



Recommendations on USEPA Proposed Plan for Koppers Superfund Site

City of Gainesville / Alachua County
Gainesville Regional Utilities
and
Alachua County Health Department

Joint City-County Commission Meeting
August 30, 2010

Introduction

- Purpose of Presentation
- LIT – Local Intergovernmental Team
 - City of Gainesville
 - GRU
 - Alachua County EPD
 - Outside Technical Experts
- Alachua County Department of Health

Presentation Topics

- Introduction (Fred Murry, City of Gainesville)
- LIT Goals (Fred Murry)
- Overview of Site and Proposed Plan
(John Mousa, ACEPD and Stu Pearson, City of Gainesville)
- Health Dept. Recommendations (Anthony Dennis)
- LIT Proposed Issues and Recommendations
 - Groundwater/Subsurface (Rick Hutton, GRU)
(Dr. Stan Feenstra , Applied Groundwater Technology)
 - Future Land Use (Ralph Hilliard, City of Gainesville)
 - Soils and Sediments (John Mousa, ACEPD)
- Recommended Actions

Superfund Process Overview

- Site Investigations (on-going)
- Draft Feasibility Study – August 2009
- Final Feasibility Study – May 2010
- Proposed Plan – July 15, 2010
 - ***Comment due date: October 15, 2010***
- Record of Decision (ROD)
- Consent Decree

LIT's Schedule

- Public Meeting – August 17, 2010
 - Presented our preliminary comments
 - Received public input
 - Public encouraged to submit comments directly to EPA
- Present proposed recommendations to City & County Commissions August 30, 2010
- Submit Comments to EPA (no later than) October 15, 2010

LIT Goals

- 1. Protect Our Water Supply**
- 2. Protect Public Health & Environment**
 - Clean up On-site & Off-site Soils
 - Stop off-site migration of contamination
- 3. Foster Site Reuse**
 - Remediate consistent with Community Vision for site

Process Concern

- Administrative Record Not Complete

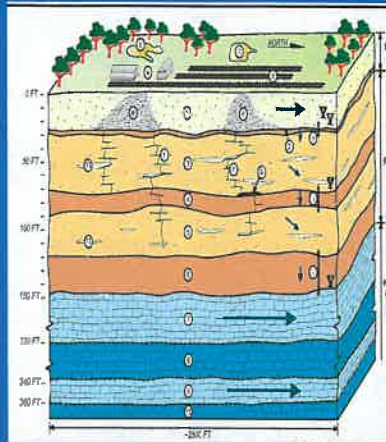


Overview of Koppers Site



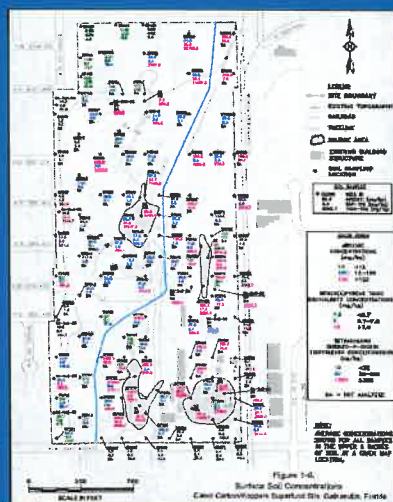
- Wood preserving ~ 90 years
- Superfund site since 1983
- USEPA selects remedy
- Beazer East responsible party
 - Current land owner
- Koppers operations until 2009
- Four main source areas
- Soil and groundwater contamination

Subsurface and Groundwater



- Creosote in soils and groundwater
 - Surficial aquifer (to ~ 25ft)
 - Upper Hawthorn (to ~ 65ft)
 - Lower Hawthorn (to ~115ft)
- Contaminated groundwater in Floridan Aquifer > 200 ft
- Threat to city well field

On-site Surface Soils



- Surface soils contaminated above FDEP (State) soil clean-up target levels (SCTLs)
- Eastern side greater and deeper contamination
- Contamination “hot spots” exist in western and northern areas.

