

An aerial photograph of the White Sands Test Facility. The facility is a large industrial complex with numerous buildings, storage tanks, and piping, situated in a desert landscape. In the background, there are mountains under a cloudy sky. The text "Petition for Class 3 RCRA Permit Modification November 13, 2024" is overlaid in white on the image.

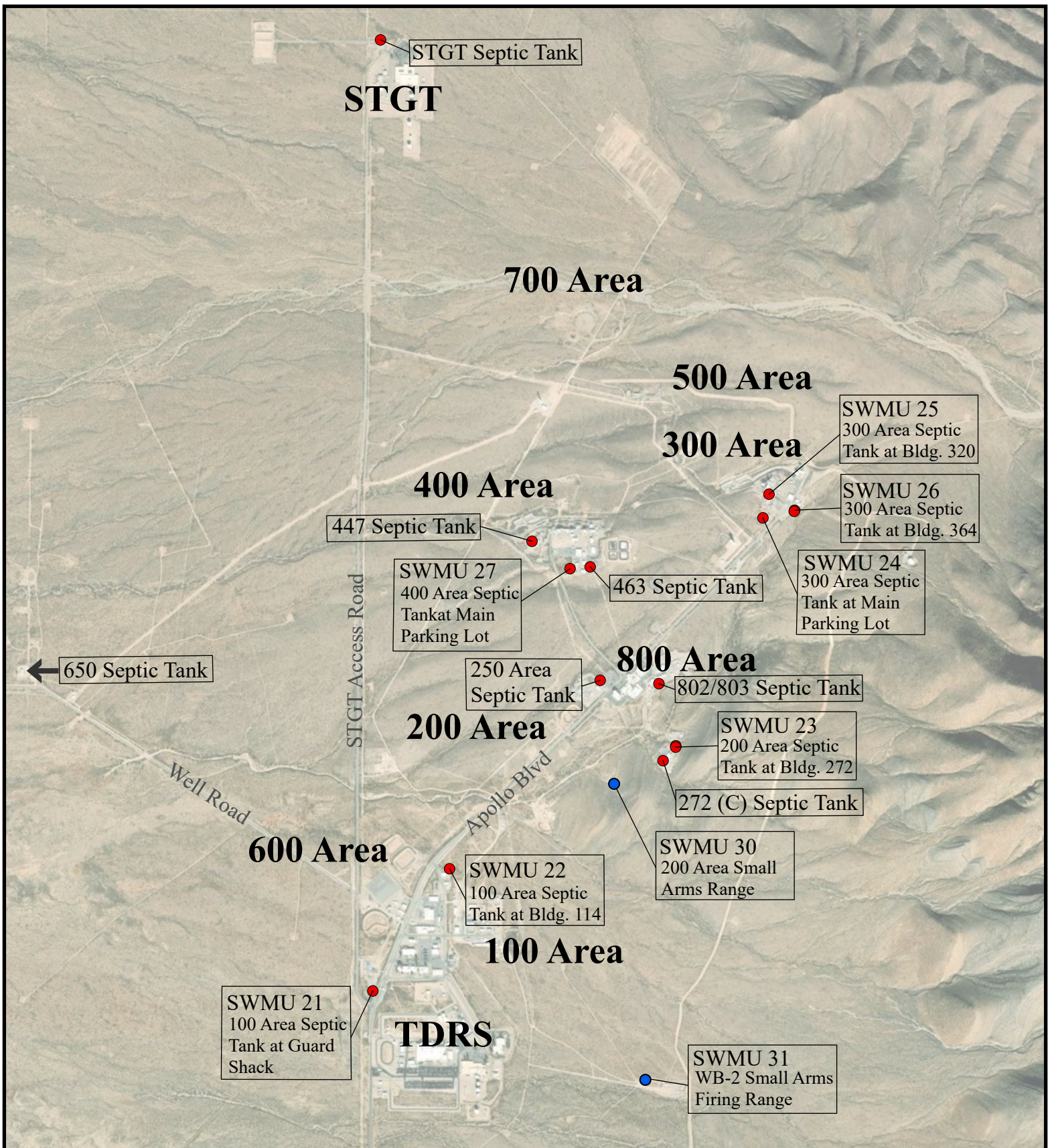
Petition for Class 3 RCRA Permit Modification November 13, 2024

Background

- NASA Johnson Space Center operates the White Sands Test Facility (WSTF).
- The New Mexico Environment Department (NMED) issued the Resource Conservation and Recovery Act (RCRA) Post-Closure Permit (Permit).
- The Permit requires WSTF to identify, evaluate, and clean up each Solid Waste Management Unit (SWMU) and Area of Concern (AOC) at WSTF.
- Evaluation and clean up activities were completed at 9 SWMUs, any remaining SWMU constituents to not constitute risk to human health and the environment.
- WSTF is Petitioning the NMED to change the status of 9 SWMUs from “Requiring Corrective Action” to “Corrective Action Complete without Controls.”

