



Agencies Mobilize after Crude Oil Train Derails

A Response to the Galena, Illinois Bakken Incident

The Incident

21 tank cars of a 105 car BNSF train derailed at milepost 171.6 of the Aurora Sub near Galena, Illinois. Each of the cars was carrying around 30,000 gallons crude oil.





Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image Landsat

Google earth

Initial Response

- 15:02 Light smoke a visible flame.
- 15:26 Pulled personnel back
- 17:08 Large explosion like failure



Fire Chief
Randy Beadle

Initial Evacuation Area

- 6 Homes / 4 Occupied
- 2 Evacuated and 7 refused



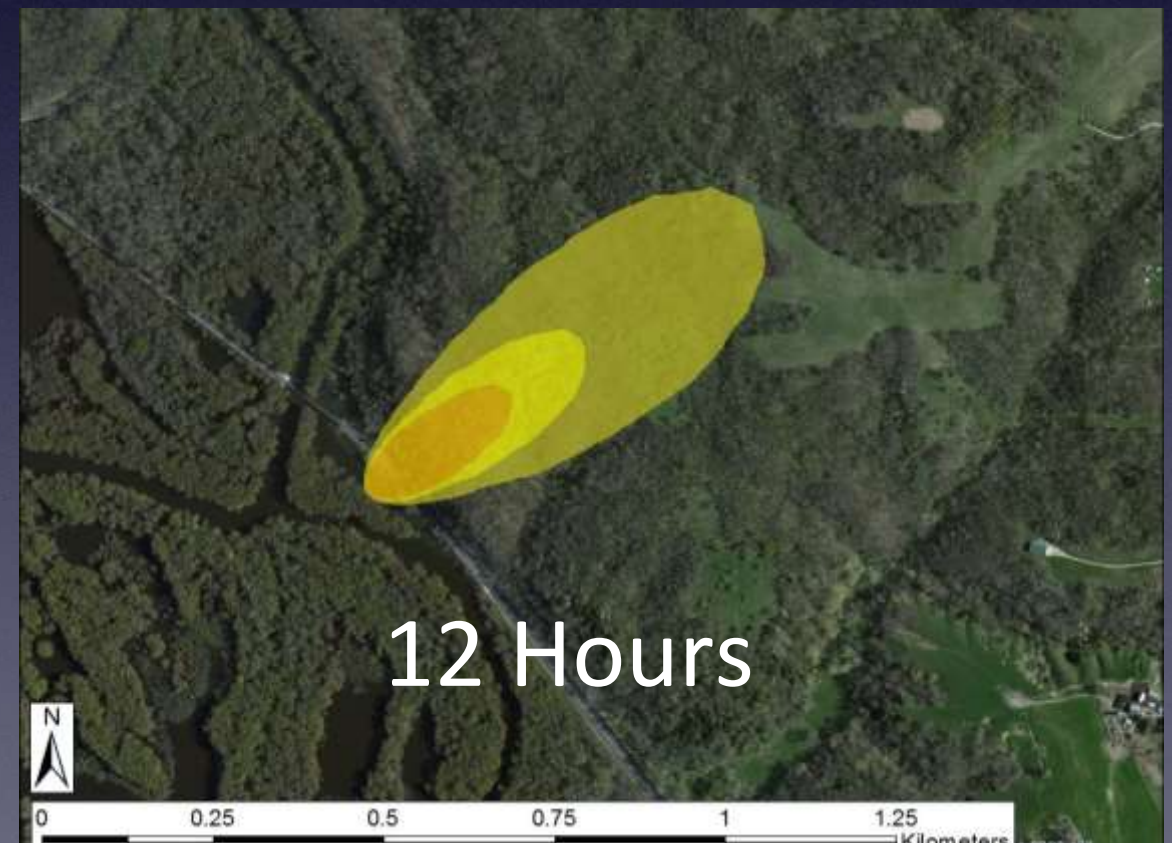
1 Hour



**Oilfire Gas
Surface Dosage
07-Mar-15 10:00:00Z (12.000 hr)**

	mg-min/m3	In contour area (km ²)
 Hazardous	360.72	2.03E-2
 Very Unhealthy	216.72	4.34E-2
 Unhealthy	94.32	0.144

12 Hours





Illinois Incident Management Team

- Established by Illinois Terrorism Taskforce in 2005.
- Type III All-Hazards Team deployed via the Illinois Emergency Management Agency.
- 3 Geographical Division within the nation's 5th most populous state.
- Comprised of first responders from various organizations.



