

Former Kilmer Landfill Voluntary Cleanup Program Application

Public Meeting – July 25, 2023

Voluntary Cleanup Program

- Facilitates redevelopment and rehabilitation of properties
- Provides resources to direct and allow cleanup and mitigation
- Cleanup decisions are based on regulatory standards and proposed property uses.
- Program operational since 1994
- 113 sites in Jefferson County alone



Kilmer Landfill Background

- Unpermitted solid waste landfill utilized by Jefferson county (~1939-late 1960s/early 1970s)
- Landfill contents consist of household/municipal waste
- No observations of industrial/hazardous/medical waste disposal
- Waste covered by 2-5 feet of soil, site remains vacant and covered with vegetation



Historical Investigations/Findings

- No fewer than nine historical investigations have been conducted at the site since 1980
- Jefferson County Public Health Department and various private environmental consulting firms
- Site investigated under EPA direction in 1995 (Superfund Amendments and Reauthorization Act)
- EPA records indicate the site does not qualify for the National Priority List.
- Consistent findings of buried landfill debris to depths of up to 16 feet below surface, but very limited impacts to soil and groundwater
- 2017-2023 Terracon investigations utilized as primary basis for VCP Application



CDPHE-Directed Assessments in Support of VCP Application (2021-2023)

- Soil borings and groundwater sampling
- Wetlands survey
- Additional soil vapor sampling
- Ralston Creek surface water and embankment soil sampling
- Landfill evaluation geophysical survey
- Groundwater monitoring well network installation and sampling
- Shallow exploratory excavations (test pits)



Additional Assessment Findings

- Soils Data

- Arsenic above Colorado background value in two historical soil borings
- Other constituents below applicable regulatory values
- Heterogenous landfill debris observed across property
- Limited asbestos-containing materials observed in test pit excavations

- Wetlands survey

- Desktop review of FEMA flood, National Wetland Inventory, and USGS maps
- No wetlands observed onsite during confirmatory field reconnaissance

