

Pan Am Railroad's

**Activities to
Investigate and Address
Contamination**

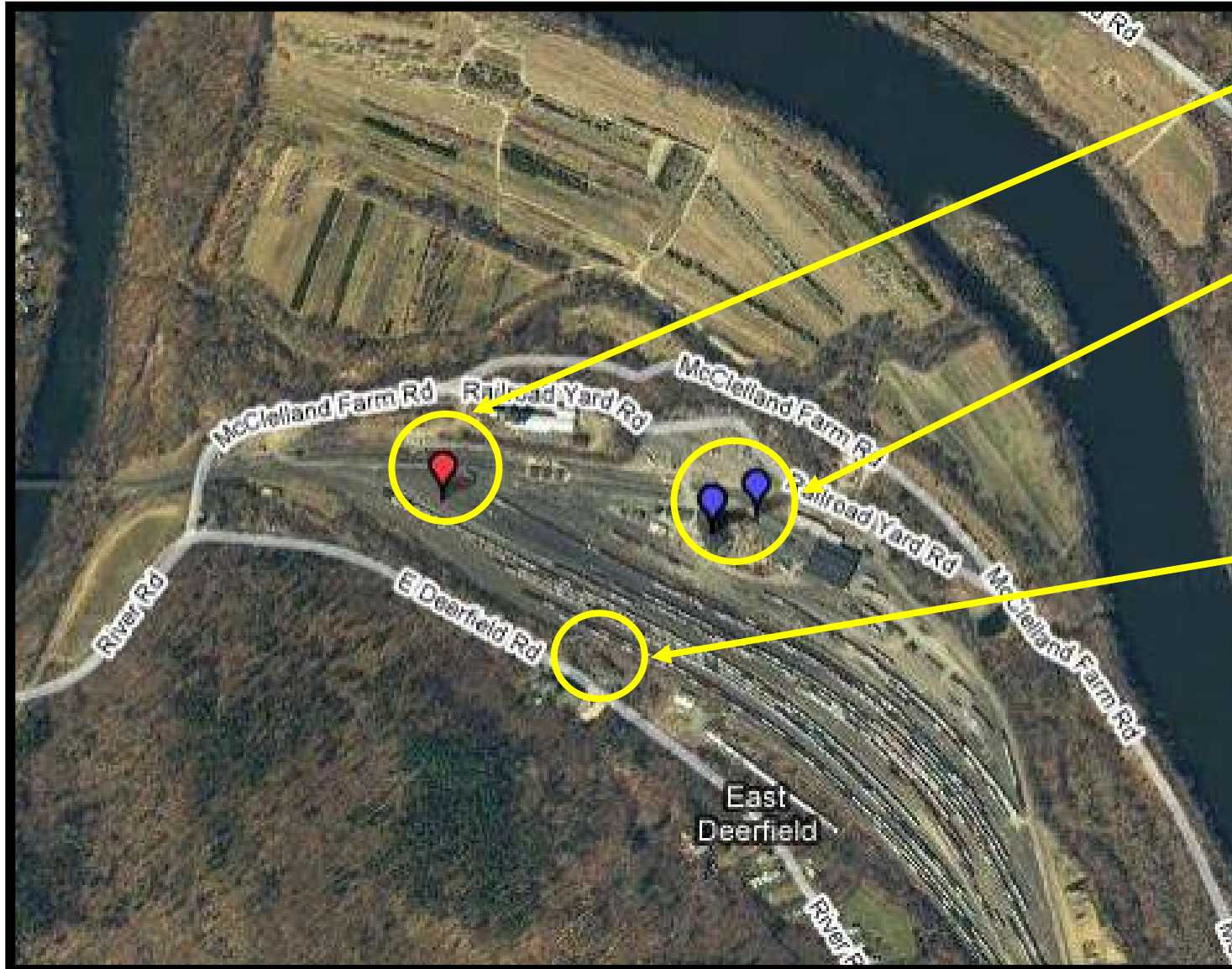
at

4 current

State Superfund Sites

At the East Deerfield RR Yard

4 Sites: *Locations*



**Site 1: 750
gallon diesel
Spill**

**Site 2:
Existing
Releases
(4 total)**

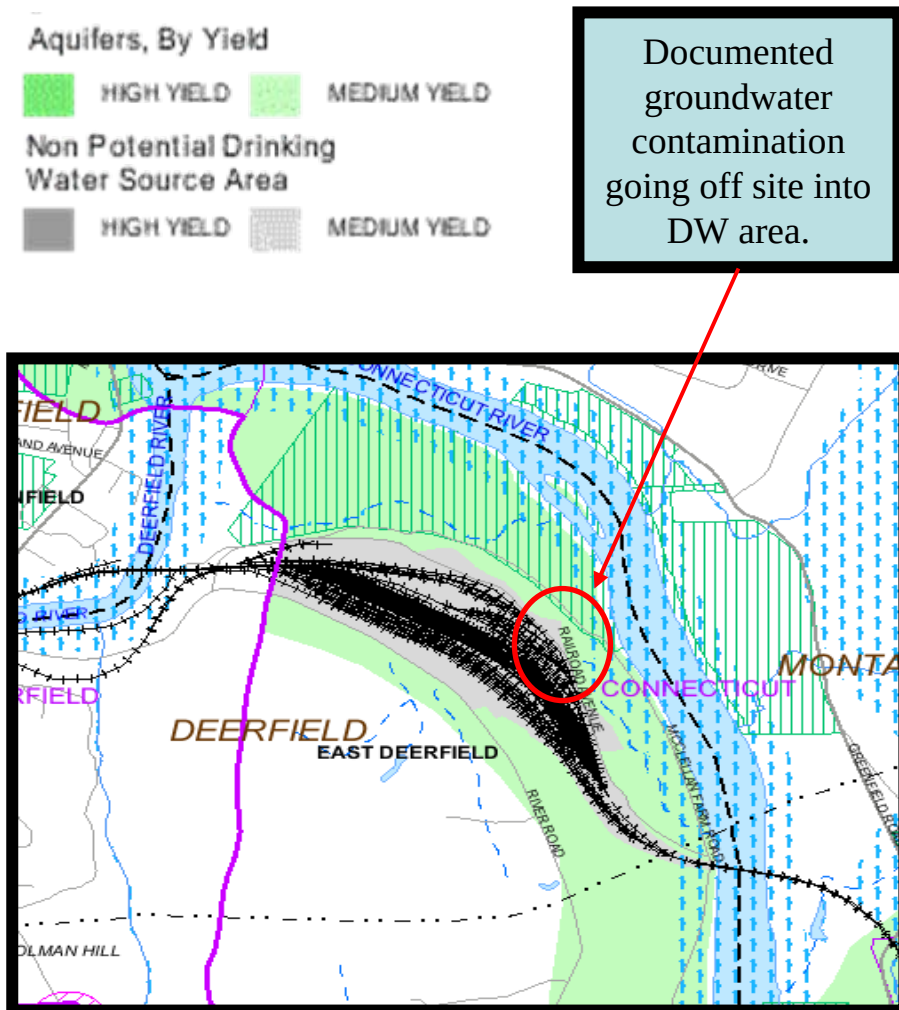
**Site 3:
Asphalt
Plant**

**Site 4:
Unknown
diesel spill**

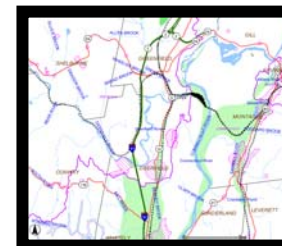
4 Sites: *General Location*

- **Residential/Industrial Area.**
- **3 of the sites are located in the RR yard and Lake Asphalt site is located adjacent to the RR Yard.**
- **Residences are located directly across the street from the Lake Asphalt site.**
- **Ground water flows toward Connecticut River under the site.**
- **A stream that discharges to the Connecticut River runs under the Lake Asphalt site.**

4 Sites: *Drinking Water Contamination*



- The site is surrounded by a high yield aquifer
- Although the actual RR yard is classified as a non-potential drinking water source (gray) due to its industrial use,
- The chlorinated solvents in the ground water have moved off of the exempted site into Deerfield's potential drinking water source (green).



4 Sites: *Rare Species in Close Proximity*



- Bald Eagle
- Shortnose sturgeon
- Dwarf wedge mussel
- Atlantic salmon
- Other plants and insects

Legend:

-  NHESP 2006 Priority Habitats of Rare Species and also Estimated Habitats of Rare Wildlife
-  NHESP 2006 MA Priority Habitats of Rare Species

Note: (NHESP) Natural Heritage & Endangered Species Program

Site #1: 750 Gallon Diesel Fuel Spill

Spill: 750 gallons spilled from a locomotive and contaminated the soils and groundwater.

There is diesel contamination left in the groundwater and in some of the soils after:

- **Some soil removal, and**
- **some bailing of the contamination of the groundwater**

Due to the location of the contamination of the soils under active railroad lines, some contaminated soil remains.

