████████</p>	<p>██████████ 4400 Treadwell Road PO Box 177 Wayne, MI 48184</p>		
<p><b>District Office Electrical Engineer</b></p> <p>██████████</p>	<p>██████████ ██████████</p>	<p>██████████ Buckeye Partners L.P. 469 Moon Clinton Road Coraopolis, PA 15108</p>		
<p><b>Pipeline Corrosion</b></p> <p><i>Jeff Brown</i></p>	<p>██████████ ██████████ ██████████</p>	<p>██████████</p>	<p>Shell - ██████████ Inspection Engineer ██████████ ██████████</p> <p>Shell - ██████████ Inspector ██████████ ██████████</p>	<p>██████████ <b>Shell Canada Products</b> 150 St. Clair Parkway Corunna, Ontario NON 1G0</p> <p>██████████ <b>Shell Canada Products</b> 150 St. Clair Parkway Corunna, Ontario NON 1G0</p>

<p><b>Emergency Contacts BPL Gulf Coast Control Center</b></p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>Control Center – Dispatcher #3</p>
<p><b>Emergency Contacts Marysville Hydrocarbons</b></p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED])</p> <p>Control Room Operator</p>
<p><b>Emergency Contacts Shell Control Center</b></p>	<p><b><i>Shell - Dispatching Control Room</i></b></p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p><b><i>Alternate contact:</i></b></p> <p><b><i>Maingate</i></b></p> <p>[REDACTED]</p> <p>[REDACTED]</p>
<p><b>BPL Control Center Phone Number</b></p> <p>(if not the same as Emergency number)</p>	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
<p><b>Marysville HC Control Center Phone Number</b></p> <p>(if not the same as Emergency number)</p>	<p>[REDACTED]</p> <p>Control Room Operator</p>



<b>Shell Control Center Phone Number</b>  (if not the same as Emergency number)	<b>Shell - Dispatching Control Room</b>  [REDACTED] [REDACTED]  <b>Alternate contact:</b>  <b>Maingate</b> [REDACTED] [REDACTED]
<b>Other Important Contact Numbers (below)</b>	
<b>Buckeye Control Center</b>	9811 Eagle Drive  Baytown, TX 77520
<b>Marysville Hydrocarbons</b>	2510 Busha Highway  Marysville, MI 48040
<b>Shell Canada</b>	150 St. Clair Parkway  Corunna, Ontario NON 1GO, Canada

**(NB – this is a quick reference list only. Do not use as an all-inclusive list.)**  
**[individual's name, personal information]**

*Appendix B: SMC Personnel List & Hierarchy*

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**[individual's name; personal information]**

Position	Name	Local	Home Phone	Cell Phone	Emergency Role
Production Manager	██████	██	██████	██████	EOC Manager (P)
Technical Manager	██████	██		██████	EOC Manager
Engineering Manager	██████	██	██████	██████	EOC Manager
E&S Manager	██████	██	██████	██████	EOC Manager
ER/Safety Specialist	██████	██	█	██████ ██████	ER Lead
Manufacturing Excellence Manager	██████	██	██████	██████	Legal Service (P)
Production Excellence Manager	████	██	██████	██████	Operations Section Chief (P)
Production Unit Manager - Process	██████	██		██████	Operations Section Chief
Production Unit Manager - DUCP	██████	██		██████	Operations Section Chief
HSSE Manager	██████	██		██████	HSSE Section Chief (P)
Process Safety Manager	██████	██		██████	HSSE Section Chief
Safety Manager	██████	██	██████	██████	HSSE Section Chief
Environmental Specialist	██████	██	██████	██████	Environmental Unit (P)
Environmental Lead	██████	██	█	██████	Environmental Unit
Environmental Waste Specialist	██████	██	██████		Environmental Unit
Safety Specialist	██████	██	██████		Safety, Security & Medical (P)
Safety Specialist	██████	██	██████	██████	Safety, Security & Medical
Turnaround & Major Maintenance Safety	██████████	██			Safety, Security & Medical
Industrial Hygienist	██████	██	██████	██████	Industrial Hygiene Unit (P)
Industrial Hygienist	██████	██	██████ ██████	█	Industrial Hygiene Unit
Engineering Services Manager	██████	██	██████	██████	Planning Section Chief (P)
Major Projects Development Supervisor	██████	██	██████	██████	Planning Section Chief
Process Engineering Manager	██████	██	██████	██████	Planning Section Chief

Position	Name	Local	Home Phone	Cell Phone	Emergency Role
Project Manager	██████████	████	██████████		Planning Section Chief
Production Supervisor	██████████	████		██████████	Communications Officer (P)
ESP IT Superuser	██████	████	██████████		Communications Officer
Production Team Lead	██████████	████	██████████		Communications Officer
Operations Support EIT	██████████	████	████	██████████	Documentation Support (P)
Operations Support Engineer	██████████	████	██████████	██████████	Documentation Support
Operations Support Engineer	██████████	████	██████████	██████████	Documentation Support
Operations Support EIT	██████████	████	██████████		Documentation Support
Turnaround Manager	██████████	████	██████████	██████████	Logistics Section Chief (P)
Maintenance Manager	██████████	████	██████████	██████████	Logistics Section Chief
Reliability Manager	██████████	████			Logistics Section Chief
Production Maintenance Coordinator	██████████	████	██████████		Logistics Support (P)
GAME ME Coordinator	██████████	████	██████████		Logistics Support
Production Maintenance Coordinator	██████████	████	██████████	██████████	Logistics Support
Requisition Tech	██████████	████	██████████		Logistics Support
Maintenance Planner	██████████	████	██████████		Logistics Support
Maintenance Planner	██████████	████	██████████		Logistics Support
Instrument Control & Electrical Manager	██████████	████	██████████		Technical Support (P)
Process Control/RTO Manager	██████████	████	██████████	██████████	Technical Support
Tech Control System Engineer	██████████	████	██████████	██████████	Technical Support
Electrical Team Lead	██████████	████	██████████		Technical Support
CP Site Lead	██████████	████	██████████	██████████	Contracting & Procurement (P)
Senior Buyer	██████████	████	██████████		Contracting & Procurement
Senior Buyer	██████████	████			Contracting & Procurement
Finance Manager	██████████	████	██████████		Finance/Admin Section Chief (P)
Finance Advisor	██████████	████	██████████	██████████	Finance/Admin Section Chief

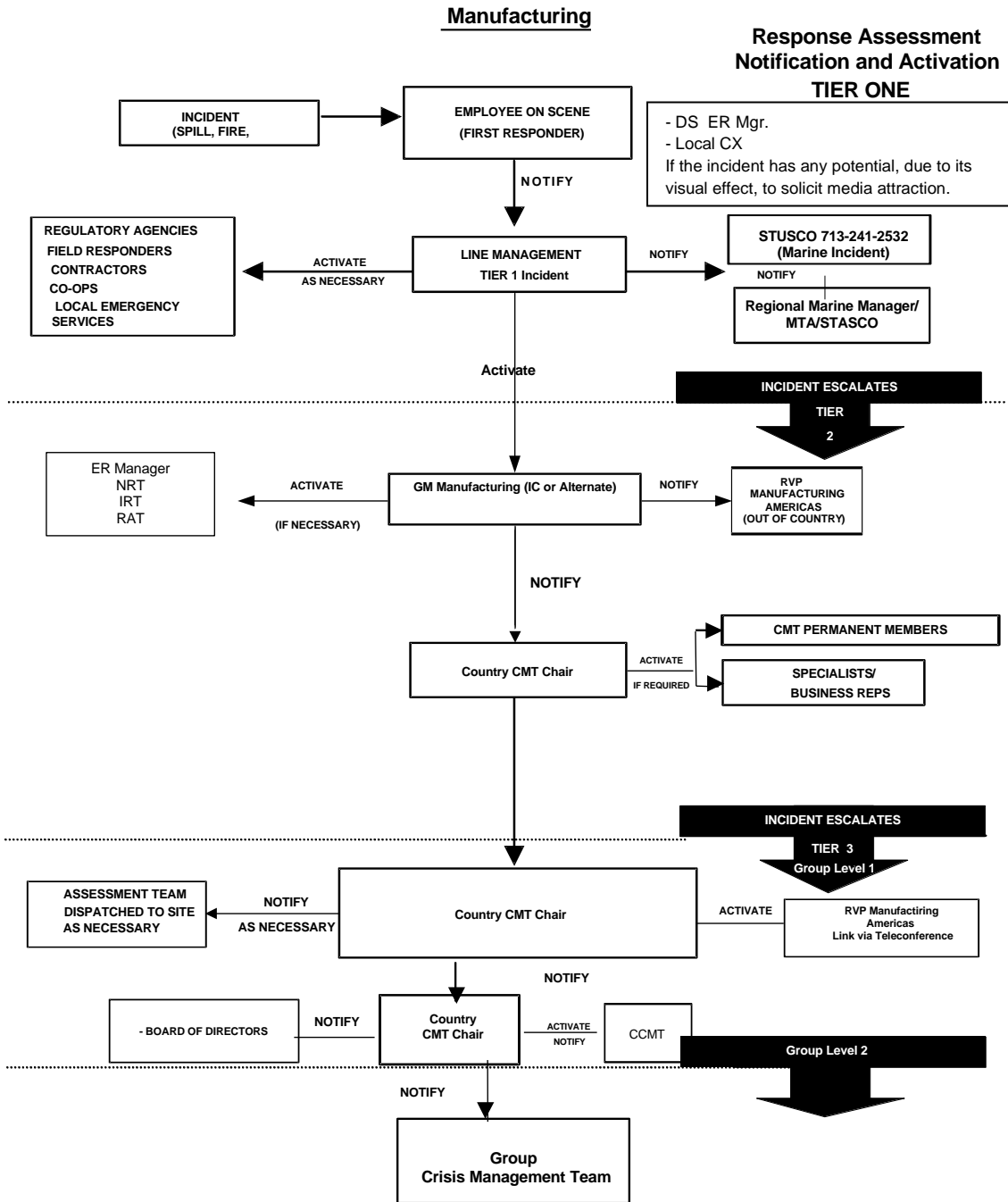
Position	Name	Local	Home Phone	Cell Phone	Emergency Role
Finance Advisor	████████	███	████████		Finance/Admin Section Chief
Finance Advisor	████████	███	████████		Finance/Admin Section Chief
Communications Manager	████████	███			Emergency Information Officer (P)
Senior Aboriginal Consultation Specialist	████████	███		████████	Emergency Information Officer
Sr. Admin Assistant	████████	███			Emergency Information Officer
HR Manager	████████	███	████████	████████	Human Resources (P)
HR	██████	███	████████	████████	Human Resources
HRA Production	████████	███			Human Resources
Refinery Scheduler	████████	███	███	████████	Economics & Scheduling (P)

[Individual's name; Personal Information]

*Appendix C: SERTS Response (Incident Escalation Process)*

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**Response Assessment, Notification and Activation**



*Appendix C: SERTS Response (Incident Escalation Process) Cont'd*

**Country Crisis Management Team (CCMT)**

Is a team led by the Country Chair, or Alternate, to manage a crisis at a country level.

Within Shell, a crisis is defined as a situation that falls outside normal business continuity and emergency response arrangements. It significantly threatens (potentially) the safety or well being of people, the environment, the Company's reputation and/or its financial bottom line. Ultimately, it may put our license to operate at risk.

## ACTIVATION OF SHELL CANADA COUNTRY CMT (CCMT)

In the event the CCMT needs to be activated please contact:

**[individual's name; personal information]**

	Office Phone	Mobile Phone
<b>Leader:</b>		
<b>Alternates:</b>		

The Emergency Response Department:



## National Response Team

### Purpose / Responsibilities:

The NRT provides a well-coordinated effort to respond to any major TIER III incidents that is beyond the capabilities of Local Response Personnel (ICT or IRT). The NRT manages all aspects of the response throughout the incident. The NRT is led by an Incident Commander and uses the ICS based Emergency Response Management System to manage the incident. The team will be activated by the ER Manager after discussion and authorization with respective CMT Chairman and site IC (ICT) / Team Leader (IRT).

