



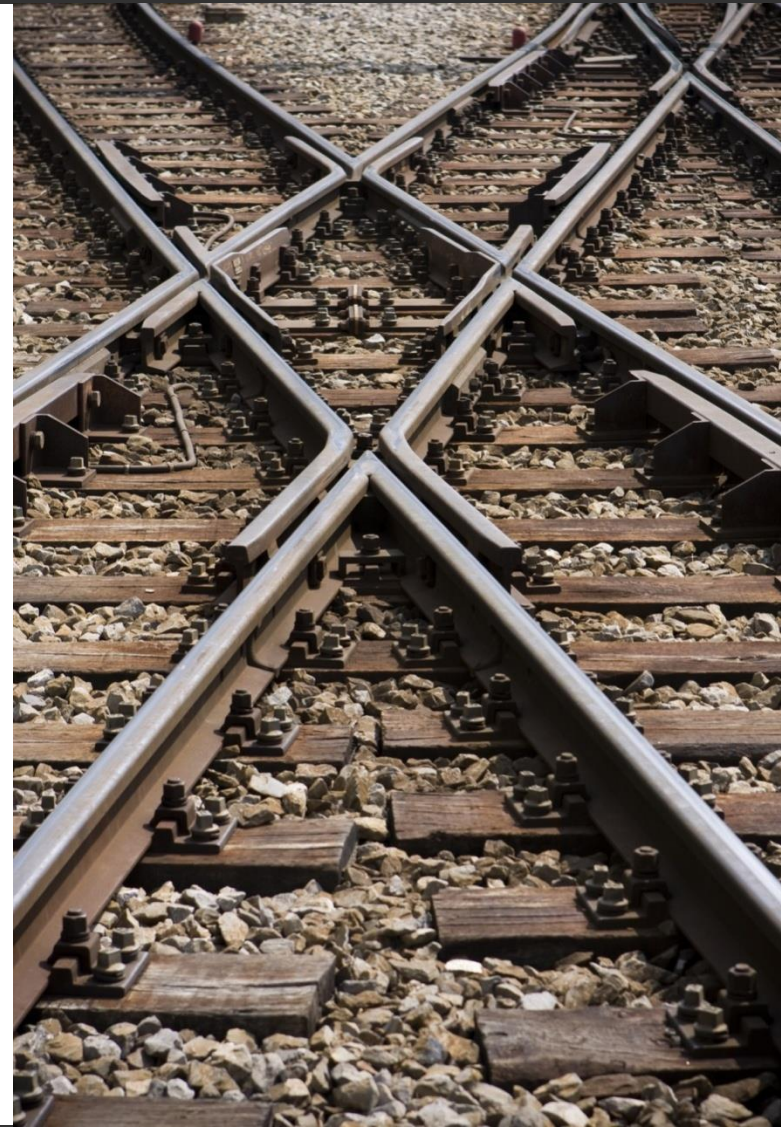
Managing Continuing Obligations Associated with Contaminated Site Closure using a Geographic Information System

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Maura Matthews, Yves Decoste, CN

October 28, 2014

Overview

- Background
- Concepts/Planning Phase
- Implementation Phase
- Conclusion



Background

- Continuing obligations are legal requirements established by some state environmental regulatory agencies upon closure of contaminated sites that have residual contamination.
- The purpose of continuing obligations is to ensure the maintenance of certain physical or engineered systems or to limit land use or groundwater use.

Background

- Examples of continuing obligations
 - Proper management of contaminated soil if excavated.
 - Obtaining approval for construction of water supply wells.
 - Operating and maintaining a vapor mitigation system.
 - Maintaining industrial zoning for sites where industrial soil standards were applied for closure.
 - Maintaining a specific use of the property, as defined in the closure letter, and notifying the state before changing that use
 - Maintaining an engineered barrier (cap) or an existing surface cap that were subject to a Cap Maintenance Plan.

Background

- AECOM assisted CN in establishing a tracking system to manage their continuing obligations at closed contaminated sites in Wisconsin, Illinois, and Michigan.
- A primary goal was to implement and track annual site inspections and the need for corrective actions at sites with an engineered barrier (cap) or an existing surface cap that were subject to a Cap Maintenance Plan.

Background



Background



Background



Background



SOIL DISTURBANCE
IS
RESTRICTED
IN THIS AREA.
PLEASE CONTACT
SUPERVISOR IF YOU
SEE ANY SIGNIFICANT SOIL LOSS.

