



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**



2021 Individual Permit Corrective Action Installations

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Individual Permit Public Meeting
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ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE





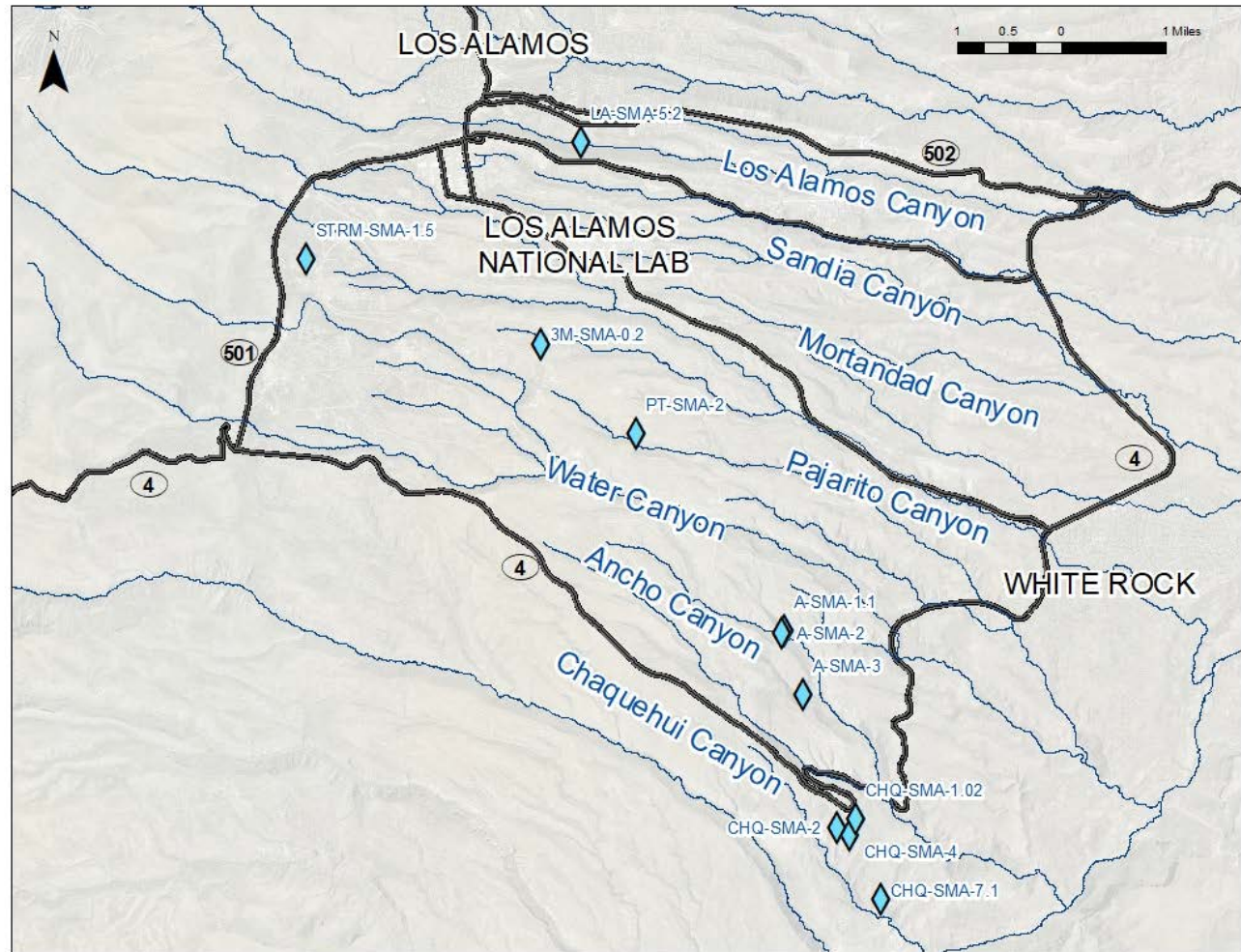
- Program is operating under the administratively continued 2010 National Pollutant Discharge Elimination System Individual Permit requirements.
- Corrective actions are evaluated during the Alternatives Analysis process after screening of storm water samples. Corrective actions include:
 - Enhanced controls – manage sediment migration or erosion by altering site storm water run-on or runoff to reasonably meet applicable target action levels (TALs).
 - Total retention controls – capture a volume of storm water from the Site to prevent runoff. Defined in the Draft IP as the volume of runoff from a 3-year, 24-hour statistical storm.
 - No exposure controls – prevent exposure of contaminants to storm water runoff.
 - Investigation and remediation – cleanup of soil at sites within the SMA.
- N3B Individual Permit website: <https://ext.em-la.doe.gov/ips/?Length=4>

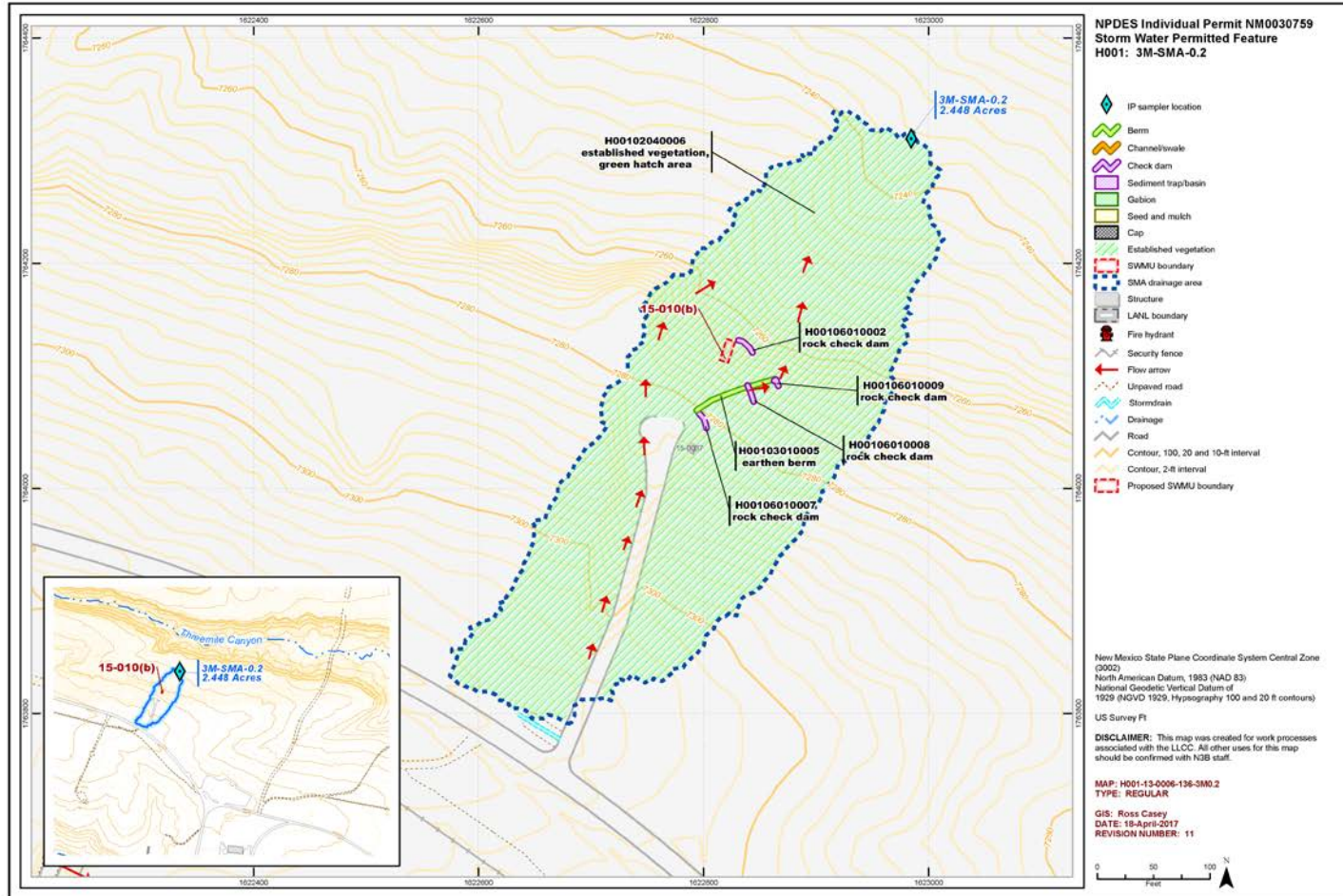




2021 Enhanced Control Installations

- 3M-SMA-0.2
- A-SMA-1.1
- A-SMA-2
- A-SMA-3
- CHQ-SMA-1.02
- CHQ-SMA-2
- CHQ-SMA-4
- CHQ-SMA-7.1
- LA-SMA-5.2
- PT-SMA-2
- STRM-SMA-1.5

