



Historical Spill Management Challenges at an Active 1950s Gas Plant

October 16, 2015

Environmental Services Association of Alberta
2015 Remediation Technologies Symposium, Banff, Alberta

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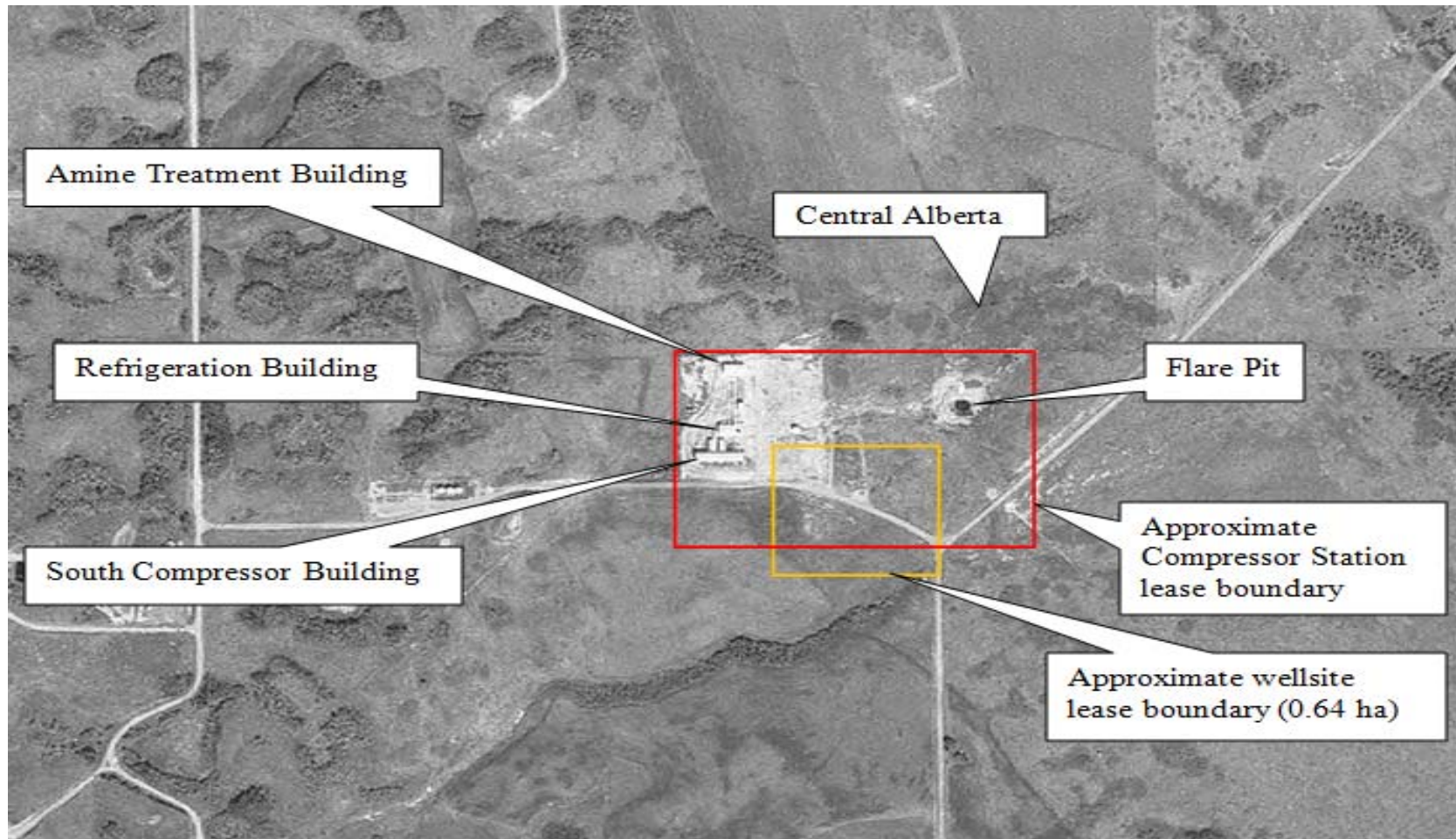
Outline