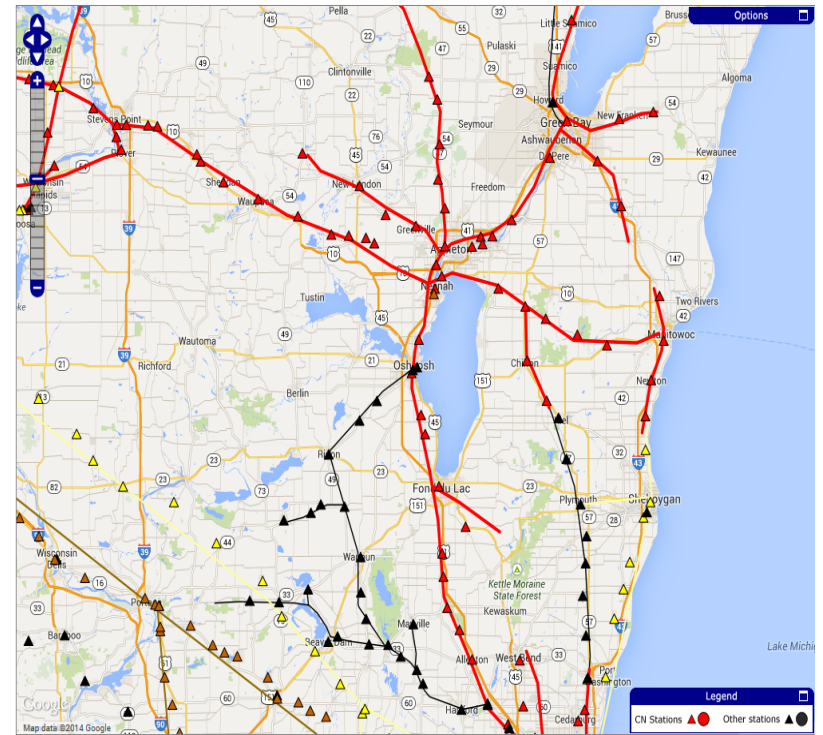
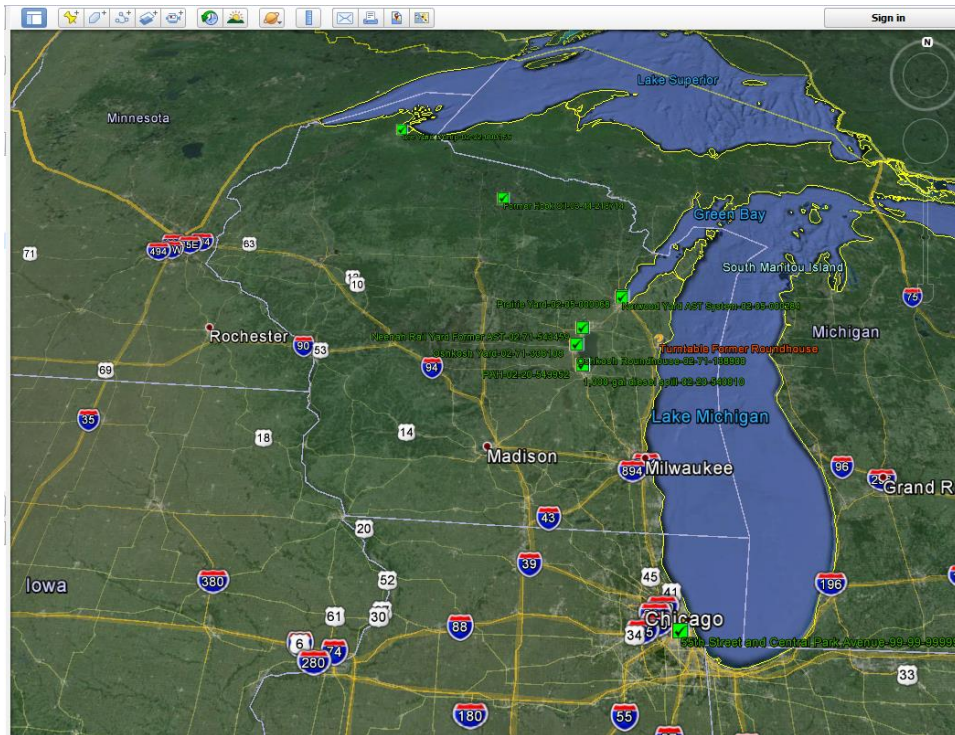