Overview of Site Offsite Soils



- Contamination exceeds FDEP residential SCTLs in rights of way west of site
- Primary concern dioxin
- Background samples below FDEP residential SCTLs (dioxin)
- Health Dept advisories
- Limit access to easement
- Extent of impacted area not yet established

Overview of Site Offsite Soils



- Additional residential and offsite sampling planned by EPA – Sept 2010
- West, east, north and south of site and background locations

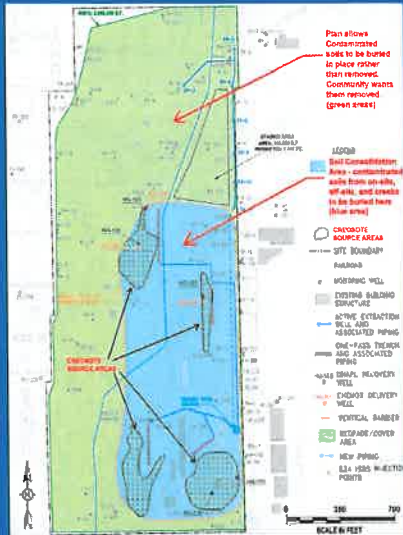
Overview of Site
Creek Sediments

- Tar residues in Springstead & Hogtown Creek
- Contamination (PAHs) exceeds FDEP Sediment Quality Guidelines
- Levels of dioxin (not co-located with tar residues) above FDEP Residential SCTLs
- FDEP warning signs placed along creeks
- Tar removal actions planned in creeks (Cabot)
- Additional actions required to address PAHs and dioxins

Overview of Site
Stormwater

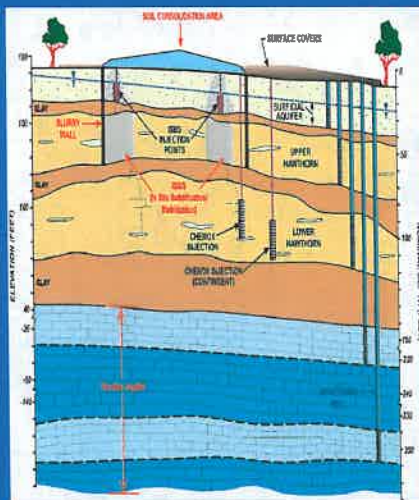
- Untreated stormwater discharges from site
- Stormwater contains contamination with arsenic, copper and low levels of dioxins
- Beazer has applied for new specific stormwater permit with FDEP NE district
- FDEP in process of permit review.
- Short term interim remedial actions planned.

USEPA Proposed Remedy On-Site –Surface Soils



- Low permeability cap over source and soil consolidation area.
- Cover or excavate soils in non-source area to meet FDEP Commercial SCTLs and address GW leaching
- Move excavated soils (including off-site and contaminated sediments) to consolidation area
- Surface grade or cover 83 acres

USEPA Proposed Remedy On-Site – Source Areas



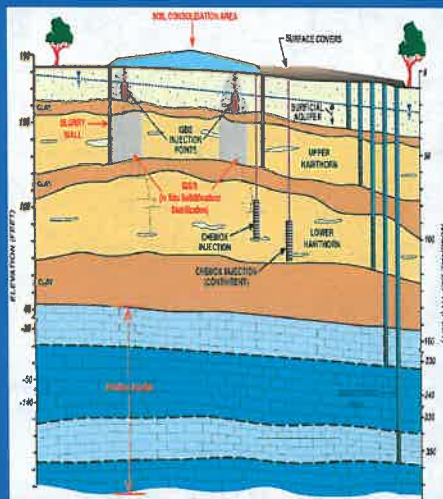
- Underground barrier wall around source areas
- Treat or solidify source areas
 - In-situ Biogeochemical Stabilization – **ISBS**
 - In-situ Soil Solidification Stabilization – **ISSS**
- Chemical treatment (ISBS and Chem-ox) in the Lower Hawthorn and on East Boundary

USEPA Proposed Remedy On-Site – Source Areas



- Continue northern extraction system
- Continue horizontal collection drains in surficial aquifer near sources
- Expand groundwater monitoring
- Institutional controls