### Organization:

The NRT is comprised of various Downstream (DS) and Upstream Americas (UA) business function personnel; head office and field personnel from refinery ICTs, S&D, Scotford Upgrader ICT, marine advisors & marine spill management specialists (including contractors) possessing the range of skills and expertise to respond to any given incident and fill the functional ICS positions to which they are assigned. NRT members are activated to fill as many positions as warranted by the magnitude of the incident to adequately carry out; Command, Operations, Planning, Logistics, and Finance activities associated with the response effort.

*[Appendix C: SERTS Response \(Incident Escalation Process\) Cont'd](#)*

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### Activation Call

[REDACTED]

[REDACTED]

[individual's name; personal information]

## RESPONSE ACTION TEAM (RAT)

Purpose/Responsibilities:

- The RAT (Response Action Team) is an integral component of SCAN Downstream's overall response capability for transportation incidents involving Shell materials. RAT team members are located in Canada and are coming from Shell's refineries, Upgrader, S&D and Retail HSSE. Teams can be contacted on a 24-hours basis. They are trained in emergency response and are familiar with the Downstream businesses and Shell products. They count on back-up support from Shell's other response organizations such as the Initial Response Teams (IRT) and the National Response Team (NRT).
- RAT team members are located in Montreal, Toronto, Sarnia, Scotford and Vancouver.
- They act as advisors (HSSE and product knowledge) and represent Shell as "Eyes On-Scene".

The Canadian RAT team coordinator is the DS ER Manager – Alain Boulanger. UA ER Manager [REDACTED] is the first back up. Second back up is the SOPUS RAT coordinator in Houston – [REDACTED]. Organization:

- The RAT team is comprised of individuals who possess the necessary skills to deal with transportation incidents involving tank cars (rail) and tank trucks.

*Appendix D: Table 6.1 excerpt from the Environmental Manual*

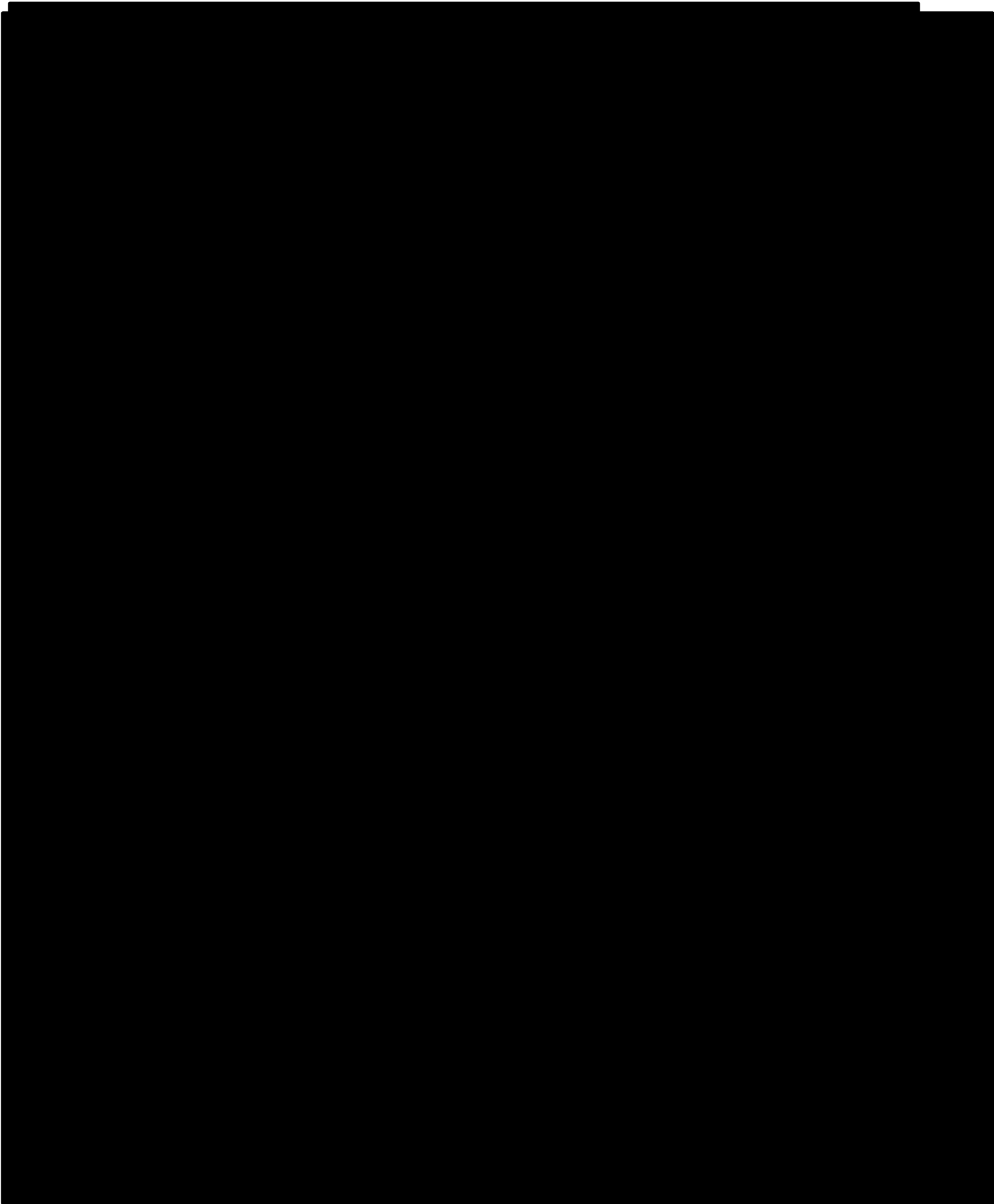
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COLUMN I CLASS AND DIVISION	COLUMN II QUANTITIES OR LEVELS
1 Explosives	Any quantity that could pose a danger to public safety or 50 kg.
2.1 - 2.4 Gases	Any quantity that could pose a danger to public safety or any sustained release of 10 minutes or more.
	>200 L (~1.2 bbl)
	>25 Kg
3 Flammable Liquids	>50 Kg or 50 L
4 Flammable Solids	>1 Kg or 1 L
5.1 Oxidizing Substances	>5 Kg or 5 L
5.2 Oxidizing Substances	Any quantity that could pose a danger to public safety or 1 Kg or 1 L
6.1 Poisonous Substances	or 1 L
6.2 " "	Any quantity that could pose a danger to public safety. An emission level greater than the emission level established in section 20 of the "Packaging and Transport of Nuclear Substances Regulations"
7 Radioactive Substances	>5 Kg or 5 L
	>25 Kg or 25 L
8 Corrosives	
9.1 - 9.3 Misc. Dangerous Wastes	
Products	
<b>THIS IS A TDGA REPORTING REQUIREMENT</b>	

*Appendix E: Hazard Bowties and HSE Critical Tasks*

**[technical drawing; security risk]**

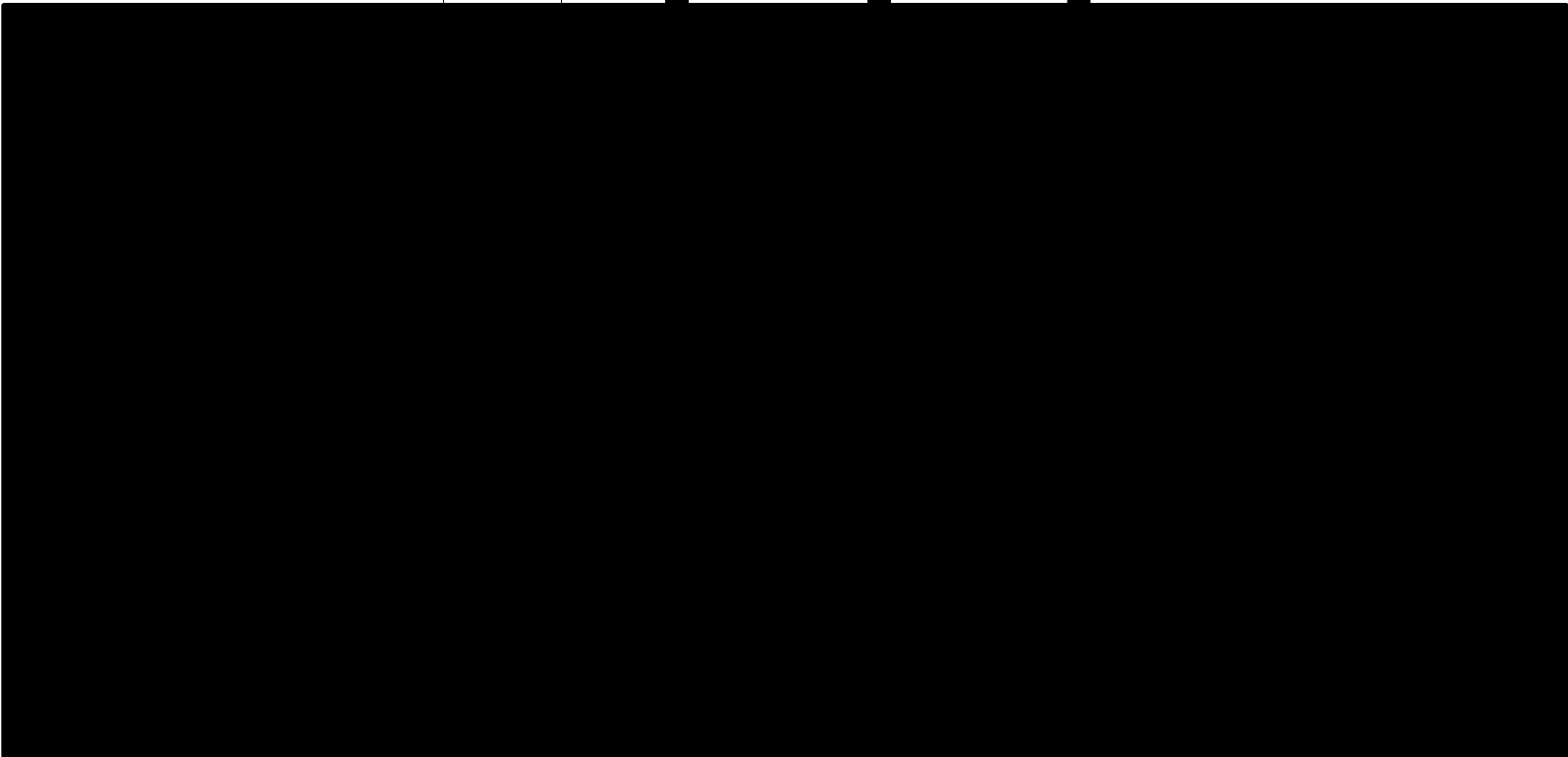
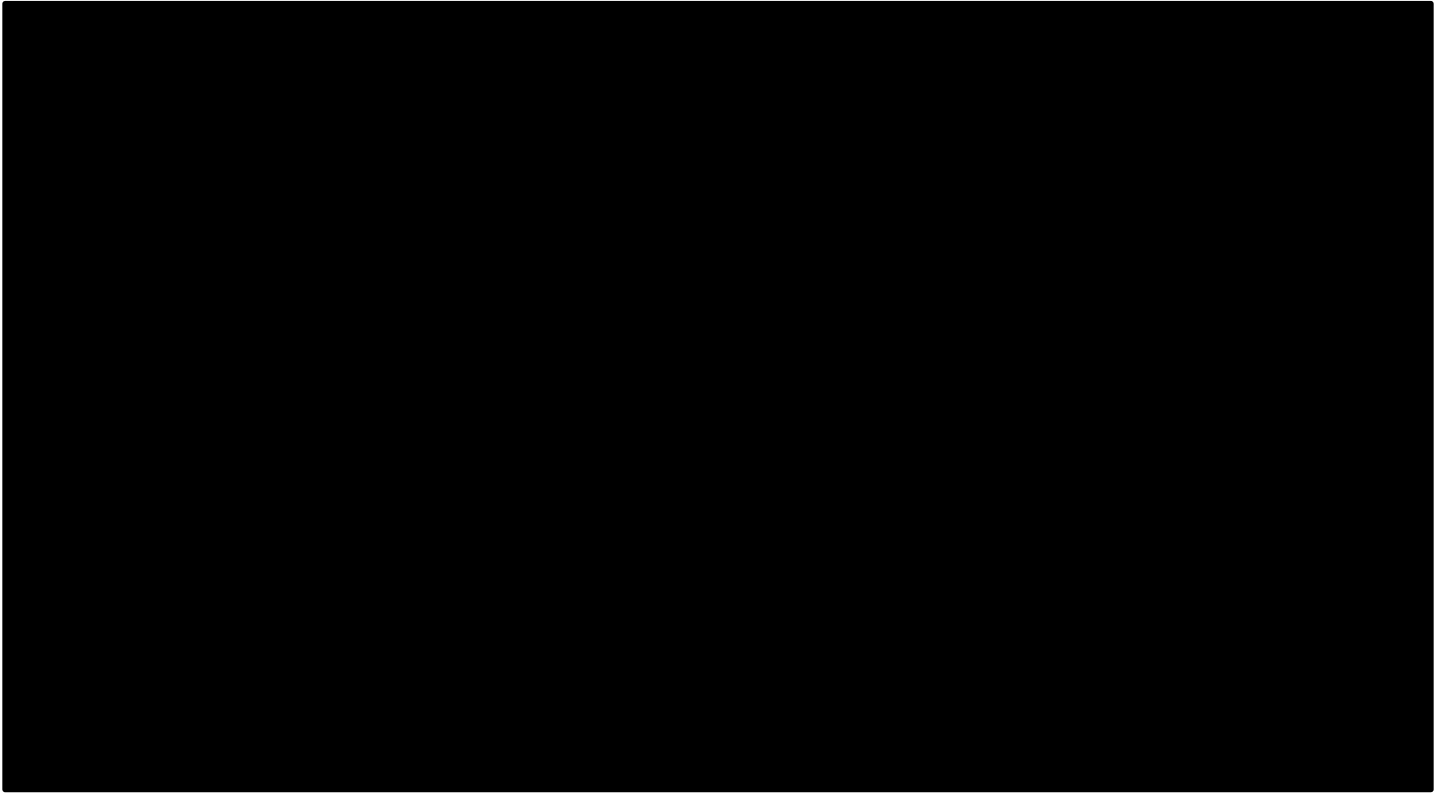