Site #1: 750 Gallon Diesel Spill

Date of Spill: 7/13/2005

Status of Activities at the Site:

- ***Phase I: Complete***
- ***Phase II Scope of Work: submitted***

Tells us what they will do to identify the source and extent of the contamination

- ***Phase II Report: due August 2008***
tells us what they found (“extent and magnitude”)
- ***Phase III Report: due August 2008***

It provides their proposed “Cleanup Plan” that identifies the technology to be used to clean up the release



Example: Similar ER Clean-Up of Spilled Diesel at a Conrail Site

Site #2: *Original Release Areas (4 spills)*

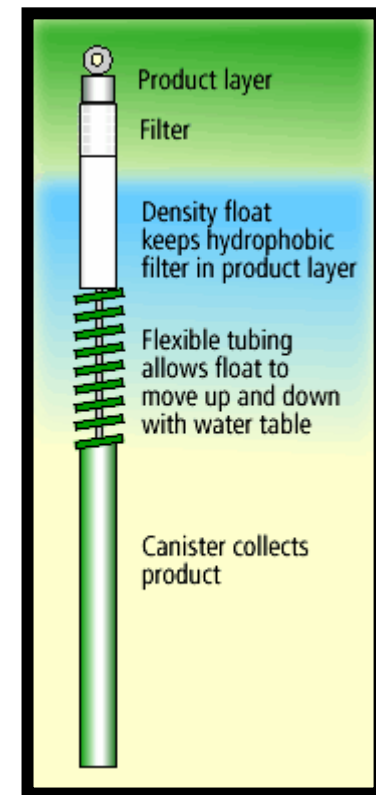
Diesel in soils and groundwater &

Chlorinated Solvents in groundwater from 4 sites:

Date Site Activities began: 1998

In Phase V - Currently monitoring the cleanup process

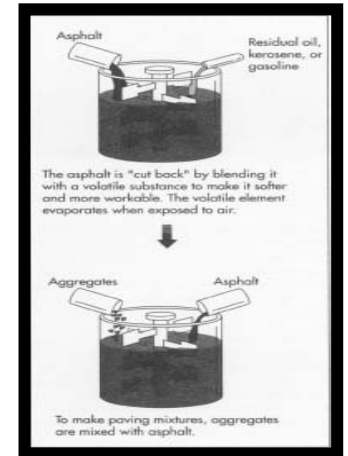
- ***Remediation Strategy:***
 - ***Diesel:*** Passive removal of diesel floating on ground water. Will likely take many years to remove.
 - ***Chlorinated Solvents:*** monitor natural breakdown process. Translates into no treatment.
- Current Status unknown (last status report submitted to DEP in October 2006)



Example of a
Passive Skimmer

Lake Asphalt: *History*

- **Property owned by B&M Corp (now Pan Am)**
 - **Leased to Lake Asphalt and Petroleum Company of Massachusetts in 1946**
- **Stored and distributed liquid asphalt from 1946 to 1984**
- **Distributed asphalt throughout the region**
 - **Trucks used for distribution were reportedly sprayed inside and out with diesel fuel to prevent tar sticking to the vehicle**



Lake Asphalt: *History*

- **Abandoned in 1984, no further use since then**
- **Buildings/storage tanks at site:**
 - 4 buildings
 - 18 above ground storage tanks
 - 1 “vault”
 - approximately 60 scattered drums



Lake Asphalt: *Materials Stored*

- **Most liquids were stored in tanks (some tanks were full or partially full in April 2008) and consisted of:**
 - **Tar/Asphalt**
 - **Number 2 Fuel Oil**
 - **Number 4 Fuel Oil**
 - **Number 6 Fuel Oil (a thick, viscous oil)**
 - **Turpentine**
- **The drums at the site were mostly empty, but some were full and contained:**
 - **fuel/solvent mixture**
 - **oil or grease**
 - **antifreeze**

Lake Asphalt: *Hazards Present*

- Petroleum Spills to soil and/or ground water from historical operations and spills from tanks and drums.
- Asbestos that was used as an insulator for heating equipment in the boiler room and around pipes that were used to keep the asphalt hot.
- Elevated lead was detected in some initial samples.
- PCBs (polychlorinated biphenyls) were detected in some initial samples.



