Mine Site Soils

- Summary of Mine Site Soils
- Summary of PCB Risk Assessment for Mill Area
- Historic Tailings Spills

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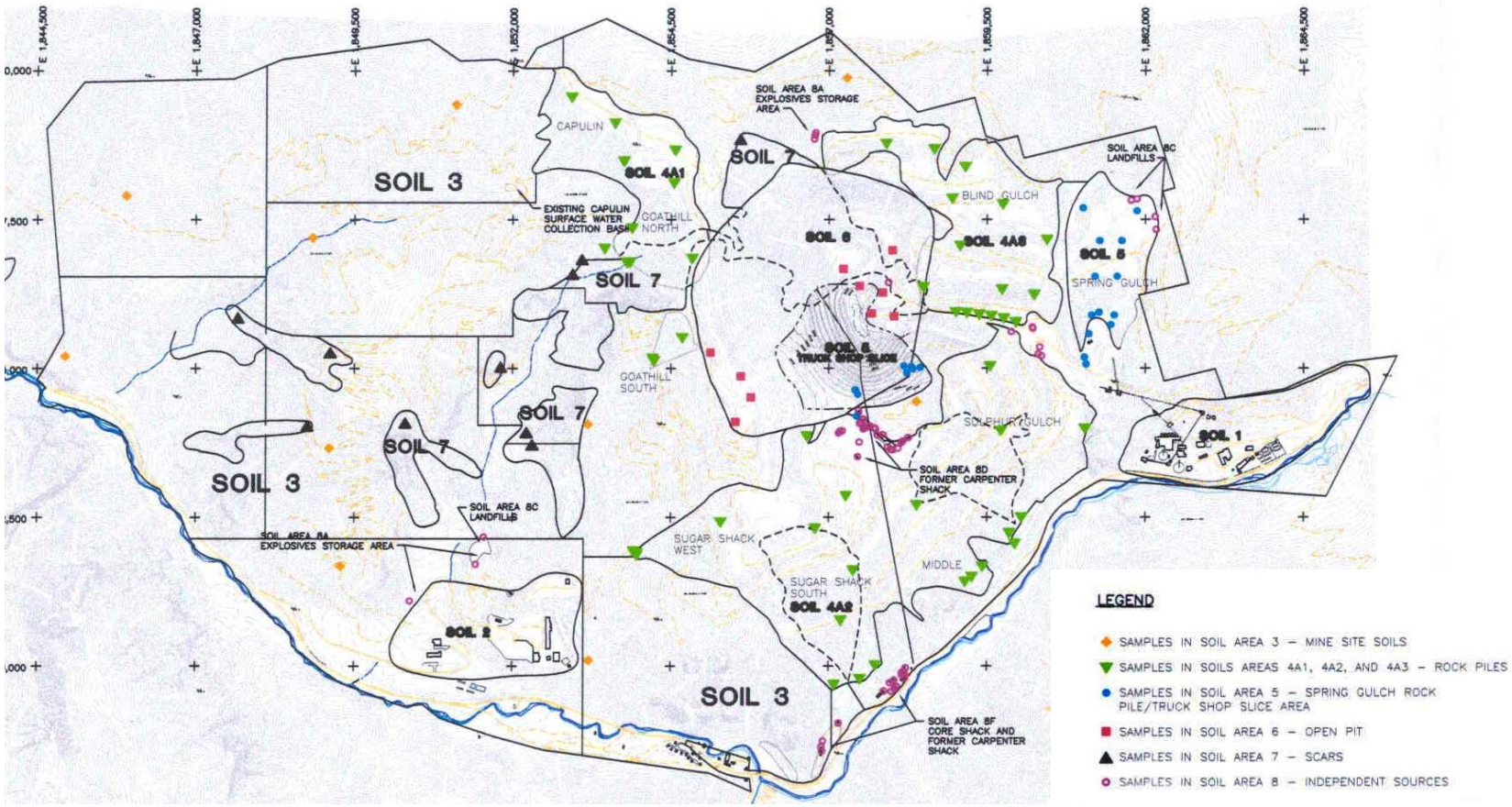
Mine Site Soils
Data Quality Objectives

- Concentrations > RBSLs?
- Has nature and extent of contamination in soils been adequately determined?
- Has sufficient data been collected for the risk assessment?

Mine Soil Locations



Work Completed on Mine Site (# Sites / # Samples)

- Soil Area 1 - Mill Area (110/298)
- Soil Area 2 - Admin. and Maintenance Area (75/169)
- Soil Area 3 - Mine Site Soils (12/24)
- Soil Area 4 - Rock Piles (57/113)
- Soil Area 5 - Blind Gulch and Truck Shop Slice (19/37)
- Soil Area 6 - Open Pit (10/20)
- Soil Area 7 - Mine Site Scars (10/20)
- Soil Area 8 - Independent Sources (76/179)

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Work Completed on Other Soil Areas Associated with the Mine Site

- Reference Soils - Above Mine Site (5/10)
- Reference Soils - Upper Cabresto Creek (5/10)
- Reference Scars - Above Mine Site (10/20)
- Soil Area 9 - Reference Red River Riparian (10/20)
- Soil Area 16 - Red River Riparian (11/22)

Numbers of Analyses

- 25 metals (788)
- Dioxins-Dibenzofurans (8)
- Pesticides-PCBs (308)
- Explosives (26)
- SVOCs (489)
- VOCs (452)

