EMID-704316

N3B Los Alamos

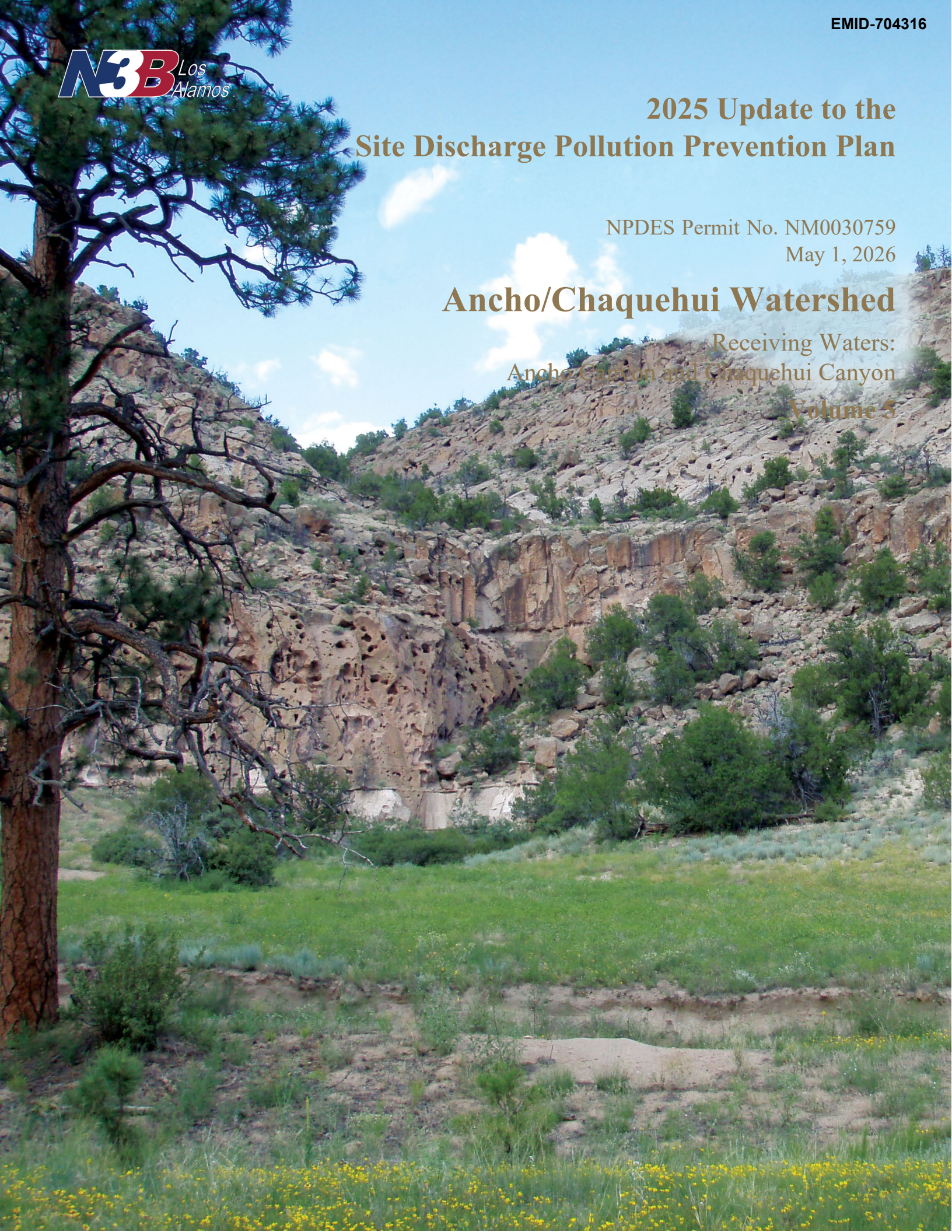
2025 Update to the Site Discharge Pollution Prevention Plan

NPDES Permit No. NM0030759
May 1, 2026

Ancho/Chaquehui Watershed

Receiving Waters:
Ancho Canyon and Chaquehui Canyon

Volume 5



CONTENTS

Attachments

219.0 A-SMA-1.1: SWMUs 39-004(a) and 39-004(d)

Two historical industrial activity areas, Sites 39-004(a) and 39-004(d), are associated with A-SMA-1.1 (permitted feature A001). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on decision-level soil investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

219.1 Site Descriptions

39-004(a) (8/25/2017)

SWMU 39-004(a) is a firing site (structure 39-7) at TA-39. This site was constructed in 1953, as a remote test firing facility to test materials. The experiments conducted at this firing site are designed to expend all the HE contained in the device. If a shot fails such that not all of the HE is spent, an effort is made to pick up and destroy the unexploded HE. A typical shot carries 10 lb to 100 lb of explosives, but on occasion, up to 1000 lb may be used.

Signs of impact are generally noticeable only within a 200-ft radius around the firing pad. This firing site is within the fall zone of a high cliff that erodes when explosives experiments are conducted at the site. SWMU 39-004(a) is currently inactive, but firing site activities may begin at any time. SWMU 39-004(d), another remote test-firing facility, is located near SWMU 39-004(a) and is currently active. Both SWMUs 39-004(a) and 39-004(d) are located along the northern tributary of the upper reach of Ancho Canyon. The firing pads are located in the canyon bottom between a diverted ephemeral stream and the canyon wall.

39-004(d) (8/25/2017)

SWMU 39-004(d) is an active firing site (structure 39-57) at TA-39 This site was constructed in 1953, as a remote firing test-firing facility to test materials. The experiments conducted at this firing site are designed to expend all the HE contained in the device. If a shot fails such that not all of the HE is spent, an effort is made to pick up and destroy the unexploded HE. A typical shot carries 10 lb to 100 lb of explosives, but on occasion, up to 1000 lb may be used.

Signs of impact are generally noticeable only within a 200-ft radius around the firing pad. This firing site is within the fall zone of a high cliff that erodes when explosives experiments are conducted at the site. SWMU 39-004(a), another remote test-firing facility, is located near SWMU 39-004(d) and is currently inactive. Both SWMUs 39-004(a) and 39-004(d) are located along the northern tributary of the upper reach of Ancho Canyon. The firing pads are located in the canyon bottom between a diverted ephemeral stream and the canyon wall.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 219-1.