IMT Challenges



- Credentialing/Accountability
- Site security/Safety
- Federal NIMS Integration
- Meeting/Working Space and Logistics
- Communication
- VIP Visits

Credentialing/ Accountability

Federal Response

35 People

- US-EPA
- START Contractor
- OSHA
- US-DOT/FRA
- USCG
- US Fish and Wildlife



State and Local Response

- Jo Daviess County
- City of Galena
- IEMA
- ISP
- IEPA
- MABAS
- ILEAS
- IL-IMT
- SIRC
- ARC
- Out of State Mutual Aid

228
People



Illinois Mutual Aid Box Alarm System (MABAS)

- State-wide mutual aid
- USAR Team
- Equipment resource

Illinois-Specific – 102/102 Counties
MABAS Presence
69 Operating Divisions
1180+ Fire Agencies
38,000 Firefighters/EMT
2700+ Front-Line Engines
500+ Front-Line Ladder Trucks
960+ Water Tenders
1200+ Transport Ambulances

42 HazMat Teams
41 Technical Rescue Teams
16 Water Rescue Teams
25 Decontamination Vehicles
9 Compressor/Cascade Vehicles
8 Mobile Ventilation Units
7 Mobile Semitrailer Warehouses
3 Mission Support Vehicles
75 Incident Management Trailers
70 All Terrain Vehicles with Trailers
82 Generator Light Towers
1 EMS Mass Casualty Support Unit
69 Expedient Field Shelter Units with Trailers
10 Water Rescue Boat Systems
38,000 Standardized CBRNE PPE Masks



Illinois Law Enforcement Alarm System (ILEAS)



- Police mutual aid organization
- Mobile Field Force

Illinois State Incident Response Center

- Emergency Management Agency
- Illinois Commerce Commission
- Environmental Protection Agency
- State Police
- Emergency Service Management Association
- Department of Natural Resources
- MABAS
- ARC
- Illinois National Guard
- Department of Transportation



BNSF Railroad/Private Contractors

152
People



Personnel Accountability

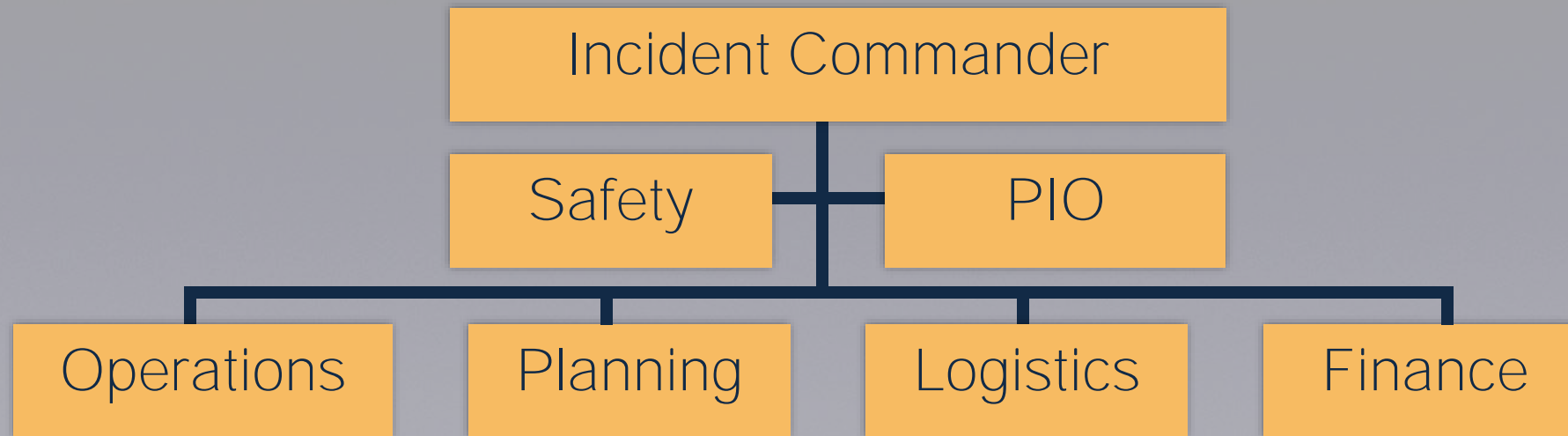
- Largely a private corporation operation with detailed Federal Government oversight.