Background

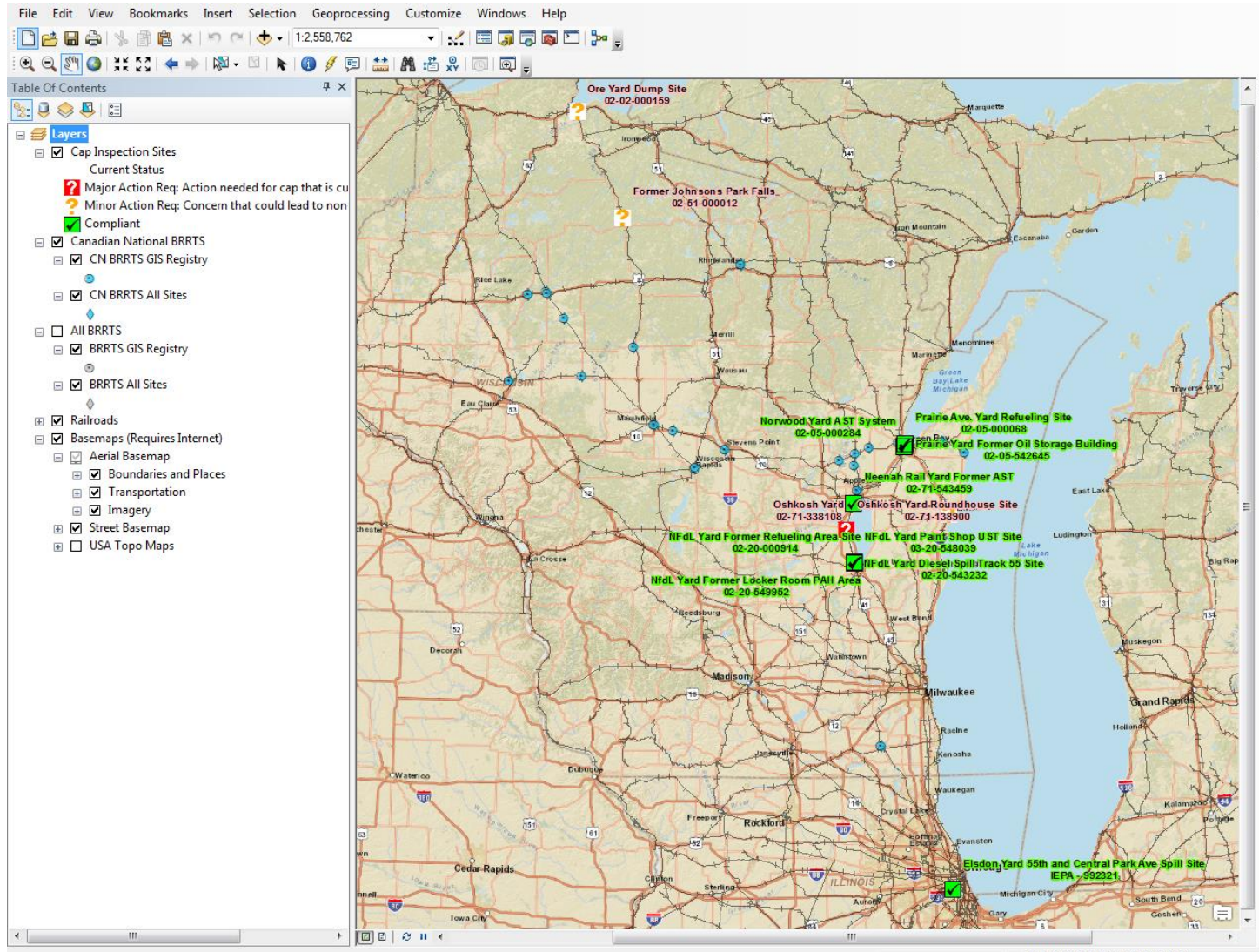
- CN Real Estate and Operations Group's goal to develop a tool to implement and track annual site inspection
 - Determine Sites that have an engineered system.
 - Track engineered system integrity.
 - Prevent engineered barrier disturbance.