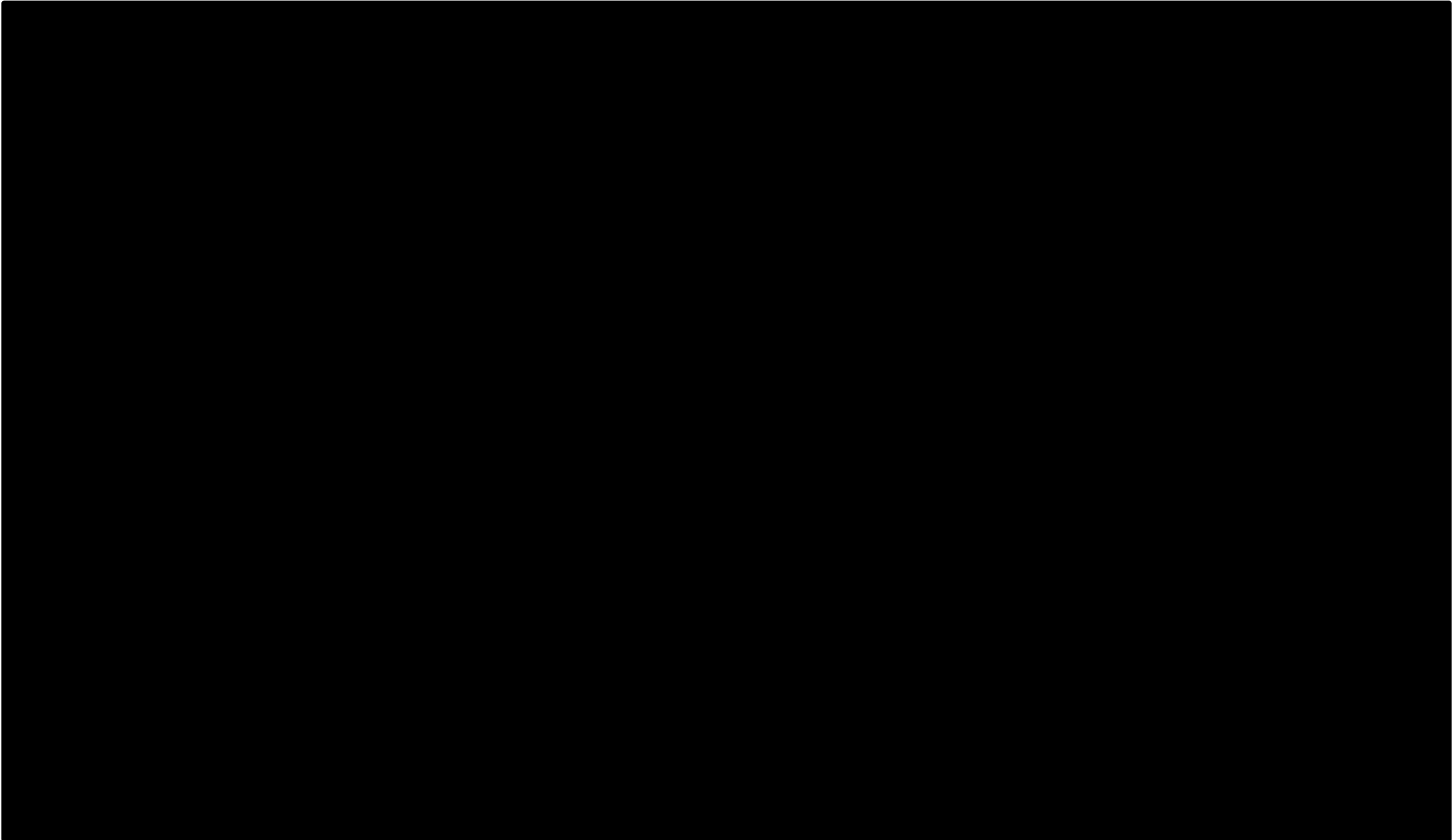




*Appendix E: Hazard Bowties and HSE Critical Tasks Cont'd*

[technical drawing; security risk]



