Raymark Bulletin #28

November 1999

Raymark – Shore Road
Non-Time-Critical Removal Action Fact Sheet

RAYMARK 13.5 10929

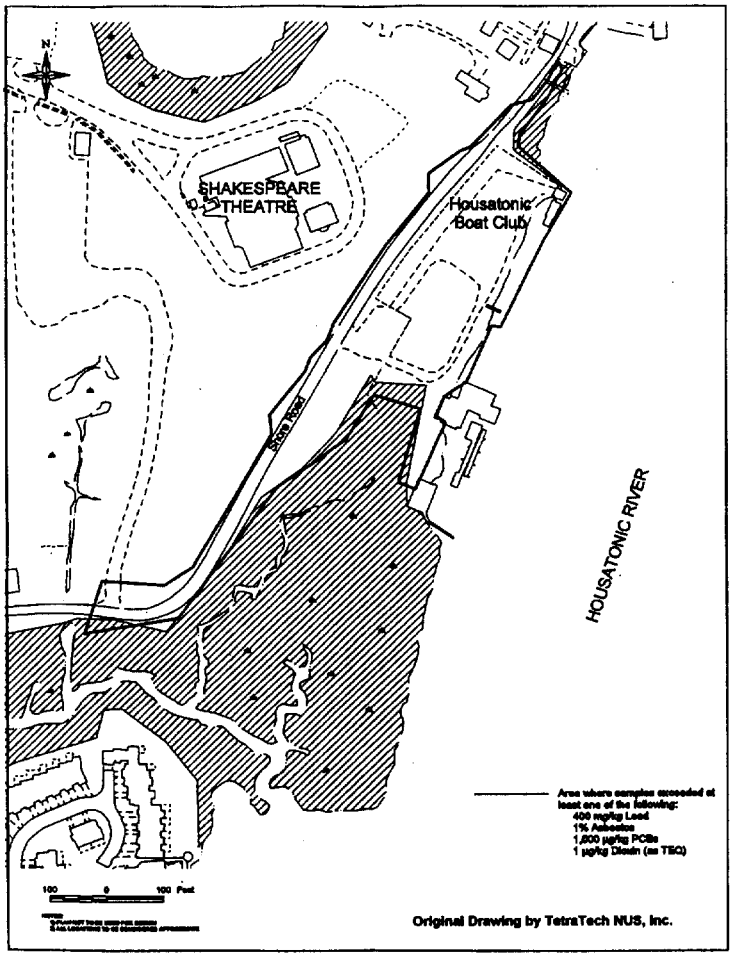
NATURE AND EXTENT OF CONTAMINATION

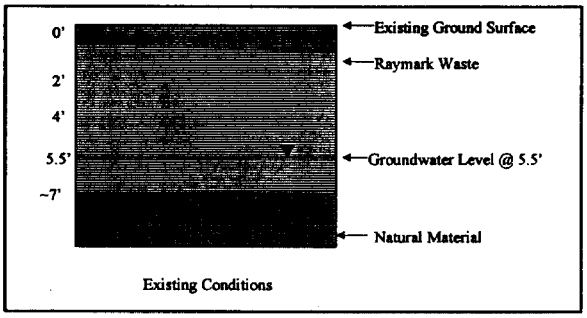
Lead: Elevated concentrations of lead (400-10,000 ppm) were detected in both the surficial and subsurface soils. Concentrations were typically comparable in both soil layers, however, lead was more laterally dispersed in the surficial soils. The highest concentrations were found in the parking lot of the Housatonic Boat Club and along the shoreline of the Housatonic River. Lead contamination was actually used to define the perimeter of the contaminated area (see Figure below) as elevated levels of asbestos, PCBs and dioxins were all found within the area of lead contamination.

Asbestos: High concentrations of asbestos were detected in both the surficial and subsurface soil layers. The distribution and magnitude of asbestos within the two soil layers were comparable, encompassing the Housatonic Boat Club parking area and Shore Road at concentrations between 1 and 85 percent asbestos.

PCBs: Elevated levels of PCBs were scattered throughout OU5 (Shore Road). A few samples in both the surface and subsurface soils exceeded 10 ppm. Concentrations were comparable between the two soil layers, but somewhat higher in the surficial soils, especially along Shore Road.

Dioxins: Dioxins were detected in both surficial and subsurface soils at comparable levels, but at different locations. Dioxins in surficial soils were found along Shore Road. Dioxins in subsurface soils were found in the parking lot area of the Housatonic Boat Club and along the shoreline. All locations, both surficial and subsurface, are within the area defined by high lead concentrations.





RAYMARK – SHORE ROAD
REMOVAL ACTION OBJECTIVES

Non-Time Critical Removal Action Goals

- Prevent direct human contact with contaminants in soil-waste/fill materials.
- Prevent, to the extent practicable, the further release of contaminants from soil-waste/fill materials into the soil, groundwater, surface water, and sediments.
- Prevent, to the extent practicable, the release of contaminants from the soil-waste/fill materials into the Housatonic River that occurs through flooding.
- Prevent, to the extent practicable, continued ecological impacts from the release of contaminants from the soil-waste/fill into the Housatonic River and nearby wetlands.