Lake Asphalt:

Heath Risks and Environmental Concerns

- **PCBs and Petroleum:**

- Can migrate to Connecticut River via storm water or ground water
- Can build up in fish and mussels, which could pose a health risk for people eating fish/mussels

- **Asbestos and Lead:**

- Potential risks to neighbors and people trespassing and working on site
- Airborne asbestos fibers and dust with lead could pose a risk to neighbors

- **Surface Petroleum Spills:**

- Potential risks and hazards to people trespassing and working at site.
- Potential to migrate to ground water and add to existing contamination

Lake Asphalt:

Assessment and Clean up Activities

The MA Dept of Environmental Protection has ordered Pan Am to assess and clean up the site. This involves:



- **Removing buildings**
- **Removing tanks**

Lake Asphalt: *Assessment Activities*



Phase II: Investigation will include:

- Groundwater testing
- Soil testing

Lake Asphalt: *Status of Activities*

Date Site Activities began: Fall 2007

Status of Activities at the Site:

- **Phase I:** submitted, but DEP has required a revised Phase I report.
- **Phase II Scope of Work:** submitted but unacceptable so DEP requires revisions.
 - Tells us what they will do to identify the source and extent of the contamination
- **Phase II Report:** due June 6, 2008 (recently extended to September 2008)
 - Tells us what they found (“extent and magnitude”).
- **Phase III Report:** due June 6, 2008 (recently extended to September 2008)
 - It provides the proposed “Cleanup Plan” that identifies the technology to be used to clean up the release

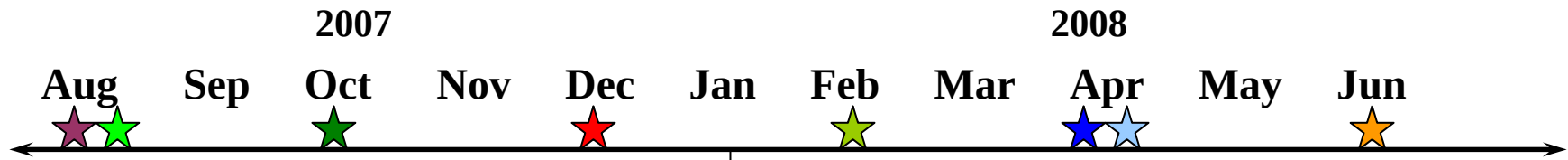


Front View before demolition



Rear View before demolition

Lake Asphalt: *Timeline of Cleanup Process*



- **August 15, 2007**
 - MassDEP inspection conducted after complaints.
- **August 23, 2007**
 - Notice of Responsibility issued to Boston & Maine (B&M) Corporation.
- **October 22, 2007**
 - Immediate Response Action (IRA) Plan submitted.
- **December 12, 2007**
 - MassDEP issues Notice of Noncompliance to B&M for failure to perform IRA.
- **February 4, 2008**
 - Phase I Initial Site Investigation (ISI) and Tier Classification submitted. MassDEP requires additional activities and revised reports.
- **April 2008**
 - Removal of tanks and contents begins, as well as removal of asbestos materials.
- **April 21, 2008**
 - Additional IRA Plan for addressing asbestos materials.
- **June 6, 2008 (Note: extended to September 2008)**
 - Extension of due date for revised Phase I ISI and Tier Classification.
 - Phase II and III reports due (comprehensive evaluation and cleanup plan).

Site #4: *June 7, 2008 Diesel Spill*

- **Up to 500 gallons of diesel spilled from train engine derailment.**
- **IRA Plan must be submitted within 60 days (August 6, 2008).**
- **Spill location and status of cleanup activities currently unknown (DEP approved excavating up to 200 cubic yards of material).**

Public Involvement Plan (PIP):

Appeal for Original Release Areas (4 spills)

- **A PIP Appeal developed in 2005 is being revised to reflect current issues:**
 - **Original PIP appeal was submitted to DEP, but was not current by the time DEP returned it to the town.**
 - **Will be submitted to DEP and Pan Am.**
- **Goals:**
 - **Identify areas of noncompliance with existing PIP, for example:**
 - **Specific community concerns**
 - **Lack of fact sheets for ongoing activities and releases**
 - **Some public comments that were not considered, sent back or not addressed**
 - **Request modifications and updates to existing PIP and MCP decisions and submittals.**

Public Involvement Plan (PIP): *New*

- **Town requested that the other spills also be designated as PIP sites:**
 - **New PIP will be issued for Former Lake Asphalt Plant (draft PIP and public meeting by July 4, 2008).**
 - **New PIP also requested for the 750 gallon diesel spill (have not heard back from B&M yet, thus they are out of compliance).**
- **Town will request another PIP for June 2008 spill.**

Next Steps

- **July 2008:**
 - **IRA Status Report for Former Lake Asphalt Plant – status of cleanup activities**
- **August 2008:**
 - **IRA Plan for “new” 500 gallon spill (Site #4)**
 - **Assessment and cleanup plans for 750 gallon diesel spill – Phase II and Phase III**
- **September 2008:**
 - **Assessment and cleanup plans for Former Lake Asphalt Plant – Phase I, Phase II, and Phase III (cleanup plan)**
 - **IRA Status for 750 gallon spill (Site #1)**
- **There may be reports for the cleanup at the Original Release Areas.**