- Background
- Source areas
- Challenges
- Learnings



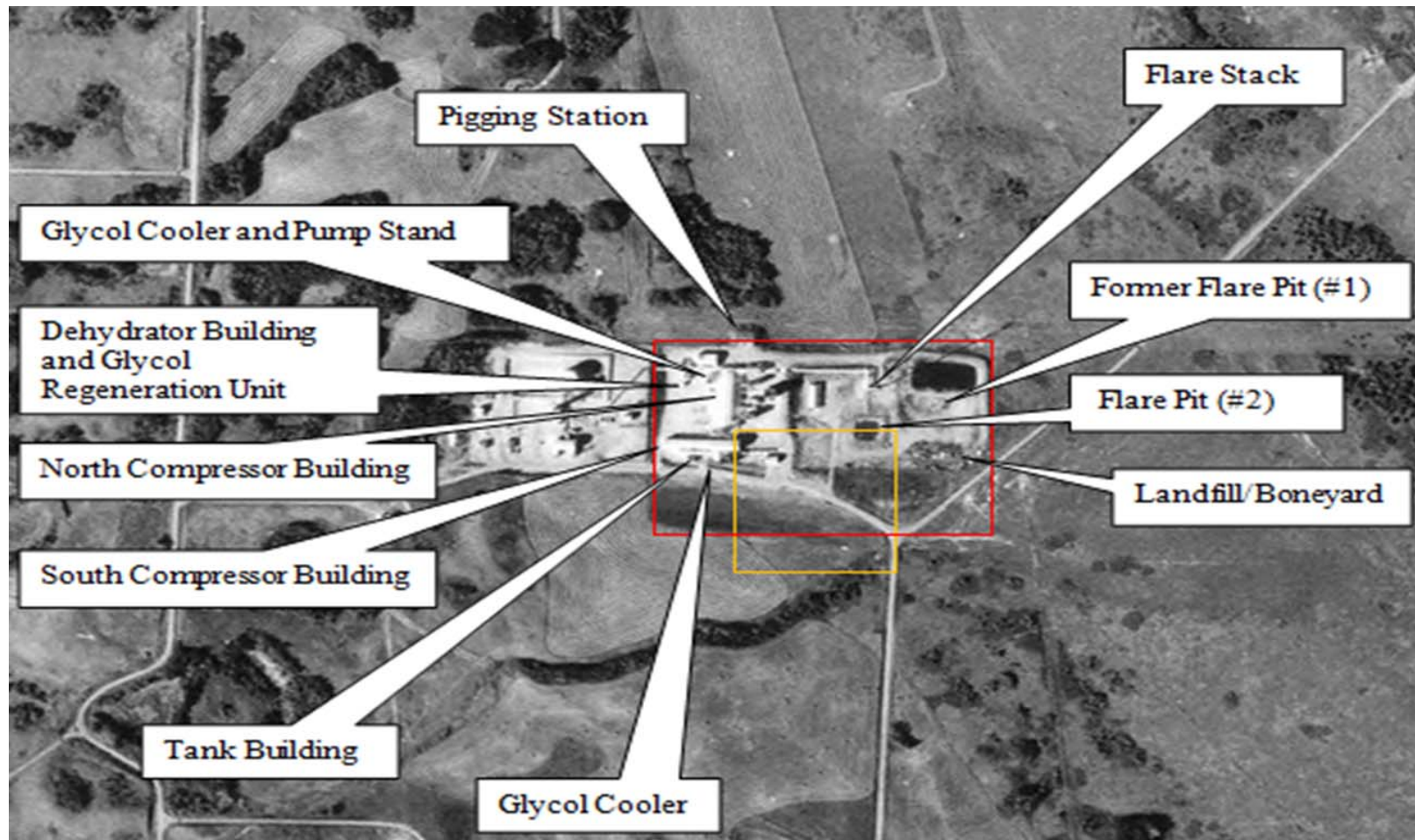
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Background – 1956 Construction



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1976



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Background

- 1970's – Amine treatment facility discontinued - large site expansion
- 1983 – large fire
- 1990's – Dehydration process added
- Present – Gas compression activity
- Wide variety of sources areas

Previous Work

Objective: To reduce liability

Prior to Trace:

- Groundwater monitoring program: 1995
- Environmental liability assessment: 1996
- Phase 1 & 2 ESA: 2001
- Stormwater management program: 2001