- BNSF Hazmat and Contractors
 - BNSF Fire Trailers and Industrial Fire Fighters
 - Hazmat Technicians
 - Damage Assessment
 - Vacuum truck
 - Frac Tanks

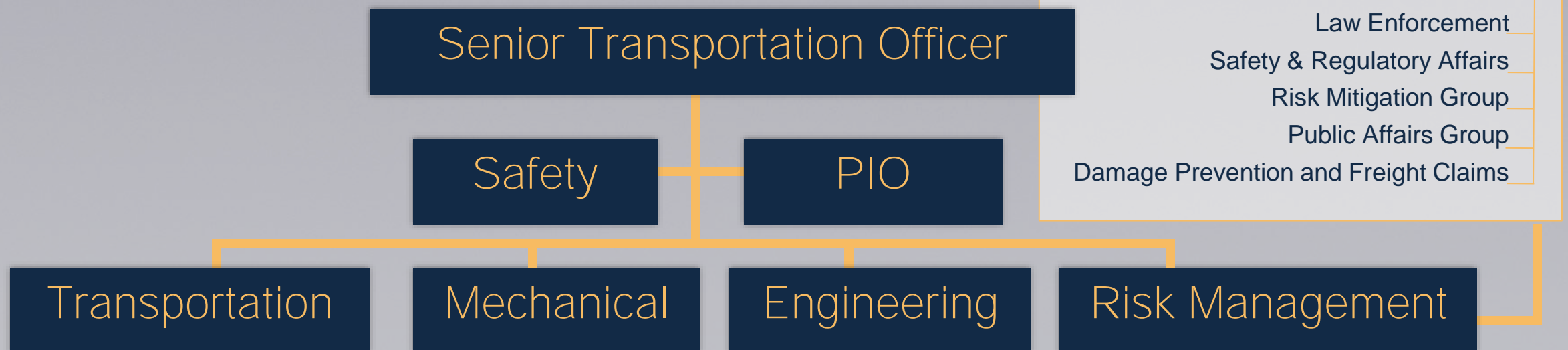


Incident Command System

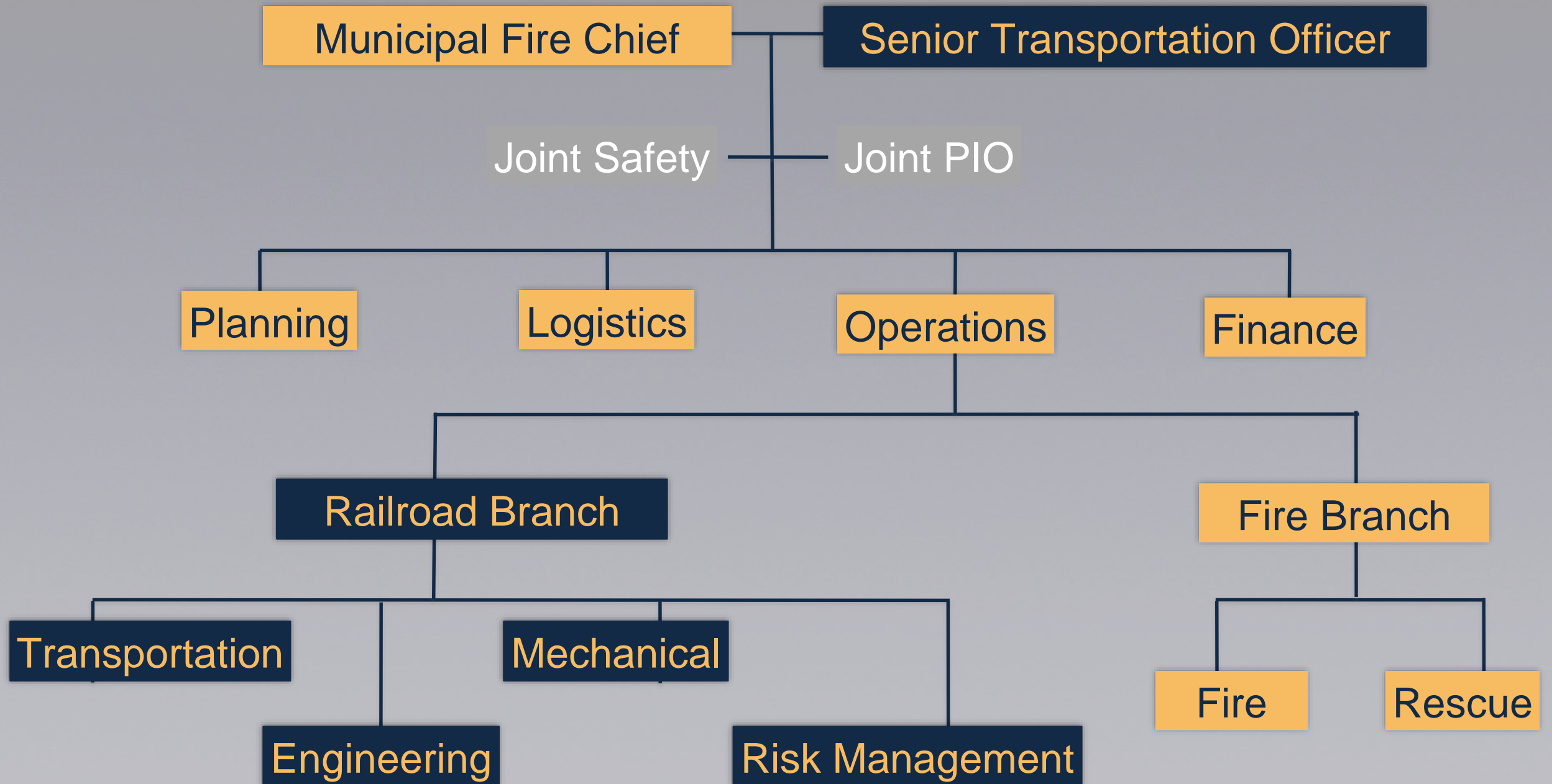
Public Safety ICS



Railroad Incident Management



Unified Command



Security/Safety

Derailment Location



Session Details

Current File: 54F8AB4F.VAM

GMT: 2015/03/05, 19:15:37

Wheel Diameter: N/A

Road#: BNSF # 6062

CST: 2015/03/05, 13:15:37



Flom:

On

Off

Bell:

On

Off

Speed:

75

60

45

30

15

0

Reverser

Und

Frv

Rvr

Cnt

Power Cut

clo



Video Length: 00:20:48

Position: 00:15:34

GPS Lat: 42°22'21"

GPS Lon: -90°26'30"

Monitor Parameters (00000006.ini):

BNSF Railway Crude Oil Train Derailment Near Galena, Ill.



