

Pre-CERCLIS Site Screening in Missouri

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Basic Overview

- Site is not on Comprehensive Environmental Response Compensation and Liability Information System (CERCLA)
- Perform site visit
- Limited sampling if necessary
- Write a brief report

Where Our Sites Originate

- Site inventories
- Referrals from:
 - Environmental Protection Agency
 - Regional Offices
 - Other Missouri Department of Natural Resources programs
 - Other State agencies
- Citizens' complaints

Site Inventories Maintained By Site Evaluation Unit (SEU)

- Former Manufactured Gas Plants (FMGP)
- Former USDA Grains Bins
- Historic Lead and Zinc Mines and Smelters
- Wood Treating Facilities
- Electroplating Facilities*
- Chemical Manufacturing and Distribution Facilities*

Sampling During Site Screening (SS) Investigations

- Samples collected at 81% of SS
- Limited to 5-10 samples (targets plus backgrounds)
- Limited analytes
- Limited to source areas, on-site drinking water wells, other potential immediate health concerns

Support Requested

- SEU is assisted in Site Screening by
 - Geological Survey and Resource Assessment Division for geological information
 - Environmental Services Program for sampling aid
 - Field Services Section: collects samples
 - Chemical Analytical Section: analyzes samples

Quality Assurance Project Plan (QAPP)

- Generic, non site-specific QAPP used for all site assessment investigations
- Data Quality Objective for site screenings requires lab memo:
 - Background Information
 - Conceptual Site Model
 - Site Maps
- For SS, sampling plan streamlined into memo with attached CSM

