



REMTECH 2016 | FAIRMONT BANFF SPRINGS | OCTOBER 12-14, 2016

Have you tested your environmental unit lately?
We did.

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Outline

- Spectra Energy
- Regulatory Framework
- How Spectra Responds to an Incident
- Spectra Energy and Stantec's Partnership
- Level III Exercise
- Findings from Exercise
- Conclusion
- Q & A



Our diverse portfolio of businesses

Spectra Energy
Partners

Spectra Energy

U.S. Transmission



**Delivers
~15%**

of natural gas used
in North America

Liquids



**Express-Platte
1 of 3**

existing crude oil
pipelines from W.
Canada to Midwest

Western Canada



**SET-West
60%**

Gathering &
processing in British
Columbia

Distribution



**Union Gas
2nd**

Largest natural gas
distributor in Canada with
2nd largest physically traded
gas hub in North America

Field Services



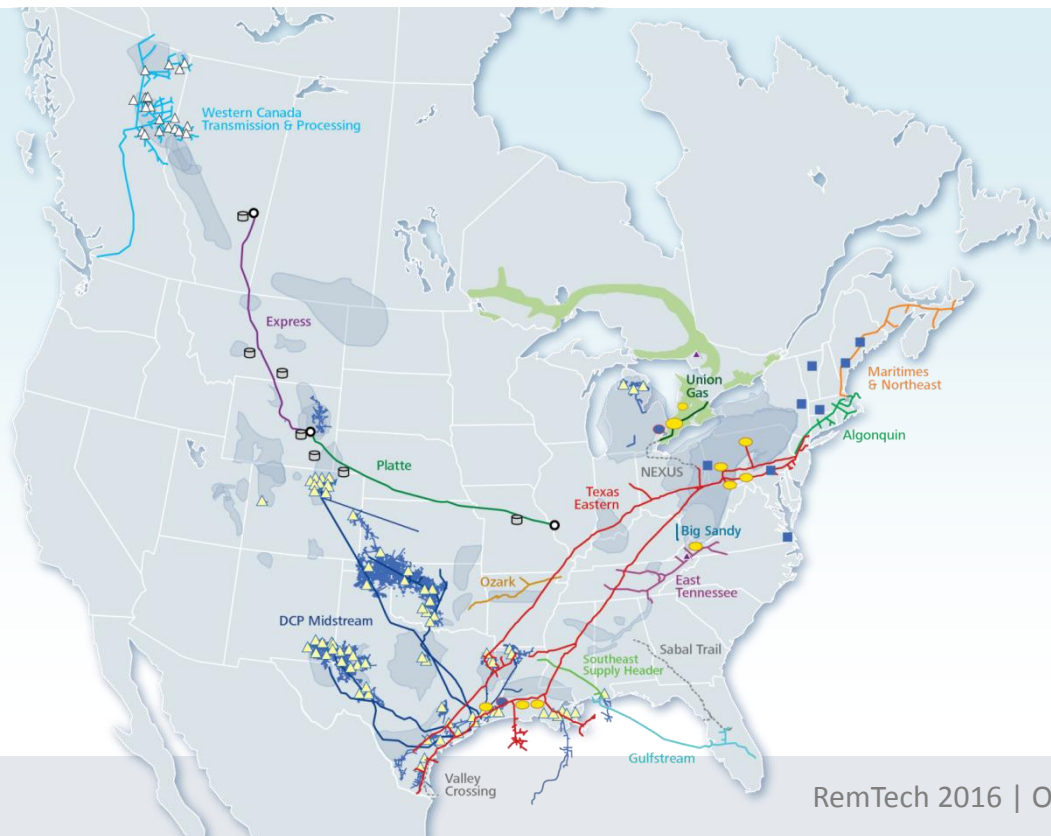
**DCP Midstream
#1**

NGL producer & natural
gas processor in North
America

Spectra Energy Portfolio of Assets