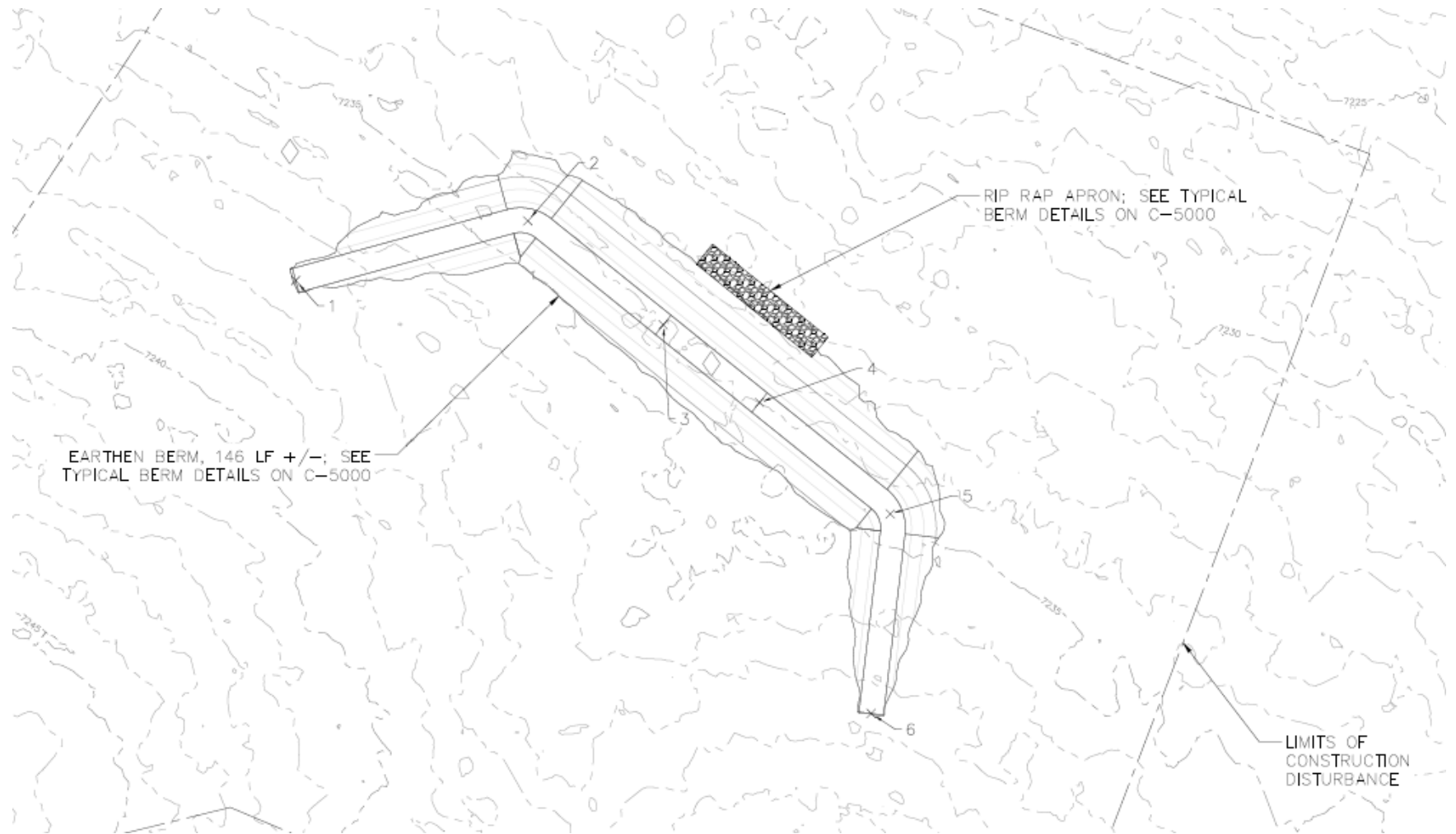






- Baseline sample collected in October 2018
 - Copper 1.6 x TAL; exceeds tuff background
 - Gross alpha 8.5 x TAL; does not exceed tuff background
 - Mercury 2.6 x TAL; no background value
- Soil data for Solid Waste Management Unit (SWMU) from 2011 Consent Order Investigation
 - 15-010(b)– Inactive settling tank (copper and mercury detected above background in soil)
- 2021 corrective actions – earthen berm Total Retention control installed downstream at sampler