USEPA Proposed Remedy Floridan Aquifer



- Limited hydraulic containment – groundwater extraction and treatment of Floridan Aquifer
- Additional extraction wells as needed
- Monitored natural attenuation of contaminants

USEPA Proposed Remedy Offsite Soils



- More Sampling to Delineate
- FDEP residential SCTLs on residential properties
- FDEP commercial SCTLs on commercial properties
- Choice of property owner:
 - Excavate contaminated soil and restore properties
 - Cover contaminated soils - engineered controls
 - Institutional controls to manage access and use of property
- Transport excavated off-site soil to on-site consolidation area

USEPA Proposed Remedy Sediments in Creeks

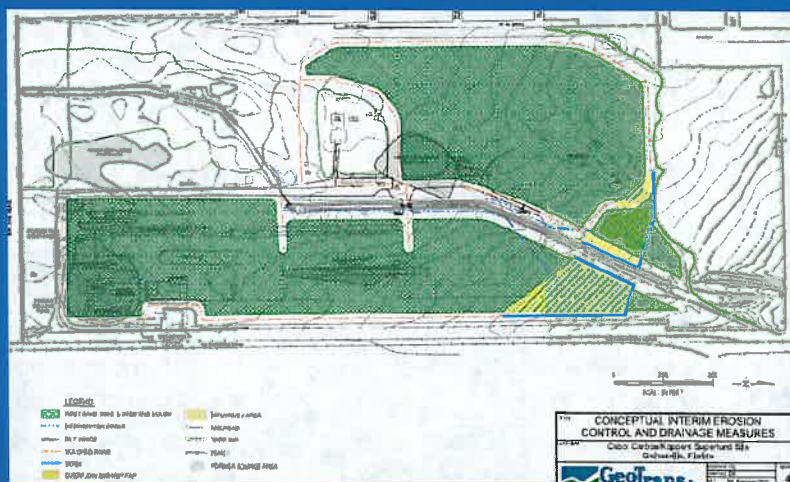


- Excavate sediments that exceed probable effects concentration (PEC)
- Monitored natural attenuation
- Transport excavated creek and sediments and stormwater pond soil to consolidation area

USEPA Proposed Remedy Stormwater

- Site stormwater management (OnR-5C)
 - Grading & contouring; runoff to pond(s)
 - Installation detention/retention pond(s)
 - Existing stormwater ditch
 - Replace with another ditch, or
 - Replace with other conveyance (pipe)

Short-Term Interim Measures Stormwater



Alachua County Health Department
Florida Department of Health

Recommendations on Proposed Plan

Health Department Recommendations

- The Health Department has recommended continued delineation of off-site soil contamination to the Florida Residential Soil Clean Up Target Level.
- The Health Department has recommended soil sampling in residential yards to determine the extent of contamination.
- The Health Department has recommended cleanup of off-site contaminated soils to the Florida Residential Soil Clean Up Target Level.

Health Department Recommendations

- The Health Department has recommended cleanup of contaminated sediments in Springstead and Hogtown Creeks to Residential Soil Clean Up Target Level.
- The Health Department has recommended that dust prevention measures be used during any onsite soil movement.

Groundwater

- GRU Murphree Wellfield
 - Serves ~185,000 people
 - 2 miles from Koppers
- No contaminants at Murphree Wellfield (GRU tests Regularly)
- “Water Supply is Safe, we want to keep it that way”
- Goals
 - Prevent contamination from reaching wellfield
 - Protect Groundwater