Table 219-1 POCs Known or Suspected to Have Been Used Historically at the Sites

Site	Potential POC Source	Potential POCs
39-004(a)	Firing site	Aluminum, beryllium, cadmium, chromium, copper, lead, mercury, thallium, PCBs, HE, and uranium
39-004(d)	Firing site 39-57 (open detonation) RCRA Unit (active)	Aluminum, beryllium, cadmium, chromium, copper, lead, mercury, thallium, HE, and uranium

219.2 Control Measures

All active control measures in use at A-SMA-1.1 are listed in Table 219-2. Their locations are shown on the project map (Figure 219-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 219-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00102040006	Established vegetation	-	X	X	-	5-13-2013
A00103010005	Earthen berm	X	-	-	X	6-1-2009
A00104060010	Riprap	-	X	-	X	8-25-2021
A00106010007	Rock check dam	-	X	-	X	8-25-2021
A00106010008	Rock check dam	-	X	-	X	8-25-2021
A00106010009	Rock check dam	-	X	-	X	8-25-2021

219.3 Inspections and Maintenance

A-SMA-1.1 was in long-term stewardship in 2025, subject to inspection requirements outlined in the Permit Part I.B.8.c. Rain gage RG267.4 recorded one storm event equal to or greater than a 3-yr, 24-hr storm event in 2025, requiring one post-storm inspection, summarized in Table 219-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 219-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	3-yr, 24-hr Storm Total (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114058	8-25-2025	1.23	9-8-2025	14	Yes

219.4 Stormwater Monitoring

219.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline controls, a baseline stormwater sample was collected on August 10, 2018. Analytical results from this sample yielded TAL exceedances for aluminum (807 µg/L), gross-alpha activity (333 pCi/L), mercury (1.08 µg/L), and selenium (7.88 µg/L). The complete analytical results are presented in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

In the initial SIP (N3B 2023, 702792; EPA 2023, 704169) for the 2022 Permit, A-SMA-1.1 screened into Long-Term Stewardship status per Permit Part 1.C.3, effective July 5, 2023.

219.4.2 Stormwater Monitoring during 2025

No stormwater monitoring was conducted at A-SMA-1.1 in 2025. The SMA continued to be in Long-Term Stewardship status, as discussed in the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814), and the "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

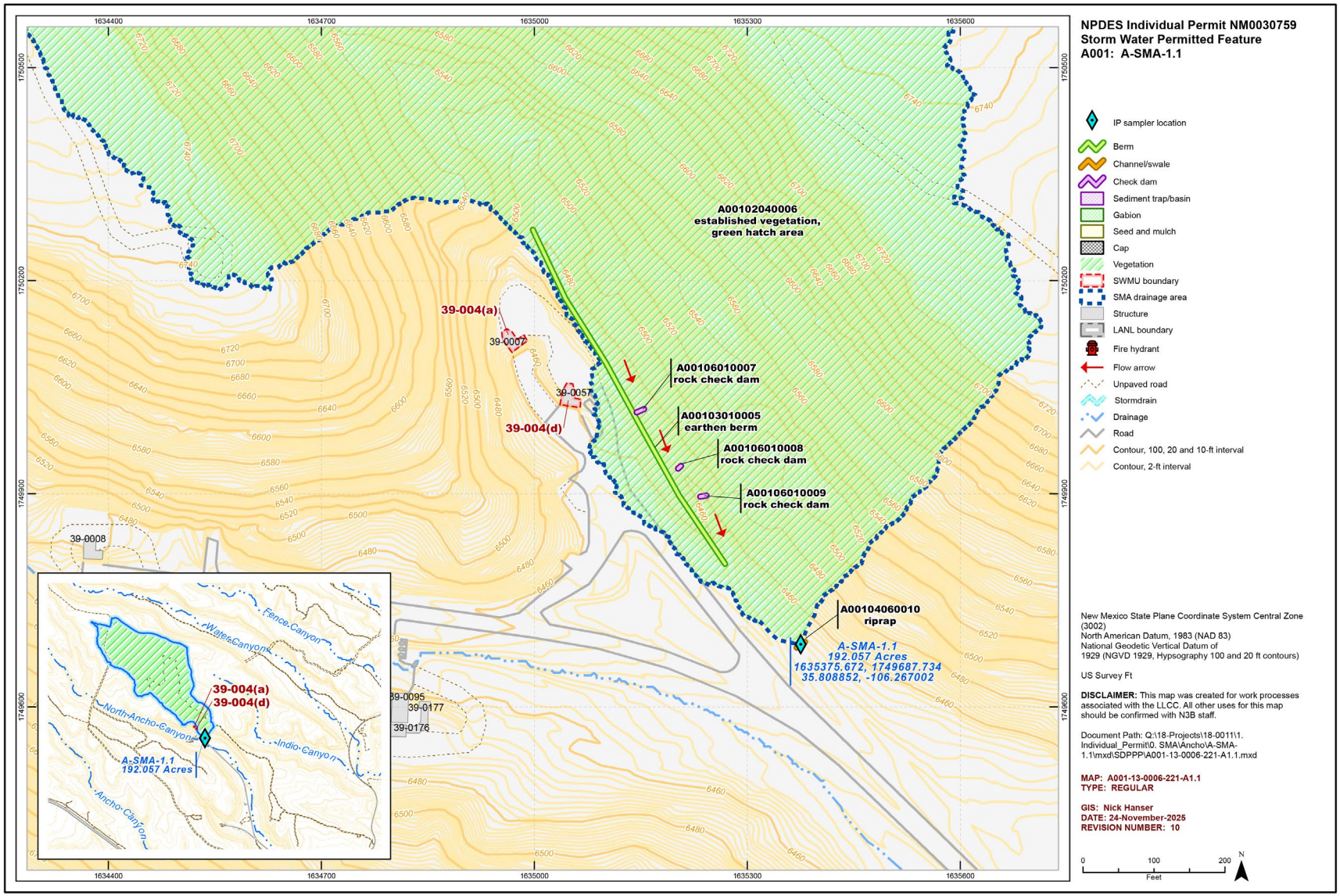


Figure 219-1 A-SMA-1.1 location map

220.0 A-SMA-2: SWMUs 39-004(b) and 39-004(e)

Two historical industrial activity areas, 39-004(b) and 39-004(e), are associated with A-SMA-2 (permitted feature A002). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on decision-level soil investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