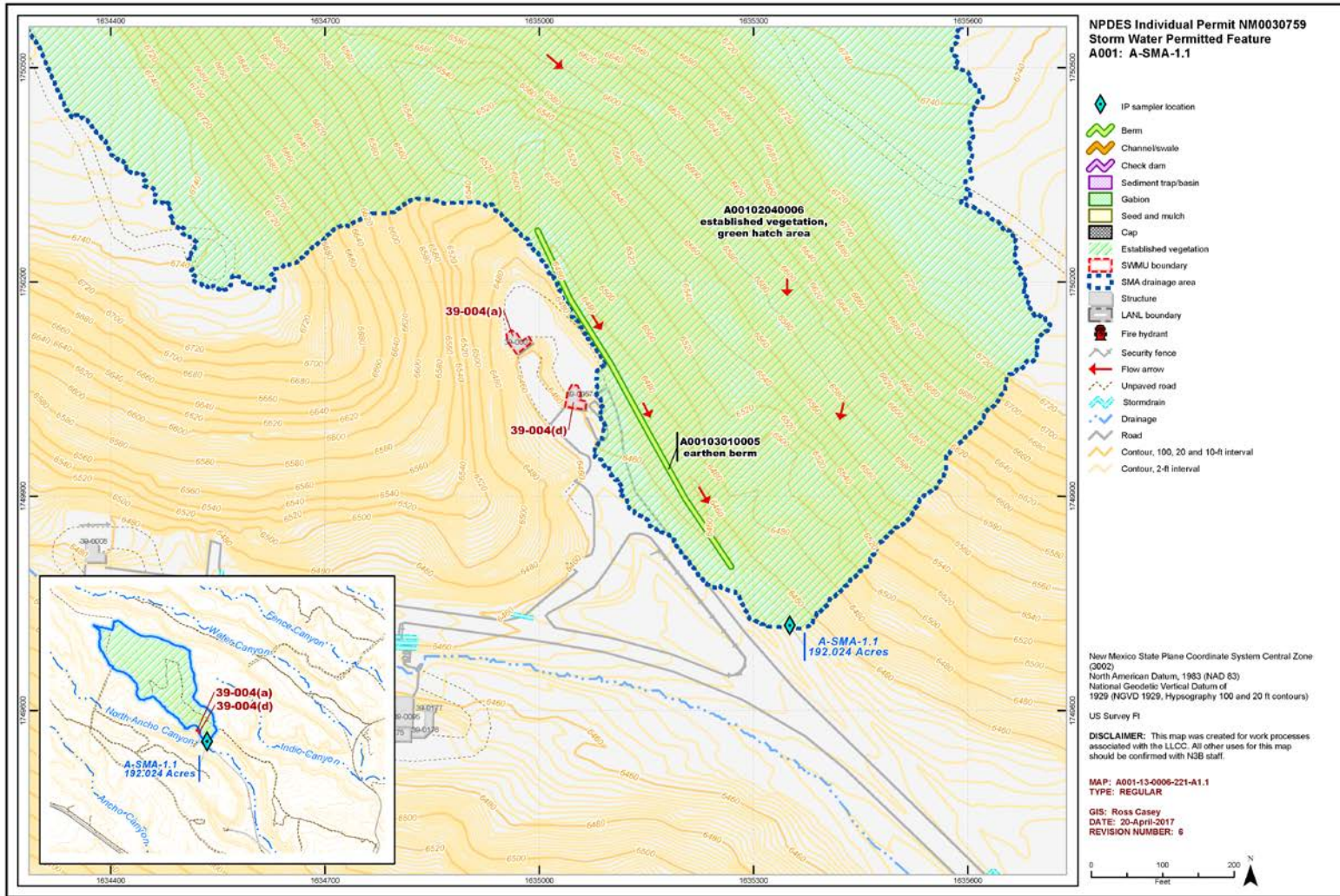


EARTHEN BERM, 146 LF +/-; SEE TYPICAL BERM DETAILS ON C-5000

RIP RAP APRON; SEE TYPICAL BERM DETAILS ON C-5000

LIMITS OF CONSTRUCTION DISTURBANCE

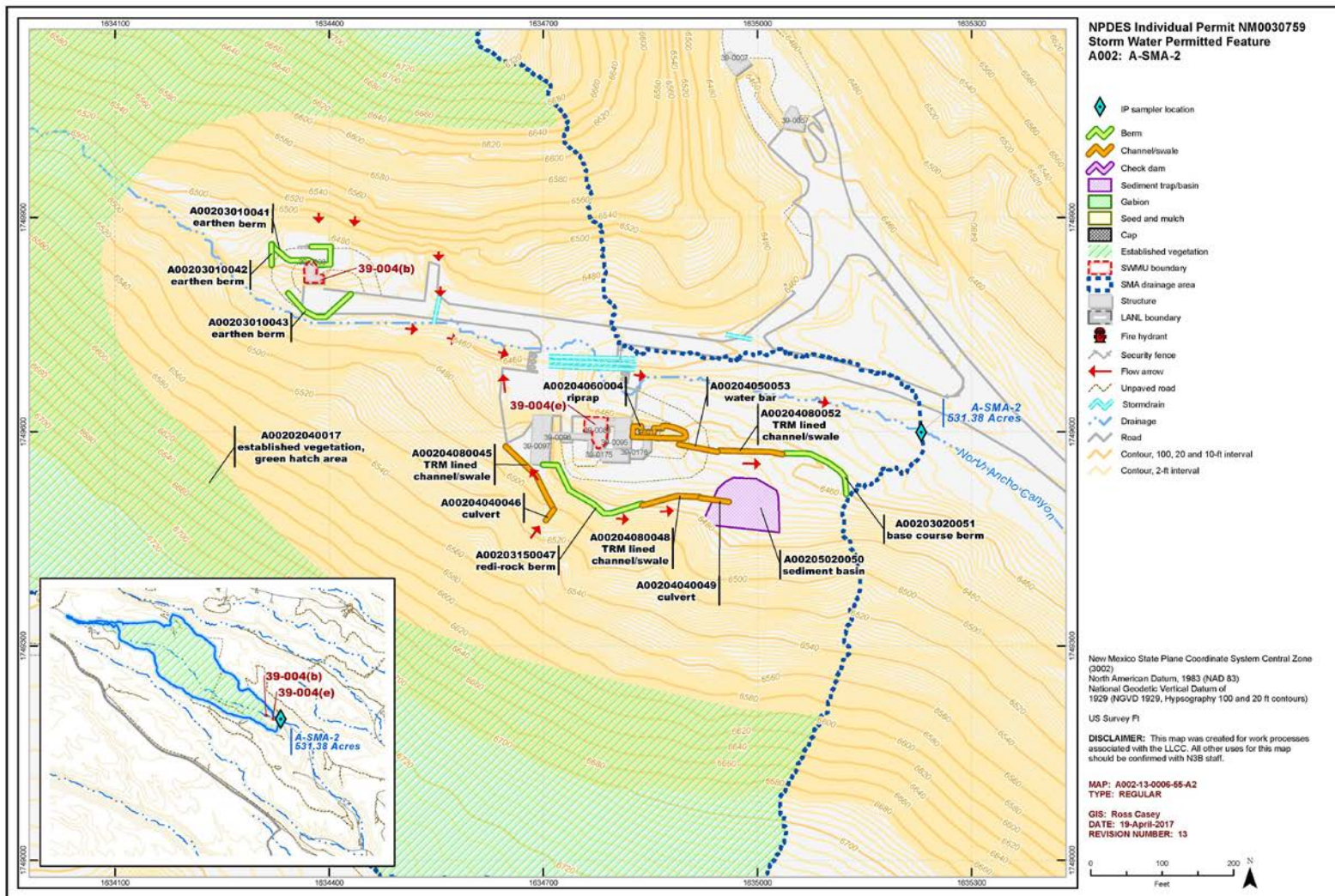






- Baseline sample collected in August 2018
 - Aluminum 1.1 x TAL; exceeds tuff background
 - Gross alpha 22 x TAL; does not exceed tuff background
 - Mercury 1.4 x TAL; no background value
 - Selenium 1.6 x TAL; no background value
- Soil data for SWMUs from 2009 Consent Order Investigation
 - 39-004(a) – Firing site, active (mercury above background in soil)
 - 39-004(d) – Firing site, active (mercury above background in soil)
- 2021 corrective actions – rock check dam and plunge pool enhanced controls installed in active channel upstream of sampler to capture additional sediment. Additionally, work with facility to perform debris cleanup.