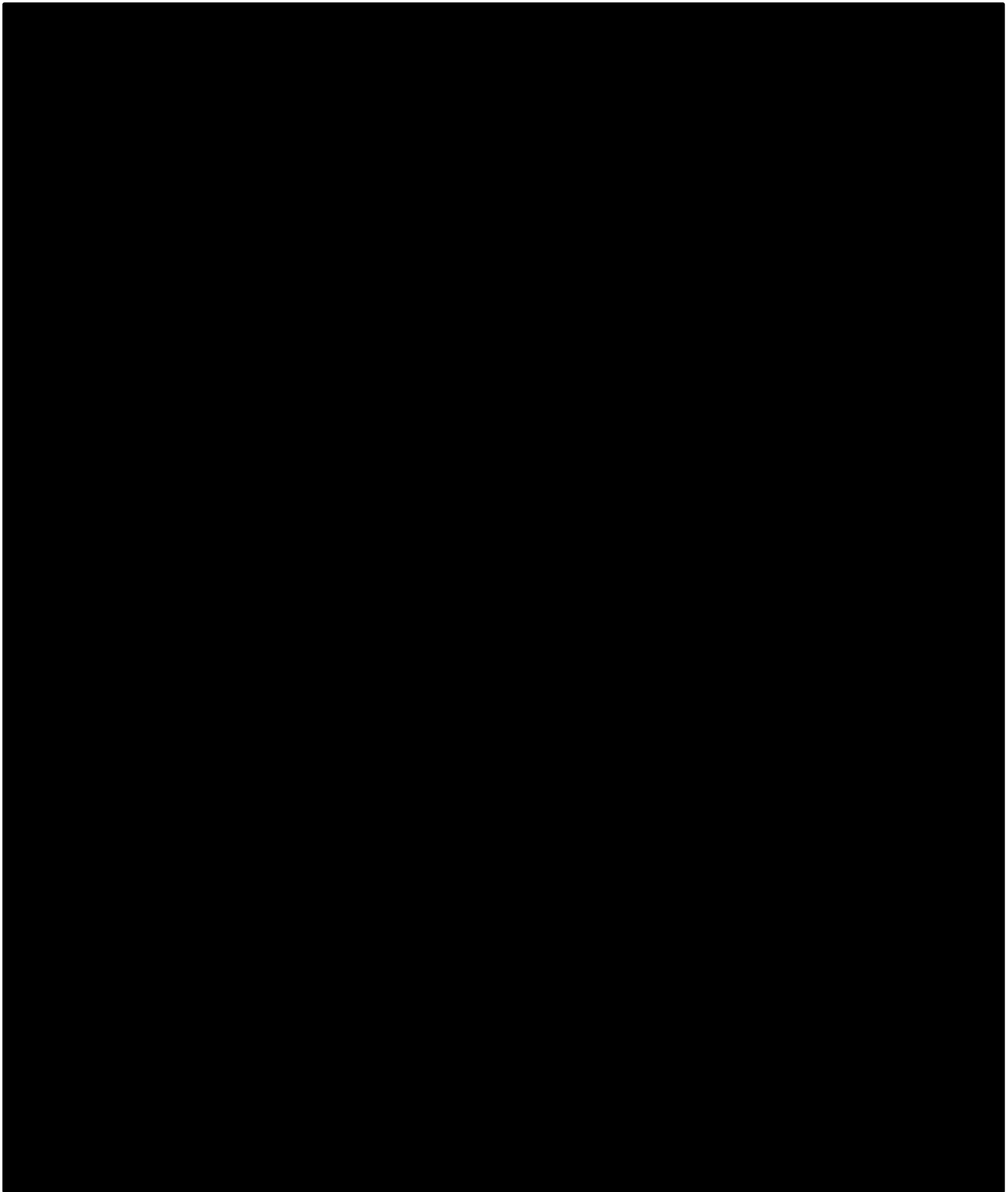


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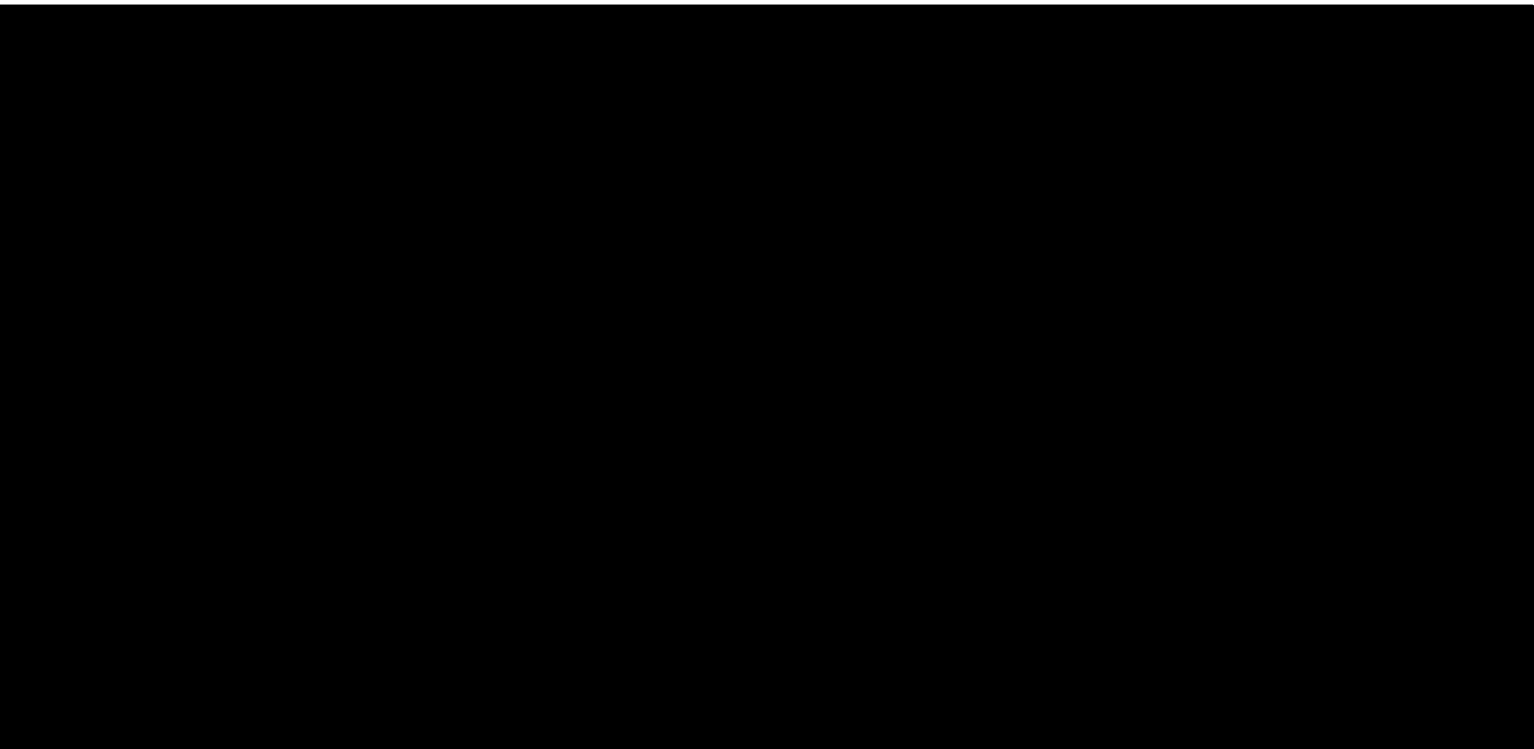
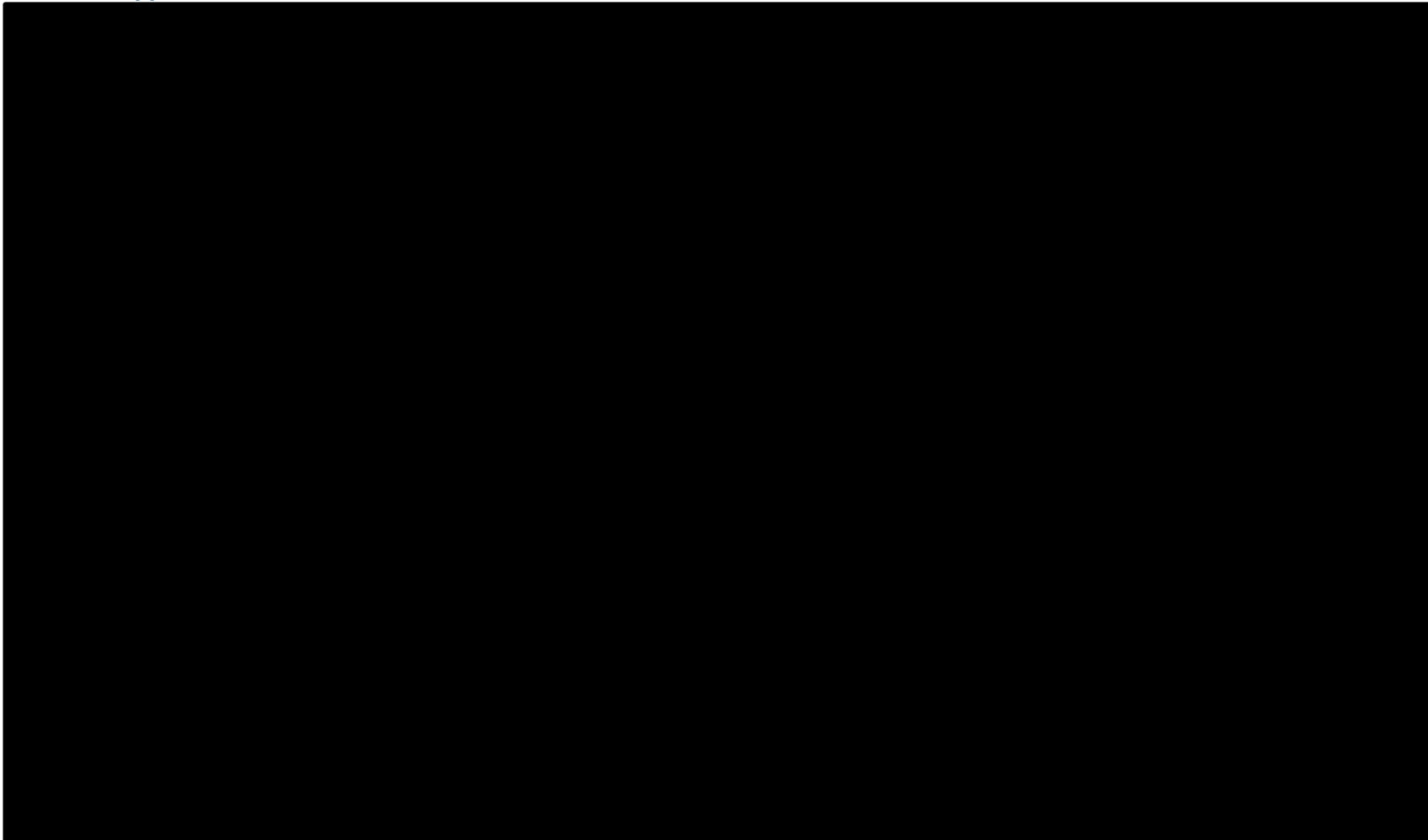


[Redacted line of text]

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[technical drawing; security risk]

*Appendix E: Hazard Bowties and HSE Critical Tasks Cont'd*



*Appendix E: Hazard Bowties and HSE Critical Tasks Cont'd*

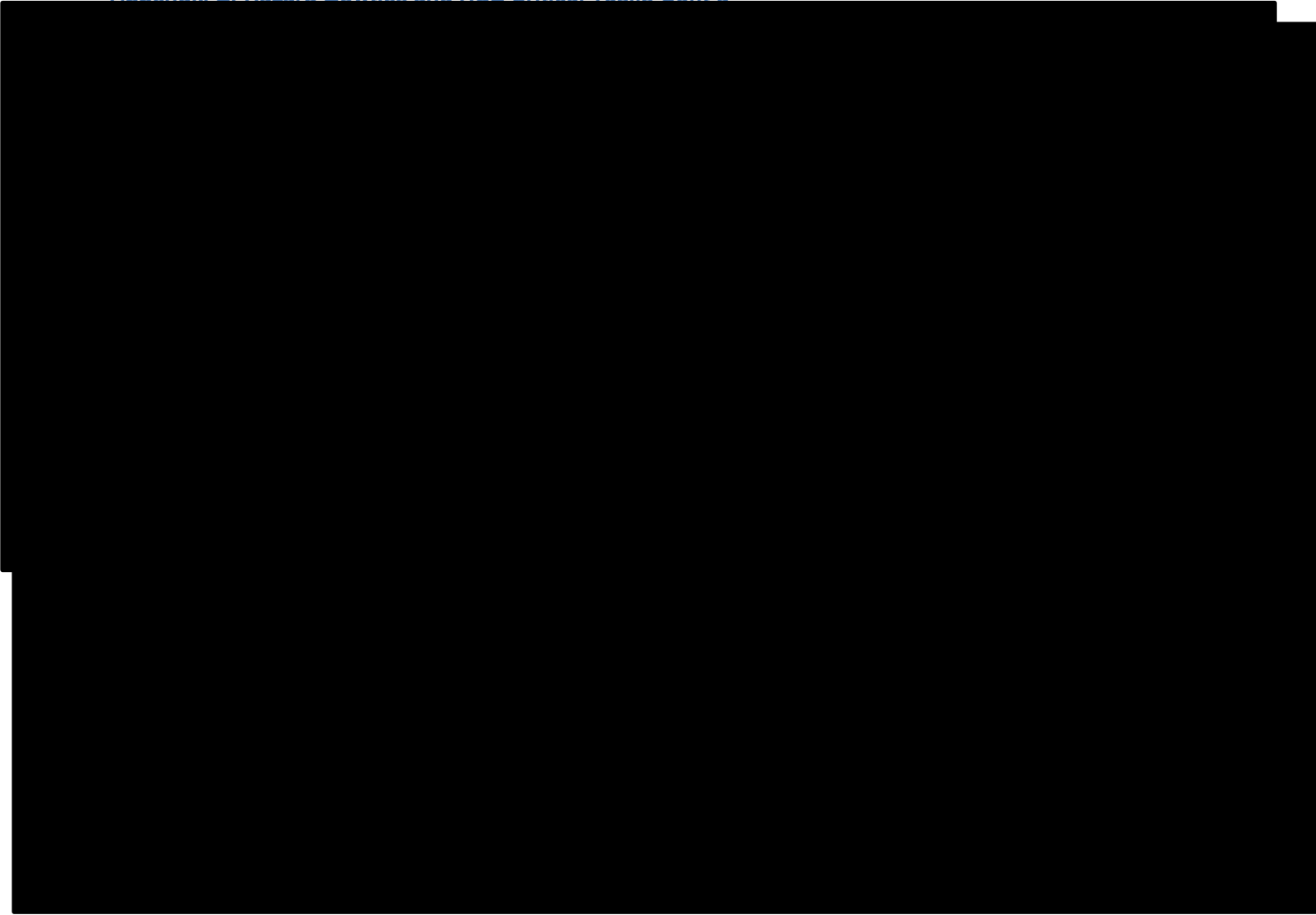
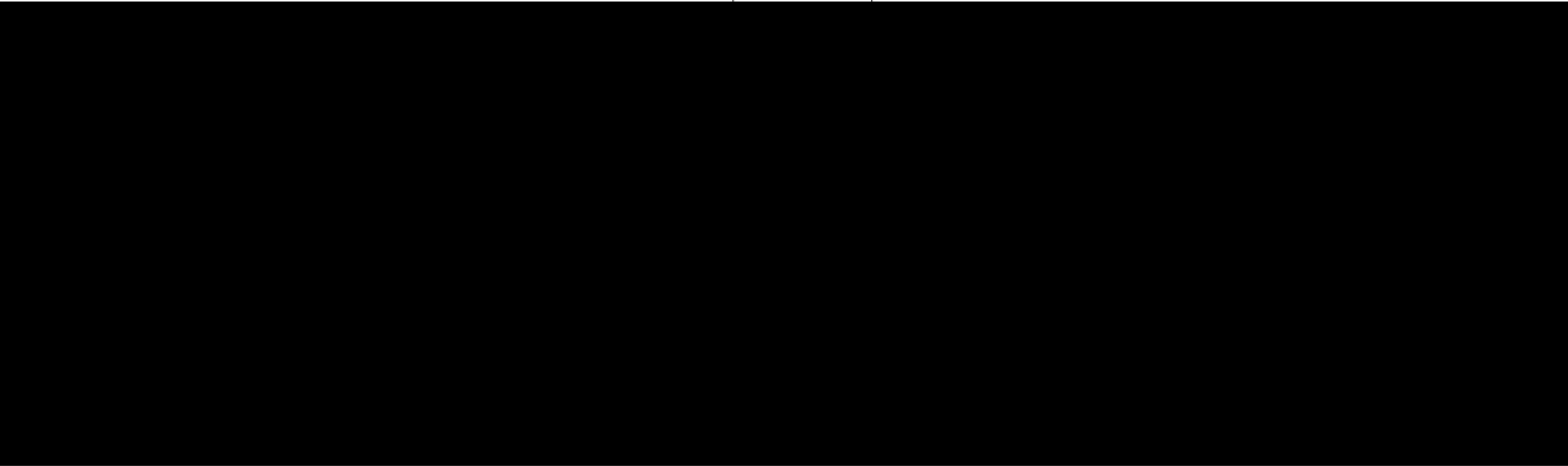





Figure 7.5 :SCL A Pipeline (M.U.S.T.), Loss of Containment, Major Release (Fire/Explosion) Threats 9 to 10 &