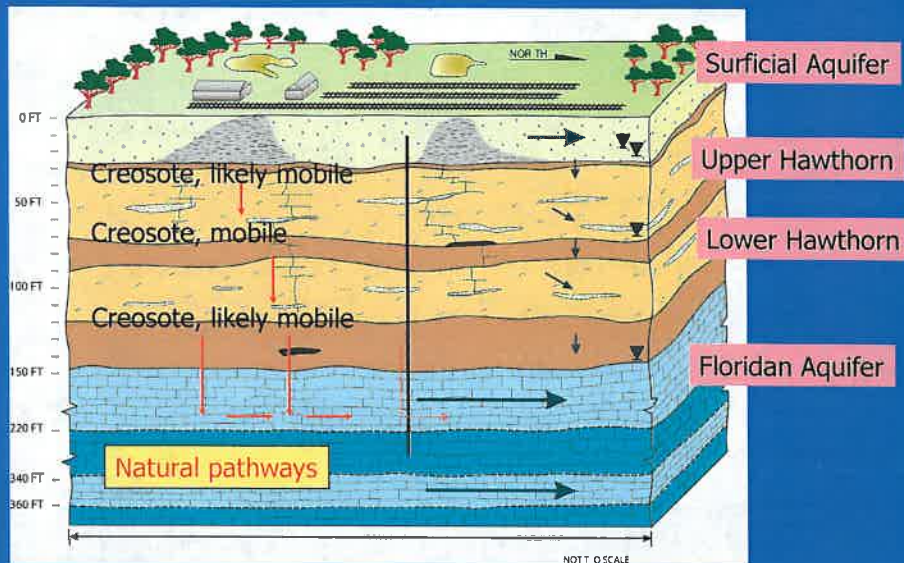
Groundwater

- 2001
 - Site geology & extent of contamination not well understood
 - Proposed Remedy based on incorrect assumptions
- 2010
 - Much better understanding of site
 - Geology & nature of contamination very complex
 - Remedy will be complex
- GRU “DNAPL Team”
 - In 2004 GRU assembled team of individuals with specialized expertise in type of contamination at Koppers
 - Recently added expert on chemical treatment

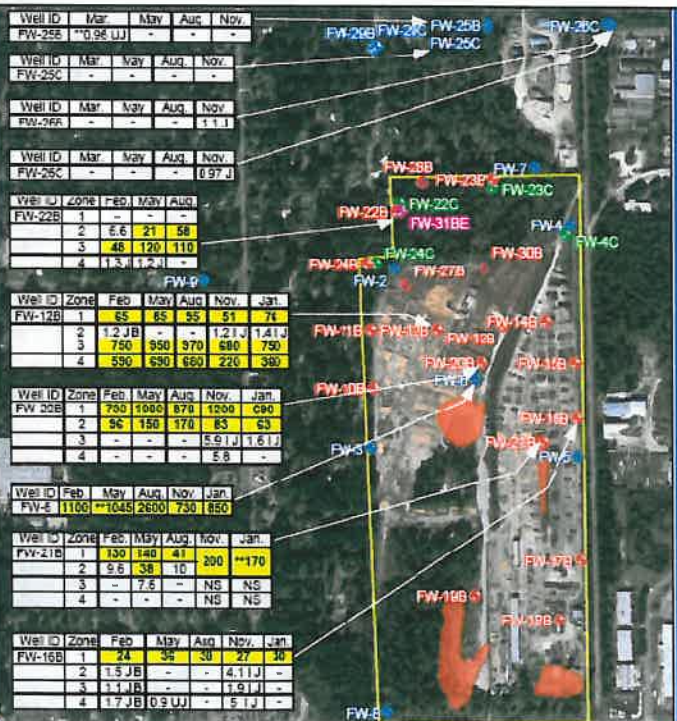
Creosote Characteristics

- “Dense Non-Aqueous Phase Liquid” (DNAPL)
 - *Liquid that is heavier than water & sinks*
- Viscous
 - *Very slow moving*
- Dissolves Slowly
 - *Groundwater in contact with creosote DNAPL becomes contaminated*

Creosote Movement



Floridan Aquifer Naphthalene Concentrations



LIT's Goals (Groundwater)