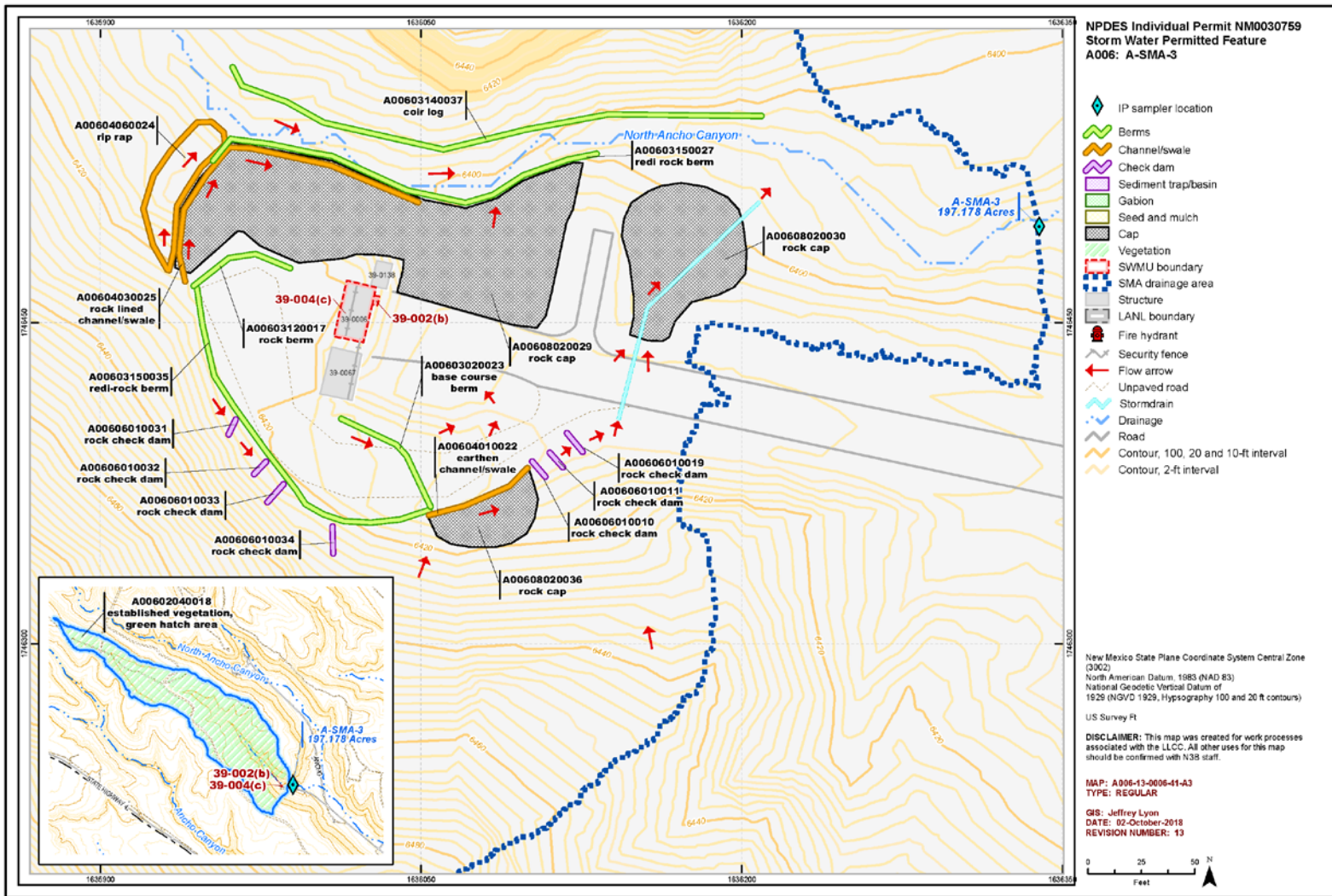






- Baseline sample collected in August 2018
 - Copper 6.9 x TAL; exceeds tuff background
 - Gross alpha 13.4 x TAL; does not exceed tuff background
- Soil data for SWMUs from Consent Order Investigation
 - 39-004(b) – Firing site, active (copper above background in soil)
 - 39-004(e) – Firing site, active (copper above background in soil)
- 2021 corrective actions – redi-rock retention wall and base course berm enhanced controls installations to increase capacity and reliability of existing swale to direct storm water runoff to sediment basin. Additionally, work with facility to perform debris cleanup.

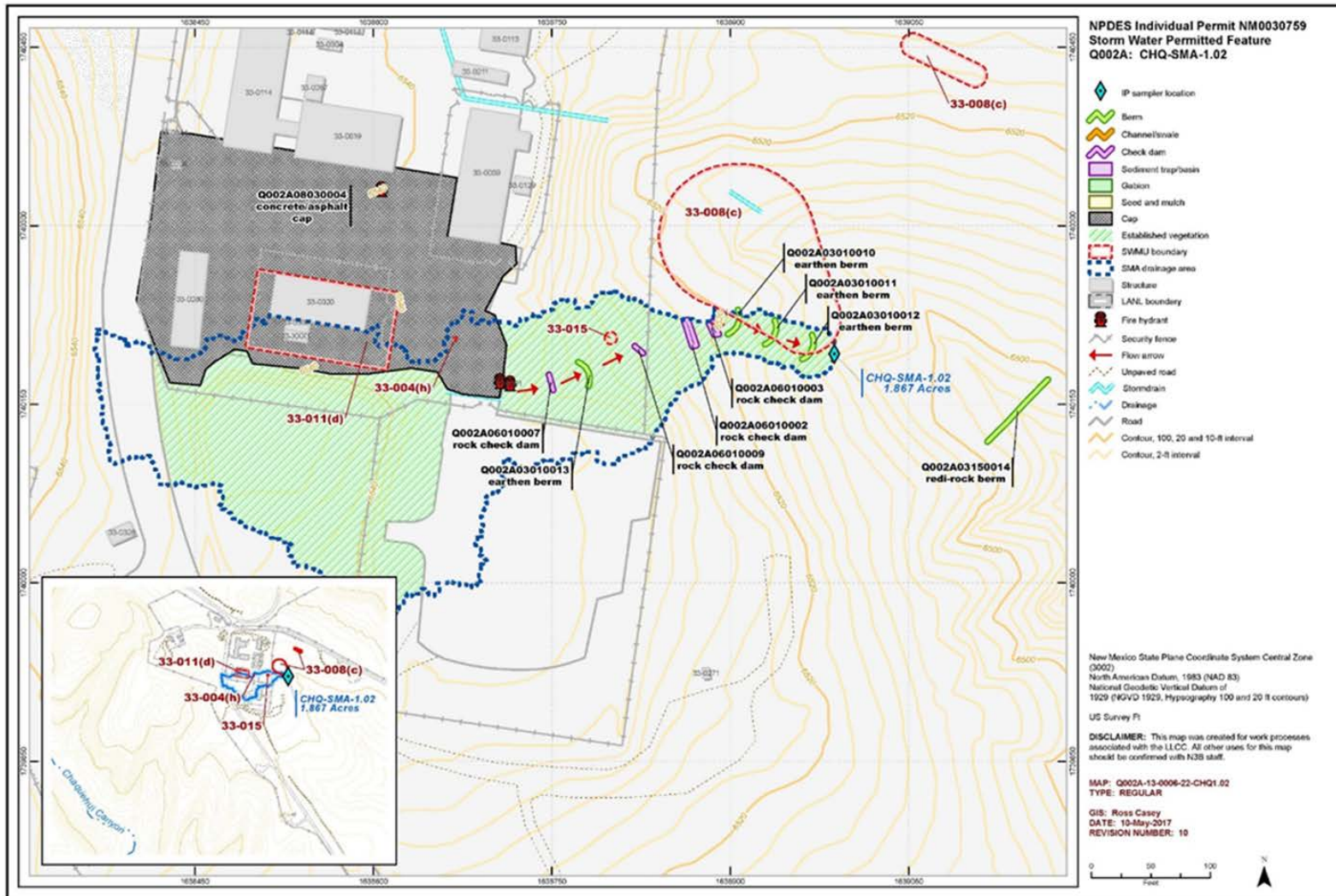






- Corrective action sample collected in August 2018
 - Copper 12 x TAL; exceeds tuff background
 - Gross alpha 6.1 x TAL; does not exceed tuff background
 - PCBs 5300 x TAL; exceeds tuff background value
- Soil data for SWMUs from 2009 Consent Order Investigation
 - 39-002(b) – Storage area, former (no soil data available)
 - 39-004(c) – Firing site, active (copper and PCBs detected above soil background values)
- 2021 corrective actions – large rock berm enhanced control installed in active channel downstream of site to capture additional sediment