Concepts/Planning Phase

- Reviewed different geospatial data platforms
 - KMZ files or Google Earth
 - Data Mapper



Implementation Phase



Implement

Full page photo.pdf - Adobe Acrobat Pro

File Edit View Window Help

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Field	Value
Site Name	Nfdl
BRRTS Location	Wis
BRRTS ID	02
Responsible Party	Wis
Street	2 H
City	Nov
County	For
Activity Name	CA
Start Date	6/1
Action Open	ER
Type of Cap	Par
Site Documents	02
Cap Inspection Date	11
Inspector	Dak
Current Status	Compliant
Current Recommendations	11/8/2013 - None
Previous Recommendations Implemented?	NA
Photo	02-20-549952 Nfdl. Yard Former Locker Roc
Inspection Log	02-20-549952 Nfdl. Yard Former Locker Roc
GIS Registry Doc	02-20-549952 Nfdl. Yard Former Locker Rod
BRRTS Website	http://dnr.wi.gov/botw/GetActivityDetail.do?adn=0220549952&
IEPA Document 1	<null>
IEPA Document 2	<null>

Identified 1 feature

File Edit View Window Help

32 / 37 | 8.07%

Tools Comment Share

Bookmarks

- GIS Registry Cover Sheet
- GIS Registry Checklist
- Closure Documents
- Source Legal Documents
- Maps
- Tables

Implementation Phase

WdNR BRRTS on the Web x

dnr.wi.gov/botw/GetActivityDetail.do?adn=0220549952&siteId=1257000&crumb=1&search=b

File Edit View Bookmarks Insert Selection Geoprocessing Customize Win

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Identify

Identify from: <Top-most layer>

Cap Inspection Sites

Nfdl. Yard Former Locker Room PAH Area

Location: 88°28'40.451"W 43°48'34.161"N

Field	Value
Site Name	Nfdl. Yard Former Locker Room PAH Area
BRRTS Location	Wisconsin Central RR
BRRTS ID	02-20-549952
Responsible Party	Wisconsin Central Ltd
Street	2 Harrison Street
City	North Fond du Lac, WI
County	Fond du Lac
Activity Name	CANADIAN NATIONAL - PAH
Start Date	6/18/2007
Action Open	ERP closed
Type of Cap	Pavement and sand and gravel
Site Documents	02-20-549952 Nfdl. Yard Former Locker Room PAH Are
Cap Inspection Date	11/8/2013
Inspector	Dan O'Connell
Current Status	Compliant
Current Recommendations	11/8/2013 - None
Previous Recommendations Implemented?	NA
Photo	02-20-549952 Nfdl. Yard Former Locker Room PAH Are
Inspection Log	02-20-549952 Nfdl. Yard Former Locker Room PAH Are
GIS Registry Doc	02-20-549952 Nfdl. Yard Former Locker Room PAH Are
BRRTS Website	http://dnr.wi.gov/botw/GetActivityDetail.do?adn=022
IEPA Document 1	<null>
IEPA Document 2	<null>

Identified 1 feature

Cleanup has been approved at this location but some contamination remains. Due to this remaining residual contamination, one or more continuing obligations are applicable to this location (e.g., an asphalt cap or other barrier covering the contamination). For information specific to the continuing obligations at this location, read the Closure Letter within the GIS Registry Packet in the Documents section below. For general information on managing continuing obligations and residual contamination [click here](#). **You must contact DNR before constructing a well. Remaining contamination must be properly handled if disturbed.**