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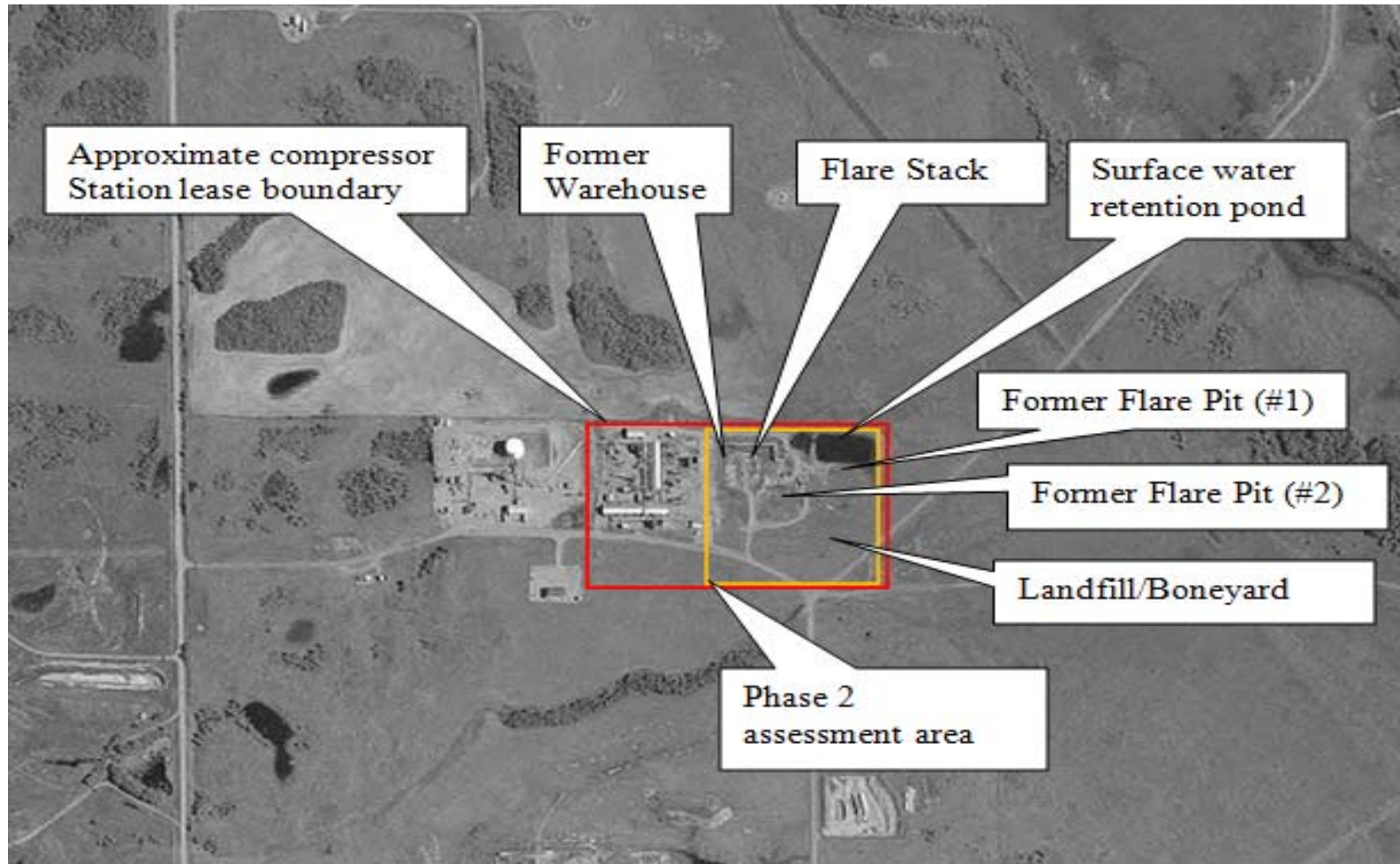
Assessment Activity - Trace

- 2009
- Extensive Phase 1 and 2 ESA
- Confirmed and delineated major source areas
- Confirmed groundwater quality



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Phase 2 ESA



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Flare Pit Remediation

- Winter 2009
- Challenges:
underground facilities
and the surface
retention pond