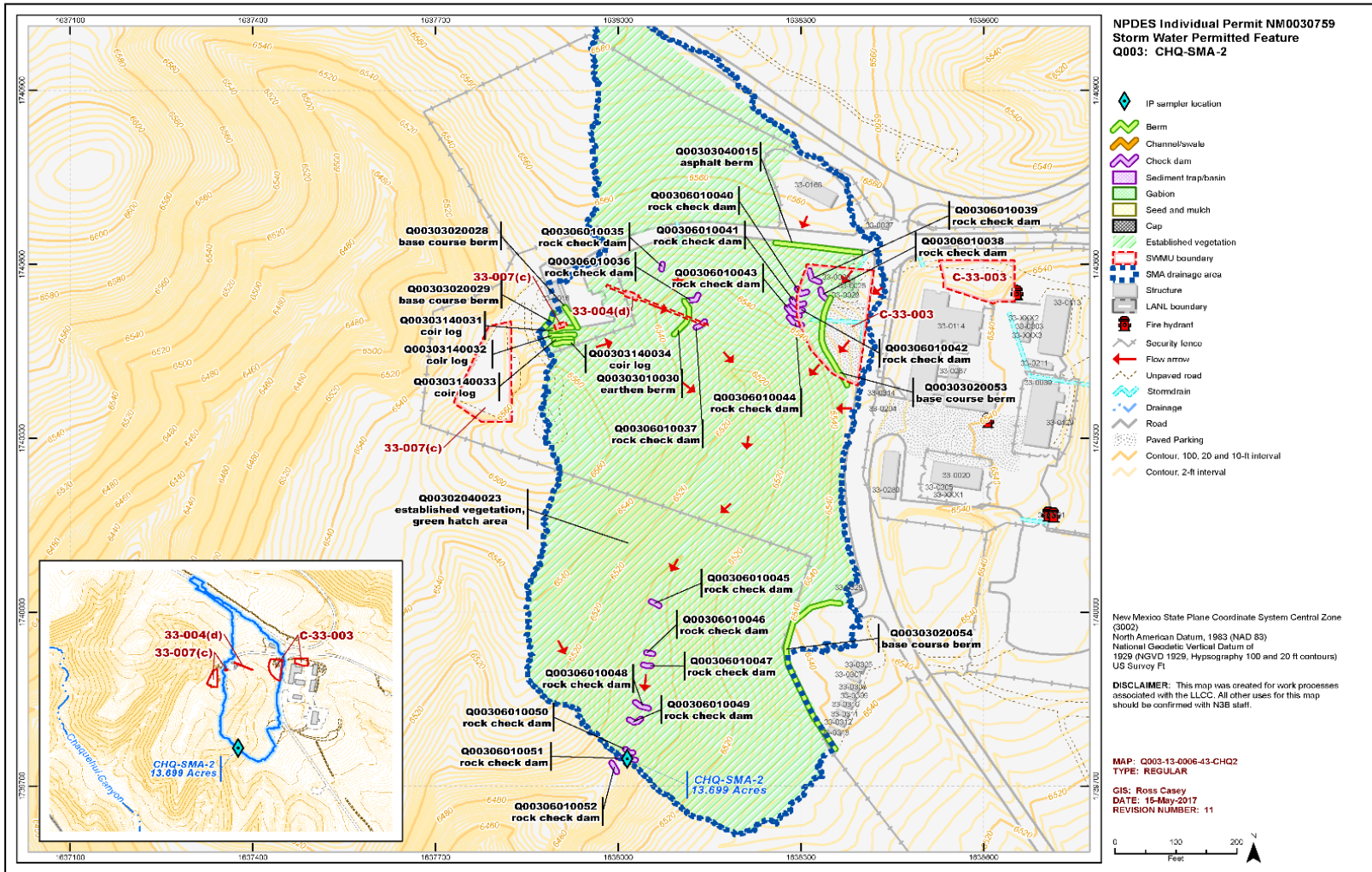






- Corrective action samples collected in July and August 2018
 - Copper 1.6 x TAL; exceeds tuff background
- Soil data for SWMUs from 2019-2020 Consent Order Investigation
 - 33-004(h) – Inactive outfall
 - 33-008(c) – Former surface disposal area (very high copper above background in soil, mostly outside of site management area (SMA) drainage area)
 - 33-011(d) – Former storage area
 - 33-015 – Former incinerator (copper above background in soil)
- 2021 corrective actions – rock check dam enhanced controls installed downstream of 33-008(c) and 33-015

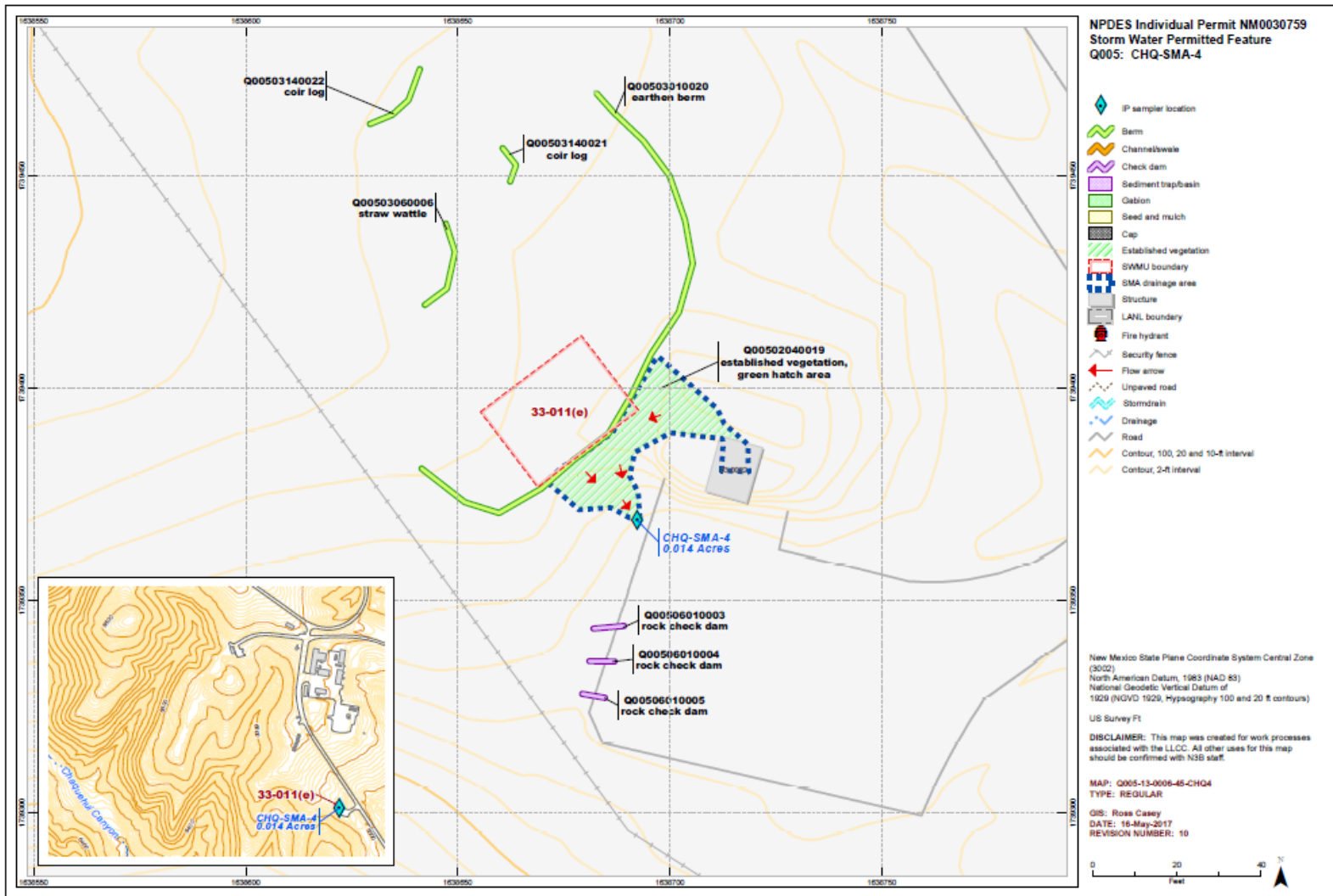






- Corrective action sample collected in July and August 2018
 - Copper 1.1 x TAL; exceeds tuff background
 - Gross alpha 4.6 x TAL; does not exceed tuff background
- Soil data for Area of Concern (AOC) and SWMUs from 2019-2020 Consent Order Investigation
 - 33-004(d) – Abandoned septic tank; removed during investigation (copper detected above background in soil)
 - 33-007(c) – Former firing site (copper detected above background in soil)
 - C-33-003 – Fill areas (copper detected above background in soil)
- 2021 Corrective Actions – rock check dam enhanced controls installed in series with existing rock check dams

