



Area III Drainage Sediment Sampling


Stephanie Jennings US Department of Energy

Laura Rainey California Department of Toxic
Substances Control

June 20, 2012

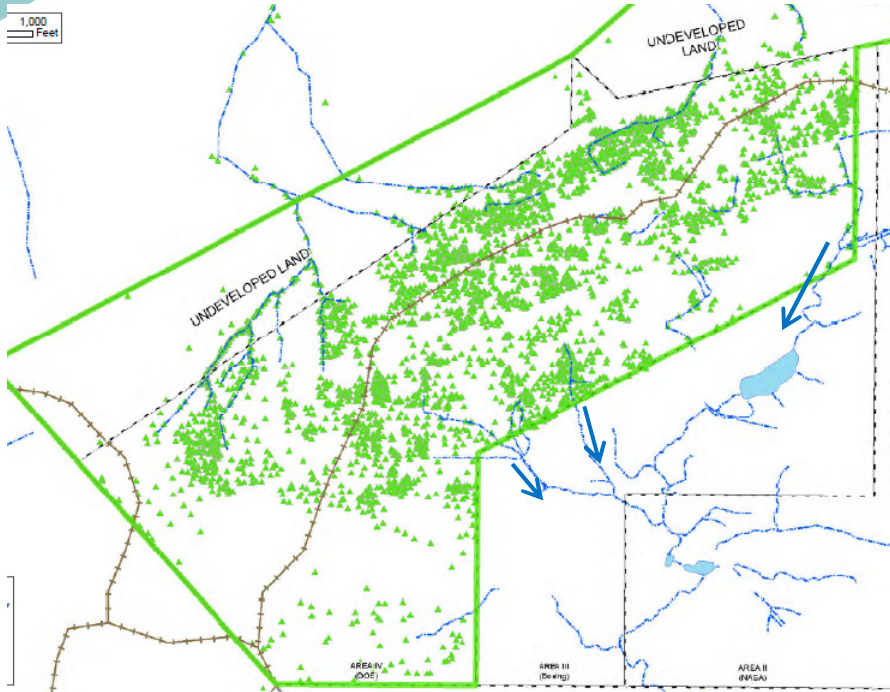


Area III Drainage Sediment Sampling Objectives

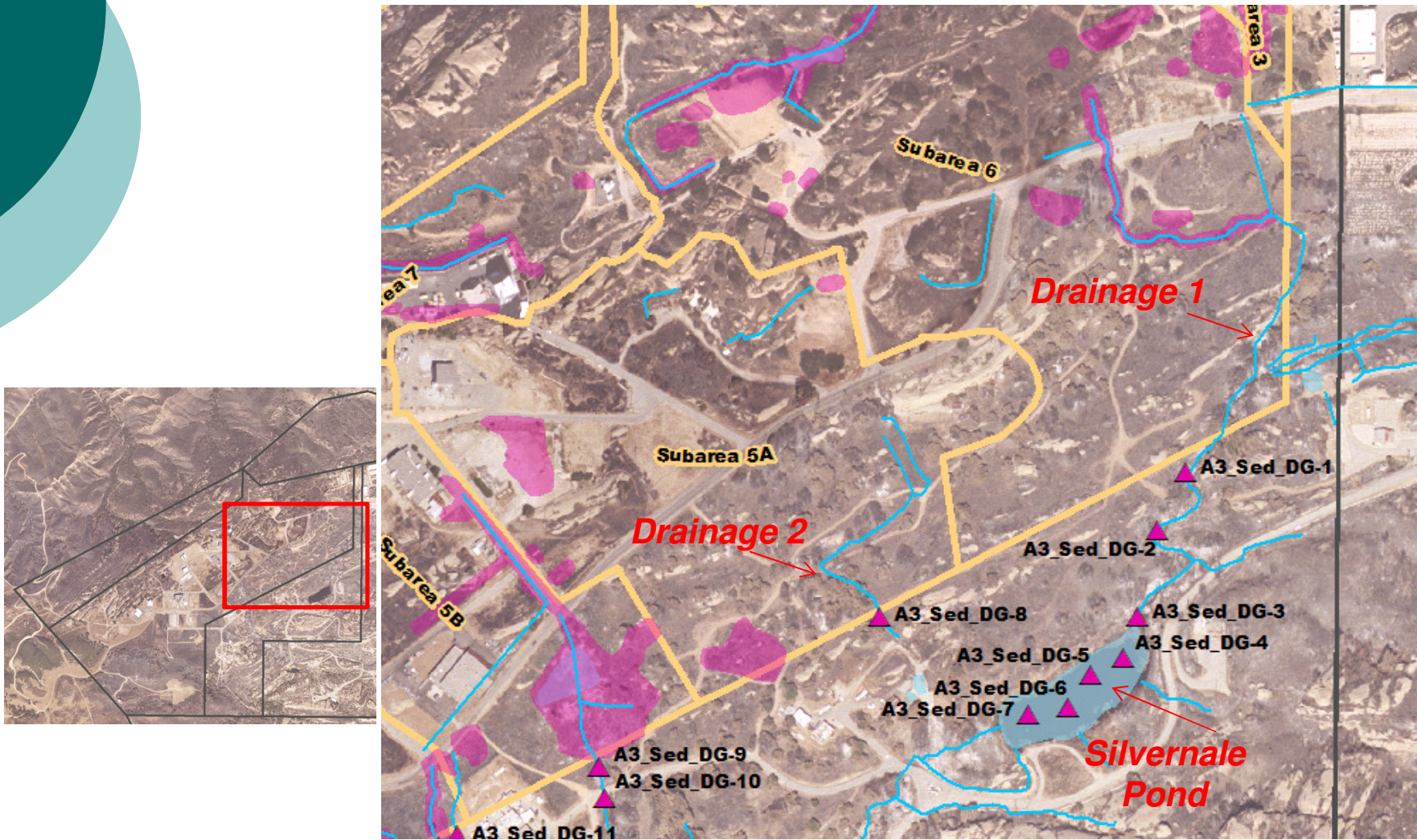
- To investigate potential contamination of soil contiguous to and emanating from Area IV
- Includes recommendations from the chemical data gap analysis – the previous “pink pluses –  ” placed in Area III
- Will be co-located sampling with EPA – both chemicals and radionuclides will be analyzed