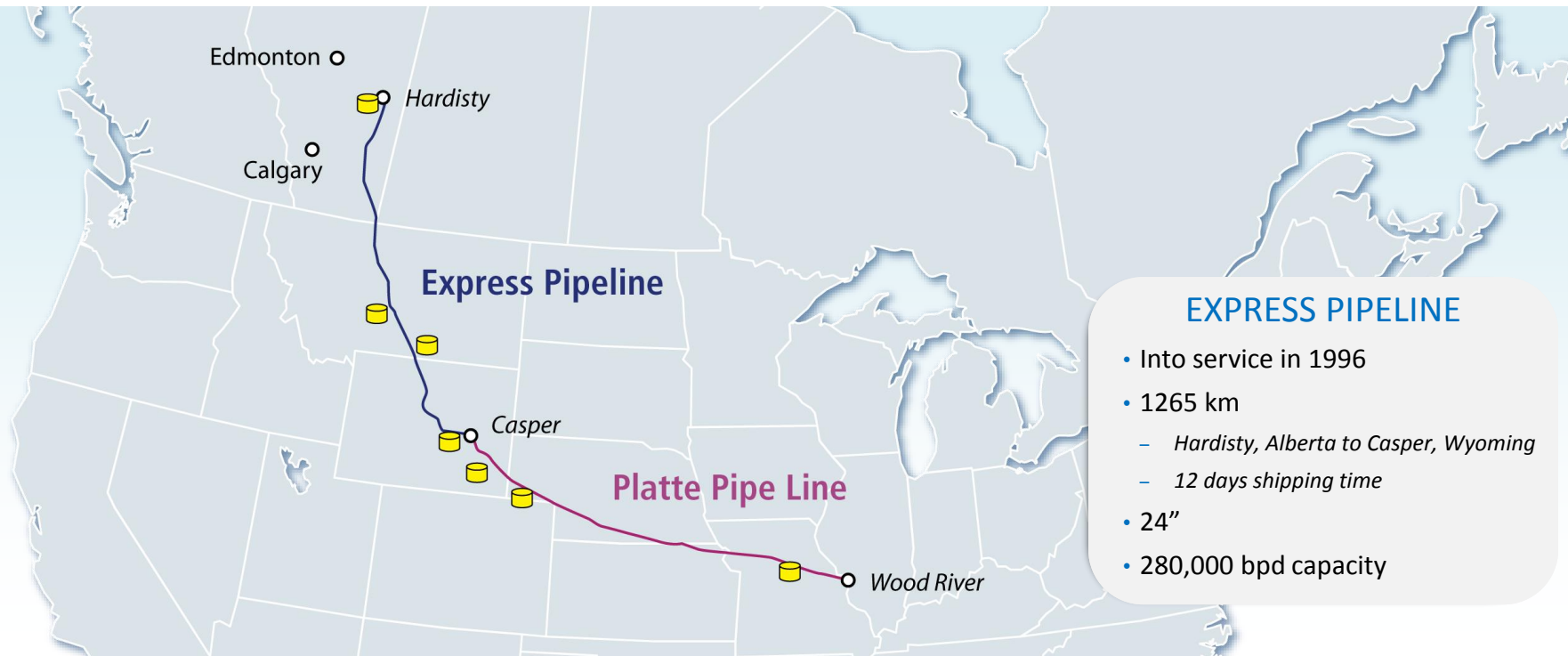


Connecting the largest markets
with growing supply



- Gas storage facility
- Gas processing plant
- Propane terminal
- NGL storage
- Shale gas formations
- Crude storage
- Major oil pipeline terminal

Express-Plate Pipeline System



Regulatory Framework

- National Energy Board
- Onshore Pipeline Regulations - SOR/99-294
- Emergency Management Program
 - 32 (1) (1.1) Emergency Response Plan
 - 33, 34 and to a degree 35 - which is the Level III exercise



Regulatory Framework

Emergency Management Program:

- 32(1). A company shall develop, implement and maintain an emergency management program that anticipates, prevents, manages and mitigates conditions during an emergency that could adversely affect property, the environment or the safety of workers or the public.
- (1.1). The company shall develop an emergency procedures manual, review it regularly and update it as required.
- (2). A company shall submit the emergency procedures manual and any updates that are made to it to the Board.