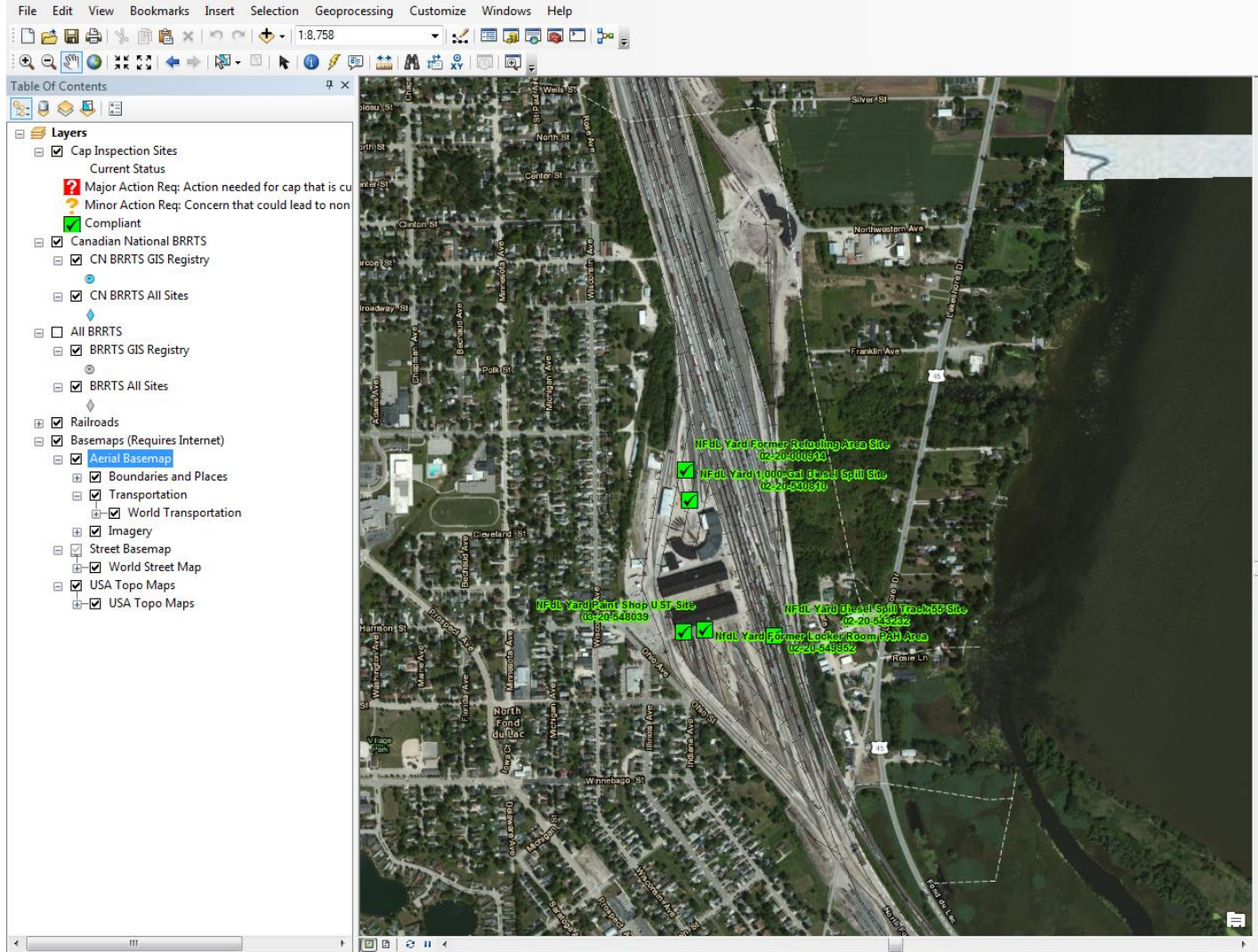
Location Name (Click Location Name to View Location Details)	County	WDNR Region
WISCONSIN CENTRAL LTD	FOND DU LAC	NORTHEAST
Address	Municipality	
2 HARRISON ST	NORTH FOND DU LAC	
Public Land Survey System	Latitude	Google Maps
SE 1/4 of the SW 1/4 of Sec 33, T16N, R17E	43.809495	CLICK TO VIEW
Additional Location Description	Longitude	Facility ID
NONE	-88.4779039	420092420
		Size (Acres)
		>100 Acres
Jurisdiction	PECFA No.	EPA Cerclis ID
DNR RR		2007-06-18
		2012-10-08
		2012-10-11
		2012-10-11

Characteristics						
PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	On GIS Registry?
No	No	No	No	No	No	Yes