220.1 Site Descriptions

39-004(b) (8/25/2017)

SWMU 39-004(b) is an inactive firing site (structure 39-8) located at TA-39. The SWMU 39-004(b) firing site is located in the western tributary of the upper reach of Ancho Canyon. The firing pad is located in the canyon bottom between an ephemeral stream and the northern canyon wall. This site had been used to test materials from the time TA-39 was established as a remote test firing facility in 1953. The experiments conducted at this firing site were designed to expend all HE in the device. Signs of impact are generally noticeable only within a 200-ft radius around the firing pad.

Activities at this site were discontinued in 1980 because of the constant hazard of falling debris from the nearby cliff. The SWMU 39-004(b) firing site is located in the western tributary of the upper reach of Ancho Canyon within the same tributary as the SWMU 39-004(e) firing site.

39-004(e) (8/25/2017)

SWMU 39-004(e) is a firing site (structure 39-88) located at TA-39. This site was constructed in 1978, as a remote test-firing facility to test materials, and has been in use since that time. The SWMU 39-004(e) firing site is located in the western tributary of the upper reach of Ancho Canyon within the same tributary as the SWMU 39-004(b) firing site. The experiments conducted at this firing site are designed to expend all HE in the device. Signs of impact are generally noticeable only within a 200-ft radius around the firing pad.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 220-1.

Table 220-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
39-004(b)	Firing site	Aluminum, beryllium, cadmium, chromium, copper, lead, mercury, thallium, HE, and uranium
39-004(e)	Firing site	Aluminum, beryllium, cadmium, chromium, copper, lead, mercury, thallium, PCBs, HE, and uranium

220.2 Control Measures

All active control measures in use at A-SMA-2 are listed in Table 220-2, and their locations are shown on the project map (Figure 220-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 220-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00202040017	Established vegetation	-	X	X	-	5-13-2013
A00203010041	Earthen berm	-	X	-	X	12-16-2014
A00203010042	Earthen berm	X	-	-	X	12-16-2014
A00203010043	Earthen berm	-	X	-	X	12-16-2014
A00203010056	Earthen berm	-	X	X	-	1-3-2022
A00203020051	Base course berm	-	X	-	X	12-16-2014
A00203150047	Redi-rock berm	X	-	-	X	12-16-2014
A00203150054	Redi-rock berm	-	X	X	-	1-3-2022
A00204040049	Culvert	X	-	X	-	12-16-2014
A00204050053	Waterbar	-	X	X	-	12-16-2014
A00204060004	Riprap	-	X	X	-	6-1-2009
A00204080045	TRM-lined swale	X	-	X	-	12-16-2014
A00204080048	TRM-lined swale	X	-	X	-	12-16-2014
A00204080052	TRM-lined swale	-	X	X	-	12-16-2014
A00204080055	TRM-lined swale	-	X	X	-	1-3-2022
A00205020050	Sediment basin	X	-	-	X	12-16-2014

220.3 Inspections and Maintenance

A-SMA-2 was in long-term stewardship in 2025, subject to inspection requirements outlined in the Permit Part I.B.8.c. Rain gage RG267.4 recorded one storm event equal to or greater than a 3-yr, 24-hr storm event in 2025, requiring one post-storm inspection, summarized in Table 220-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 220-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	3-yr, 24-hr Storm Total (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114059	8-25-2025	1.23	9-8-2025	14	Yes

220.4 Stormwater Monitoring

220.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on September 12, 2013. Analytical results from this sample yielded TAL exceedances for aluminum (1310 µg/L), copper (23.9 µg/L), and gross-alpha activity (23.7 pCi/L). The complete analytical results are presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

Following installation of enhanced control measures, two corrective-action stormwater samples were collected, on July 25 and October 4, 2019. Analytical results from these corrective-action monitoring samples yielded TAL exceedances for copper (18.1 µg/L and 29.6 µg/L) and gross-alpha activity (67.6 pCi/L and 596 pCi/L). Complete results from these samples are presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2019, NPDES Permit No. NM0030759" (N3B 2020, 700767).

In the initial SIP (N3B 2023, 702792; EPA 2023, 704169) for the 2022 Permit, A-SMA-2 screened into Long-Term Stewardship status per Permit Part 1.C.3, effective July 5, 2023).

220.4.2 Stormwater Monitoring during 2025

No stormwater monitoring was conducted at A-SMA-2 in 2025. The SMA continued to be in Long-Term Stewardship status, as discussed in the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814), and the "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