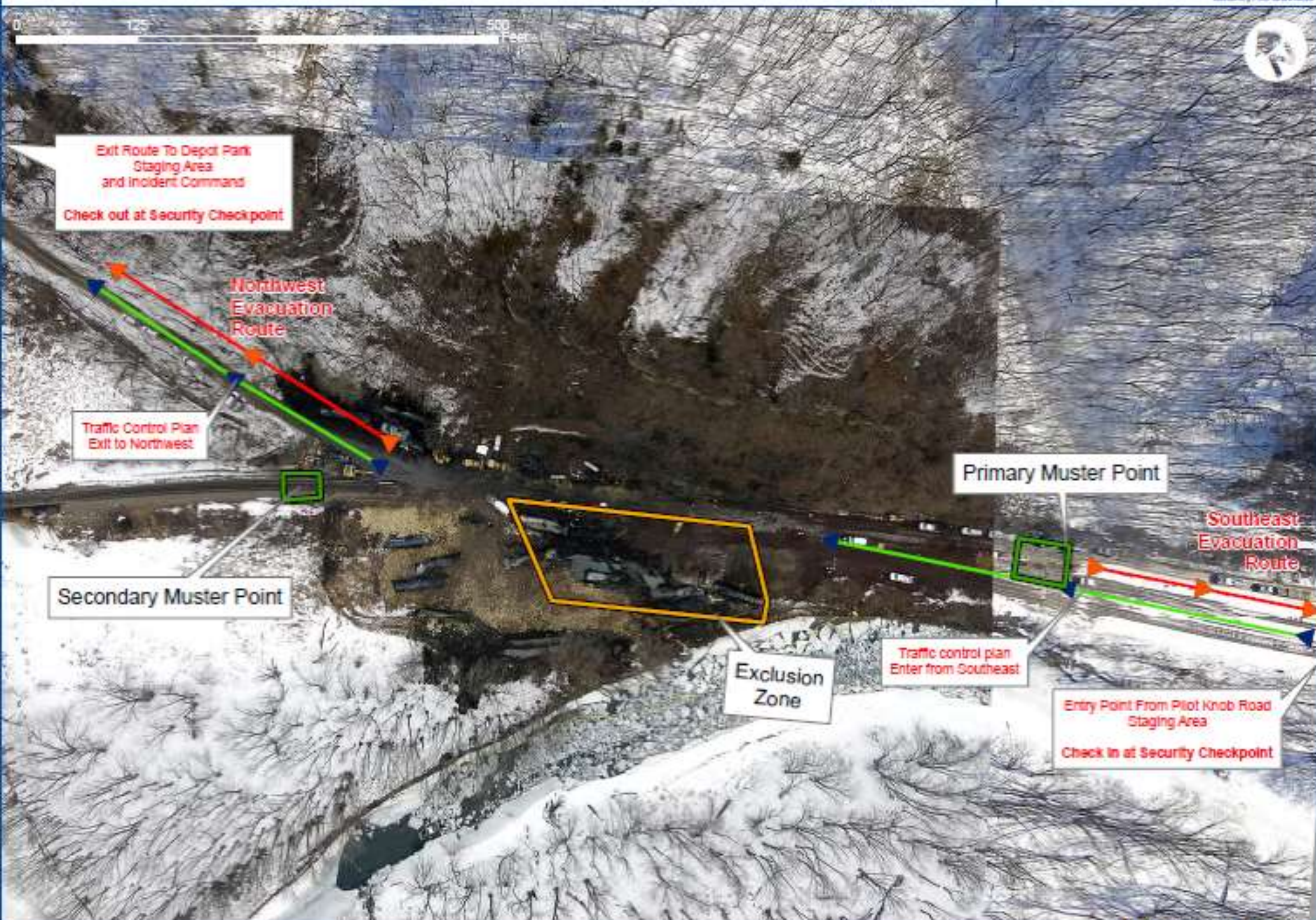
Initial Fire





Aftermath





Site Issues

- Fires Extinguished and track open on Day 4
- IL-IMT SO established with USCG and US-OSHA
- 100 Trains backed-up
- Contractor Check-in established on Day 4
- Traffic Plan Developed on Day 5

Federal NIMS Integration

GALENA TRAIN DERAILMENT



Jo Daviess County, Illinois



INCIDENT ACTION PLAN

Incident #: RT 7037663

OPERATIONAL PERIOD:

March 7, 2015 0830 HOURS

March 7, 2015 2030 HOURS

INCIDENT OBJECTIVES (ICS 202)

1. Incident Name: GALENA TRAIN DERAILMENT	2. Operational Period: Date From: 3/7/15 Date To: 3/7/15 Time From: 0830 HRS Time To: 2030 HRS
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3. Objective(s):

SAFETY OF RESIDENTS & FIRST RESPONDERS
GAIN ADDITIONAL SITUATIONAL AWARENESS
PROTECT ENVIRONMENT BY CONTROLLING PRODUCT RUNOFF (BERMS & BOOMS)
PROVIDE INFORMATION TO THE PUBLIC
MAINTAIN FIRE SURVEILLANCE
BUILD ACCESS ROAD
UPRIGHT / MOVE UNDAMAGED CARS
ESTABLISH INTEROPERABLE COMMUNICATIONS

4. Operational Period Command Emphasis:

CONTINUE TO KEEP TANK CARS COOL TANK AND EXTINGUISH FIRE AS NEEDED
MAINTAIN BERMS AND BOOMS
DEPLOY AND POSITION EQUIPMENT
PERFORM DAYLIGHT ASSESSMENT



ILLINOIS EMERGENCY MANAGEMENT AGENCY SITUATION REPORT

DATE/TIME:

03/06/15 9:00 AM

SITREP NUMBER:

0306-002

INCIDENT NUMBER:

None

INCIDENT TYPE/LOCATION:

Galena Train Derailment

EOC ACTIVATION LEVEL:

Level 3 - Partial Activation

EOC POC & POC CONTACT INFO:

Paul Rasch (217) 685-3708

BLUF – BOTTOM LINE UPFRONT