How Spectra Energy Responds to an Incident

Emergency Response Program



Spectra Energy has a detailed Emergency Response Program that is comprised of two primary documents

- Emergency Response Plan
- Emergency Response Field Guide



EMERGENCY ACTIONS

1. Respond Safely
2. Alert others – internal and external
3. Conduct spill/site assessment
4. Contain and recover the spill
5. Protect sensitive areas
6. Multiple hazards



SUPPORT INFORMATION

7. Pipeline information
8. Operations/Response equipment
9. Site information
10. Planning
11. Logistics
12. Finance/Administration
13. Wildlife care
14. MSDSs



REGULATORY INFORMATION

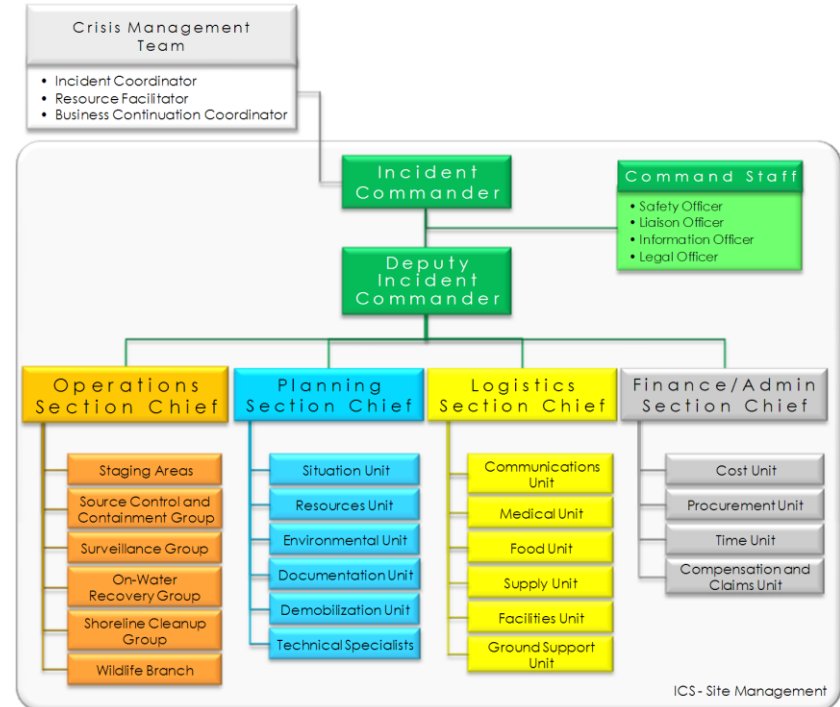
15. Environmental policy
16. Regulatory background
17. Training and Exercises

How Spectra Energy Responds to an Incident

Incident Command System

Spectra Energy utilizes the Incident Command System (ICS) to respond to an incident.

- ICS provides a consistent approach to managing incidents.
- ICS is used by:
 - First Responders
 - Regulators
 - Industry



Environmental Unit

- Positioned in the Planning Section
- Responsible for:
 - Identifying sensitive areas and recommending response priorities
 - Determining the extent and fate of contamination
 - Monitoring the environmental consequences of response actions
 - Developing response plans
 - Identifying and applying for environmental permits



Spectra Energy and Stantec's Partnership



- Express-Platte has 5 EHS personnel – 2 in Canada
- The primary focus of the EHS team is to support the operation of the pipeline
- Not many organizations can undertake an emergency response on their own
- An active emergency requires a multi-faceted approach – external experts are needed
- The goal of an Emergency Response Plan (ERP) is to stop and manage a release



Spectra Energy and Stantec's Partnership



- Stantec's Emergency Planning and Response Team
 - More than 20 disciplines with technical specialists across Canada and the U.S.
- Emergency planning includes:
 - Control point mapping
 - Access planning / management
 - Risk assessment
 - Environmental sensitivity mapping
- Integration in emergency response exercises and incidents
- For emergency response, we can fill roles in the Environmental Unit (EU)
- Over 300 employees ready to deploy
- Relationships with niche services providers / partners

Review of the ERP



- Purpose was to identify gaps and key areas to increase the level of response readiness
- Compared to the *Hazardous Materials Emergency Planning Guide*
- The majority of the elements identified in the CSA standard are present and well laid out
- Implemented a Stantec call out emergency number
- Need linkage of assets and hazards information
- Establishing the relationships of different service providers and sections of Spectra Energy
- Recommended some additional technical generic plans

Generic Technical Plans

- Generic templates are quick and easy
- Focus on information needed immediately at the time of release
- Key Day 1 and Day 2 technical plans
- After the review of the ERP – focused on key plans that would be needed for the exercise: soil sampling and surface water sampling

OIL AND OILY LIQUID MANAGEMENT PLAN

Incident Name: _____

Prepared By: _____ Date/Time Prepared: _____

Objectives

Minimize the material generated by procedures such as:

- Concentrating oils on water by booming or sweep systems.
- Choosing the appropriate recovery unit for the oil and circumstances
- Operate the recovery units with appropriately trained personnel
- Minimize the water content of any liquid using methods such as decanting or other water separation, proper selection and operation of skimmers.