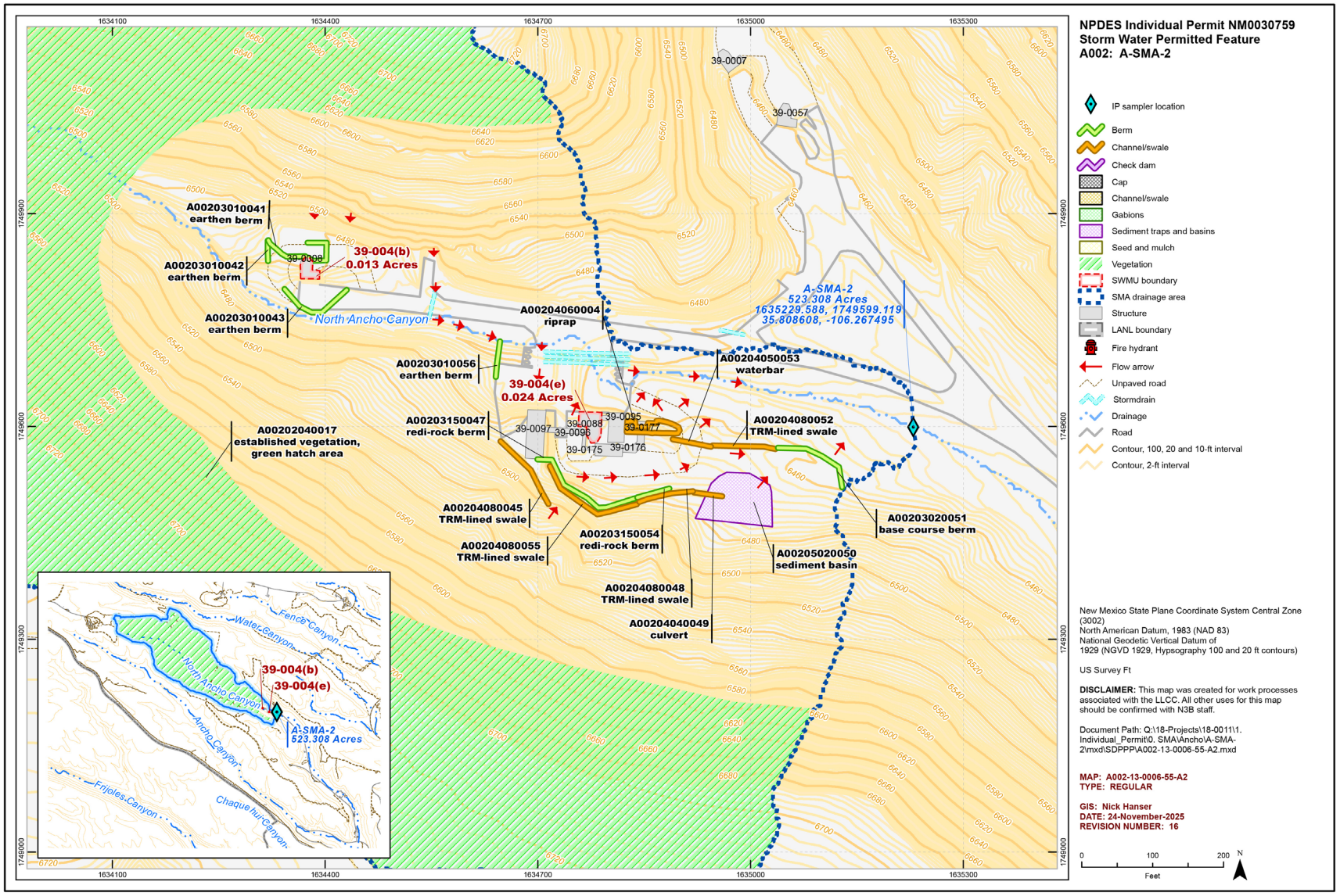


Figure 220-1 A-SMA-2 location map

221.0 A-SMA-2.5: SWMU 39-010

One historical industrial activity area, 39-010, is associated with A-SMA-2.5 (permitted feature A003). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

221.1 Site Descriptions

39-010 (N3B 2024, 703270)

SWMU 39-010 is an area used for staging soil excavated during the 1978 construction of a firing site [SWMU 39-004(e)] at TA-39. During construction of the firing site, large quantities of soil were removed and deposited in the canyon east of the firing site, forming SWMU 39-010. The site has been inactive since 1978. This soil dump, covering approximately 76,200 ft^2, was not identified in the 1990 SWMU Report (LANL 1990, 007513). However, it was noted in the RFI work plan (LANL 1993, 015316) and described in a letter notification to NMED designating a new SWMU (LANL 2001, 071215).

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 221-1.

Table 221-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
39-010	Excavated soil dump	Aluminum, beryllium, copper, iron, lead, mercury, PCBs, HE, uranium, and radionuclides

221.2 Control Measures

All active control measures in use at A-SMA-2.5 are listed in Table 221-2, and their locations are shown on the project map (Figure 221-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 221-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00302040007	Established vegetation	-	X	X	-	5-13-2013
A00303010003	Earthen berm	-	X	-	X	4-13-2010
A00303010010	Earthen berm	X	-	X	-	5-17-2017
A00303060008	Straw wattle	X	-	-	X	7-19-2013
A00303060009	Straw wattle	X	-	-	X	7-19-2013
A00304060014	Riprap	X	-	X	-	5-17-2017
A00304080015	TRM-lined swale	X	-	X	-	5-17-2017
A00307010012	Gabion	X	-	-	X	5-17-2017
A00307010013	Gabion	X	-	X	-	5-17-2017
A00307020011	Gabion blanket	X	-	X	-	5-17-2017

221.3 Inspections and Maintenance

Rain gage RG265 recorded three storm rain events (0.50 in. or more occurring within 30 min) at A-SMA-2.5 during the 2025 season, requiring three post-storm inspections, summarized in Table 221-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 221-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-112052	5-26-2025	0.53	6-5-2025	10	Yes
BMP-112965	7-1-2025	0.64	7-8-2025	7	Yes
BMP-113999	8-25-2025	0.85	9-8-2025	14	Yes

221.4 Stormwater Monitoring

221.4.1 Previous Stormwater Monitoring Results

Through Calendar Year 2024, stormwater flow was not sufficient for sample collection at A-SMA-2.5.

221.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at A-SMA-2.5 from April 9 through November 17, 2025, resulting in a monitoring season of 222 days. Eight inspections performed during the monitoring season are summarized in Table 221-5. Rain gage RG265 recorded 30 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 221-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111343	5-14-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.34/1.01 0.19/0.59 0.09/0.35 0.3/0.3
SMPLR-111922	5-29-2025	No	5-25-2025 5-26-2025	0.12/0.18 0.53/0.55
SMPLR-112135	6-5-2025	No	6-2-2025 6-3-2025 6-4-2025	0.07/0.11 0.1/0.36 0.49/0.57
SMPLR-112327	7-8-2025	No	6-11-2025 6-24-2025 6-30-2025 7-1-2025	0.13/0.13 0.15/0.39 0.23/0.25 0.64/0.65