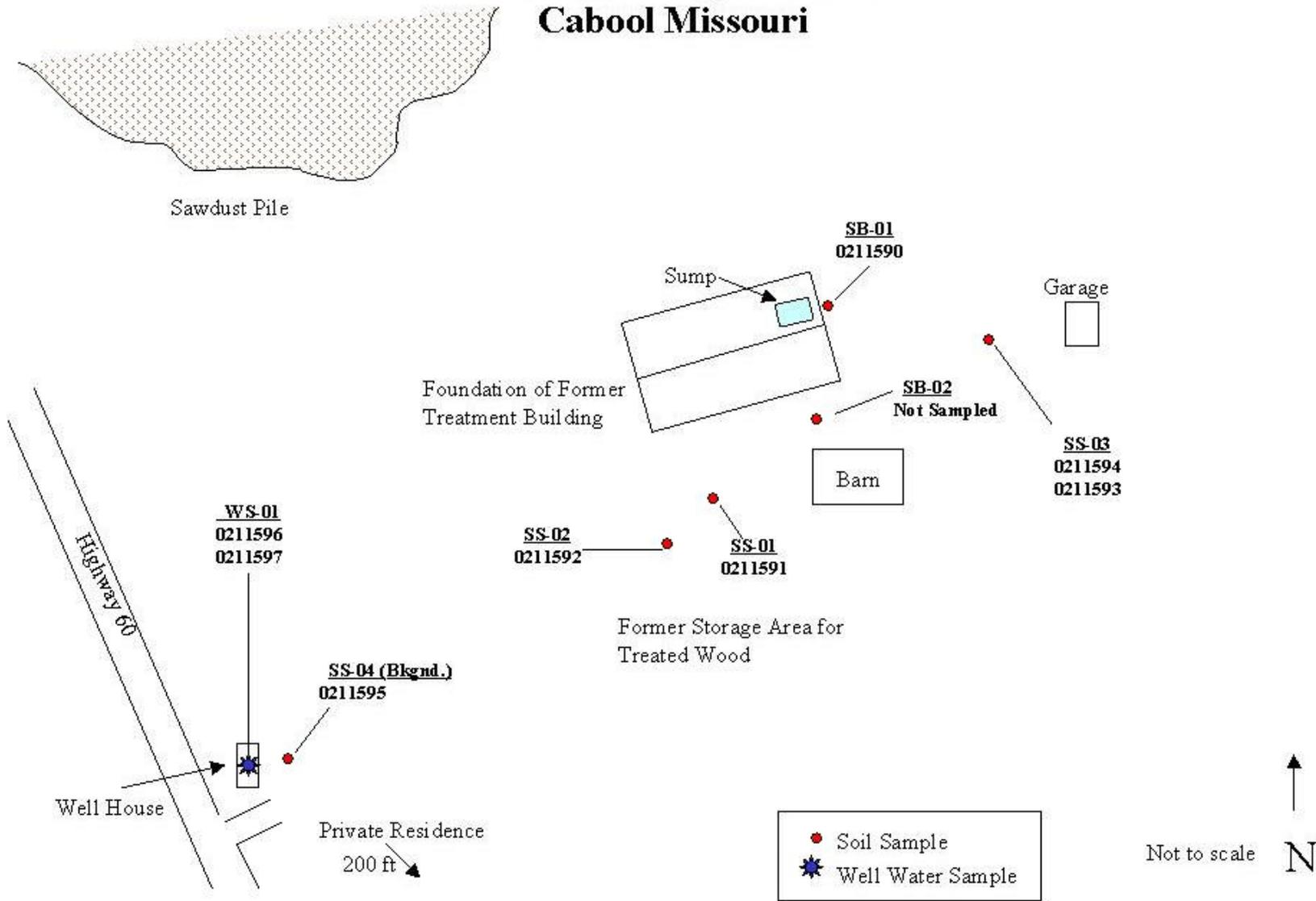
The Final Report Includes

- Brief narrative for sites headed to CERCLIS
- Site screening form for all Site Screenings
 - Site Screening form modified for some inventory sites
- Supporting documentation
 - References
 - Sample results
 - Site map

Case Study: Former Wood Treatment Facility; Cabool, MO

- Former wood treating facility which used pentachlorophenol
- Private drinking water well contaminated
- SS quickly identified health threat
- Site entered into Missouri Voluntary Cleanup Program (VCP)

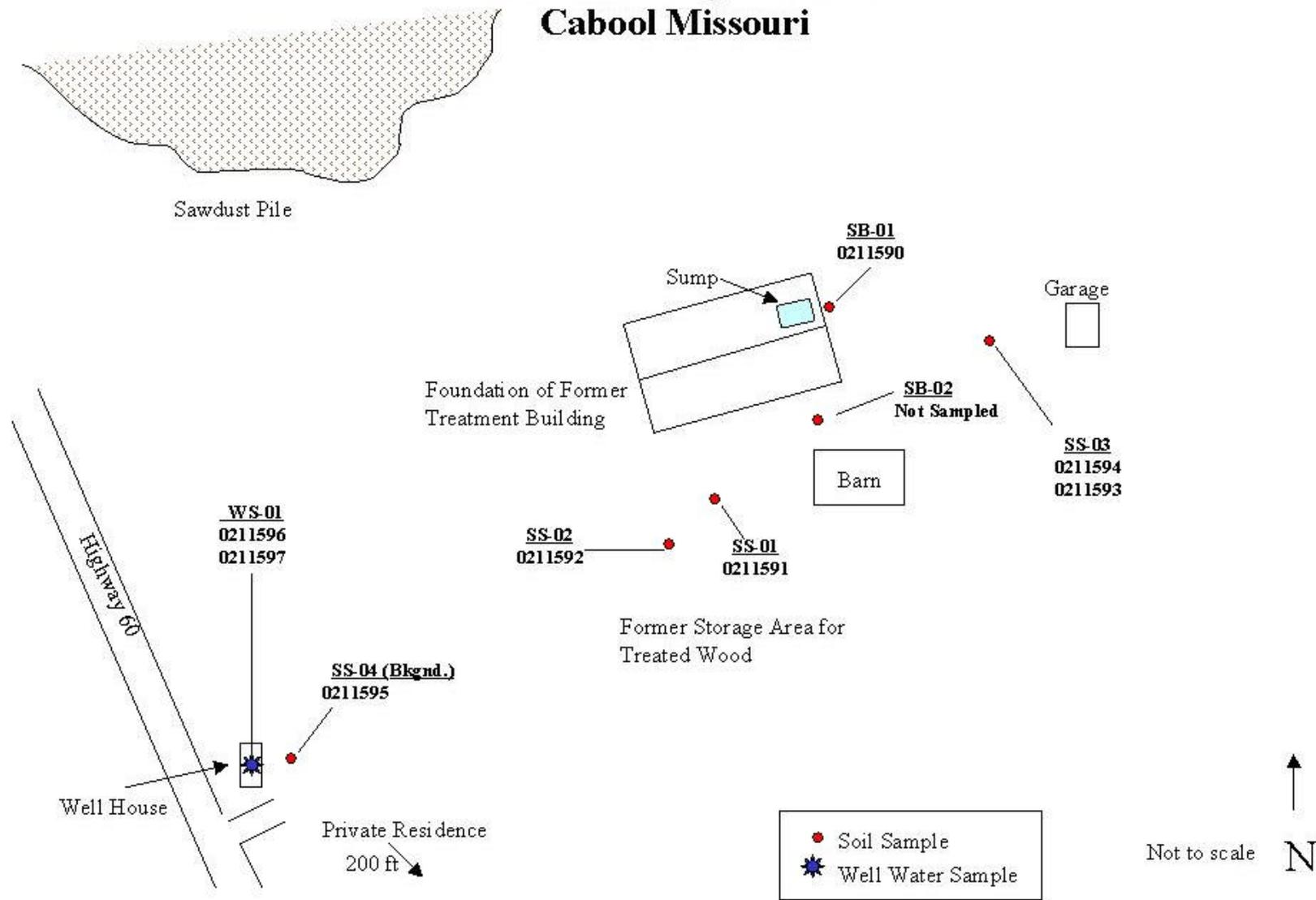
Figure 2. Site Sketch Smith Flooring - Cabool Cabool Missouri