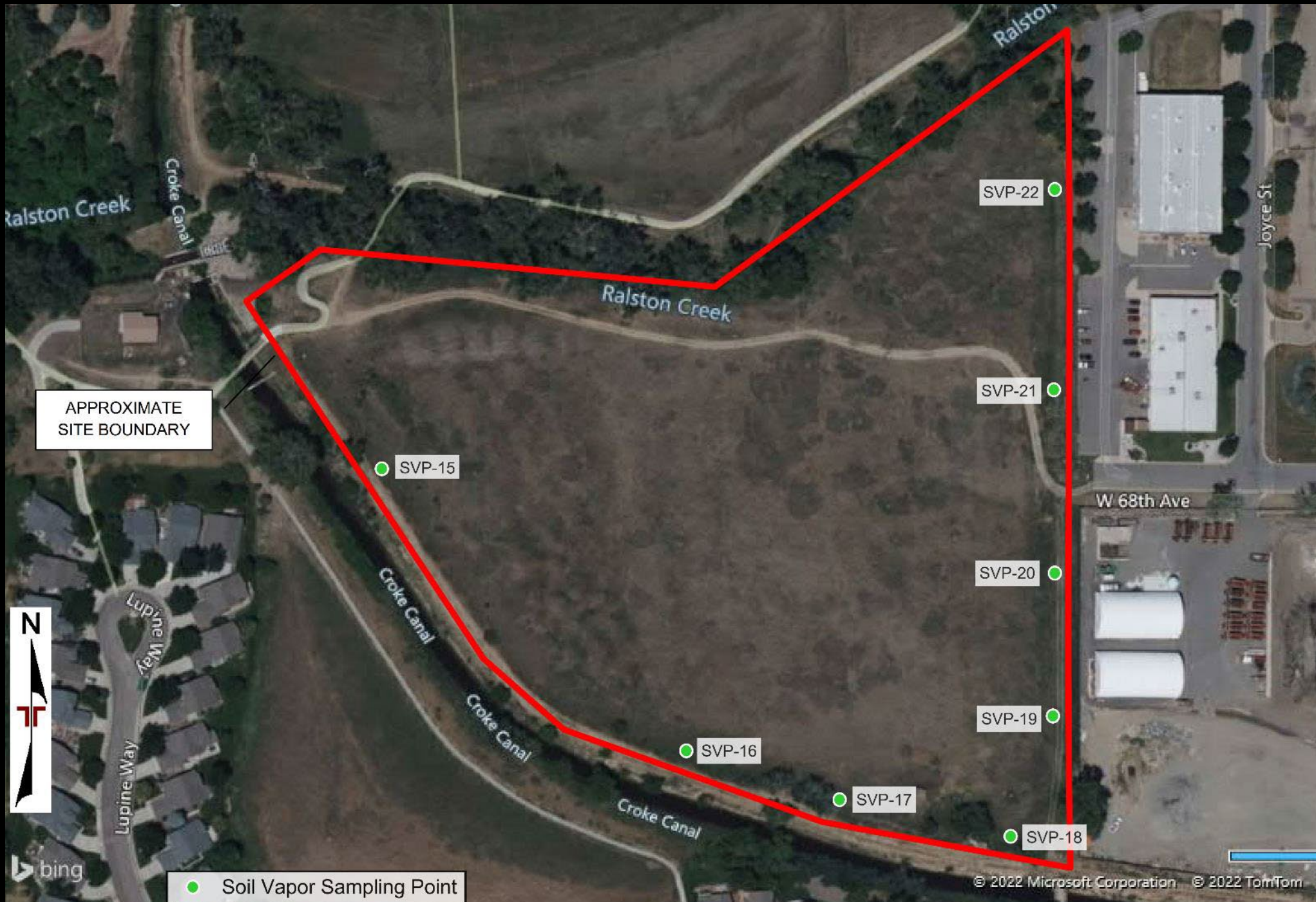


Additional Assessment Findings

- Soil Vapor Data

- 15 vapor samples collected in 2017 across entirety of the site
- Volatile organic compounds (VOCs) at levels that could intrude into onsite enclosed buildings
- Methane reported at levels above 5% of the lower explosive limit (potential ignition risk to enclosed buildings)
- 9 additional vapor points installed along the southern and eastern portions of the site and sampled in October 2022
- 2022 results indicated methane below the laboratory reporting limit