Table 221-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-113104	7-31-2025	No	7-18-2025 7-21-2025 7-28-2025 7-30-2025	0.05/0.1 0.08/0.12 0.33/0.35 0.22/0.33
SMPLR-113529	9-8-2025	No	8-23-2025 8-24-2025 8-25-2025 8-26-2025 9-5-2025	0.09/0.48 0.12/0.32 0.85/1.54 0.09/0.15 0.24/0.44
SMPLR-114318	10-23-2025	No	9-12-2025 9-13-2025 9-19-2025 9-27-2025 9-28-2025 10-8-2025 10-11-2025 10-13-2025	0.05/0.13 0.16/0.28 0.14/0.14 0.09/0.24 0.07/0.18 0.12/0.16 0.09/0.21 0.12/0.6
SMPLR-114978	11-17-2025	No	None	None

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

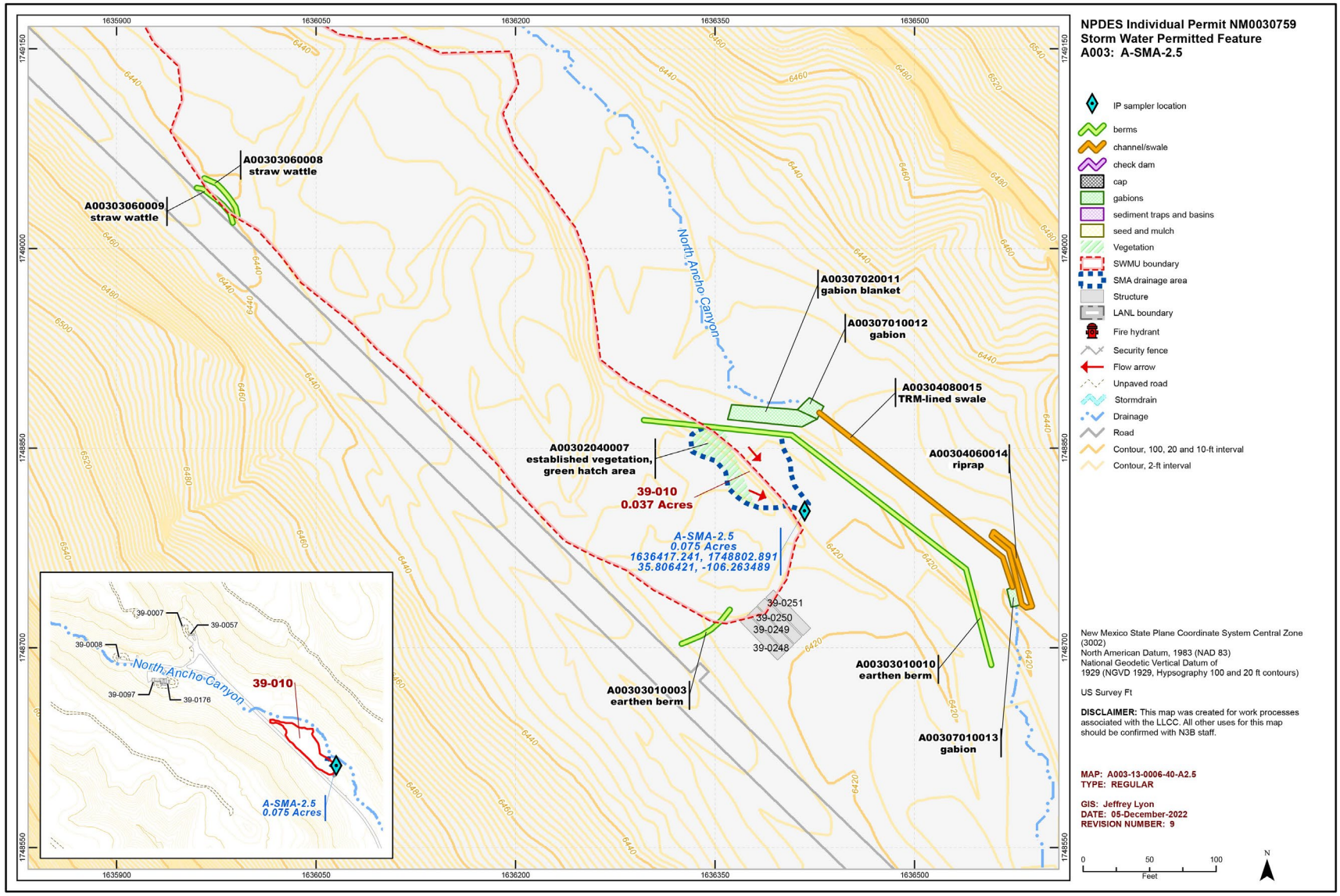


Figure 221-1 A-SMA-2.5 location map

222.0 A-SMA-2.7: AOC 39-002(c) and SWMU 39-008

Two historical industrial activity areas, 39-002(c) and 39-008, are associated with A-SMA-2.7 (permitted feature A004). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

222.1 Site Descriptions

39-002(c) (8/25/2017)

AOC 39-002(c) is a former outdoor SAA that was located on an asphalt-paved area next to the southwest corner of the gas-gun support structure (structure 39-56) at TA-39. In accordance with RCRA, SAA provisions allow generators to accumulate up to 55 gal. of hazardous waste (or 1 quart of acute hazardous waste) in containers, as long as those containers are (a) at or near any point of generation, (b) under the control of the operator, and (c) kept closed except when adding or removing waste.

Waste paper, solvent-contaminated rags (ethanol, acetone, and TCE), and vacuum grease were stored in a 55-gal. drum at the AOC 39-002(c) SAA. It is not known if this area was used for storage before it was registered as an SAA. According to the LANL RCRA storage area database dated July 2017, the AOC 39-002(c) SAA was removed in February 1994. No known or documented releases are associated with this SAA.

39-008 (8/28/2017)

SWMU 39-008 is an area of potential soil contamination from a gas-gun firing site near a Morgan shed (building 39-137) that houses a single-stage gas-gun with a 6-in.-diameter barrel. The gas gun is used for outdoor experiments; gas is used as a propellant to fire DU projectiles at targets on the cliff face. Testing at this site was conducted from 1960 to 1975, suspended for 13 yr and then resumed in 1988.