Case Study: Former Wood Treatment Facility(continued)

- Six soil samples analyzed for SVOCs, copper, and TPH
- One of the soil samples went on for dioxin analysis
- One water sample from well on the site analyzed for SVOC and copper
- Well water was field-tested for pH, temperature, and specific conductivity

**Figure 2. Site Sketch
Smith Flooring - Cabool
Cabool Missouri**



Case Study: Historic Pipeline Break

Break



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Case Study: Historic Pipeline Break (continued)

- Analyzed samples for metals, VOA's, semi-VOA's, and TPH
- Sampling showed no release of CERCLA eligible substance
- TPH found at 440ppm
- Source determined to be from pipeline
- Referred lead to EPA and negotiated with pipeline Co. to address contamination

Case Study: Excelsior Springs FMGP



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Case Study: Excelsior Springs FMGP (continued)



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Case Study: Excelsior Springs FMGP (continued)

- SS sampling discover need for PA/RA
- Sampling data used in Registry evaluation
- Site went on to PA/RA and Removal Action
- Sampling data integrated into PA/RA



Case Study: Unique Applications

- Missouri State Park Playgrounds
 - Parks Dept. concerned about CCA lumber used in play structures
 - SS performed on 8 playgrounds statewide
 - Heath consult conducted
 - Recommendations:
 - Sealing CCA wood
 - Using alternative woods or plastics in future structures
 - Maintaining the ground cover under the playgrounds

Case Study: Unique Applications

- **Viburnum Lead Haul Roads**
 - Concern about roadside lead from haul trucks
 - SS performed on main haul routes in 3 County area
 - Significant release of lead into residential yards along haul routes
 - CERCLIS entry, Removal Assessments in progress

Final Analysis of SS

- MODNR began Pre-CERCLIS Site Screening in 1996
- 145 SS completed to date
- 81% included sampling events
- 36% of sites put on CERCLIS
- 50% of sites NFRAP'd
- 26% of sites referred to other programs (VCP, Registry, Cooperative Program, etc.)

Final Analysis of SS (continued)

- On average, it takes 65.4 hours to complete a Site Screening
- The average cost of the site screening is \$3,250
 - This reflects a combination of SS with and without sampling
 - ESP and GSRAD time and expenses included

Conclusions

Advantages:

- Avoid unnecessary CERCLIS entry
- Identify time critical removal actions early
- Leverage for PRP negotiations
- Provides data for future investigations
- Data used for State Registry evaluation
- Sites referred to other programs as necessary

Disadvantages:

- Increased time, effort and cost

Questions and Answers

- Missouri DNR Hazardous Waste Program
 - P.O. Box 176, Jefferson City, MO 65102
 - (573) 751-8629
 - FAX (573) 751-7869