1. Remove or Immobilize Creosote DNAPL

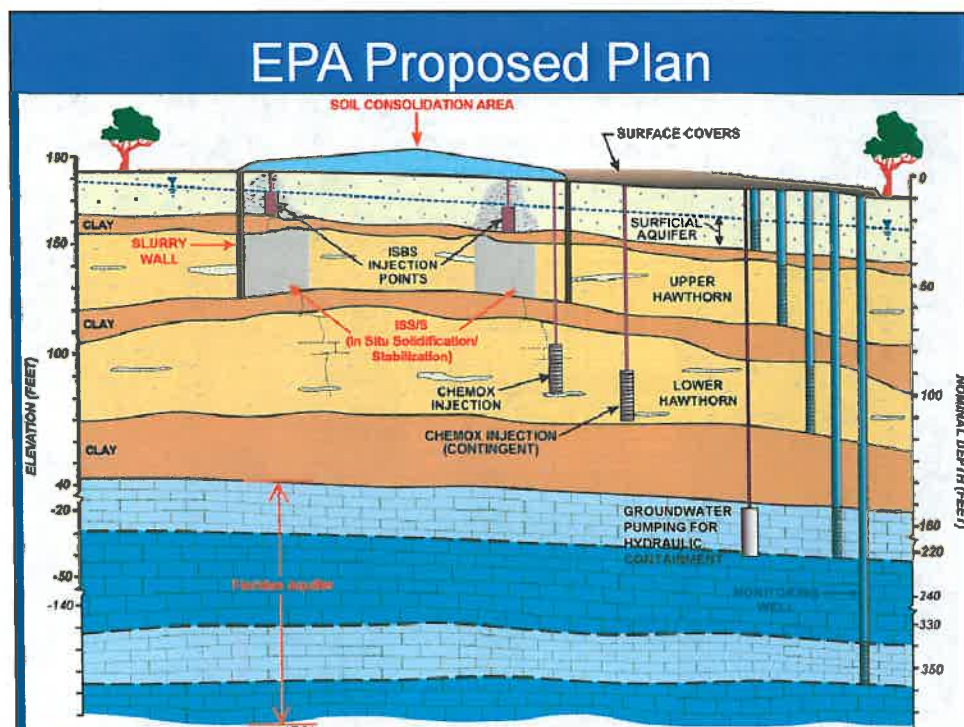
- Reduce downward movement of creosote
- Minimize on-going dissolution into groundwater
 - *Deepest material is of greatest concern & is hardest to treat*

2. Floridan Aquifer Hydraulic Containment

- *Critical due to limitations of other remedies*

3. Contain groundwater contamination in Surficial Aquifer & Upper Hawthorn

- Hydraulic containment
- Slurry wall

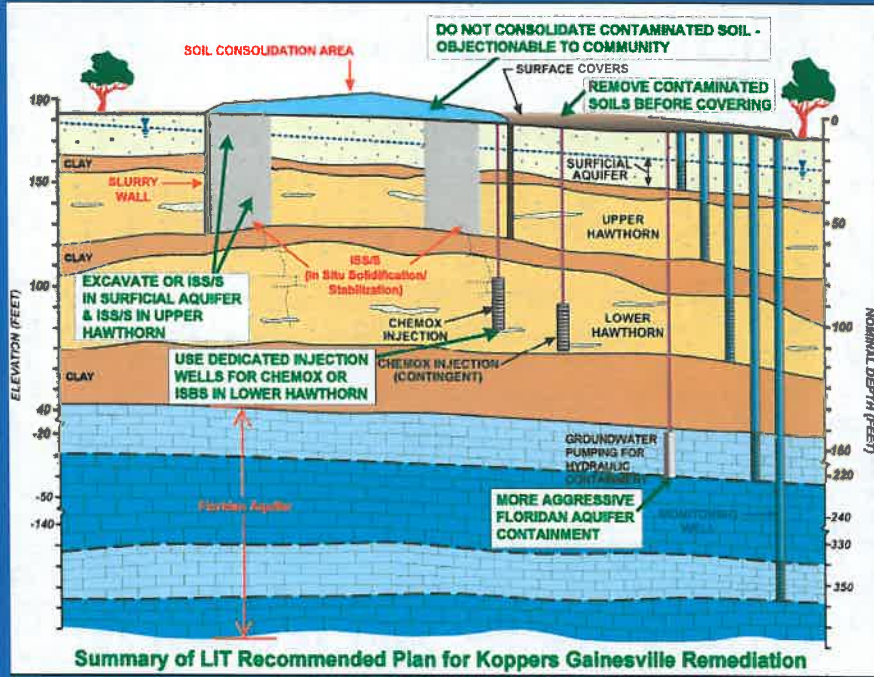
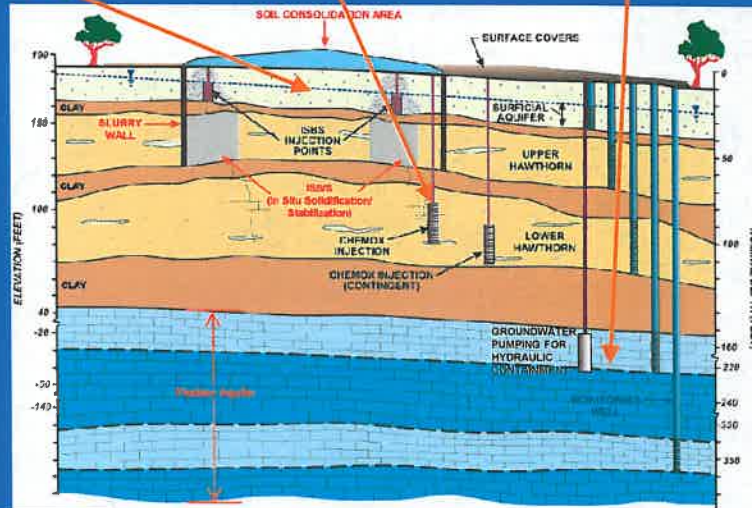