Area III Drainage Sediment Sampling Approach

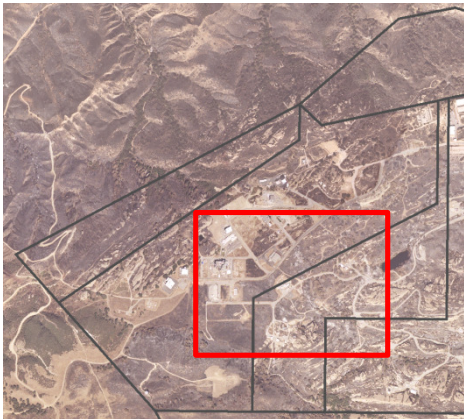
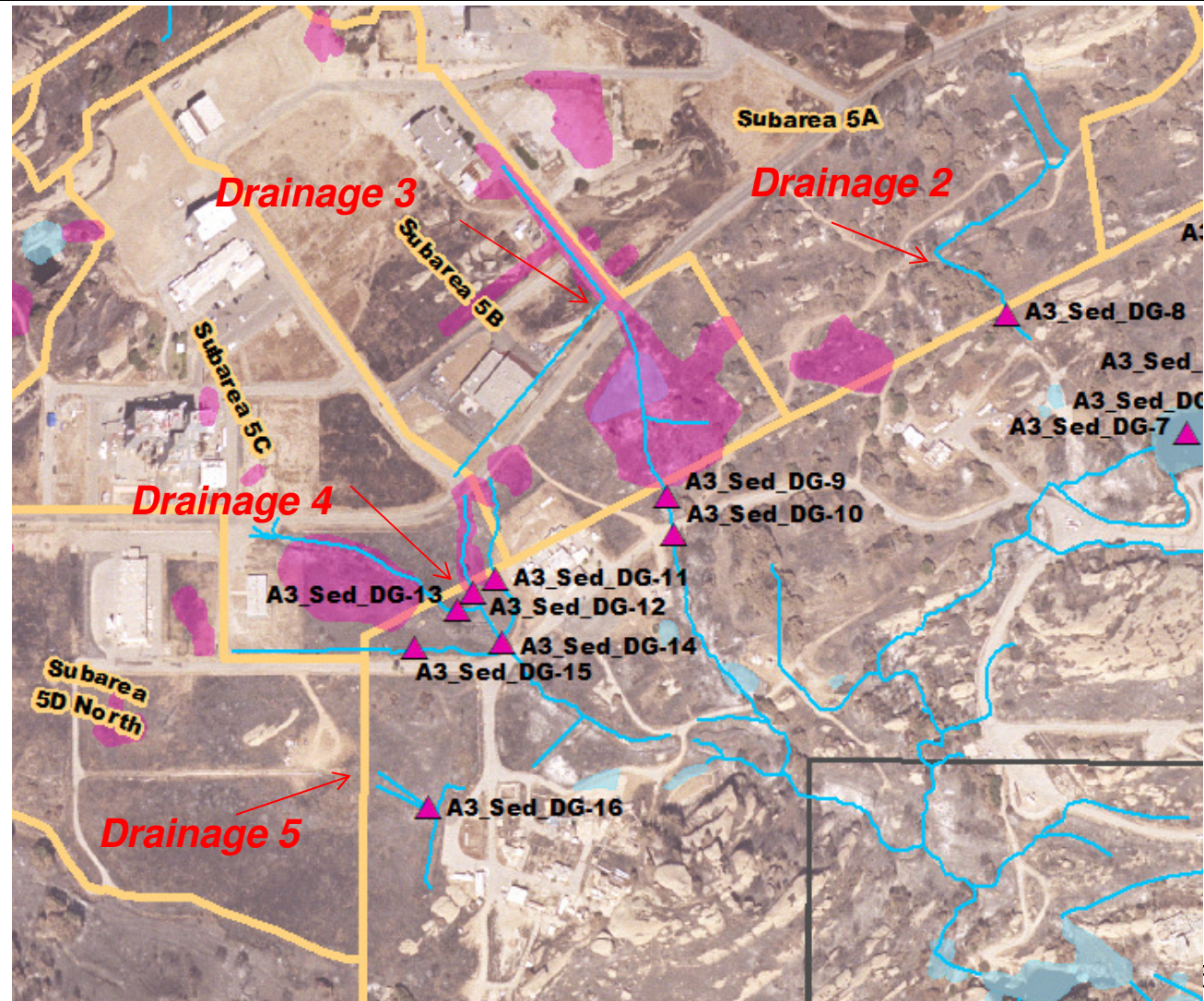
- Drainages from the central operational area of Area IV flow to the south and south east into Area III
- The drainages within Area IV were sampled for chemicals and radionuclides with EPA under Phase 1
- Area III sampling is considered Phase 3, step out sampling