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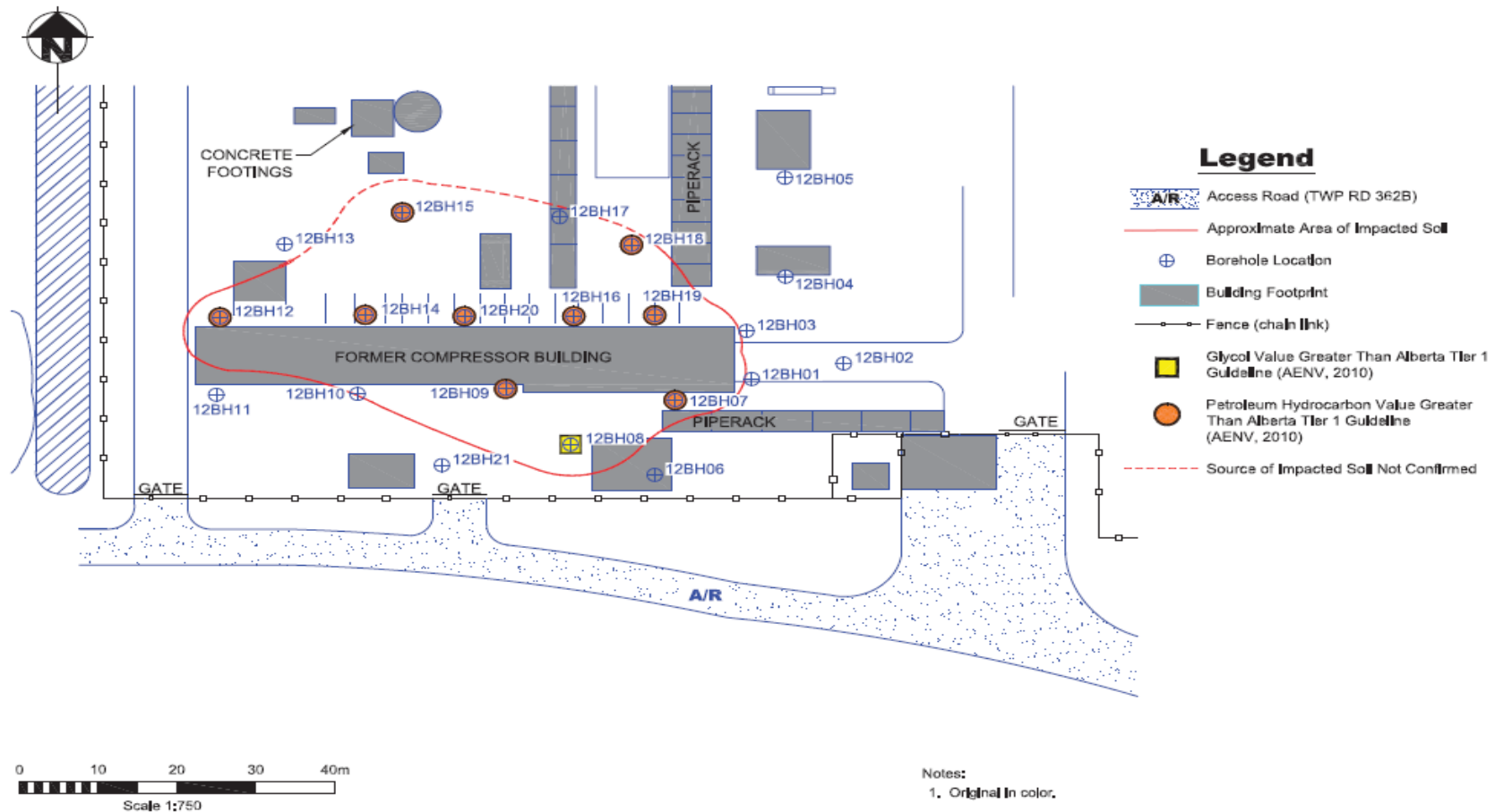
50 Year Release

- Historical compressor oil/lube leakage from late 1950's to mid 2000's
- Limited free product recovery