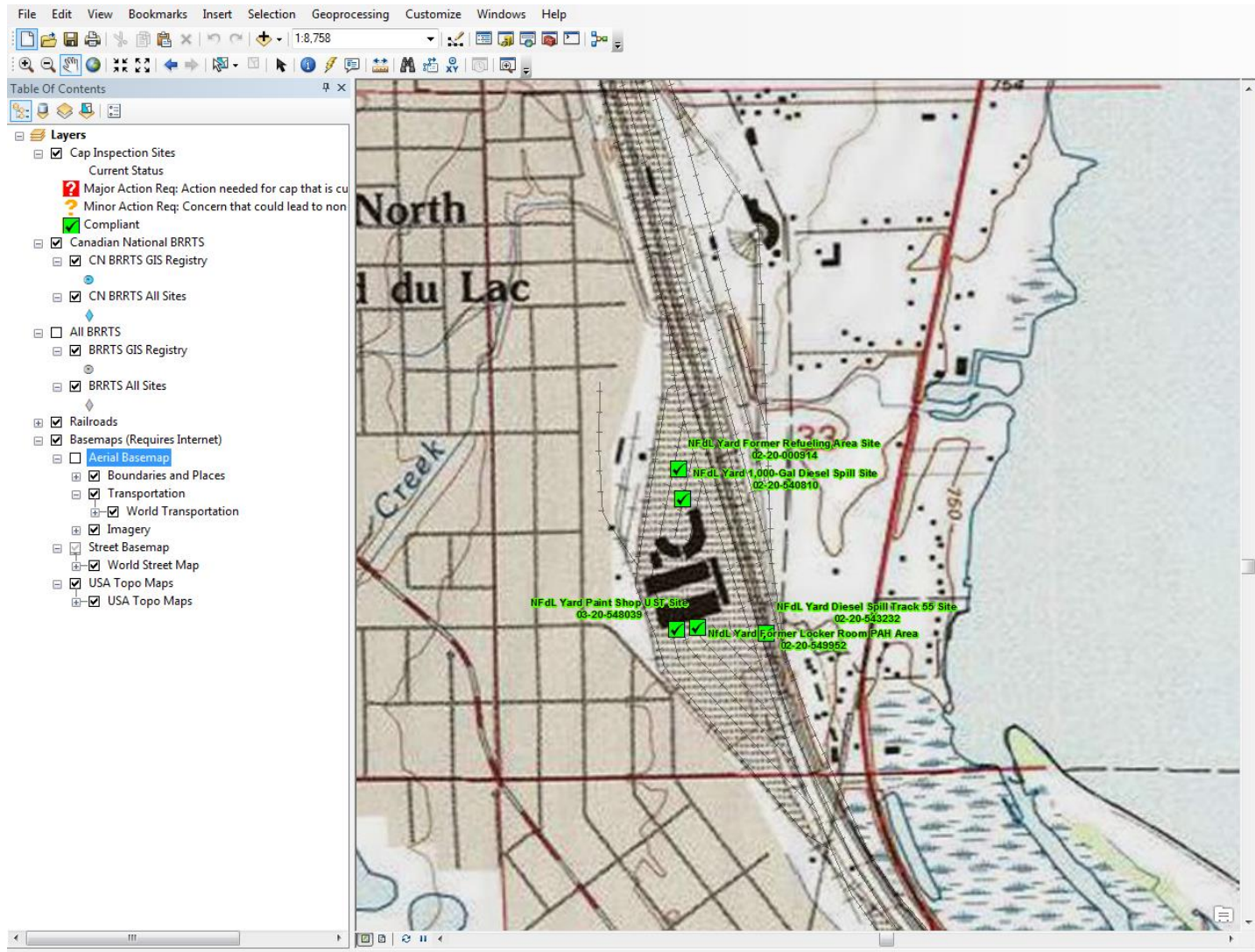
Actions			
Place Cursor Over Code to View Description			
Date	Code	Name	Comment
2007-06-18	1	Notification	
2007-06-18	99	Miscellaneous	ON-SITE MEETING
2007-08-16	2	RP Letter Sent	
2007-09-11	43	Status Report Received	NOTIFICATION OF CONSULTANT HIRED
2009-01-20	99	Miscellaneous	STATUS UPDATE REQUESTED
2009-02-04	43	Status Report Received	UPDATE STATUS - WILL APPLY FOR CLOSURE SOON
2009-09-03	710	Date Soil Registry Fee Paid	
2009-09-03	50	GIS Registry Site	*** AUTO POPULATED BY 710 ACTION ENTRY ***
2009-09-03	79	Closure Review Request Received	
2009-09-28	80	Closure Not Approved	BY PM. NEEDS ADDITIONAL SOIL SAMPLES
2010-12-15	99	Miscellaneous	NOTIFICATION OF CHANGE IN PM
2011-06-27	99	Miscellaneous	CLOSURE STATUS MTG & SITE VISIT
2011-09-08	130	DNR Regulatory Reminder Sent	Vapor Intrusion (VI) Assessment Notification Ltr Sent
Document Linkage: 0220549952_VI_Letter.pdf			
2011-12-16	99	Miscellaneous	WDNR PM CHANGE (VIA EMAIL) (LAURIDSEN)
2012-07-30	179	Closure Review Request Received (no fee required)	
2012-08-29	84	Conditional Closure	
2012-09-20	43	Status Report Received	MASTER CAP MAINTENANCE PLAN RECEIVED
2012-10-05	190	Conditional Closure Requirements Met or Documentation Recvd	WASTE DISPOSAL DOCUMENTATION RECEIVED (VIA EMAIL)
2012-10-08	232	Continuing Obligation - Residual Soil Contamination	
2012-10-08	11	Activity Closed	
2012-10-08	56	Continuing Obligation(s) Required - GIS Registry Site	REMAINING SOIL CONTAMINATION AND CAP MAINTENANCE PLAN
2012-10-08	222	Continuing Obligation - Maintain Cap Over Contaminated Area	MAINTAIN EXISTING SURFACE COVER FOR DIRECT CONTACT AND GROUNDWATER PROTECTION
2012-10-11	100	GIS Registry QAQC Completed	