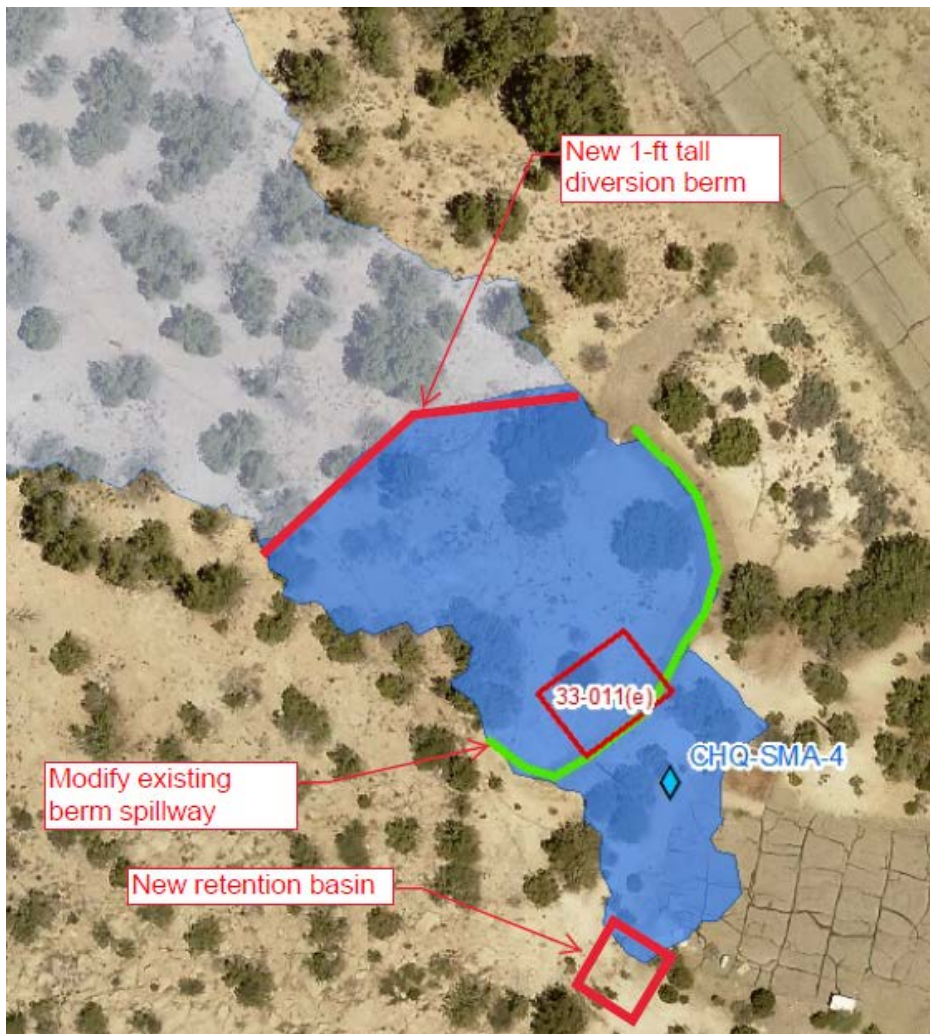


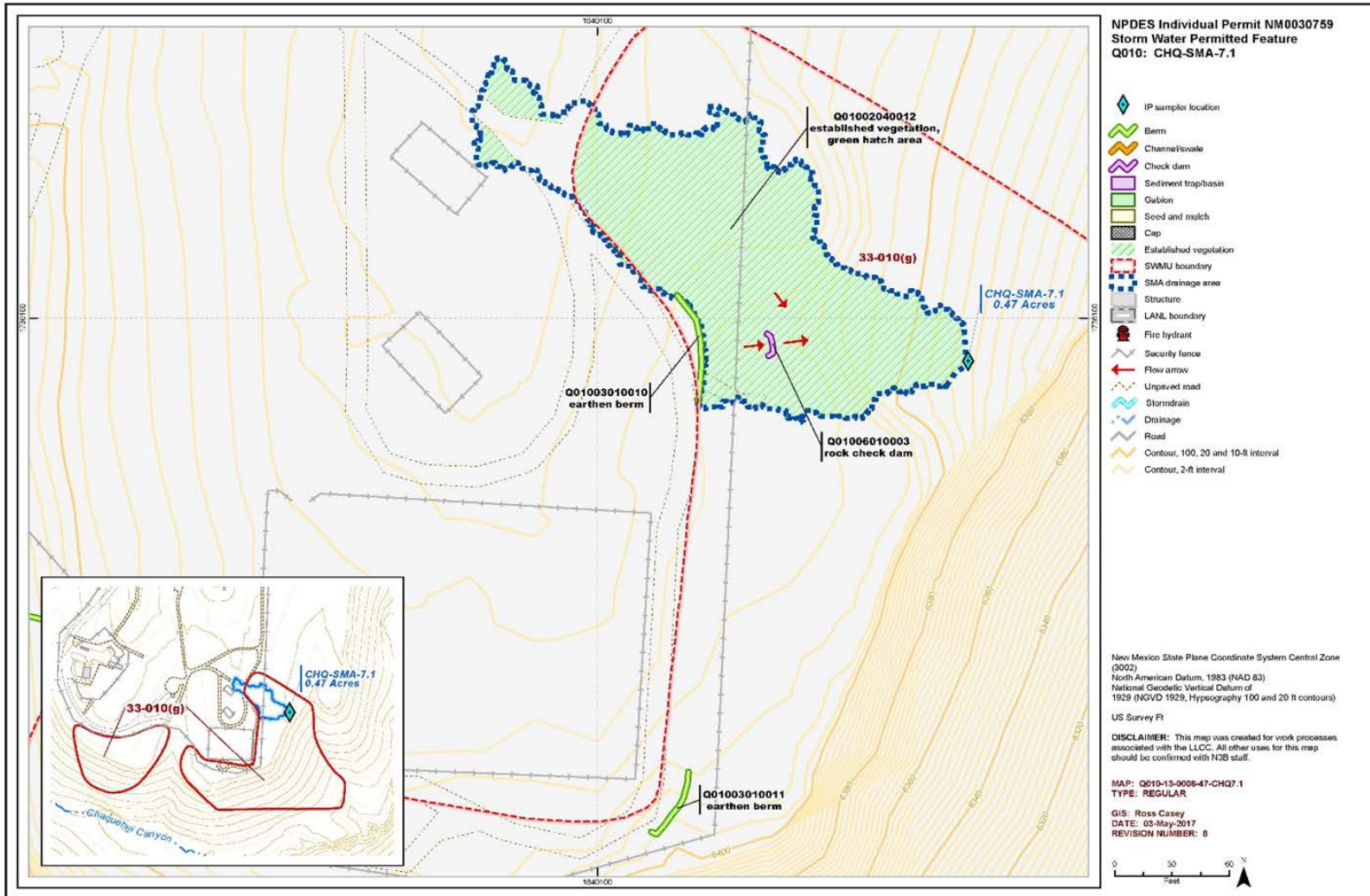




- Corrective action sample collected in July 2018
 - PCBs 990 x TAL; exceeds tuff background
 - Gross alpha 65 x TAL; does not exceed tuff background
 - Selenium 3.2 x TAL; no background value
- Soil data for SWMUs from 2019-2020 Consent Order Investigation
 - 33-011(e) – Storage Area for drums containing unknown materials (selenium detected above background in soil, PCBs not detected above background in soil)
- 2021 Corrective Actions – total retention by building run-on diversion berm, modifying existing berm, and building retention area downstream of parking lot.