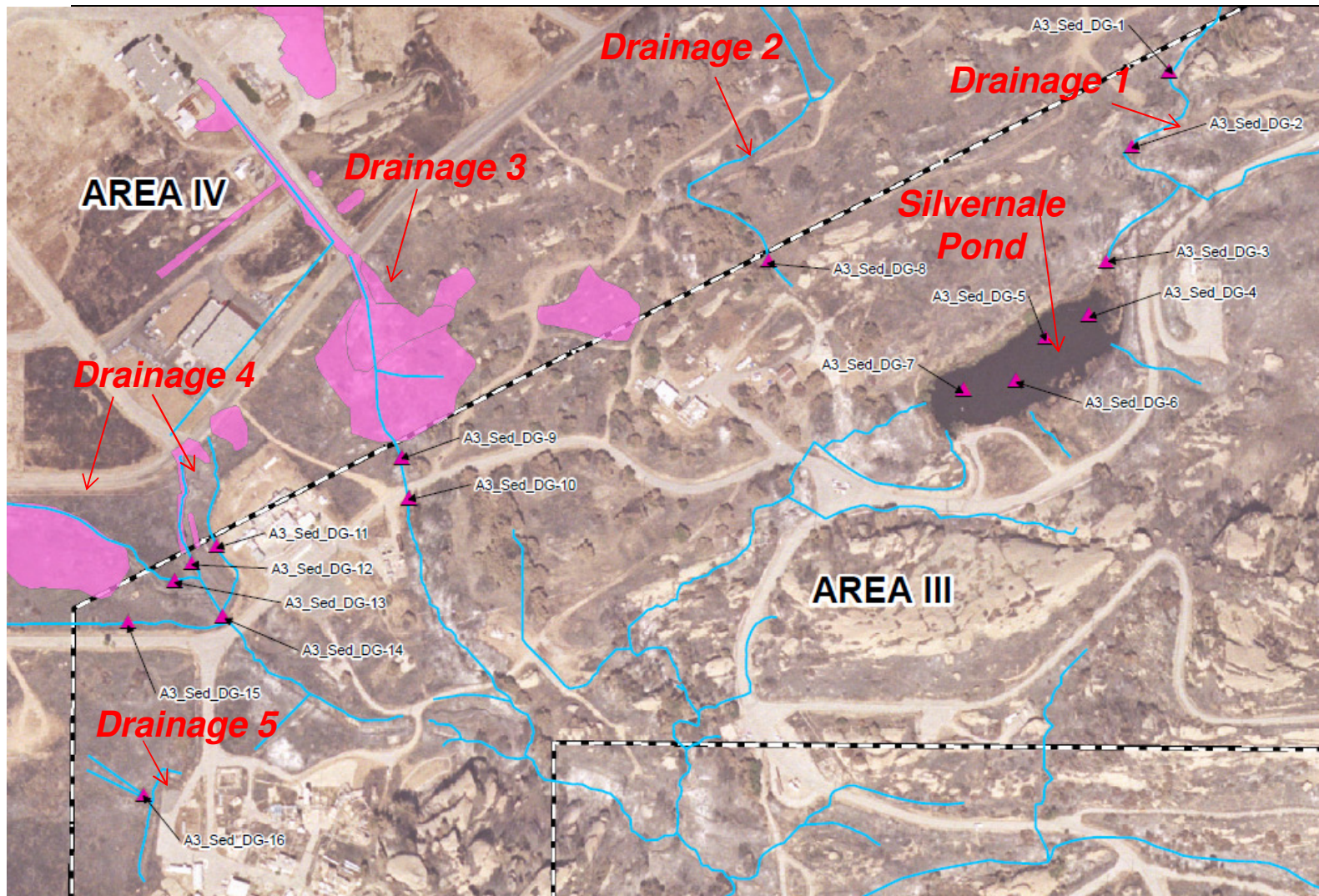
Area IV Drainage Map



Area IV Drainage Map



Area III Sample Location Map





Description of Area IV Southern Drainages

- Drainage 1 – Receives runoff from Old and New Conservation Yards, also once received water pumped from SRE Pond
- Drainage 2 – Receives runoff from the facilities in the eastern edge of Area IV, including the Building 4029 and Southeast Storage Yards
- Drainage 3 – Receives runoff from the 17th Street Drainage and Pond areas
- Drainage 4 – Convergent drainages receiving runoff from Building 4011 and Building 4383 areas, and the Building 4015 Field
- Drainage 5 – Receives runoff from a former storage and disturbed soil area in Subarea 5D adjacent to Area III
- Of these 5 drainages, Silvernale Pond only received runoff from Drainage 1



Area III Drainage Sediment Analytical Parameters

- Drainage 1 – Locations DG-1, DG-2, and DG-3: Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Polychlorinated Terphenyls (PCTs), Dioxins, Metals, Total Petroleum Hydrocarbons (TPH), and Terphenyls
- Silvernale Pond – Locations DG-4, DG-5, DG-6, and DG-7: PAHs, PCBs, PCTs, Dioxins, Metals, TPH, and Terphenyls
- Drainage 2 – Location DG-8: PAHs, PCBs, PCTs, Dioxins, Metals, TPH, and Terphenyls



Area III Drainage Sediment Analytical Parameters

- Drainage 3 – Locations DG-9 and DG-10: PAHs, PCBs, PCTs, Dioxins, Metals, TPH, Terphenyls, and Perchlorate
- Drainage 4 – Locations DG-11, DG-12, DG-13, DG-14 and DG-15: PAHs, PCBs, PCTs, Dioxins, Metals, TPH, Terphenyls, and Perchlorate
- Drainage 5 – Location DG-16: PAHs, PCBs, PCTs, Dioxins, Metals, TPH, and Terphenyls



Area III Drainage Sampling Implementation

- Today – Community site tour of proposed locations
- Sampling is expected to occur the week of July 23
- DOE's contractor CDM will collect the samples, and provide sample material to EPA's contractor HGL
- CDM will be responsible for chemical analyses, HGL for the radionuclide analyses