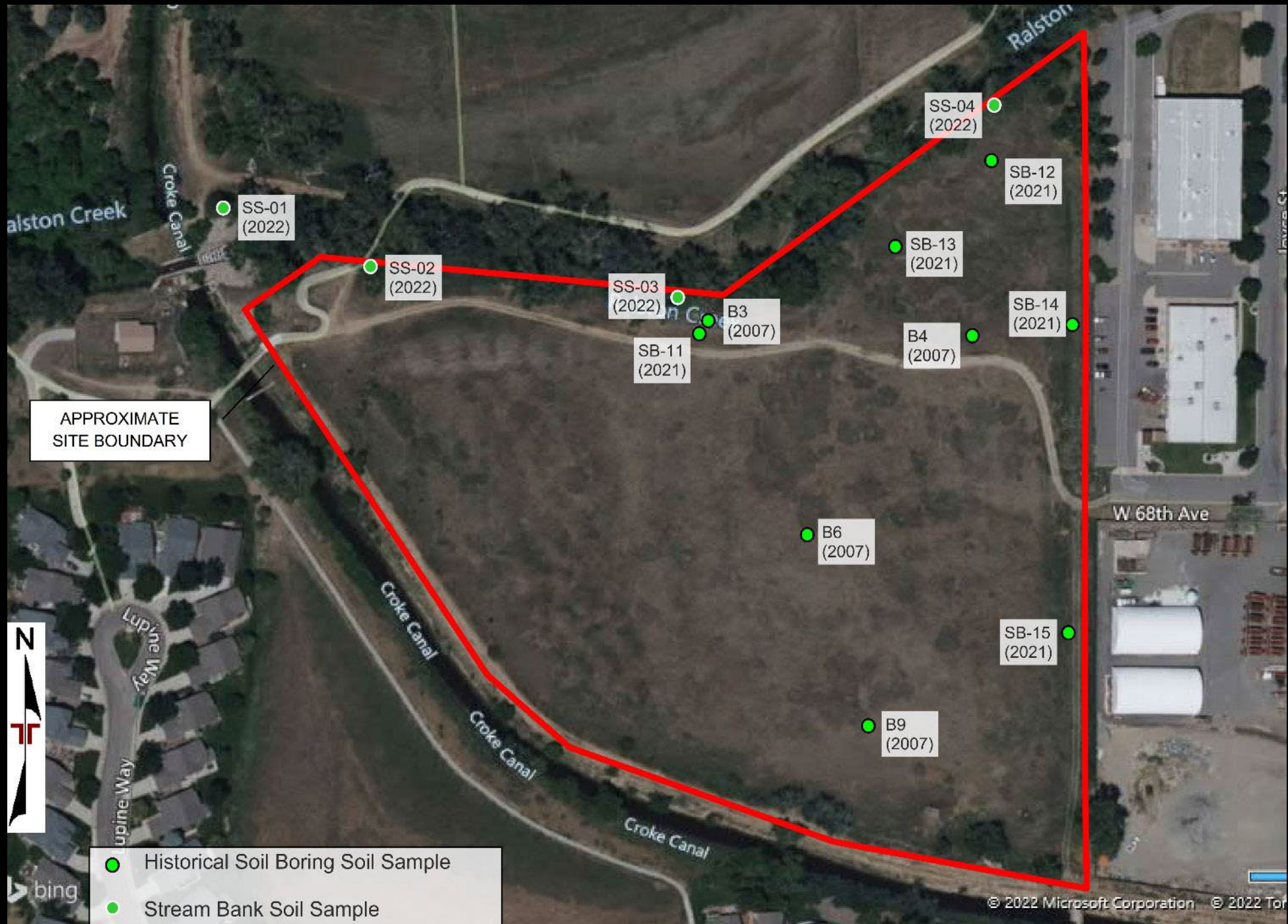


Additional Assessment Findings

- Ralston Creek Data

- 3 surface water samples collected (upstream, midpoint, downstream)
- Analytical results did not indicate surface water contamination from upstream or the site
- 4 soil samples collected from stream embankment
- Collected from western, central, and eastern portions of site, and one from off-site upstream bank as background sample
- Analytical results did not indicate embankment soil contamination on or off-site