Implementation Phase



Implementation Phase



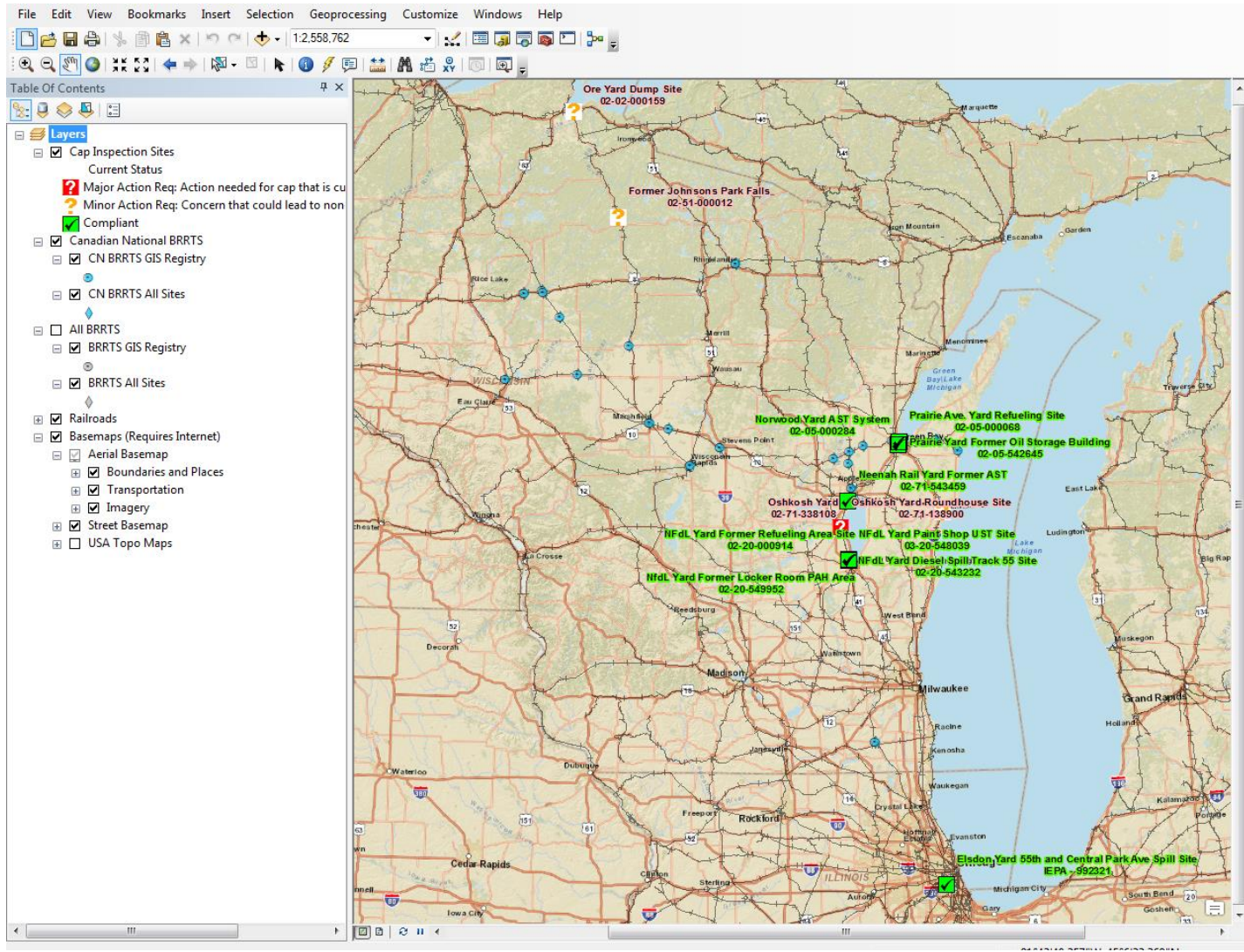
Implementation Phase

- Field Inspection consisted of 7 team members from six offices.
- Inspections were performed during spring or fall depending upon site specific requirements.
- Made observations:
 - Cap condition
 - Filled out logs
 - Took photographs.
- Identified concerns
 - Disturbed barriers and cap wear