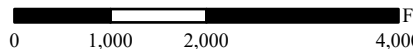
SWMUs addressed by the Petition

- SWMU 30 – 200 Area Small Arms Range.
- SWMU 31 – WB-2 Small Arms Firing Range.
- SWMU 21 – 100 Area Septic Tank at Guard Shack.
- SWMU 22 – 100 Area Septic Tank at Building 114.
- SWMU 23 – 200 Area Septic Tanks at Building 272.
- SWMU 24 – 300 Area Septic Tank at Main Parking Lot.
- SWMU 25 – 300 Area Septic Tank at Building 320.
- SWMU 26 – 300 Area Septic Tank at Building 364.
- SWMU 27 – 400 Area Septic Tank at Main Parking Lot.
- Plus 7 Septic Tanks without SWMU designations.



April 2024

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- Septic Tanks (Removed)
- Firing Ranges

White Sands Test Facility SWMUs and Ancillary Septic Tanks

NASA Johnson Space Center
White Sands Test Facility Las Cruces,
New Mexico

Coordinate System:
NAD 1983 StatePlane New Mexico Central FIPS 3002 Feet

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Environmental\EGIS\Projects\environmental\Permit_Modification\SCMI_figures\

SWMU Remediation and Risk Evaluation

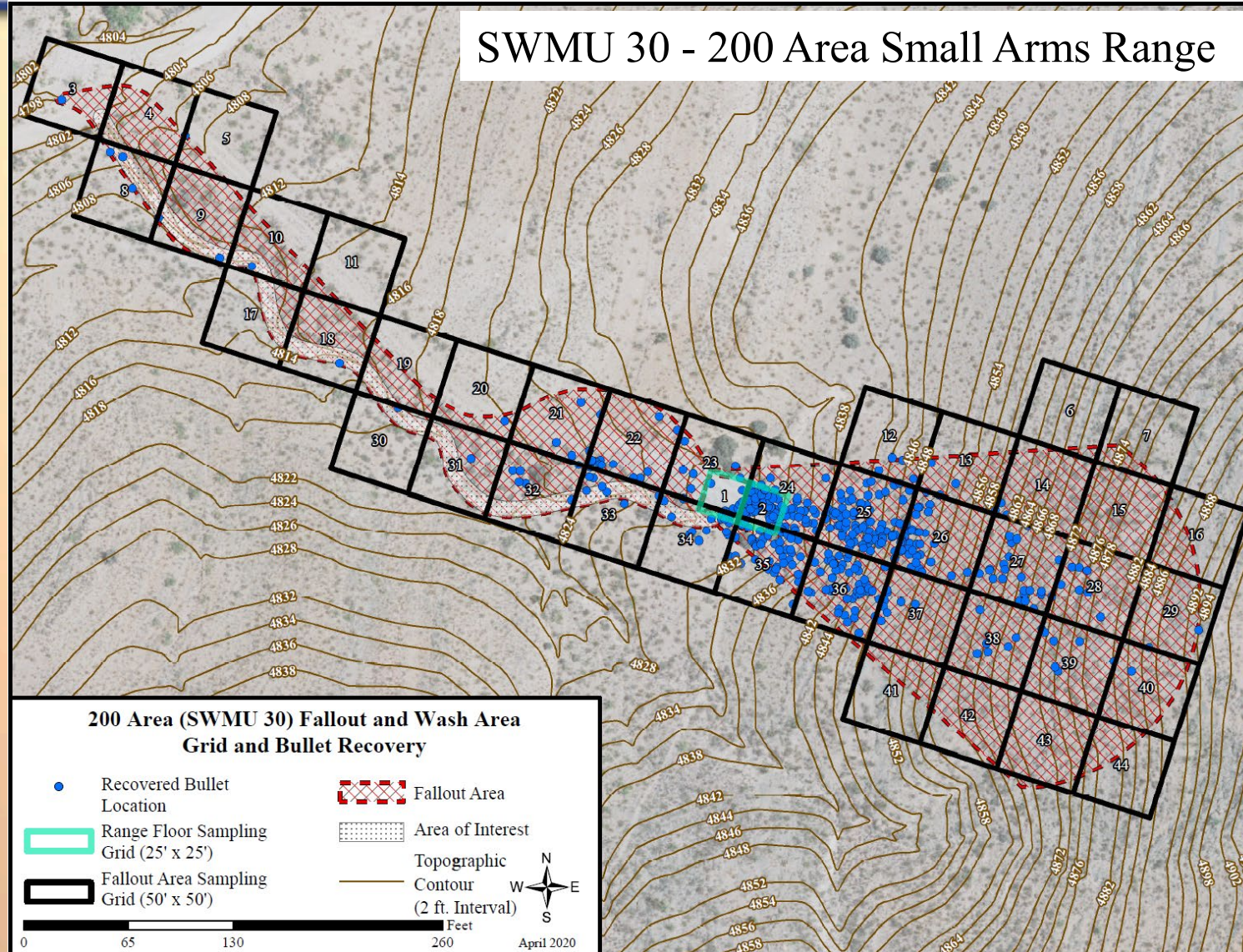
- Review of historical files, and interviews with facility workers define wastes disposed at each SWMU,
 - Former firing ranges (SWMUs 30 and 31) wastes are metals from spent ammunition (antimony, arsenic, copper, iron, lead, tin, and zinc).
 - Building 114 septic tank (SWMU 22) wastes originate from image processing chemicals (cyanide and silver).
 - Remaining septic tanks only contained domestic wastewater with no hazardous chemicals (SWMUs 21 and 23-27, plus 7 septic tanks without SWMU designations).
- Remediation of firing ranges included removal of spent ammunition and soils in the faces of the berm backdrops to the ranges.
- Remediation of septic tanks included removal and disposal of contained wastewater and the septic tanks.
- Following remediation, confirmation sampling was performed, and analytical results of these samples were used to assess site risk in accordance with the NMED Risk Assessment Guidance (latest version).