EPA Proposed Plan- Key LIT Concerns

EFFECTIVENESS OF ISS/S

USE OF MONITORING WELLS FOR CHEMOX

INADEQUATE CONTAINMENT IN FLORIDIAN



Summary of LIT Recommended Plan for Koppers Gainesville Remediation

Recommendations Groundwater

1. ISBS in Surficial Aquifer

- New/unproven technology
- *LIT recommends excavation of contaminated soils or ISS/S*

2. ISS/S in Upper Hawthorn Group

- *LIT supports*

3. Slurry Wall & Cap

- *Surficial Aquifer & extraction keep going*
- *LIT supports slurry wall, cap & surficial extraction*
- ***Soil Consolidation Objectionable to Community***

Recommendations Groundwater

4. Lower Hawthorn Group – Chemical Injection

- *Monitoring wells should not be sacrificed*
- *LIT recommends dedicated injection wells instead*
- Effectiveness of any technology likely to be limited due to depth & conditions
- *Limited ability to treat Lower Hawthorn makes Floridan containment critical*

Recommendations Groundwater

5. Floridan Containment

- *Top groundwater priority for LIT*
- Plan requires hydraulic containment in areas where groundwater exceeds cleanup goals (*LIT supports*)
- Hydraulic Containment now in operation in NW area (*LIT supports*)
- *No action yet at eastern boundary or interior areas*
- *We want EPA to be more aggressive in implementing hydraulic containment*
- *“Groundwater Contamination” section of Proposed Plan vastly understates extent of contamination in Floridan Aquifer (EPA should correct this in ROD)*

Recommendations Groundwater

6. Floridan Aquifer Monitoring

- *Robust Floridan monitoring network in place now*
 - *Multi-level wells*
 - *Near source areas*
 - *Multiple transects*
 - *Off-site sentinel wells*
- *LIT wants more wells in certain areas*

Recommendations Groundwater

7. More Site characterization Needed

- A. Potential buried drums
 - *Workplan to look for these promised soon*
- B. Need to fully delineate creosote source areas
 - For example, creosote has migrated past eastern site boundary in upper Hawthorn
 - *Plan calls for additional characterization and more wells as part of remedial design*

8. Unclear how Off-site Creosote DNAPL will be dealt with

- *LIT wants this addressed in ROD*

Issues and Recommendations Future Land Use -- On-Site Remedy

- 9. USEPA plan has not been sufficiently coordinated with City of Gainesville and local stakeholders . Plan is inconsistent with City's conceptual reuse plan for the site.