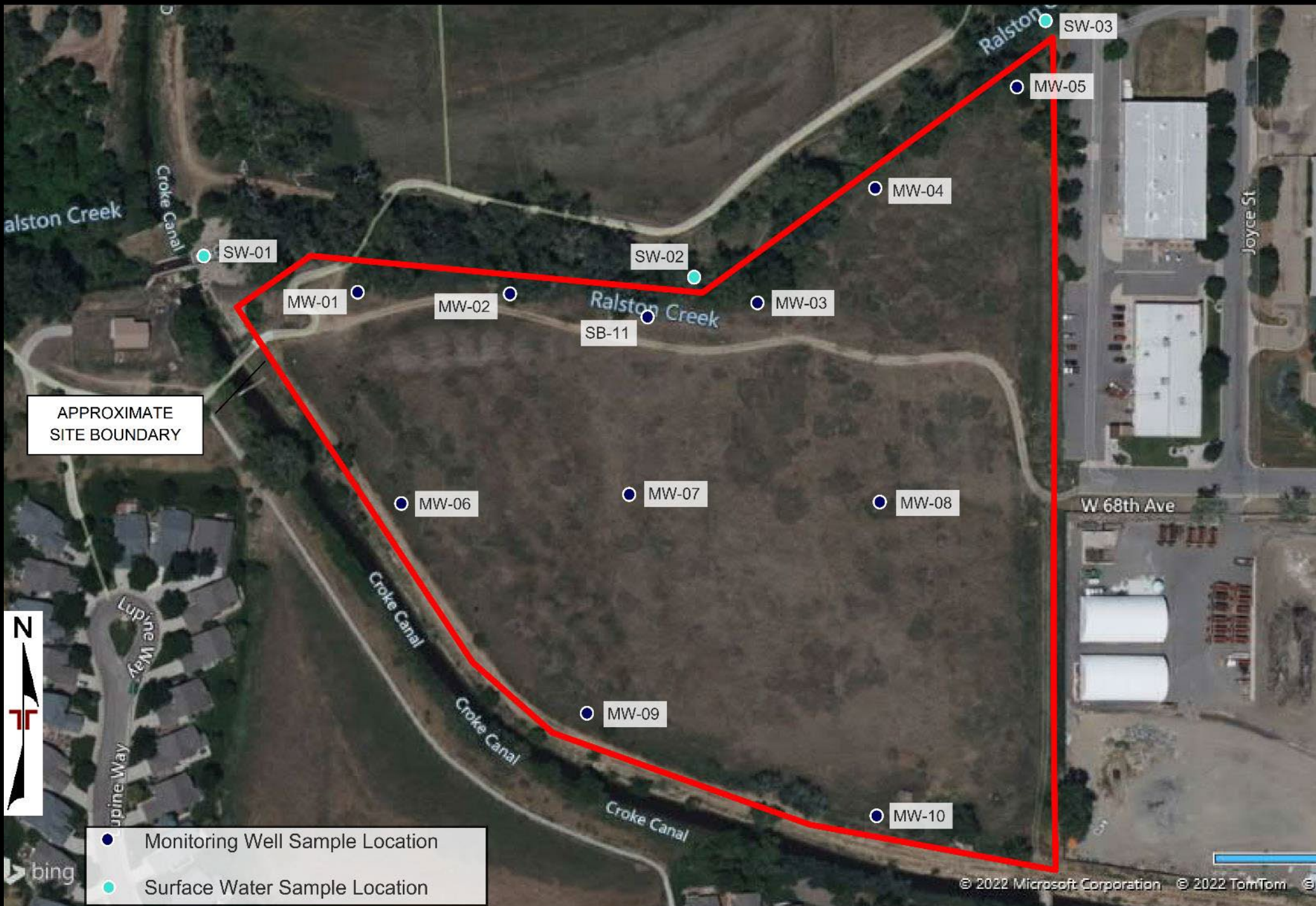


Additional Assessment Findings

- Groundwater Data

- 10 new monitoring wells installed across the site in November 2022
- 11 onsite wells developed and sampled in December
- Samples analyzed for VOCs, SVOCs, and metals
- Concentrations reported in all wells below Colorado Groundwater Quality Standards (CGWQS) except toluene in MW-10
- Anomalous nature of MW-10 results lead to re-development (additional pumping) and resampling in February 2023
- New analytical results indicated toluene below CGWQS





Additional Assessment Findings

- Geophysical Survey & Test Pits
 - Ground penetrating radar (GPR) survey conducted October 25, 2022
 - Entire site screened using GPR to evaluate for potential anomalies in buried materials
 - Results indicated likely buried debris across a majority of the property
 - Most significant anomalies in SW and NW portions of the site
 - Test pits excavated in both locations to determine waste contents
 - Buried landfill debris was consistent with previous excavations, with no indications of materials outside of household waste



Remediation/Mitigation Plans

- Excavation and Disposal of Landfill Material/Impacted Soil As Needed
- Stormwater Detention Basin Liner
- Vapor Mitigation System Installation
- Ralston Creek Streambank Stabilization
- Environmental Use Restriction and No Action Determination



Thank you!

Contacts

Jeff Attig

Project Manager
D (303) 454-5215

Jeffrey.attig@terracon.com

Kevin Saylor, P.E.

Senior Associate
D (303) 454-5218

Kevin.saylor@terracon.com