SWMUs 30 and 31 – Former Firing Ranges

- Former small arms firing ranges used for WSTF security personnel qualifications twice per year.
- SWMU 30 – 200 Area Small Arms Range used 1964-1990.
- SWMU 31 – WB-2 Small Arms Firing Range used 1990-2000.
- Wastes are metals from spent ammunition (antimony, arsenic, copper, iron, lead, tin, zinc) in surface soils.
- Clean up consisted of scrap ammunition recovery and removal of impacted soils from backstop berm at SWMU 31 (no backstop at SWMU 30),
 - SWMU 30 scrap recovery completed Sept. 2015 and Jan. 2017.
 - SWMU 31 scrap recovery and soil removal completed Aug. and Sep. 2015, Nov. 2016, and Feb. 2017.
- Confirmation samples of surface soils conducted during Sept. and Oct. 2019 were submitted for laboratory analyses of metals content. Results used to evaluate risk to residents, industrial workers, construction workers, ecological receptors, and to evaluate potential impacts to groundwater,
 - SWMU 30 – 44 discrete samples collected and analyzed for metals.
 - SWMU 31 – 77 discrete samples collected and analyzed for metals.
- Metals remaining at these former firing ranges do not constitute risk to human health and the environment

WHITE SANDS TEST FACILITY

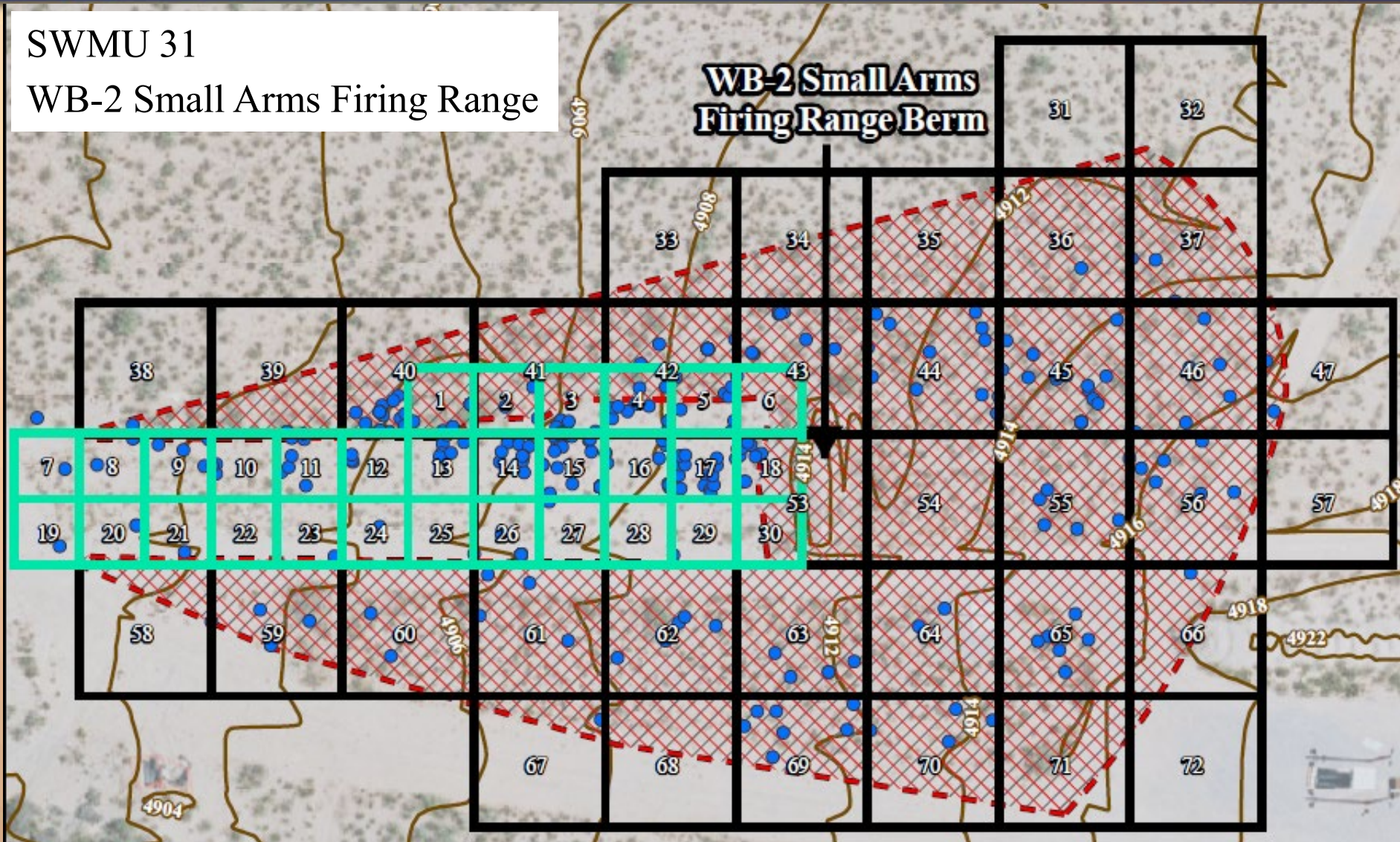
SWMU 30 - 200 Area Small Arms Range



WHITE SANDS TEST FACILITY

SWMU 31

WB-2 Small Arms Firing Range

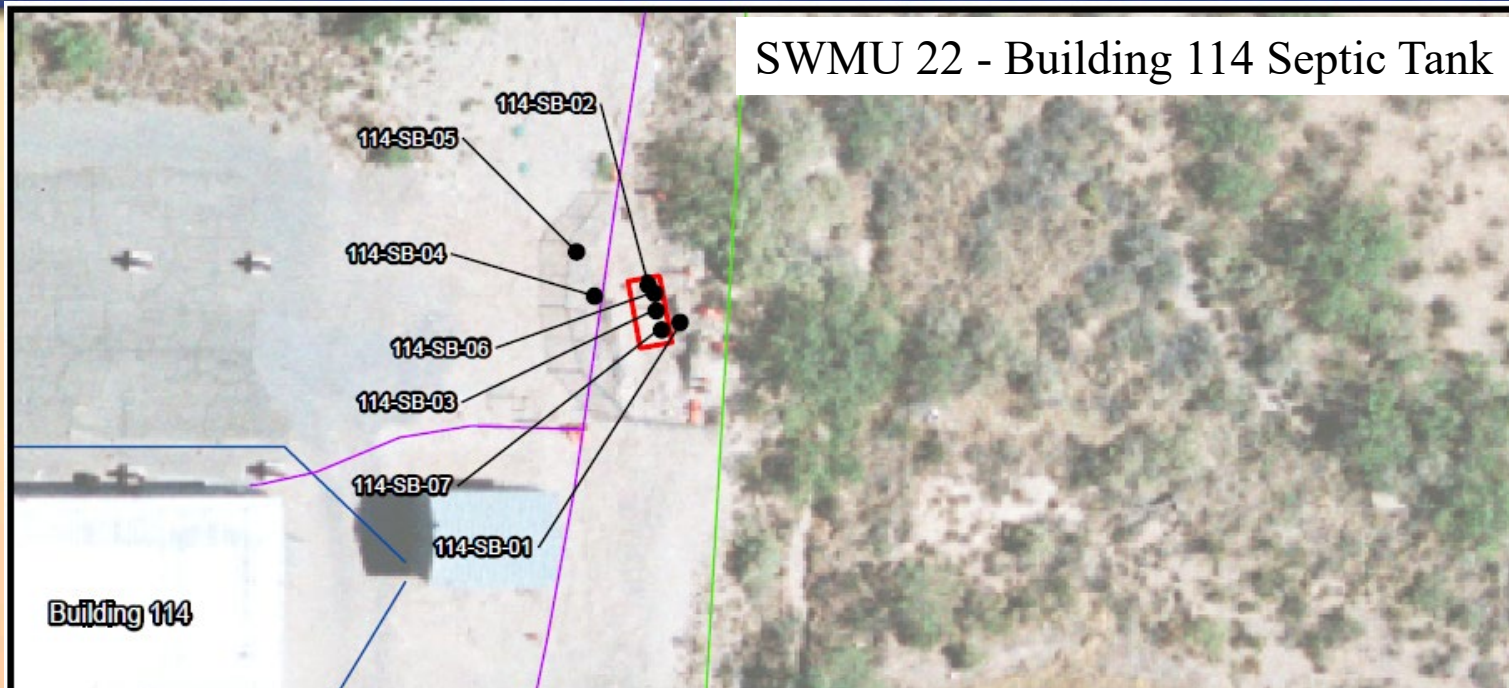


SWMU 22 – Building 114 Former Septic Tank

- Building 114 was a print shop, and the SWMU 22 septic tank received waste chemicals from image processing.
- Used from 1963 to the mid-1980s.
- Wastes consisted of metals from image processing (arsenic, barium, cadmium, chromium, cyanide, lead, mercury, selenium, and silver) in subsurface soils.
- Investigation sampling identified cyanide and silver at concentrations greater than naturally occurring at WSTF.
- Tank contents disposed and tank removed in Nov. 2016.
- Confirmation samples of subsurface soils collected during Apr. and Oct. 2017.
 - Collected 18 samples from 7 soil borings from depths of 5 to 27 feet below ground. Analyzed for cyanide and silver.
 - Analytical results evaluated to determine risk to residents, construction workers, ecological receptors, and potential impacts to groundwater.