At approximately 1324 on Thursday, 05 March 2015, sixteen tank cars of a BNSF Railways train derailed in the area of milepost 171.6 of the Aurora Sub in Jo Daviess County near Galena. A fire has resulted, involving cars which are carrying Bakken crude oil. Local, County, State, Federal and Railroad personnel have responded to manage the event, focusing on life safety, incident stabilization, and the prevention of damage to the environment.

CURRENT SITUATION

The SIRC activated at 1700 to coordinate state response efforts and assistance, and has been operating at all times.

IEMA personnel are on scene in Galena with the Illinois Incident Management Team to assist. Both are located in the ICP and are working with the Incident Commander, local officials and BNSF Railroad. The USCG is also on scene along with IEPA and USEPA and several other state and federal agencies. BNSF reported 15 cars still in the hazard zone.

NIMS Integration and IAP Development Timeline

- IL-IMT Developed Day 2 & Day 3 IAPs and Sit-Reps with BNSF leading operations.
- Day 4 began integration with IL-IMT USEPA-ICS personnel and establishment of Unified Command structure with 24 Operational Periods
- Day 5 IAP was developed by USEPA-ICS with IL-IMT personnel filling ICS roles.
- Day 6 Demob of IL-IMT.

Meeting/Workspace Needs and Logistics

Joint Incident Briefing

- BNSF
- IL-IMT
- USEPA



Illinois Mutual Aid Box Alarm System (MABAS)

- 1 - Mobile Support Unit
- 1 Western Shelter
- 4 Light Towers
- 4 Utility Vehicles





Communications

Communications

- COML Established/ILEAS
- 17 Initial Starcom Radios deployed and 36 additional ordered.
- Developed ICS 205