Appendix F: Location of CER's Responsibility & Area Maps


- 


1. **BP**  
3 x NPS 8, 1 x NPS 10
- 


2. **IMPERIAL OIL LIMITED**  
2 NPS 5 IN NPS 8 CASINGS
- 

3. **ENBRIDGE PIPELINES**  
NPS 30 (NORTH LINE)
- 

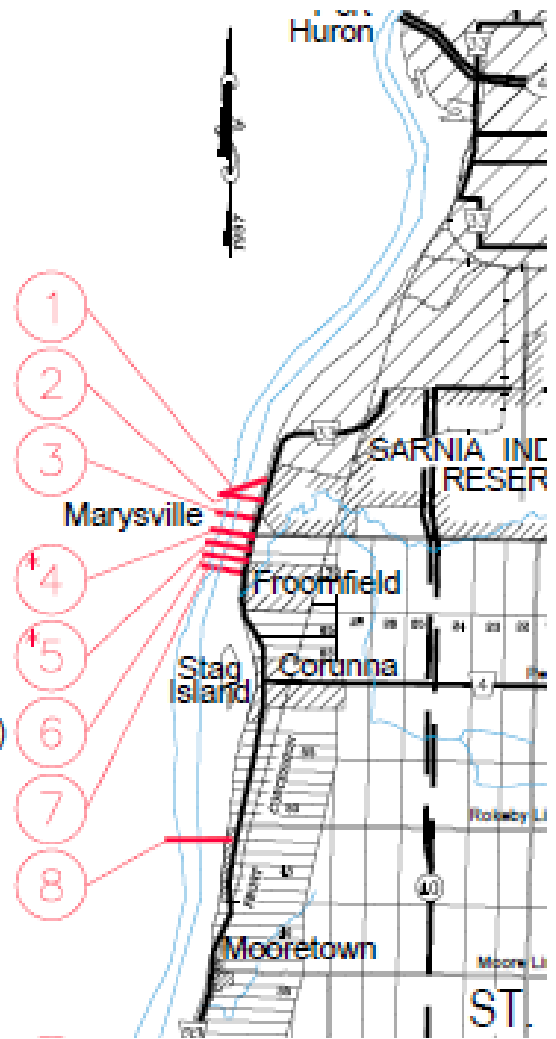
4. **SUN-CANADIAN PIPELINE COMPANY**  
NPS 8
- 

5. **NOVA CHEMICALS**  
NPS 12 (LEASED BY UNION GAS)  
NPS 8  
2 x NPS 6
- 

6. **SHELL CANADA (SALMON PIPELINES)**  
4 x NPS 6
- 

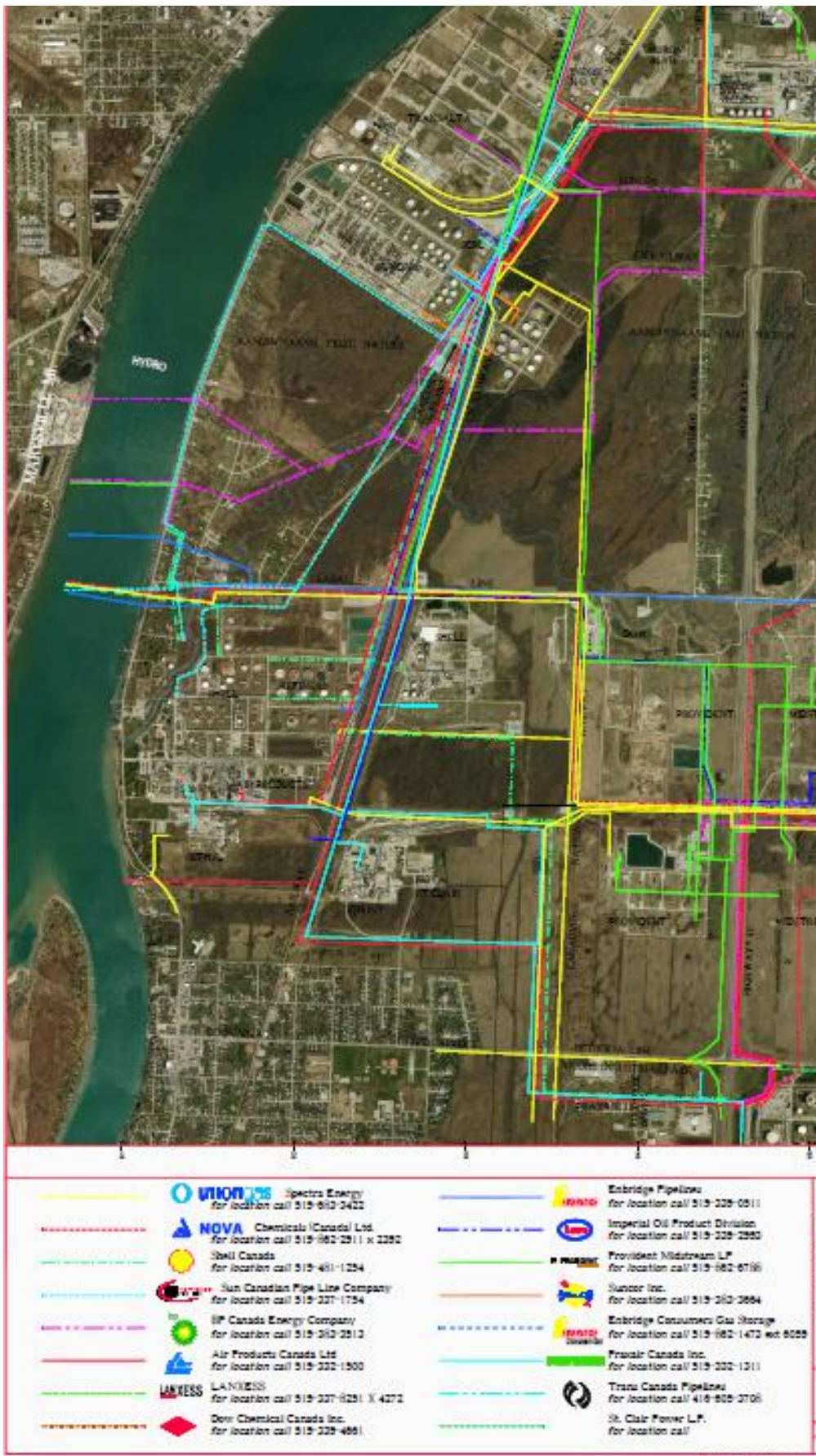
7. **ENBRIDGE PIPELINES**  
NPS 30 (SOUTH LINE)
- 