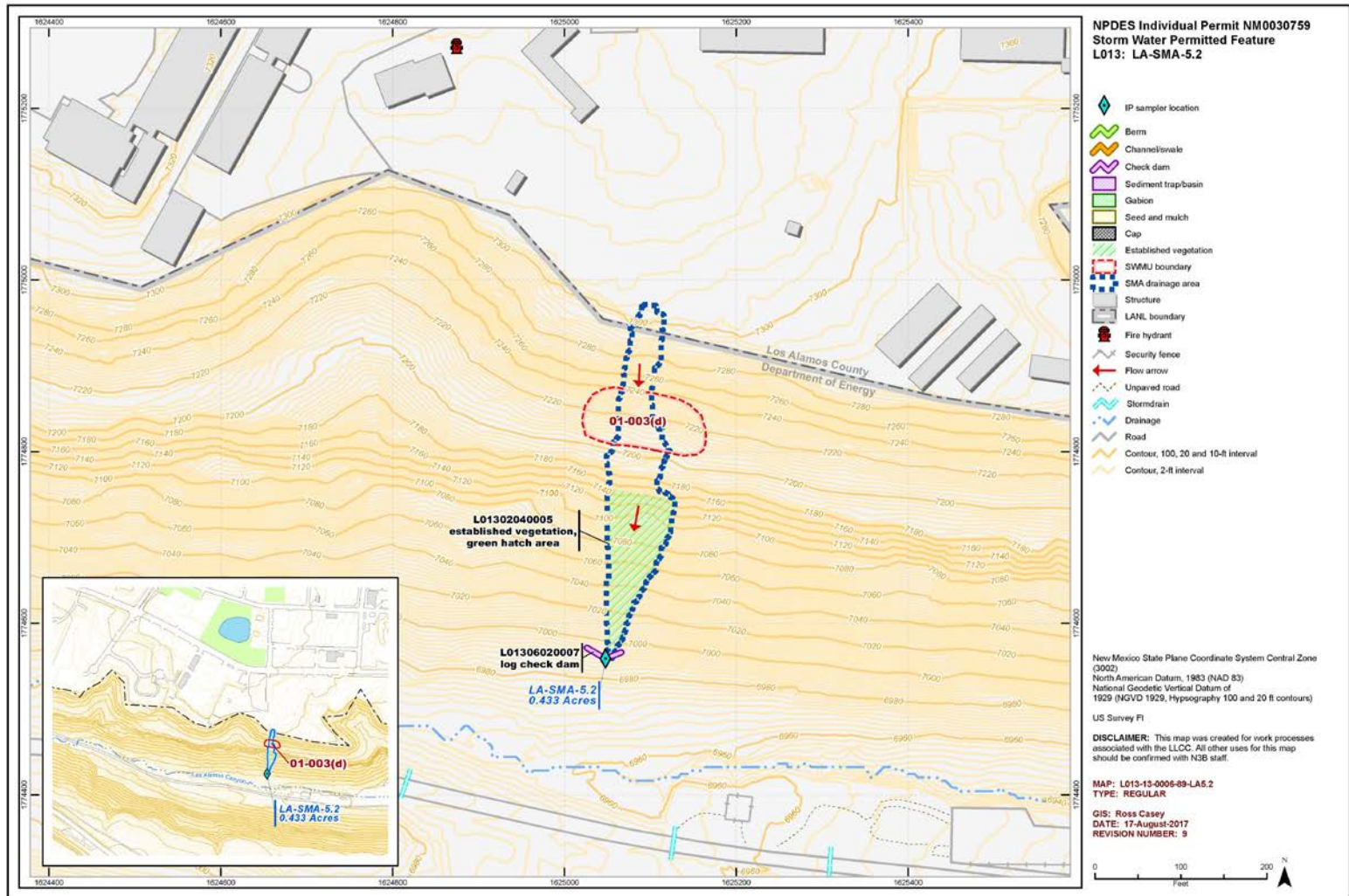






- Baseline sample collected in July 2018
 - Aluminum 1.3 x TAL; does not exceed tuff background.
 - Copper 1.9 x TAL; exceeds tuff background.
 - Gross alpha 5 x TAL; does not exceed tuff background
- Soil data for SWMUs from 2019-2020 Consent Order Investigation
 - 33-010(g) – Former disposal area (aluminum not detected above soil background; copper detected above soil background outside of SMA drainage area)
- 2021 corrective actions – coir log enhanced controls installed across slope above sampler



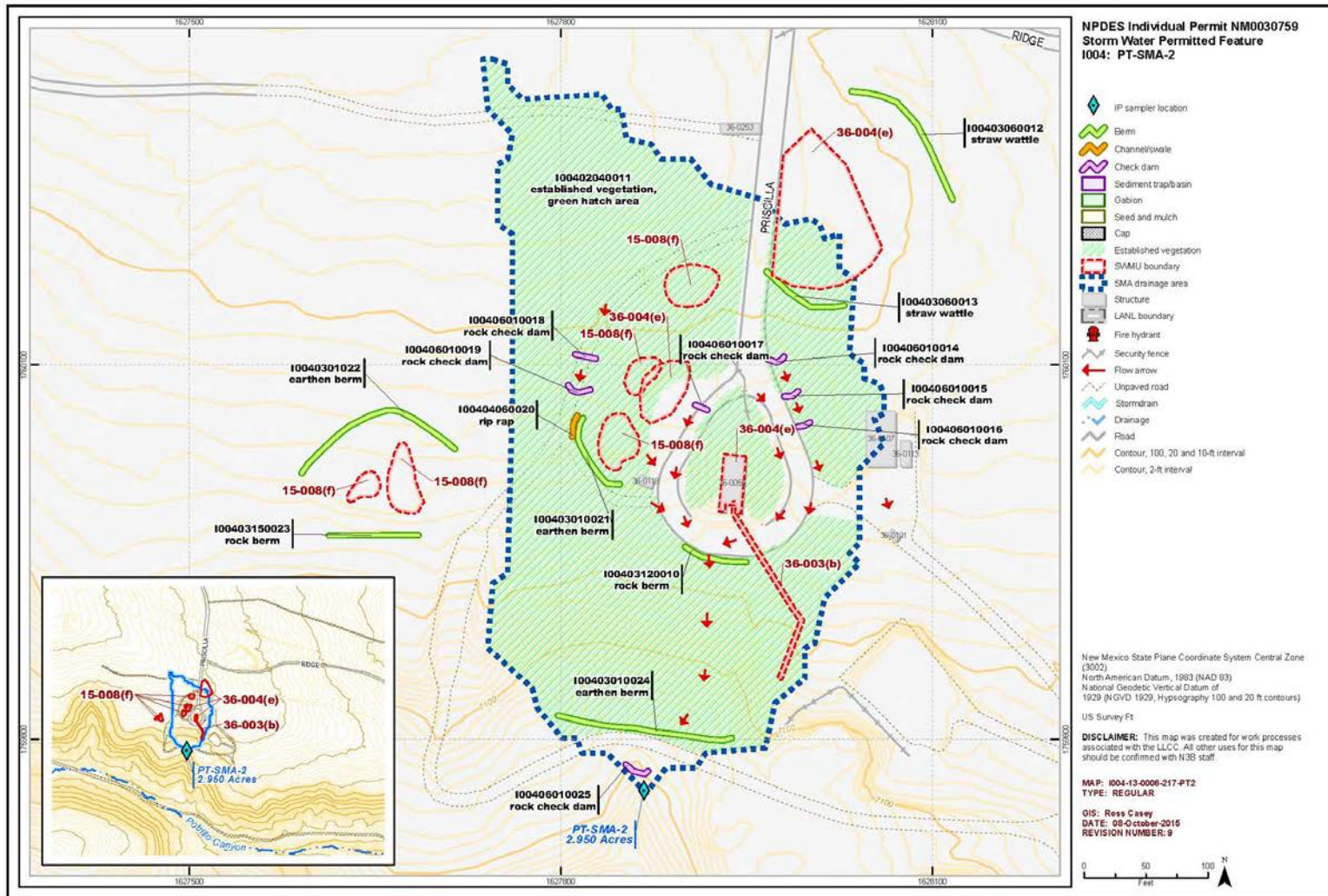




- Baseline sample collected in July 2019
 - Arsenic 1.13 x TAL; no tuff background value
 - Gross alpha 155 x TAL; exceeds tuff background
 - Radium-226 and radium-228 1.12 x TAL; no background value
 - Selenium 2.42 x TAL; no background value
 - Zinc 1.9 x TAL; does not exceed tuff background
- Soil data for SWMU from 2016 Consent Order Investigation
 - 01-003(d) – Can dump site (arsenic and zinc detected above soil background)
 - 2021 Corrective Actions – coir log and log check dam enhanced controls installed on slope; debris clean up will be completed as an additional action