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)										
1. Incident Name: GALENA TRAIN DERAILMENT				2. Date/Time Prepared: Date: 3/6/2015 Time: 2030 HRS				3. Operational Period: Date From: 3/7/15 Date To: 3/7/15 Time From: 0830 HRS Time To: 2030 HRS		
4. Basic Radio Channel Use:										
Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NA C	TX Freq N or W	TX Tone/NA C	Mode (A, D, or M)	Remarks
1			NORTH A	COMMAND					A	STARCOM ZONE AA
2			VTAC11	OPERATIONS	151.1 375 N	156.7	151.13 75 N	156.7	A	ITECS VHF BaseN Zone
3			FG BLUE	FIRE/EMS	154.2 950 N	CS	154.29 50 N	85.4	A	ITECS VHF FireN Zone
4			JC CD W	LE PERIMETER	0	0	0	0	O	0
5. Special Instructions:										
6. Prepared by (Communications Unit Leader): Name JW CHENEY Signature: JW CHENEY										
ICS 205		IAP Page		Date/Time: 3/6/2015 0400 HRS						

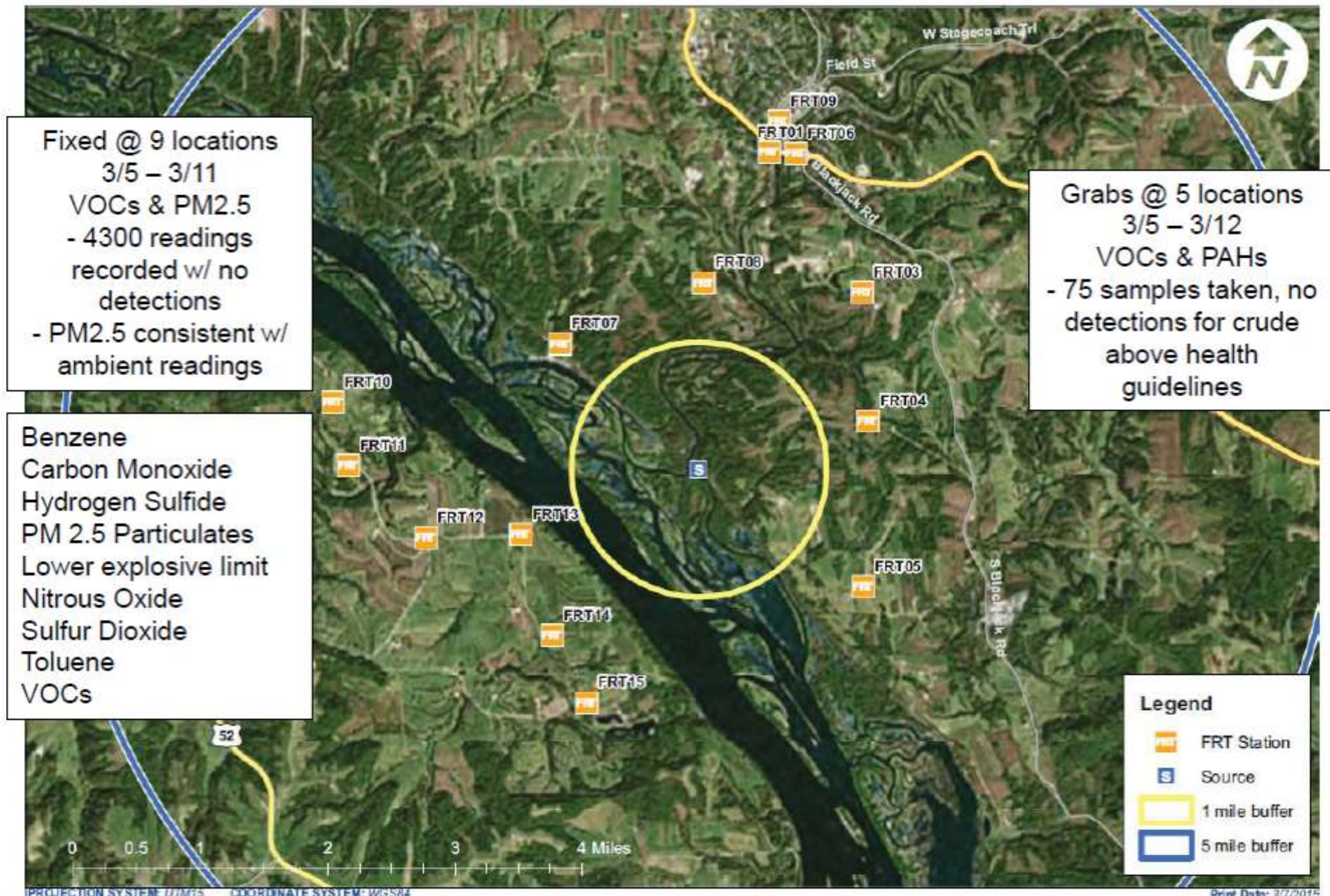
VIP Visits



Environmental Impact

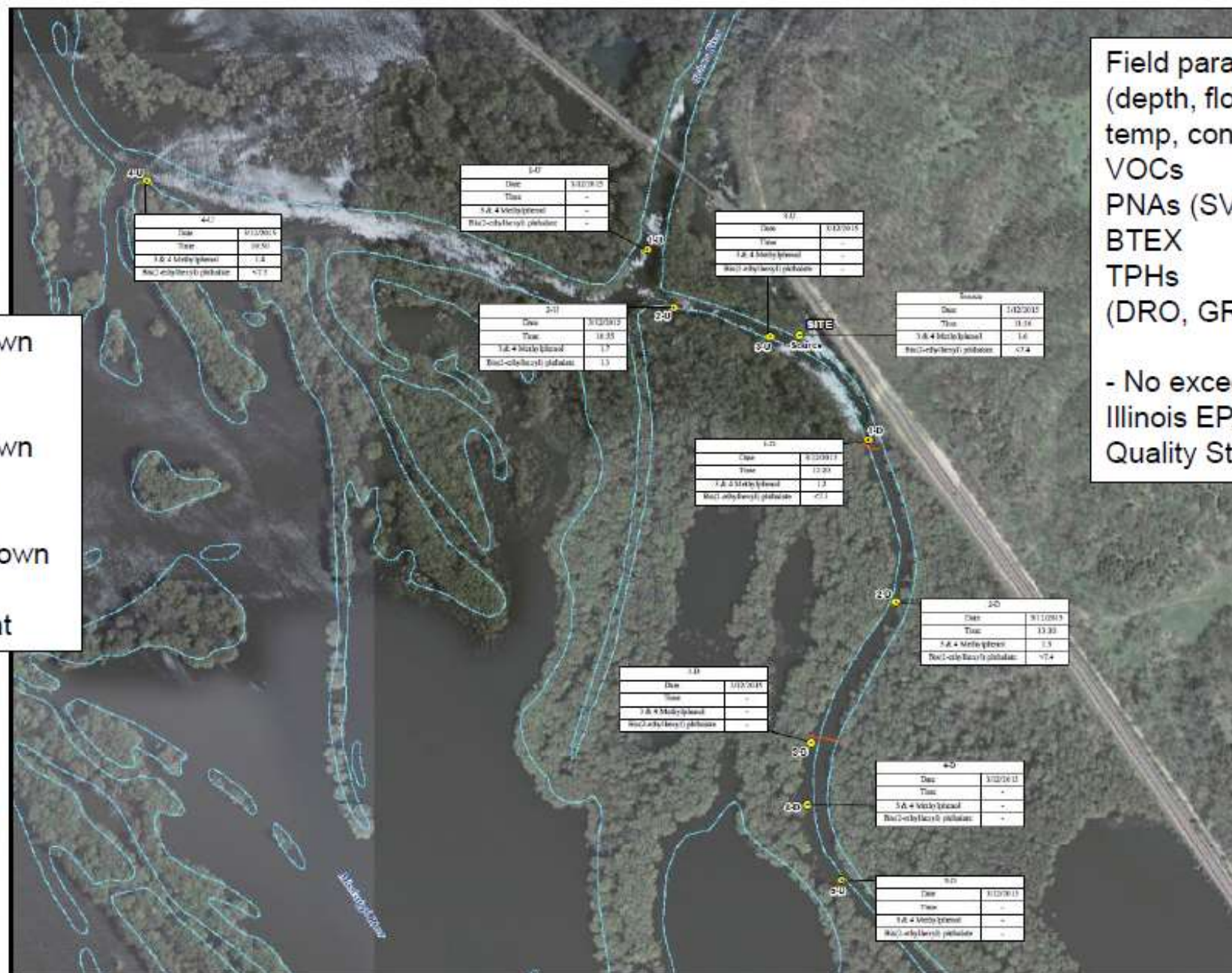
Environmental

Air



Environmental

Surface Water



Field parameters:
(depth, flow, DO, ORP,
temp, cond, pH)
VOCs
PNAs (SVOCs)
BTEX
TPHs
(DRO, GRO, ORO)