- Cyanide and silver concentrations remaining at SWMU 22 do not constitute risk to human health and the environment.

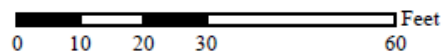
WHITE SANDS TEST FACILITY

SWMU 22 - Building 114 Septic Tank



Building 114 Septic Tank Soil Boring Locations and Utilities

- Building 114 Septic Tank Soil Borings
- Telephone Lines
- Fiber Optic Lines
- Water Lines
- Building 114 Septic Tank Footprint



1:355

Original Size: 8.5"x11"
North American 1983
State Plane Coordinate System
NM Central FIPS 3002 (Feet)
July 2019

Fig 2_1 Bldg_114_Soil_Borings071619.mxd



NASA Johnson Space Center
White Sands Test Facility
12600 NASA Rd
Las Cruces, NM 88012

SWMUs 21, 23-27, and Seven Septic Tanks

- Historical files and worker interviews indicate these septic tanks only contained domestic wastewater (bathrooms, sinks, showers).
- Hazardous chemicals were not used.
- Septic tanks were pumped dry and removed. Wastewater and tanks were properly disposed.
- Documentation of waste composition support administrative closure.
- Removal activities completed between 5/2015 and 7/2017.
- Notification of closure submitted to NMED HWB.

Questions?