8. **NIAGARA GAS TRANSMISSION**  
NPS 24



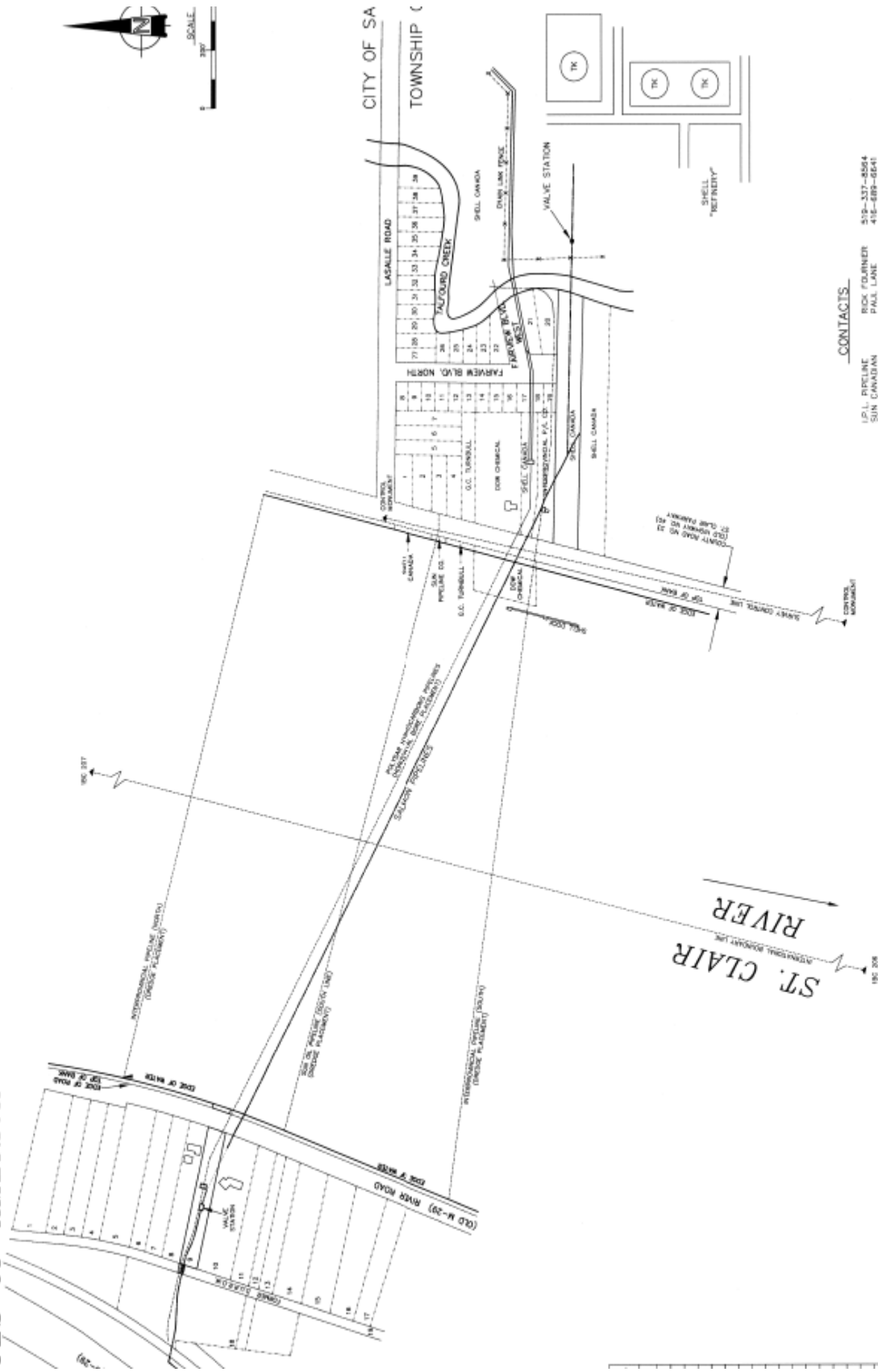


Appendix F: Location of CER's Responsibility & Area Maps



TOWNSHIP OF MOORE, ONTARIO  
CANADA

LE, MICHIGAN  
TES OF AMERICA

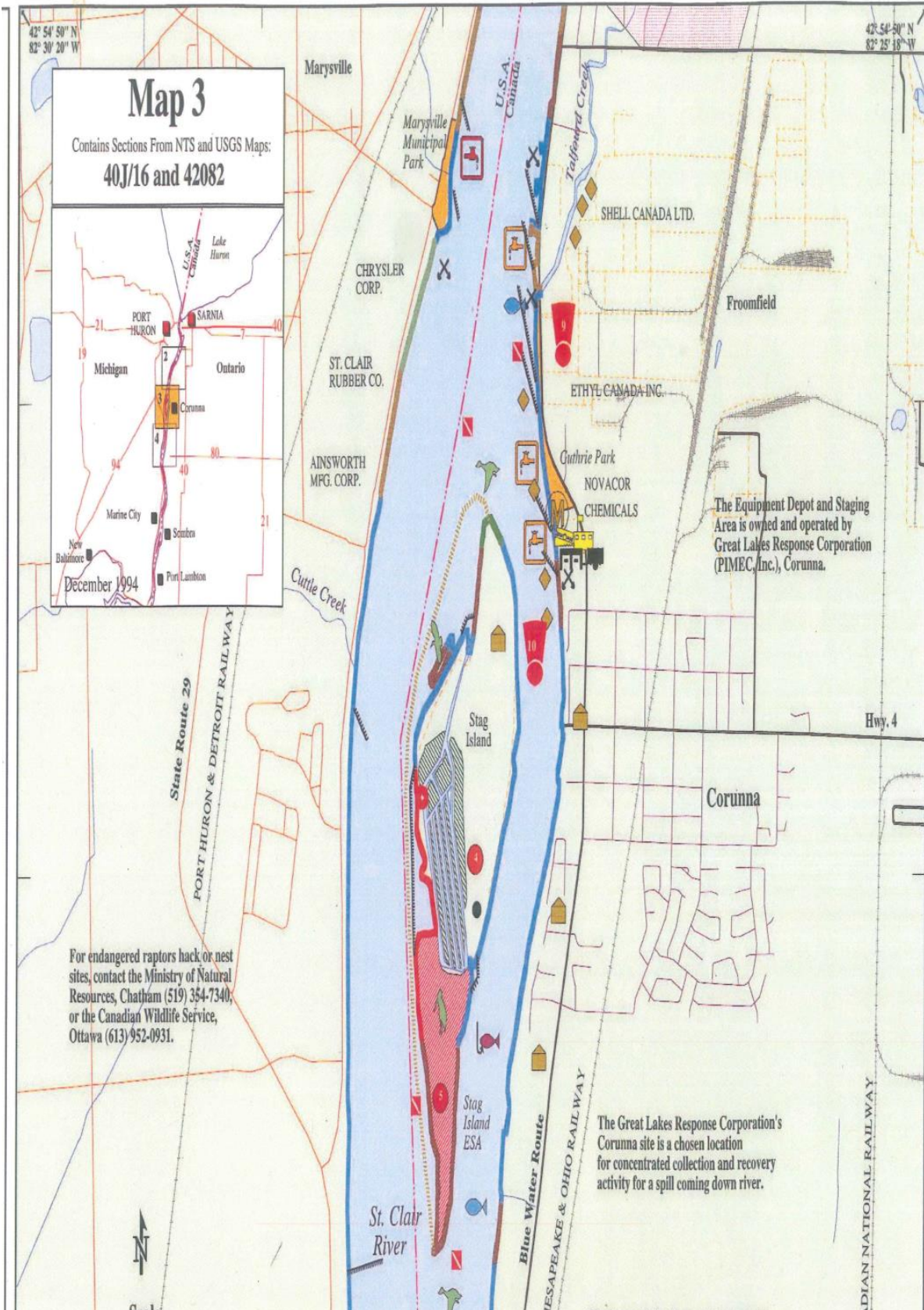


CONTACTS

IPIL PIPELINE	RICK FOURNER	519-337-8564
SUN CANADIAN	PALL LANE	416-689-6641
POLSKAR PIPELINE	JOHN COX	519-863-2911
TOWNSHIP OF MOORE	REN KERR	519-867-2993
COUNTY OF AMBTON	LUKASZ	416-845-3363
CITY OF CANADA	LUKASZ	416-944-3363
CITY OF MARYSVILLE	SCOTT RICHARDS	313-364-6613

NOTE

THE POSITION OF CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS AND MUST BE SHOWN. THE ACCURACY OF THE POSITION OF SUCH UTILITIES IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.



### Legend

**ES<sup>1</sup> Ranking**

**Shoreline Habitats**

- 14(14) Exposed Bedrock Bluff less than 1 metre elevation
- 14(14) Exposed Bedrock Bluff 1-5 metre elevation
- 14(14) Exposed Bedrock Bluff greater than 5 metre elevation
- 21(4) Retaining Wall/Harbour Structure/Breakwaters
- 3(2) Shelving Bedrock

**Unconsolidated Sediment Shores**

- 4(2) Exposed Sediment Bluff
- 54(4) Sand Beach: Depositional
- 54(4) Sand Beach: Erosional or Transitory
- 4(4) Sand Barrier With Lagoon
- 74(4) Pebble Beach
- 74(4) Pebble/Cobble Beach
- 74(4) Cobble Beach
- 8(4) Rip Rap
- 9(4) Boulder Beach
- 10(5) Mixed Beach (% by sediment in DOE Database)

**Vegetated Shores**

- 11(4) Low Vegetated Bank (Grass or Trees)
- 12(5) Delta Mud Flat
- 134(14) Fringing Wetland
- 134(14) Broad Wetland

\* ES<sup>1</sup> - Canadian Environmental Sensitivity Index (USA ES<sup>1</sup> ranking follows in brackets) Higher numbers indicate greater sensitivity.

**Biological Resources**

**Fish**

- Area of Seasonal Fish Spawning
- Location of Seasonal Fish Migration

**Birds**

- Migratory Waterfowl
- Colonial Nesting Birds (total nests - all species)
- Wading Birds (total nests - all species)
- Shore Birds
- Raptors

**Shore Associated Mammals**

- Furbearers (such as Muskrat, Mink, and Beaver)

**Human-Use Resources**

**High Recreational Usage**

- Marinas and Small Craft Harbours
- Anchorage Sites
- Residential, Recreational or Cottage Use
- High-Use Recreational Beach
- Recreational Dive Site

**Resource Extraction**

- Water Intakes - Industrial
- Water Intakes - Municipal
- Outfall
- Commercial Fisheries Activity

**Special Status Areas**

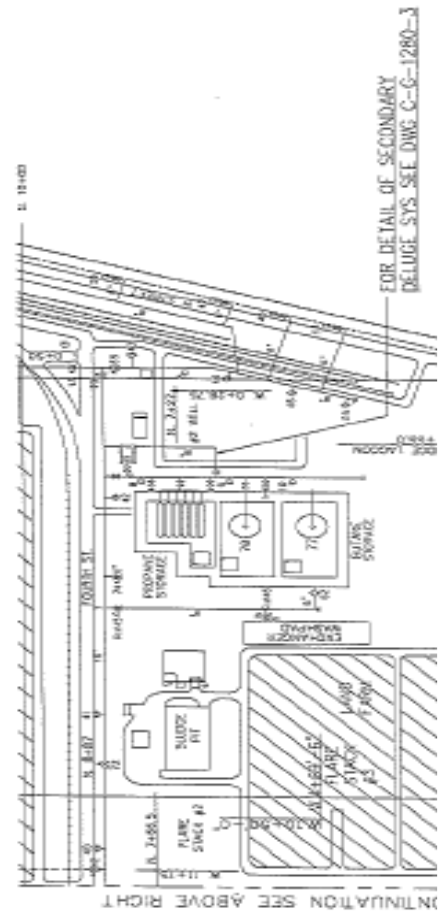
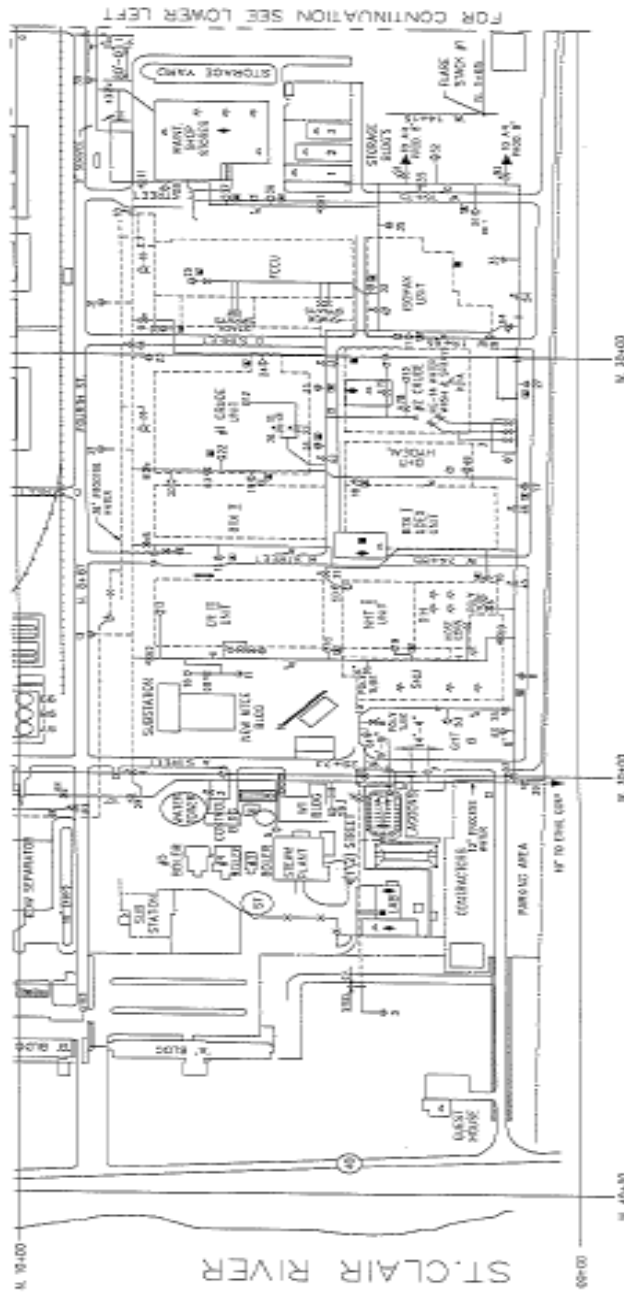
- Highly Sensitive Classified Feature (within 2km)
- First Nation/Native American Reservation
- National Park/National Forest
- Provincial/State Park, Wilderness Area or Nature Reserve/State Forest
- Conservation Area or Municipal Park
- Environmentally Sensitive Area<sup>1</sup>
- Area of Natural and Scientific Interest<sup>1</sup>
- Area of Ecological Significance (e.g. Wetland)
- Dune Formations
- Location of Archaeological Site

<sup>1</sup> As identified by Ontario Ministry of Natural Resources or Conservation Authorities