Most of the debris from the gas-gun firings is scattered over the area just west of the building, but occasionally projectiles and target fragments hit the cliff face, which is situated approximately 200 ft west of another building associated with this experimental gun (building 39-56). Photographic evidence shows that the area between the buildings and the cliff has been leveled, and the removed surface materials were pushed into a mound on the south side of the test area.

The gas gun is currently used for experimental purposes. Further investigation of SWMU 39-008 is deferred per Appendix A of the 2016 Consent Order because the site is impacted by continuing Site operations.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 222-1.

Table 222-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
39-002(c)	Storage area	Lead, PCBs, and DU
39-008	Area of potential soil contamination	Aluminum, beryllium, lead, and DU

222.2 Control Measures

All active control measures in use at A-SMA-2.7 are listed in Table 222-2, and their locations are shown on the project map (Figure 222-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 222-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00402040017	Established vegetation	-	X	X	-	5-13-2013
A00403010013	Earthen berm	-	X	-	X	5-31-2012
A00403010014	Earthen berm	-	X	-	X	5-31-2012
A00403010015	Earthen berm	-	X	-	X	5-31-2012
A00403010016	Earthen berm	-	X	-	X	5-31-2012

222.3 Inspections and Maintenance

Rain gage RG265 recorded three storm rain events (0.50 in. or more occurring within 30 min) at A-SMA-2.7 during the 2025 season, requiring three post-storm inspections, summarized in Table 222-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 222-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-112053	5-26-2025	0.53	6-5-2025	10	Yes
BMP-112966	7-1-2025	0.64	7-8-2025	7	Yes
BMP-113997	8-25-2025	0.85	9-8-2025	14	Yes

222.4 Stormwater Monitoring

222.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, baseline confirmation samples were collected on July 24 and September 4, 2011. Analytical results from these samples yielded TAL exceedances for copper (5.4 µg/L and 6.2 µg/L) and gross-alpha activity (25.4 pCi/L and 31.8 pCi/L). The complete analytical results are presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2011, NPDES Permit No. NM0030759" (LANL 2012, 211408).

Following the installation of enhanced control measures at A-SMA-2.7, a corrective-action stormwater sample was collected on September 13, 2013. Analytical results from this corrective-action monitoring sample yielded a TAL exceedance for gross-alpha activity (175 pCi/L). The complete analytical results are presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

222.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at A-SMA-2.7 from April 9 through November 21, 2025, resulting in a monitoring season of 226 days. Eight inspections performed during the monitoring season are

summarized in Table 222-4. Rain gage RG265 recorded 31 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 222-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111067	5-14-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.34/1.01 0.19/0.59 0.09/0.35 0.3/0.3
SMPLR-111926	5-29-2025	No	5-25-2025 5-26-2025	0.12/0.18 0.53/0.55
SMPLR-112139	6-5-2025	No	6-2-2025 6-3-2025 6-4-2025	0.07/0.11 0.1/0.36 0.49/0.57
SMPLR-112340	7-8-2025	No	6-11-2025 6-24-2025 6-30-2025 7-1-2025	0.13/0.13 0.15/0.39 0.23/0.25 0.64/0.65
SMPLR-113114	7-31-2025	No	7-18-2025 7-21-2025 7-28-2025 7-30-2025	0.05/0.1 0.08/0.12 0.33/0.35 0.22/0.33
SMPLR-113536	9-8-2025	No	8-23-2025 8-24-2025 8-25-2025 8-26-2025 9-5-2025	0.09/0.48 0.12/0.32 0.85/1.54 0.09/0.15 0.24/0.44
SMPLR-114326	10-23-2025	No	9-12-2025 9-13-2025 9-19-2025 9-27-2025 9-28-2025 10-8-2025 10-11-2025 10-13-2025	0.05/0.13 0.16/0.28 0.14/0.14 0.09/0.24 0.07/0.18 0.12/0.16 0.09/0.21 0.12/0.6
SMPLR-114980	11-21-2025	No	11-19-2025	0.05/0.19