RECOMMENDATION: Additional coordination with City of Gainesville and local stakeholders is needed regarding future land use vision. Remedy should meet the following criteria:

- Based on redevelopment vision
- Step down in land use types from east to west on the site.
- At a minimum, clean-up soils in the western 300 feet of property to allow redevelopment with residential density no more than 8 units per acre consistent with townhouse type development and adjacent residential use.
- Industrial re-use should not be considered an appropriate land use.

Issues and Recommendations Surface Soils Remedy

10. Landfilling of contaminated soils and sediments in large on-site soil consolidation area is unacceptable to community and limits future redevelopment.
-- USEPA did not evaluate off-site disposal of excavated on-site and offsite surface soils.

RECOMMENDATIONS:

- Eliminate on-site consolidation of contaminated surface soils (on-site, off-site and creek sediments).
- Provide costs for and implement offsite disposal of excavated on-site and off-site soils and sediments. In particular offsite contaminated soils and sediments should not be brought on site.

Issues and Recommendations Surface Soils Remedy

11. Surface soil remedy for area outside of containment area is vague; cannot determine where contaminated surface soils on-site will be excavated or just covered up.

RECOMMENDATION:

- Provide more detail and commitment on specific actions to be taken to remediate on-site soils outside of source containment area.
--Specifically address remediation of elevated contamination areas in northern wooded area.

Issues and Recommendations Surface Soils Remedy

12. Covering contaminated surface soils outside of containment area is a concern --leaves permanent soil contamination under cover and may limit options for future redevelopment.

RECOMMENDATIONS:

- Remedy should maximize removal and not covering of soils outside of source containment area.
- USEPA should provide separate costs for removal of contaminated surface soils outside of containment area that are above FDEP residential and commercial SCTLs.

Issues and Recommendations Surface Soils Remedy

RECOMMENDATION:

- Remove surface soils outside of containment area exceeding FDEP SCTLs or FDEP Leachability SCTLs down to the water table. Community desires achieving FDEP Residential SCTLs in areas outside of capped areas.

13. Other potential source areas outside of containment area may exist and may be covered or not identified in soil remedy.

RECOMMENDATION:

- Commit to screen site for additional source areas (including buried drums) and conduct appropriate removal or treatment.

Issues and Recommendations Off Site Soils Remedy

14. Off-site delineation of contamination is incomplete.



RECOMMENDATIONS:

- Support – FDEP Residential SCTLs for offsite residential properties.
- Additional offsite sampling needed to the north.
- Include residential and commercial properties west of 6th Street until FDEP SCTLs are met.
- Expedite delineation and remediation of offsite contamination areas.

Issues and Recommendations Off Site Soils Remedy

15. Citizen concerns about potential indoor contamination related to Koppers chemicals of concern.

RECOMMENDATION:

- EPA should address potential indoor contamination issue in structures within delineated contamination zone.

16. No consideration given to relocation assistance during off-site and on-site remediation.

RECOMMENDATION:

- Relocation assistance should be considered for neighboring residents during on-site and offsite remediation.

Issues and Recommendations Sediment and Creeks Remedy

17. Creek clean-up is proposed only for those areas where contaminants exceed benthic Probable Effects Concentrations (PEC).

-- FDEP has determined that exposed sediments in Creek potentially pose human health risk.

RECOMMENDATION:

- Creek sediments should be excavated to the more stringent of the FDEP Residential SCTL or the PEC for PAHs, cPAHs, and dioxin.

Requested Actions

- 1) Authorize staff to prepare recommendations on the USEPA Proposed Plan, and if deemed necessary schedule a meeting(s) to review the final recommendations, for submission prior to October 15, 2010.
- 2) City Commission -- Authorize the Mayor to transmit the LIT recommendations to USEPA before October 15, 2010.
- 3) County Commission -- Authorize the Chair to transmit the LIT recommendations to USEPA before October 15, 2010.



Public Comment



- Public also encouraged to submit comments directly to EPA:

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USEPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