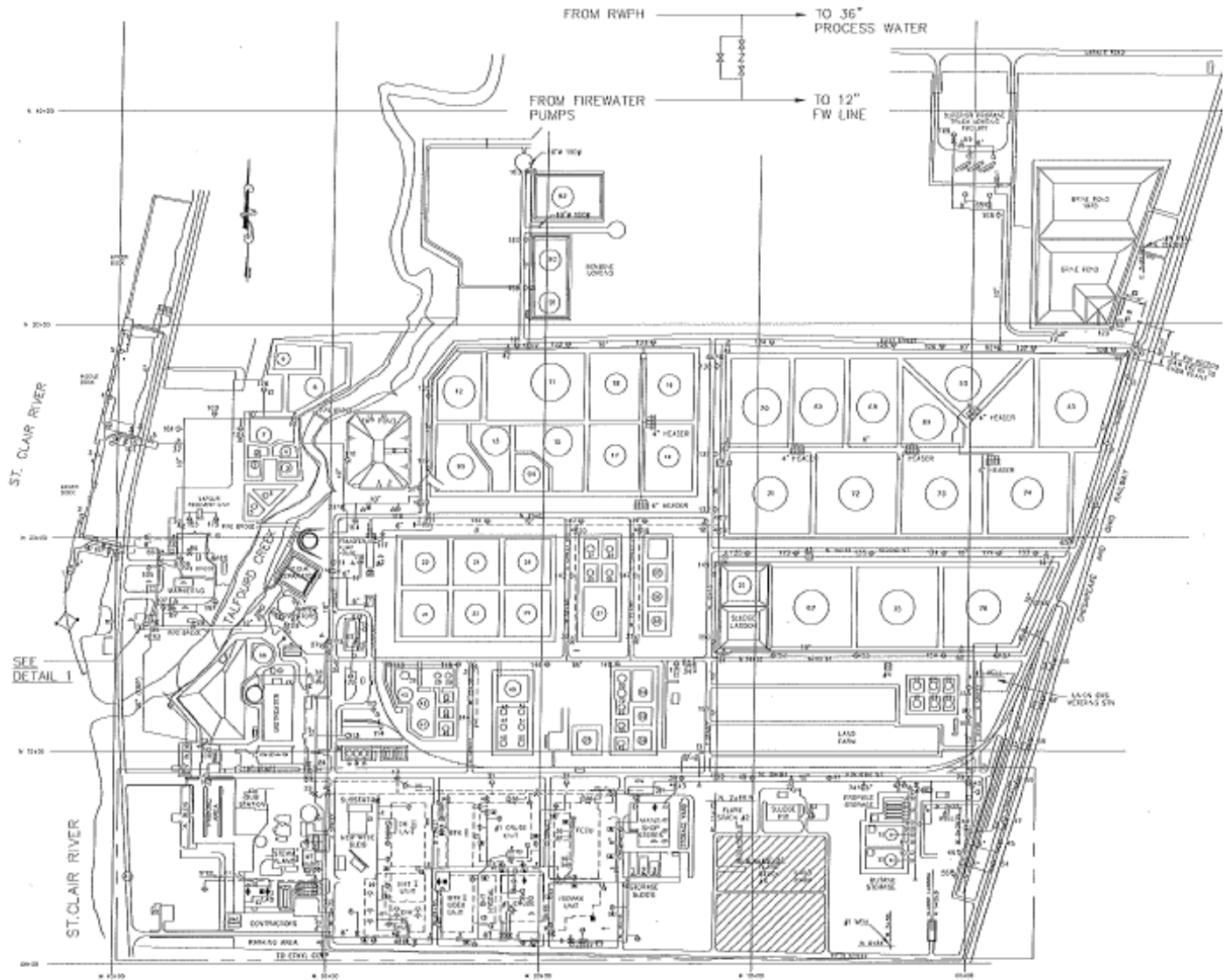


**LEGEND:**

- ☐ FFC HYDRANT
- ☐ FFE HYDRANT WITH 450 PSI
- ☐ HYDRANT WITHOUT FFE HYDRANT
- ☐ PORTABLE HYDRANT
- ☐ EMERGENCY FFE SUPPLY
- ▲ FFOH UNIT, 50 GAL
- ▲ FFOH UNIT, 100 GAL
- ▲ FFOH UNIT, 150 GAL
- ▲ FFOH UNIT, 185 GAL
- ▲ FFOH UNIT, 200 GAL
- ▲ PORTABLE FFOH UNIT
- ☐ FFOH STORAGE UNIT
- ☐ FFE ALARM SYSTEM
- ☐ STRANGLER SYSTEM
- MISC SYSTEM
- GREEN DODGE SYSTEM
- EAST SIDE AIR
- EAST CABIN W/IN FFE
- ELECTRIC DRIVEN FFE PUMP
- EXHAUST BLSL (WITHIN FFE MAP)
- W/ CLEAN GAS (FEE)



Appendix H: Refinery Fire Protection Facilities



LEGEND:

- ⊕ FIRE HYDRANT
- ⊕ FIRE HYDRANT WITH MONITOR
- ⊕ MONITOR WITHOUT FIRE HYDRANT
- ⊕ PORTABLE MONITOR
- ⊕ EMERGENCY FIRE SUPPLY
- ▲ FBM UNIT, 50 GAL
- ▲ FBM UNIT, 100 GAL
- ▲ FBM UNIT, 150 GAL
- ▲ FBM UNIT, 500 GAL
- ▲ FBM UNIT, 1000 GAL
- ⊕ PORTABLE FBM UNIT
- ⊕ FBM STORAGE DEPOT
- ⊕ POST INDICATION SYSTEM
- ⊕ FIRE ALARM SYSTEM
- ⊕ SPRINKLER SYSTEM
- ⊕ HALON SYSTEM
- ⊕ CARBON DIOXIDE SYSTEM
- ERST STEEL PIPE
- - - ERST CAST IRON PIPE
- ⊕ ELECTRIC DRIVEN FIRE PUMP
- ⊕ EMERGENCY DRIVEN FIRE PUMP
- 12" CLEAN OIL ("FO")

## **Appendix I: Emergency Response Drill Schedule**

### **1. Emergency Response Drills - Requirement for Completion**

#### **A. Oil Pollution Emergency Plan**

1. Notification Drill - to verify the SMC responders are readily available and that external contacts, including response contactors and ECRC, are valid. Completed twice each year.
2. Operational Drill - To evaluate the Shell Response Team's ability to deploy the required equipment in a safe and expedient manner to stop the downstream migration of spilled recoverable product. The Response Team Coordinator will create a scenario, conduct pre-exercise briefing and will monitor and coach the response crews as necessary. To be completed annually.
3. Management Drill - To evaluate the SMC's ability to effectively organize, manage and direct some or all aspects of an emergency. This is a table top exercise and will include the activation of at least one outside agency. This exercise can be done in conjunction with the operational exercise. To be completed every 3 years.

#### **B. Spill Prevention and Contingency Plan - Section 1.7 [Ontario Regulation 224/07 10(1)(3), 10(1)(4), 10(1)(5)]**

1. A portion of the operations of the plant must be tested each year to determine whether, if a spill at or related to the operations of the plant occurs, the plant's response to the spill would comply with the Spill Prevention and Contingency Plan and would be effective to prevent, eliminate or ameliorate any adverse effects that may result from the spill.
2. All portions of the operations of the plant must be tested once in a 5 year period.
3. At least once every two years, a live exercise where every person involved in the planned response to the spill practices their response and every operation involved is physically tested.

#### **C. PCB Regulation Section 28(1)(i)**

The owner or operator of a PCB storage site shall test the PCB storage site fire protection and emergency procedures plan once per year.

#### **D. Ontario Fire Code Section 2.8.3.2(1)**

A fire drill must be conducted for all supervisory staff at least once in each 12 month period.

#### **E. National Energy Board - Onshore Pipeline Regulation and Canadian Standards Association (CSA) Z662**

CSA Z662 Section 10.3.2.4 - Operating companies shall have verifiable capability to respond to an emergency in accordance with their emergency procedures and response plans and shall demonstrate and document the effectiveness of such procedures and plans.

#### **F. Tier 3 Manufacturing Management System (MMS) - Section 5.6.1.6 Emergency Response**

Establish and maintain a program of testing of emergency response plans and procedures at least once a year or more frequently based on the level of risk.

- i. The program includes testing of notification and activation procedures, Emergency Response Team communications and communications with internal and external contacts.
- ii. Carry out exercises according to a program that includes tabletop and mobilization exercises using equipment and key regulatory agencies, contractors and consultants.

## **Appendix I: Emergency Response Drill Schedule Cont'd**

- iii. Review tests and exercises to identify lessons learned and use these to improve training and procedures.

### **G. Health, Safety, Security, Environment & Social Performance (HSSE & SP) Control Framework Emergency Response - Section 3**

Establish and maintain Emergency Response plans and Procedures for Emergency Incident scenarios associated with Hazards in the yellow and red areas of the RAM as specified in Managing Risk.

3.1. The Emergency Response plans and Procedures must include:

- contact details of the Emergency Response Team including Contractors;
- criteria for escalation of an Emergency Incident into a Crisis; and
- how to make the transition to normal operations after the Emergency Incident is declared over.

3.2. Review and update Emergency Response plans and Procedures on a risk-based frequency, at least every three years.

3.3. Provide spill response and preparedness plans to comply with national oil and chemical spill response plans as specified in Spill Preparedness and Response.

### **H. Health, Safety, Security, Environment & Social Performance (HSSE & SP) Control Framework Emergency Response - Section 8**

1. Establish and maintain a program of testing of Emergency Response plans and Procedures at least once a year or more frequently based on the level of risk.
2. The program must include testing of notification and activation Procedures, Emergency Response Team communications and communications with internal and external contacts.
3. Carry out exercises according to a program that includes tabletop and mobilization exercises using equipment and key regulatory agencies, Contractors and consultants.
4. Review tests and exercises to identify lessons learned and use these to improve training and procedures.

### **I. Ministry of Natural Resources - CSA Z341-10 Storage of Hydrocarbons in Underground Formations - Section 10.1.2**

Operators shall establish an emergency response plan to deal with accidental hydrocarbon release, equipment failure, natural perils, and third-party emergencies. The emergency plan shall:

- a) be developed in accordance with CAN/CSA-Z731;
- b) include procedures for the safe control and shutdown of the hydrocarbon storage facility, or parts of the facility, in the event of a failure or other emergency, as well as safety procedures for personnel at emergency sites;
- c) be tested and updated annually, with results documented and records kept on site for five years; and
- d) include a program to demonstrate operator familiarity with the emergency response plan.

### **J. Shell Canada Baseline Security Standard Section 3.7**

Facility Security Plans shall require drills and exercises annually or as may be required by applicable laws or regulations. (Per Salvador Menendez, drills must be conducted every 3 months and an exercise once per year.)



**K. SCL Emergency Response Procedures - Section 21**

Procedure requires completion of weekend fire drills which are carried out throughout the year to give the operators hands-on involvement in simulated incidents. These exercises range from tabletop reviews to full dress practice dry runs similar to the RRT exercises, which occur at least once each year.

**L. Canada Shipping Act - Response Organizations and Oil Handling Facilities Regulations (SOR/95-405)**

1. Section 3(2)(h) A description of the oil spill exercise program established to evaluate the effectiveness of all aspects of the procedures, equipment and resources that are identified in the plan, including exercises to be coordinated with ships, oil handling facilities or the Canadian Coast Guard, as the case may be;
2. Section 5 The oil spill exercise program referred to in paragraph 3(2)(h) shall be carried out over a three-year period that begins on the day on which the certificate of designation is issued.
3. Section 12(2)(j) An oil pollution incident exercise program established to evaluate the effectiveness of all aspects of the procedures, equipment and resources that are identified in the oil pollution emergency plan, including exercises to be coordinated with ships, response organizations or the Canadian Coast Guard, as the case may be.

**M. Canada Environment Protection Act – Environmental Emergencies Regulation**

1. Section 6(1) The emergency response plan must be tested at least once in each calendar year to ensure that it meets the requirements outlined in section 4(2) and (3) of the regulation.

**2. Procedure for Completing Emergency Response Drills**

- 2.1. The HSSE Specialist has overall responsibility to ensure that this procedure is followed and for updating the drill schedule as drills are completed. The HSSE Specialist will update this schedule on an annual basis to ensure that a five year plan is maintained that will meet the requirements outlined above under 'Drill Requirements.
- 2.2. A list of predetermined emergency scenarios is available in Appendix A. The person identified in the schedule is responsible for reviewing this list, determining if one of the scenario's is appropriate for the assigned area and completing the drill as outlined. If there is no appropriate scenario for the area assigned, the person identified in the schedule will develop an emergency scenario for the assigned area and complete the drill. The drills should be completed in the assigned time period.
- 2.3. The responsible person listed in the schedule will complete a critique of the drill on the Emergency Response Drill Record. The critique will consist of the names of personnel involved, the spill scenario, actions taken to respond to the event, including notifications (internal and external) that would be made in an actual event, actions to stop the release and to prevent it from getting off site, a list of work notifications issues (if any) and recommendations requiring follow up.
- 2.4. Each shift will complete a minimum of 4 tabletop exercises and 4 emergency drills each year, at least 2 drills must be completed each quarter. Involvement in Dock, Security and ICT exercises are in addition to the above drills.
- 2.5. All emergency and tabletop drills must include a response to a spill and a fire (if possible). Response to the event must include determining the notifications (internal and external) that would be made in an actual event and actions to put out the fire and stop the release and prevent the release from getting off site.
- 2.6. All electronic copies of the critique of emergency response drills will be saved to S:\SAProj1\Emergency\Drill\YEAR.

## Appendix I: Emergency Response Drill Schedule Cont'd

- 2.7. The person completing the critique will forward (email) a copy of the report to the HSSE Specialist and the Environmental Analyst.
- 2.8. The Environmental Analyst will save the drill to the location specified above and enter the drill information into FIM and send information to Business admin support. Actions will be assigned to the:
  - HSSE Specialist to review the drill and take action as necessary (this will include completing any actions that require follow up)
  - Administrative Assistant - Business to enter the participants into Shell Open University.