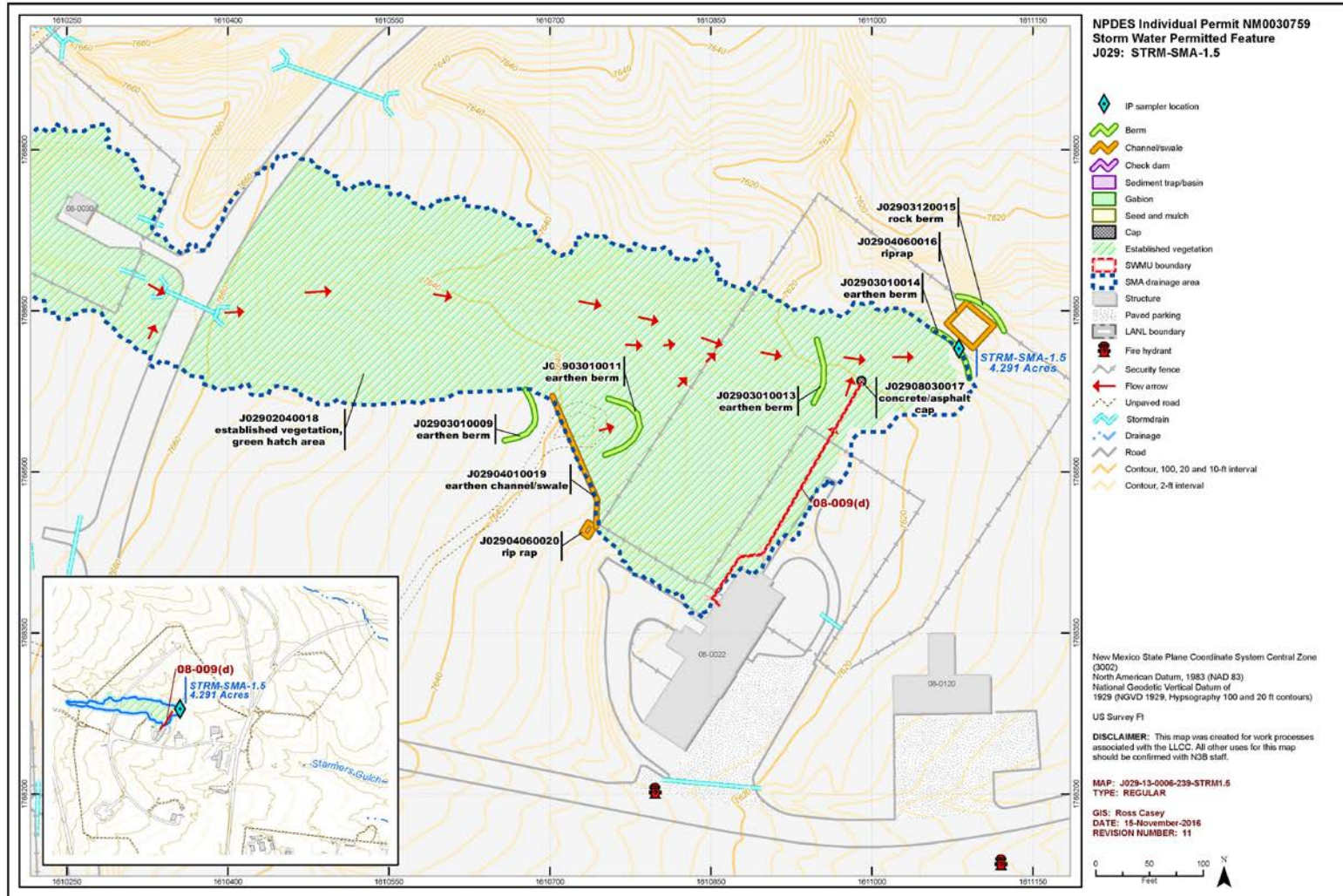






- Corrective action samples collected in July and October 2019
 - Copper 1.2 x TAL; exceeds tuff background
 - Gross alpha 6.9 x TAL; does not exceeds tuff background
- Soil data for AOCs and SWMU from Consent Order Investigation
 - 36-003(b) – Septic tank (copper detected above soil background)
 - 15-008(f) – Firing site, active (copper detected above soil background)
 - 36-004(e) – Firing site, active (not investigated)
- 2021 Corrective Actions – coir logs enhanced controls installed upslope of sampler

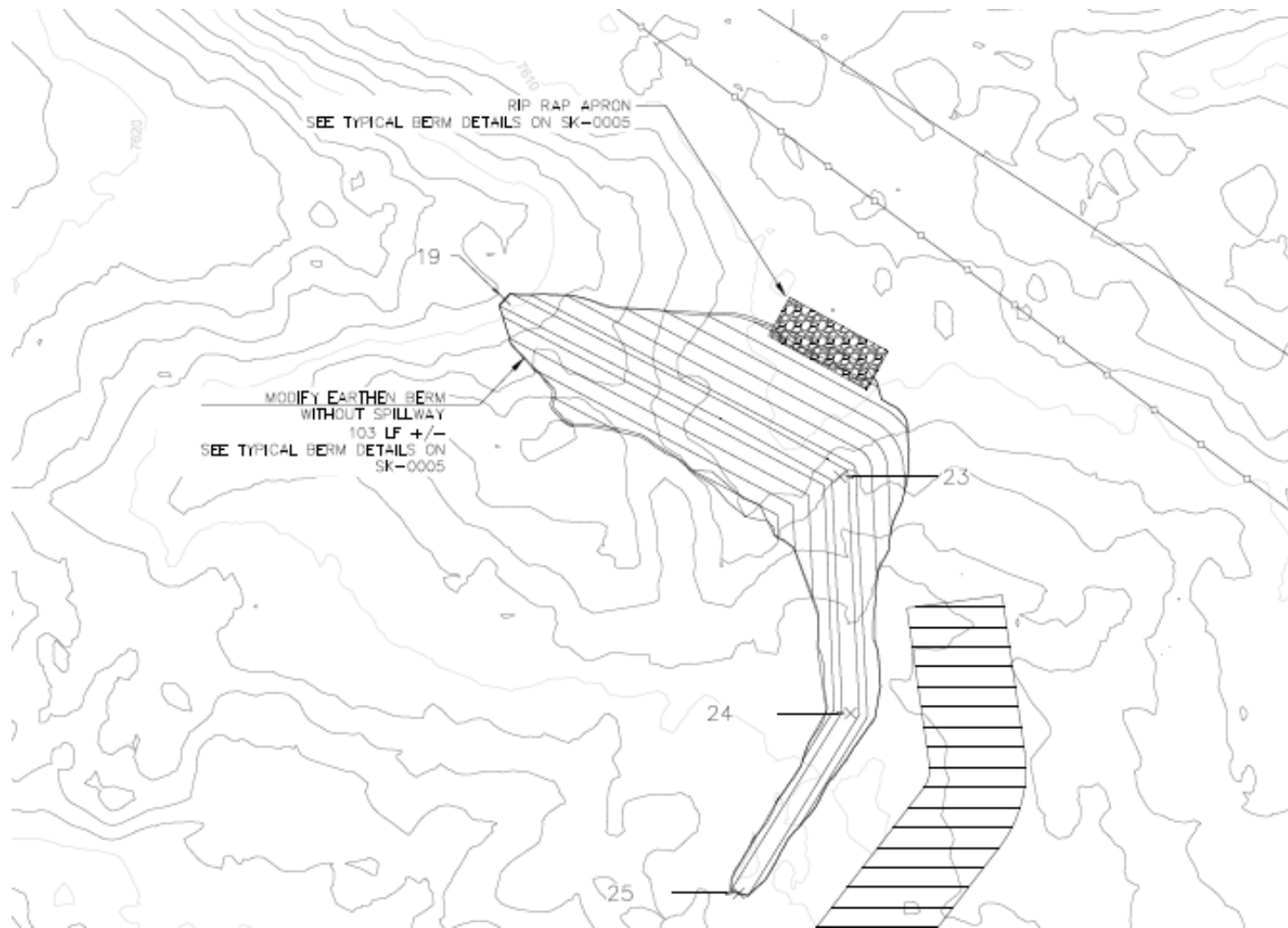






- Corrective action sample collected in September 2018
 - Silver 2.4 x TAL; no tuff background value
 - Gross alpha 5.4 x TAL; does not exceeds tuff background
- No decision-level data for SWMU within SMA drainage area
 - 08-009(b) – Drains and outfalls (x-ray machines and photo processing)
- 2021 Corrective Actions – modify earthen berm for total retention







Acronyms

- 2M – Twomile Canyon
- 3M – Threemile Canyon
- A – Ancho Canyon
- Acid – Acid Canyon
- AOC – Area of Concern
- B – Bayo Canyon
- CDB – Cañada bel Buey
- CDV – Cañon de Valle
- CHQ – Chaqehui Canyon
- DP – DP Canyon
- IP – Individual Permit
- LA – Los Alamos Canyon
- M – Mortandad Canyon
- NPDES – National Pollutant Discharge Elimination System
- P – Pueblo Canyon
- PJ – Pajarito Canyon
- PT – Potrillo Canyon
- R - Rendija Canyon
- S - Sandia Canyon
- SDPPP – Site Discharge Pollution Prevention Plan
- SMA – Site Monitoring Area
- STRM - Starmers Gulch
- SWMU – Solid Waste Management Unit
- T – Ten Site Canyon
- TAL – Target Action Level
- W – Water Canyon





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Questions



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Produced by Los Alamos Legacy Cleanup Contractor, N3B Los Alamos
on behalf of DOE's Environmental Management Los Alamos Field Office