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

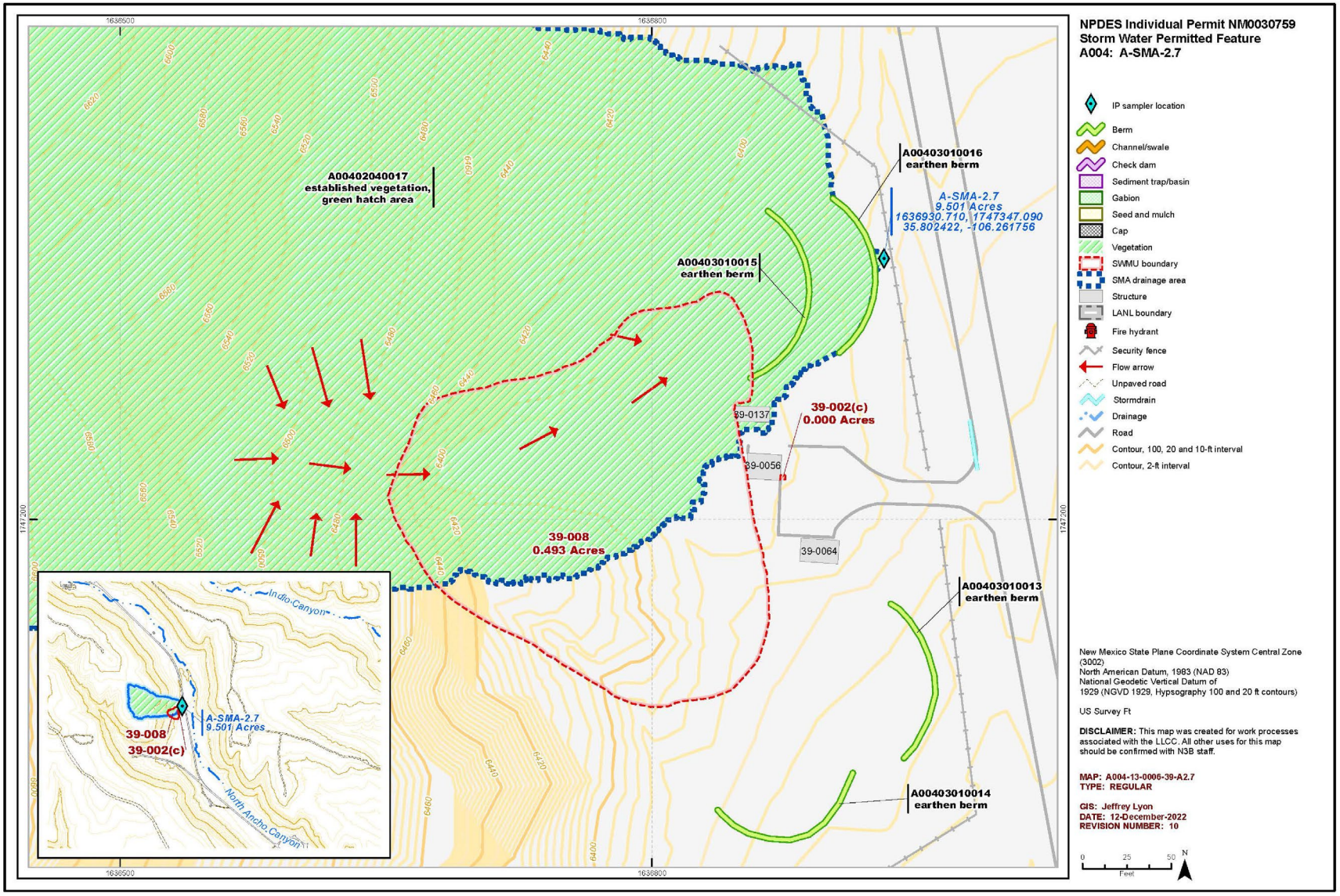


Figure 222-1 A-SMA-2.7 location map

223.0 A-SMA-2.8: SWMU 39-001(b)

One historical industrial activity area, Site 39-001(b), is associated with A-SMA-2.8 (permitted feature A005). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

223.1 Site Descriptions

39-001(b) (12/15/2022)

SWMU 39-001(b) is a former landfill that was located east of Ancho Road and structure 39-56 in North Ancho Canyon at TA-39. The 1990 SWMU Report (LANL 1990, 007513) identified the site as consisting of four trenches used in succession. Only the original trench, known as MDA Y, appears in engineering drawings, with dimensions of 148 ft × 20 ft × 12 ft deep. According to the 1990 SWMU Report, the second trench was excavated in parallel with, and west of, MDA Y, with the same dimensions, and a third trench was excavated directly south of MDA Y with dimensions of 150 ft × 40 ft × 10 ft deep. Although a fourth trench was described in the 1990 SWMU Report, it never appeared in any site photographs or engineering drawings, and the reported location of the fourth trench, east of trench 3, is in the Ancho Canyon stream channel.

The 1990 SWMU Report indicated that MDA Y was excavated in the late 1960s; however, engineering drawings indicate that trench 1 was surveyed and excavated in 1973 and used until 1976. Trench 2 was used from approximately 1976 to 1986, and trench 3 was used from 1986 to 1989. All three disposal trenches were backfilled and covered over by May 1989; historical photographs indicate trench 3 was only half full when it was backfilled in 1989.

Wastes disposed of in this landfill included firing-site debris consisting of metal, cabling, and wire, empty chemical containers, glass, wood, plastics, Styrofoam, concrete, and office waste. Waste disposed of in disposal trench 1 prior to 1976 may have included heavy metals, PCB-containing oils, HE, thorium isotopes, natural and DU, and solvents.

Based on the results of the 1993 geophysical survey, the 1997 RFI (LANL 1997, 055633) concluded that this landfill was more amorphous than the three distinct disposal trenches that had been previously reported. Excavation activities associated with the 2009 Phase I Consent Order field investigation confirmed a solitary, irregularly shaped disposal trench coincident with the anomalies identified by the 1997 RFI geophysical survey. SWMU 39-001(b) was completely excavated during the 2009 Phase I Consent Order investigation.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 223-1.

Table 223-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
39-001(b)	MDA Y	Arsenic, beryllium, cadmium, chromium, lead, mercury, PCBs, HE, and uranium

223.2 Control Measures

All active control measures in use at A-SMA-2.8 are listed in Table 223-2, and their locations are shown on the project map (Figure 223-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 223-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00502040006	Established vegetation	-	-	X	-	12-22-2022
A00503010002	Earthen berm	-	X	-	X	11-4-2010
A00508020005	Rock cap	-	X	X	-	10-14-2014

223.3 Inspections and Maintenance

Rain gage RG265 recorded three storm rain events (0.50 in. or more occurring within 30 min) at A-SMA-2.8 during the 2025 season, requiring three post-storm inspections, summarized in Table 223-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 223-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-112054	5-26-2025	0.53	6-5-2025	10	Yes
BMP-112967	7-1-2025	0.64	7-8-2025	7	Yes
BMP-113995	8-25-2025	0.85	9-8-2025	14	Yes

223.4 Stormwater Monitoring

223.4.1 Previous Stormwater Monitoring Results

A baseline confirmation-monitoring sample was collected on July 27, 2022. Analytical results from this sample yielded TAL exceedances for gross-alpha activity (669 pCi/L) and selenium (21.6 µg/L). The complete analytical results are presented in the "2022 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2023, 702681).