### 3. Emergency Response Drills - Definitions

Emergency Drill	<p>A live exercise to test response to an emergency event. The emergency event must include response to a spill and a fire. An emergency drill must include the doning of PPE necessary to respond to the scenario. Response must include spraying water.</p> <p>In the case of the PCB Storage building, an emergency drill will only include response to a fire unless there is PCB waste stored within the building.</p> <p>A Rescue Drill will also be considered an emergency drill. See definition below.</p>
Evacuation Drill	Testing of the fire safety plan including, sounding the alarm, notifying the fire department and evacuating occupants.
ICT Exercise	A live exercise to test response to a spill where every person involved in the planned response to an event practices their response and every operation involved is physically tested. The ICT exercise must be refinery based and include the involvement of the Corunna Fire Department.
Management Drill	A table top exercise completed to test the organization, management and direction of some or all aspects of an emergency. This exercise must include the activation of at least one outside agency. This exercise can be done in conjunction with the operational exercise.
Mustering Drill	Involves testing the response of all employees to the activation of the plant alarm.
Notification Drill	Involves contacting all SMC responders and external contacts, including response contactors and ECRC, to ensure contact numbers are valid and the system is operational.
Operational Drill	Completed at the SMC Refinery Dock. Equipment, to stop the downstream migration of spilled recoverable product, must be deployed. Exercise must be coordinated with ships, the Coast Guard or other appropriate response organization. Different scenarios must be tested each year.

## Appendix I: Emergency Response Drill Schedule Cont'd

Rescue Drill	A live exercise that involves practicing the removal of an individual from a dangerous, potentially life threatening, situation. This may involve a rescue from heights or a confined space. The drill must include completing first aid and use of the defibrillator.
Table Top Drill	A simulated exercise designed to test the response capability to an emergency event. The emergency event must include response to a spill and a fire. The scenario requires coordinated response to a realistic situation that develops in real time with participants gathered to formulate responses to each development. A review of an actual event may be considered a table top exercise.
Sewer Drill	An exercise to verify sewer operation using a natural weather event. Immediately following a rainfall event of a minimum of 0.35 inches (0.89 mm) /minute for more than 10 minutes, areas of the unit that are showing flooding are to be identified.
Security Drill	A simulated exercise that will only test a part or specific element of the security plan contained within the site Security Manual.
Security Exercise	A simulated exercise that test all your levels of your security plan, contained within the site Security Manual. It will test areas of communication, coordination, resource availability, and response capability.
Plant Alarm Speakers Test	An exercise to verify that all speakers in the plant area are operational.

### Emergency Response Drills – Plant Areas

Brine Ponds	Loading Rack
BTX Reformer/UDEX	Marketing Tanks
Buildings	Naphtha Hydrotreater (NHT)
CR3	River Water Pump House
Dispatching	SCL
Dock	Sats
Extractive Mercox Unit (EMU)	Solvent Hydrogenation Unit (SHU)
FCCU	Sour Water Stripper
Flare	Steam Plant
FPU	Storage Wells 1 & 2
Gasoline Hydrotreater	Storage Wells 3 & 4
Girbitol	Sulphur Recovery Unit (SRU)
IPA - Feed Prep Unit	Visbreaker Unit
IPA - Flare	Waste Water Treatment Plant
IPA - Plant	PCB Storage Bldg
IPA - Rail Car Storage	IPA - Tank Farm

## Drill Schedule

### Emergency Response Drill Schedule – 2020

Area	Date Due	Date Drill Sched	Classification	Tier of Emerge	Drill Scenario	Reason for Dr	Responsibility for Completion	Crew	Date Complet
Dock	Q1		Notification	1	Call Out List		Production Specialist/Security		
Loading Rack - Critical Injury	Q1		Emergency	2	Top 10 ER Actions / Mustering Drill	ER	HSSE Manager	4	
Pipeline	Q1		Field Exercise	tier 2	Vapour release from Salmon Pipeline	vapour release & fire	Shift FIRE CAPTIAN & Shift PTL / PIPE LINE Manager	1	
CR3	Q1		Emergency	1	Tube rupture on any of heater EH-1/2/3/4/5/6	HEMP	Shift FIRE CAPTIAN & Shift PTL	2	
Dock	Q1		Emergency	2	Allision	CEPA & Medical	Shift FIRE CAPTIAN & Shift PTL	EOC	
Storage Wells	Q1		Emergency	1	Vapour release	CEPA & Spill drill	Shift FIRE CAPTIAN & Shift PTL	3	
Sulphur Recovery Unit (SRU)	Q1		Emergency	1	release of liquid sulphur to grade	Spill drill	Shift FIRE CAPTIAN & Shift PTL	4	
Visbreaker Unit	Q1		Emergency	1	Fire	OFC	Shift FIRE CAPTIAN & Shift PTL	1	
Brine Ponds	Q1		Emergency	1	Line carrying brine from pond 1 to 2 corrodes releasing brine to ground	Spill drill	Shift FIRE CAPTIAN & Shift PTL	2	
Security Drill	Q1		Security Drill	1	Security Lock Down for ER simulation	Security	Security Supervisor		
Dispatching	Q1		Emergency		External floating roof tank rim seal fire	HEMP		3	
Sats Gas	Q2		Table Top	1	Liquid release of butane	CEPA	Shift FIRE CAPTIAN & Shift PTL	4	
Solvent Hydrogenation Unit (SHU)	Q2		Table Top	1	fire due to release of D80	CEPA, OFC	Shift FIRE CAPTIAN & Shift PTL	1	
Sour Water Stripper	Q2		Table Top	1	Release of sour water	SPCP, CEPA	Shift FIRE CAPTIAN & Shift PTL	1	
Crude 1	Q2		Table Top	1	Damaged nuclear guage on Atmospheric Bottoms	IH	Shift FIRE CAPTIAN & Shift PTL	2	
#1 Crude	Q2		Table Top	1	Fire melts nuclear guage on AA-2 Tower	IH, OFC	Shift FIRE CAPTIAN & Shift PTL	3	
#2 Crude	Q2		Table Top	2	MEDICAL DRILL component*** Man down on third floor platform	medical	Shift FIRE CAPTIAN & Shift PTL	4	
Above Ground Propane/Butane Storage - Spheres	Q2		Table Top	1	our release of butane due to piping failure from vibration or corrosion	HEMP, CEPA	Shift FIRE CAPTIAN & Shift PTL	2	
Waste Water Treatment Plant	Q2		Table Top	1	Release of benzene to south storm pond	CEPA	Shift FIRE CAPTIAN & Shift PTL	3	
Security Drill	Q2		Security Drill	1	Suspicious Package found at Dock		Security Supervisor		
Dock	Q2		Table Top	1	Allision		Security Supervisor		
Tank Farm	Q2		Field Exercise	2	Well Release	HEMP, SPCP			
Dispatching	Q3		Emergency	1	overflow gasoline tank tank 71 or 72	HEMP	Shift FIRE CAPTIAN & Shift PTL	1	
Dock	Q3		Emergency/Operational	2	ECRC Training Day		Production Specialist		

### Emergency Response Drill Schedule – 2020

FCCU	Q3		Table Top	2	FCCU catalyst release to the public	HEMP, SPCP	Shift FIRE CAPTIAN & Shift PTL	4	
Flare	Q3		Table Top		#2 Crude Charge line road Crossing 4-5	HEMP	Shift FIRE CAPTIAN & Shift PTL	3	
PCB Storage Building	Q3		Table Top	1	fire drill	Regulatory	Shift FIRE CAPTIAN & Shift PTL	EOC	
Gasoline Hydrotreater	Q3		Emergency	1	Fin fan leak resulting in vapour release	SPCP	Shift FIRE CAPTIAN & Shift PTL	2	
Girbitol	Q3		Emergency	1	Liquid release of DEA	SPCP	Shift FIRE CAPTIAN & Shift PTL	1/EOC	
IPA - Feed Prep Unit	Q3		Emergency	1	Flange failure	SPCP	Shift FIRE CAPTIAN & Shift PTL	4	
BTEX/UDEK	Q3		Table Top	1	Jet/high pressure flange/pin hole leak fire	HEMP, SPCP	Shift FIRE CAPTIAN & Shift PTL	2	
IPA - Flare	Q3		Emergency	1	Release of liquid from the flare causing a fire at the base of the flare	HEMP, SPCP	Shift FIRE CAPTIAN & Shift PTL	3	
A Buildings	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
Docksides	Q3		Evacuation	1	Activation of building fire alarm				
D Buildings	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
A Buildings	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
57 Buildings	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
New Mtce Shop	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
Old Mtce Shop	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
Foster Wheeler Bldg	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
Chem Plant - Admin Bldg	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
A Building Contractor Lunch	Q3		Evacuation	1	Activation of building fire alarm	OFC	ER Specialist		
Security Exercise	Q3		Security Exercise	1	Suspicious mail delivery		Security Supervisor		
Security Drill	Q3		Security Drill	1	Bomb threat		HSSE Specialist		
Rescue Drill	Q4		Table Top	2	HAR / CSE Rescue		Shift FIRE CAPTIAN & Shift PTL	3	
Rescue Drill	Q4		Table Top	2	HAR / CSE Rescue		Shift FIRE CAPTIAN & Shift PTL	2	
Rescue Drill	Q4		Table Top	2	HAR / CSE Rescue		Shift FIRE CAPTIAN & Shift PTL	4	
Rescue Drill	Q4		Table Top	2	HAR / CSE Rescue - Water Treatment		Shift FIRE CAPTIAN & Shift PTL	1	
IPA - Plant	Q4		Emergency	1	Release of cylohexane from tank	CEPA, SPCP	Shift FIRE CAPTIAN & Shift PTL	3	
IPA - Rail Car Storage	Q4		Emergency	2	BLEVE	CEPA, SPCP	Shift FIRE CAPTIAN & Shift PTL	4	
IPA - Tank Farm	Q4		Emergency	2	IPA tank fire	CEPA, SPCP	Shift FIRE CAPTIAN & Shift PTL	2	
Isomax	Q4		Emergency	1	Loss of containment on reactor effluent due to salt corrosion	HEMP, SPCP	Shift FIRE CAPTIAN & Shift PTL	1	
Deck	Q4		Notification	2	Call Out List	OPEP	Production Specialist/Security		
Deck	Q4		Notification	2	Call Out List	OPEP	Production Specialist/Security		
Security Drill	Q4		Security Drill		ER Manual Call Out verification		HSSE Specialist		

Appendix J: Offsite Release Notification Matrix

**Immediate Notifications**

Group	To	From	Method	Phone Numbers
Main Gate Security	Guard on Duty	Initial Incident Reporter or PTL	Phone or radio	[REDACTED]
Incident Commander	PTL	Initial Incident Reporter or Security	Radio	[REDACTED] [REDACTED]
Emergency Responders	Operations	PTL	Radio	
SMC Personnel		Main Gate	Plant Alarm System/Radio	
Site Contractors		Main Gate	Plant Alarm System/Radio	
Sarnia Mkt. Terminal		Main Gate	Plant Alarm System and Phone	[REDACTED]
St. Clair Township	Fire Chief	PTL	Phone	[REDACTED]
SAC	Duty Person	PTL	Phone	[REDACTED]
City of Sarnia	Sarnia Dispatch	Main Gate	CVECO Radio	[REDACTED]
CSX	Data Clerk	Main Gate	Phone	[REDACTED]
SMC Incident Command Team	All ICT Positions	Main Gate	Blackberry or Pager	Per guard's List

[individual's name; personal information]

**Secondary Notifications**

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Group	To	From	Method	Numbers
Industrial Neighbors	CVECO Members	Sarnia Dispatch	CVECO Radio	As per list
St. Clair Township	Residence and Businesses	Fire Chief	One call system, sirens and local media.	[REDACTED]
Aamjiwnaang First Nations	Emergency Coordinator	Sarnia Dispatch	Monitors CVECO Pages or Phone	[REDACTED]
Aamjiwnaang First Nations	Residence and Businesses	Sarnia Dispatch - Anj. Emerg. Coord.	Phone, sirens and local media	[REDACTED]
City of Sarnia	Residence and Businesses	Sarnia Police	Phone, sirens and local media	[REDACTED]
St. Clair County - US	911 Centre	Sarnia Police	Phone	1
St. Clair County - US	Residence and Businesses	Emergency Coordinator	Phone, sirens and local media	[REDACTED]
Ministry of the Environment	Duty Person	SAC	Phone	[REDACTED]
Environment Canada	Duty person	SAC	Phone	[REDACTED]
Coast Guard	Duty Person	Sarnia Police	Phone	[REDACTED]

[individual's name; personal information]