Site-Specific Remediation Goals

Direct Exposure:

Lead: 400 mg/kg total (OSWER Directive #9355.4-12)

PCBs: 1 ppm (40 CFR § 761.1)

Dioxin: 1 µg/kg as 2,3,7,8-TCDD TE (OSWER Directive #9200.4-6)

Groundwater Protection:

Lead: 0.15 mg/L TCLP/SPLP (CTDEP Remediation Standard Regulations)

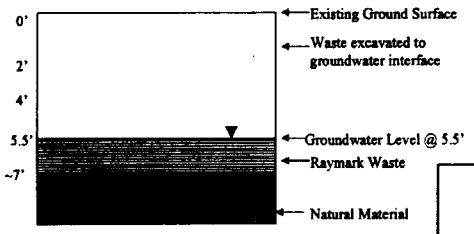
PCBs: 0.005 mg/L TCLP/SPLP (CTDEP Remediation Standard Regulations)

Airborne Exposure:

Asbestos: <1% in soil (EPA's National Emission Standards for Hazardous Air Pollutants)

RAYMARK – SHORE ROAD
PROPOSED ALTERNATIVES

EXCAVATION



Step 1 Excavation

Pilot Test

Remove 5.5 feet of soil

(35,000 cy)

PREPARATION

Treatment / Stabilization

(350 cy/day)

Dust Control and Monitoring Measures

DISPOSAL

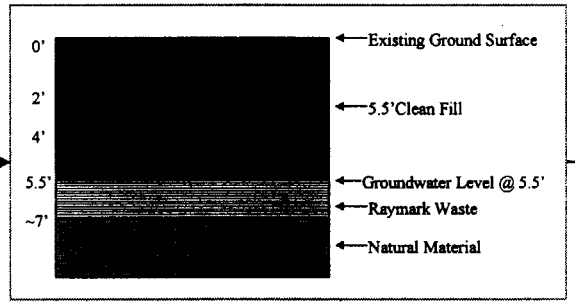
55,000 cy of treated material to Contract Plating

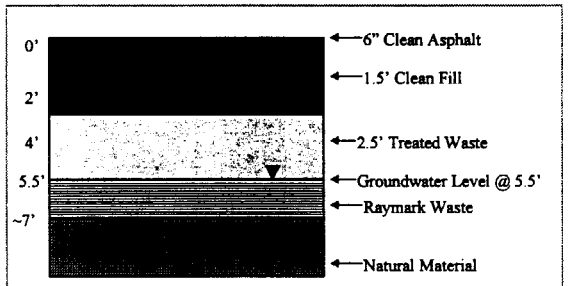
16,000 cy of treated material backfilled

39,000 cy of treated material to Contract Plating

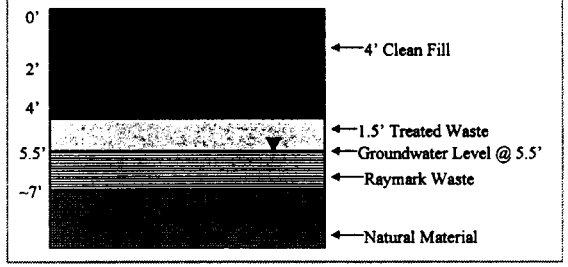
35,000 cy of material to Contract Plating

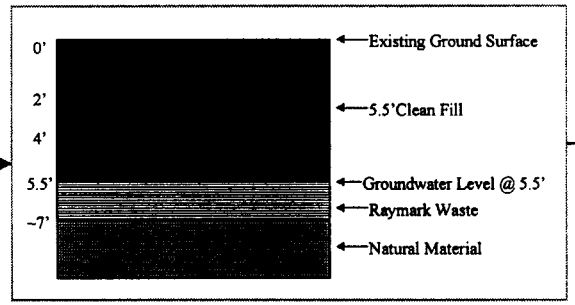
RESTORATION





(and/or)





SCHEDULE

Duration = 157 days (31 weeks) @ 350 cy/day

23 loads per day from Mar thru Oct

Duration = 111 days (22 weeks) @ 350 cy/day

23 loads per day from Mar thru Sep

Duration = 58 days (12 weeks) @ 600 cy/day

40 loads per day from Mar thru May

RAYMARK – SHORE ROAD AREA
PROS AND CONS OF CLEANUP APPROACHES

Approach	Pros	Cons
Excavate / Treat / Temp. Storage	• Long-term immobilization of contaminants	• Increased volume of hazardous material by stabilization • Transport through Stratford • Traffic and noise • Pilot testing required for soil treatment • Increased construction duration • Increased handling of materials
Excavate / Treat / Temp. Storage and Partial Backfill of Treated Waste	• Long-term immobilization of contaminants	• Increased volume of hazardous material by stabilization • Pilot testing required for soil treatment • Increased construction duration • Risk to integrity of cap due to tidal influences and coastal storms • Long term maintenance requirements • Transport through Stratford • Traffic and noise
Excavate / Temporary Storage (EE/CA Alternative 3)	• No increase in hazardous material volume • Short construction duration	• Transport through Stratford • Traffic and noise
Capping* (EE/CA Alternative 4) ** This alternative to be considered only if above alternatives are found to be infeasible.*	• No increase in hazardous material volume	• Risk to integrity of cap due to tidal influences and coastal storms • Long term maintenance requirements • Requires significant changes in topography • Possible loss of usable land