General Information

Approx. Quantity Spilled: _____ Product Spilled: _____

Has a mass balance been developed? _____ Copy attached? _____

On-Water oil quantity: Unsheltered _____ Sheltered _____

On-water oily water recovery

Decanting applied for? _____ Approved? _____

Quantity of liquid to be handled: _____ (if decanting approved assume 20% water in the oily water and if not approved assume 80% water).

Has a storage strategy been developed for each on-water recovery unit? _____

Strategy Details: (i.e., Units 1&2 use Baker tanks)

If a strategy calls for off-loading on-water storage to on shore storage is the following in place?

- Provisions and equipment to off-load on water storage (Pumps, Trucks, staff, etc.) _____
- Has sufficient on-shore storage been arranged? _____

The following shore-side liquid handling facilities will be used (name & location):

Are the appropriate approvals in place? _____

Spectra Energy Level III Exercise

Over 70 participants including:

- Spectra Energy employees from both Canada and U.S.
- National Energy Board
- Alberta Energy Regulator
- First Responders - Medicine Hat Fire
- Stantec - in Environmental Unit only
- Facilitated by Witt O'Brien



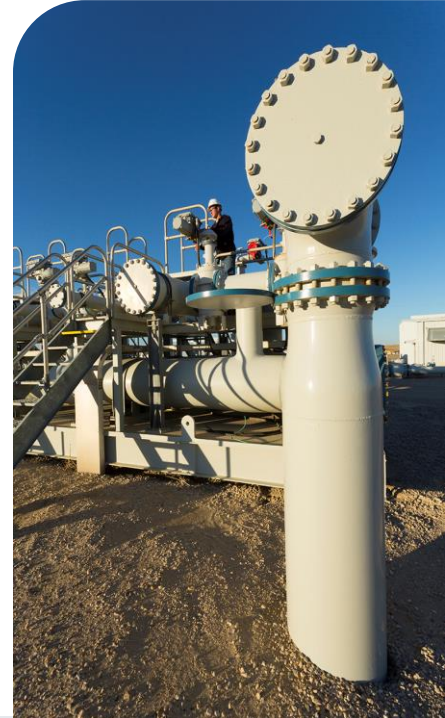
Spectra Energy Level III Exercise

- Simulated 10,156 bbl of crude oil released into a fast moving tributary that reached a major river within hours
- Two urban centers downstream within an hour's drive of the release point
- Sensitive ecosystems
- Historical resources
- Challenging and real scenario



Exercise Findings **Strengths**

- Availability and expertise of regulators and contractors
- GIS availability
- Overall implementation of ICS structure
- Engagement of environmental unit lead with other sections
- Situation status maps



Exercise Findings

Areas for Improvements

- Developing partnership with contractors - additional third party resources
- Developing additional strategic environmental plans and field level plans
- Increasing familiarity with tools available
- Improving on control point locations



Improving the Partnership

- EU was inefficient integrating some of their independent resources
- Stantec understanding the information Spectra Energy has from the other groups - i.e. GIS release mapping
- Spectra Energy understanding the limitations of on-site personnel
- Knowledge of contractual partnerships with environmental responders



ER Generic Technical Plans

- Now have the following:
 - Sediment Sampling Plan
 - Initial Cleanup Plan (ICP)
 - SCAT Monitoring Plan
 - Wildlife Monitoring Plan
 - Drinking Water Well Sampling Plan
 - Community Air Assessment Plan
 - Remedial Action Plan
 - Wildlife Deterrence Plan
 - Daily Update



Internal Resources Familiarity

- Spectra Energy has a large amount of information stored on a GIS system. The EU required additional training to access the database
- Immediately going to in house expertise
- Maximizing team strengths in the EU



Control Points

During the exercise, the NEB posed the question
“Are there sensitive environmental receptors at the control point locations?”

- While a valid question, a pipeline company needs to understand the resources involved in determining control point sensitivity
- The primary concern of control points is accessing a location(i.e. suitable river bank)
- Spectra Energy is currently evaluating this process



Conclusion

- Not many organizations can undertake an emergency response on their own: environmental contractors are important addition to the EU
- During an actual incident response, preparedness is key
- Evaluating and testing the EMP allows the EU to respond efficiently and effectively when needed most

Q&A