PCB Risk Assessment

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PCB - Risk Assessment

- PCBs confined to Mine and Mill Sites
- Mostly found in the Mill area
- Five detections on other parts of Mine Site
- Only found in soil, not in sediment
- Are not near the Red River or major drainages

PCB - Risk Assessment

- PCB results were discussed at 2003 EPA Technical Meeting
- Current employees are not a receptor in RI/FS risk assessment
- Molycorp conducted a risk assessment for current employees outside the RI/FS

Results of Occupational Risk Assessment

- Risks were well below the levels allowed for worker exposure
- Results of risk assessment were communicated to workers

Dibenzodioxins-Dibenzofurans

- Dibenzodioxin-Dibenzofurans
  - 3 out of 8 samples had detectable concentrations:
    - Two reference samples
    - One sample from Soil Area 1
  - Below the EPA Region 6 Human Health RBSL
  - Not mine related

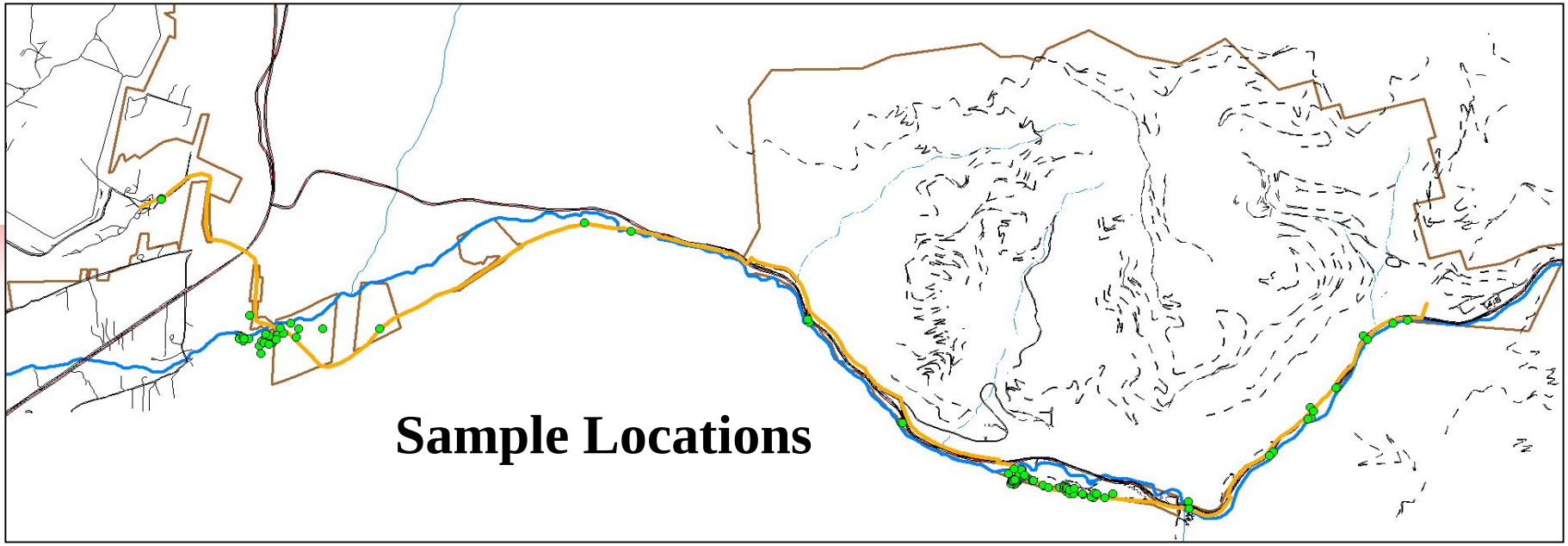
SVOCs

- Analyzed in Soil Areas 1, 2, 8, 9, & 16
- Numbers of samples with concentrations exceeding the SLC:
  - Soil Area 1 - Mill Area (3 samples)
  - Soil Area 2 - Admin & Maintenance (1 sample)
  - Soil Area 8 - Independent Sources (2 samples)

Other Organic Compounds

- VOCs
  - No VOCs detected at Mine Site
- Explosives
  - One sample had detectable concentrations
- Pesticides
  - One reference sample had detectable concentration of DDT


Historic Tailings
Spill Investigation
5. 9. 2002



- Red River from Zwergle to Rio Grande River assessed for spilled tailings
- Entire pipeline and historic pipeline corridor assessed for spilled tailings
- Ditches and private residences assessed for tailings to depth of 4 feet

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Work Completed (Numbers of Samples)

- Tailings and Subtailings Soils (55)
- Reference Soils (32)
- Groundwater (6)
- Study Expanded to Include:
  - Sampling at Private Residences
  - Hunt's Pond
  - Irrigation Ditch Sediments

Investigation at Private Residences and Hunt's Pond

This investigation was added to the Historic Tailings Spill study in an EPA workplan dated January 12, 2004

Hunt's Pond
Data Quality Objectives

- To assess whether tailings are present in Hunt's Pond
- To assess whether tailings are observed at Hunt's Pond

Sample Locations

Work Completed at Private Residences and Hunt's Pond

- Private Residences
  - Collected 11 samples
  - Augered to depth of 4 feet to look for tailings
- Hunt's Pond
  - 4 soils (augered to 4 feet depth)
  - 3 sediments
  - 2 surface water
  - 1 groundwater
- Irrigation Ditch Sediments (6)

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