- No exceedances of
Illinois EPA Surface Water
Quality Standards

4 up, source, 5 down
3/7 to 3/11

2 up, source, 2 down
3/11 to 3/27

2 up, source, 2 down
If > 1" rain
3/27 to present

Environmental

Area of Most Significant Impact – 12 cars

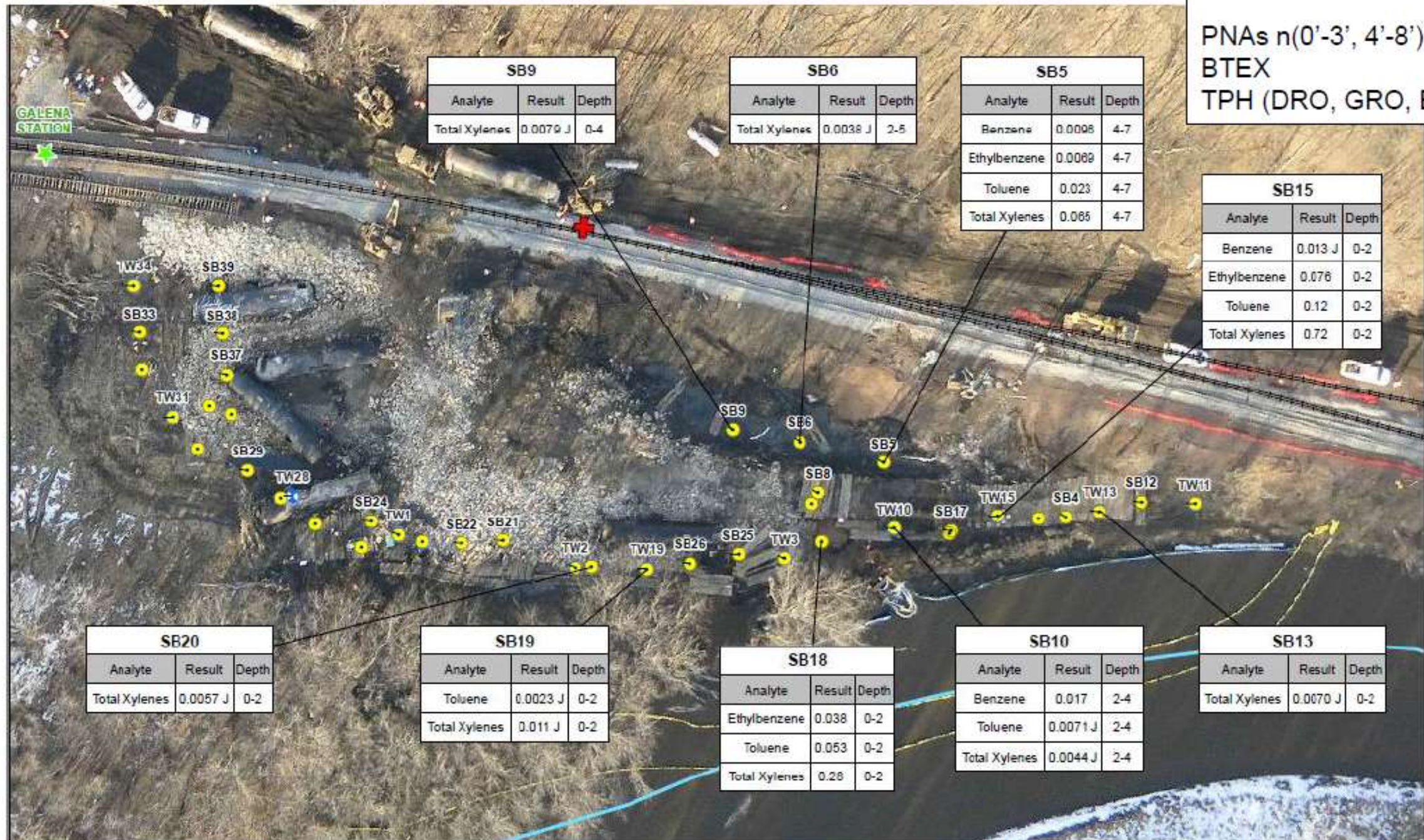


Environmental

Soils

- 143 samples from 35 borings screened
39 samples to lab

PNAs n(0'-3', 4'-8')
BTEX
TPH (DRO, GRO, ERO)



Environmental

Remediation Activities

- Remove crude (mass balance)
- Sheet pile impacted area
- Excavate impacted soils
 - Disposed of at Subtitle D landfill
- Flush ballast / ramp & recover oil
 - Water Treatment
 - FOSC exercised NCP, CWA Sect. 311(c) & NPDES Section 122.3(d) authority to exempt NPDES permit until state issued permit
- Backfill & restoration (USACOE)
- Long term monitoring



Environmental Sheet Pile Containment



Environmental

Timber Mats



Environmental

Metrics

Product	Total
Crude Oil (recovered)	221,421 gal
Contact Water (treated)	1,700,000 gal (+)
Contaminated Soil	4,748 tons (+)
Tankers wrecked	12



Cause



IMT Challenges



Credentialing/Accountability

- ✓ Start Credentialing and Accountability Early

Site security/Safety

- ✓ Secure the incident no matter how remote

Federal NIMS Integration

- ✓ Expand NIMS and IAP development as soon as you understand the scope of the incident.

Meeting/Working Space and Logistics

- ✓ Pre-determine large spaces

Communication

- ✓ Establish common communications

VIP Visits

- ✓ Don't underestimate the impact of VIP visits

Contact Information

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