 - Maintenance Plans not available at local offices
 - Need for warning signage

Implementation Phase



Implementation Phase

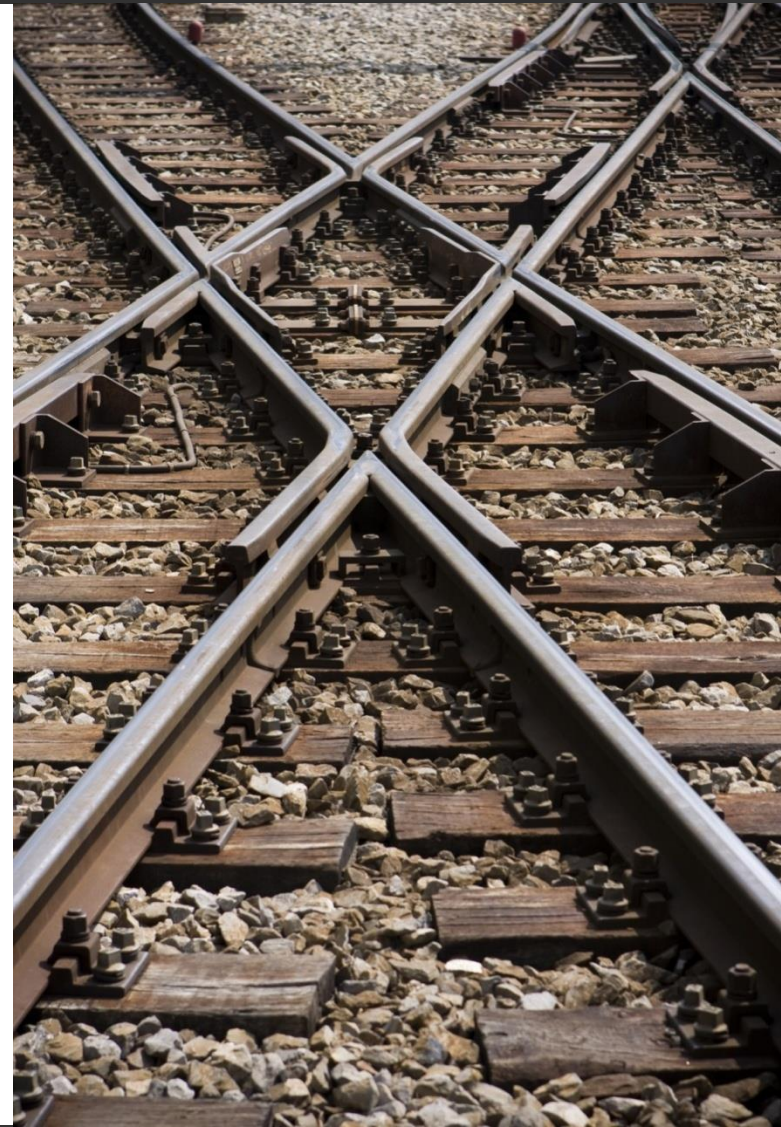


Implementation Phase



Conclusion

- Success!!
- Instant download and forward of site information to local CN environmental staff during a surprise regulatory inspection.



Thank You!

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