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Supplemental Phase 2 ESA



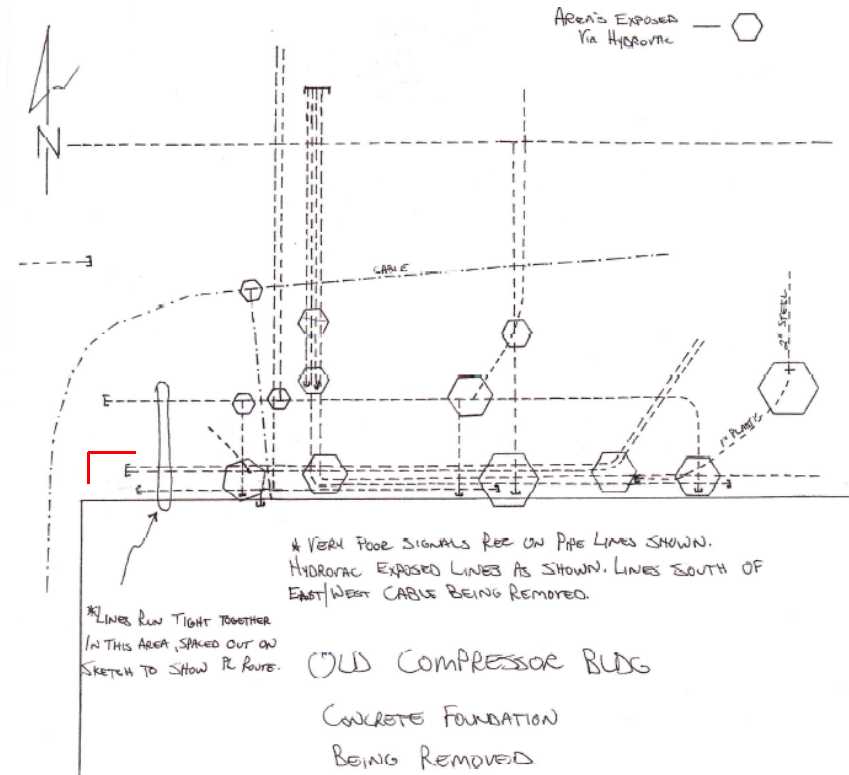
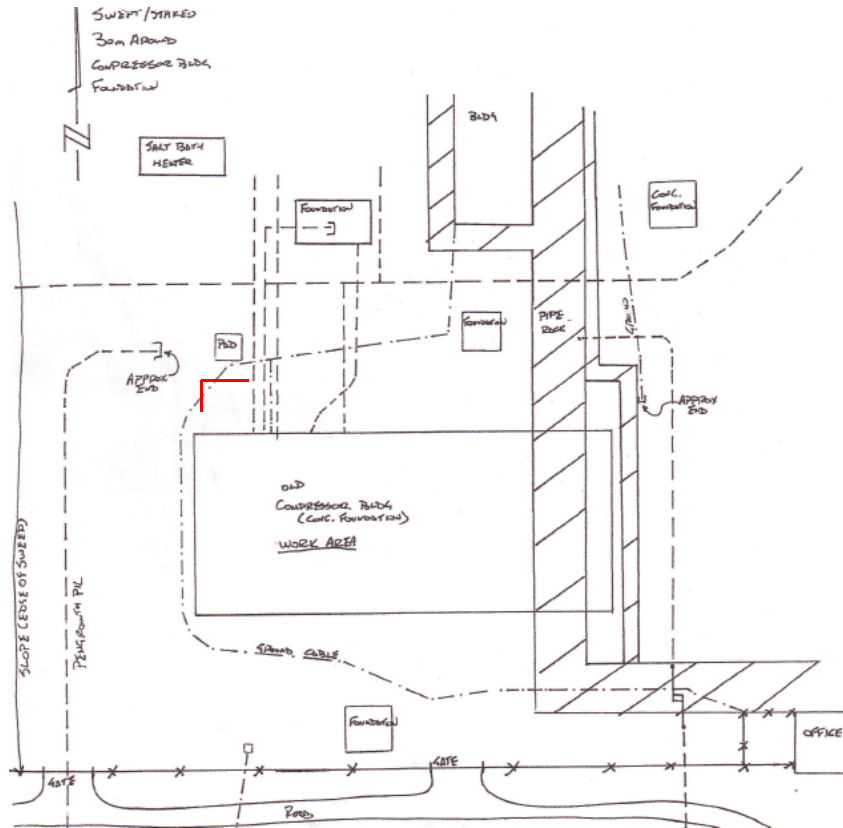
Delineate the historical release area and develop a remediation plan

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Ground Disturbance

Initial – October 29, 2012

Updated – November 2, 2012



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Decommissioning



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Fall 2012/2013

- Verified underground facilities were inactive
- Decommissioned underground facilities
- Concrete foundation was decommissioned
- 1,483 tonnes of concrete and associated debris were removed from the Site



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Fall 2012/2013

- Testpits were advanced within the former compressor building area
- PHC's > Tier 1 guidelines
- Soil > Class II landfill criteria
- Constructed berm to limit surface water infiltration



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Remediation – Fall 2014



PHC impacted soil and concrete: Class II landfill disposal



Impacted water: Treatment, recovery and disposal facility

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Remediation



Backfilling activities – west view



Backfilling activities completed – east view

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Challenges: Multiple source areas



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Challenges: Spill pathways



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Challenges: Active facilities



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Challenges:

Unknown buried facilities



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Challenges: Water management



Surface water



Groundwater

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Learnings

- Planning matters
- Staged approach is very effective
- Rebar interference
- Contractor consistency
- Water management



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Questions?



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