223.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at A-SMA-2.8 from April 9 through November 17, 2025, resulting in a monitoring season of 222 days. Eight inspections performed during the monitoring season are summarized in Table 223-4. RG265 recorded 30 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 223-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111339	5-14-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.34/1.01 0.19/0.59 0.09/0.35 0.3/0.3
SMPLR-111913	5-29-2025	No	5-25-2025 5-26-2025	0.12/0.18 0.53/0.55
SMPLR-112132	6-5-2025	No	6-2-2025 6-3-2025 6-4-2025	0.07/0.11 0.1/0.36 0.49/0.57
SMPLR-112319	7-8-2025	No	6-11-2025 6-24-2025 6-30-2025 7-1-2025	0.13/0.13 0.15/0.39 0.23/0.25 0.64/0.65
SMPLR-113089	7-31-2025	No	7-18-2025 7-21-2025 7-28-2025 7-30-2025	0.05/0.1 0.08/0.12 0.33/0.35 0.22/0.33
SMPLR-113516	9-8-2025	No	8-23-2025 8-24-2025 8-25-2025 8-26-2025 9-5-2025	0.09/0.48 0.12/0.32 0.85/1.54 0.09/0.15 0.24/0.44
SMPLR-114301	10-23-2025	No	9-12-2025 9-13-2025 9-19-2025 9-27-2025 9-28-2025 10-8-2025 10-11-2025 10-13-2025	0.05/0.13 0.16/0.28 0.14/0.14 0.09/0.24 0.07/0.18 0.12/0.16 0.09/0.21 0.12/0.6
SMPLR-114977	11-17-2025	No	None	None

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

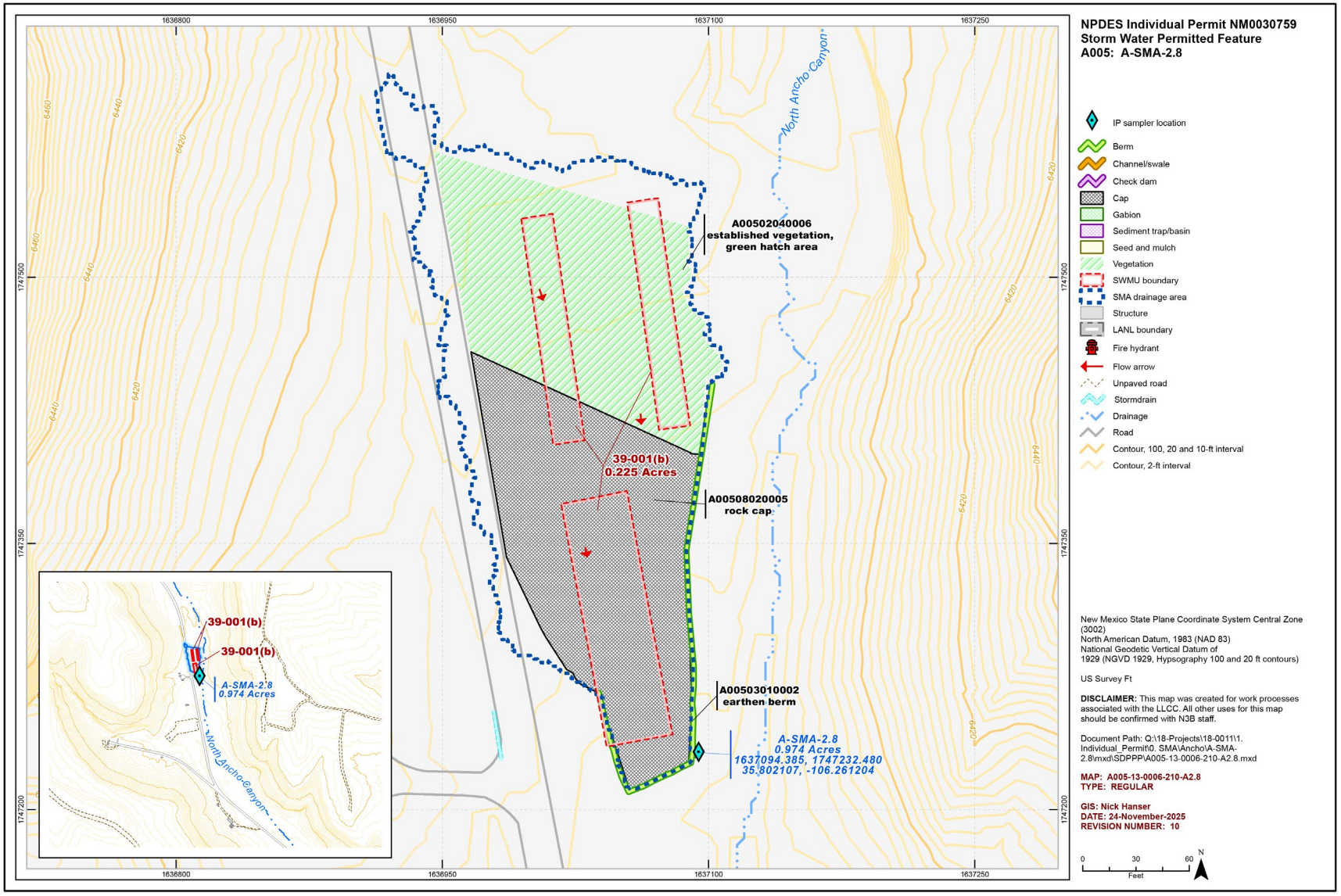


Figure 223-1 A-SMA-2.8 location map

224.0 A-SMA-3: AOC 39-002(b) and SWMU 39-004(c)

Two historical industrial activity areas, Sites 39-002(b) and 39-004(c), are associated with A-SMA-3 (permitted feature A006). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 703662) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

224.1 Site Descriptions

39-002(b) (N3B 2024, 703270)

AOC 39-002(b) consists of a former SAA that was located on a 5-ft × 5-ft concrete pad adjacent to a firing site support building (structure 39-6) [SWMU 39-004(c)] at TA-39.

Beginning in 1953, the area was used to store small quantities of paper contaminated with waste solvents (ethanol, acetone, and TCE), copper sulfate, transformer oil, vacuum pump grease, and photographic waste. The date when the SAA was established is not known; however, the SAA was removed from service in 1993. The concrete pad is intact; no staining is visible on the pad. AOC 39-002(b) is located within the blast radius of active firing site [SWMU 39-004(c)].

39-004(c) (8/25/2017)

SWMU 39-004(c) is an active firing site and active operating RCRA OD Site (structure 39-6), subject to RCRA closure requirements. The site is located in the southernmost western tributary of Ancho Canyon in the canyon bottom, between an ephemeral stream and steep hill slopes to both the north and south. The site is used for explosives experiments and for treating reactive hazardous waste by OD. The experiments conducted at this firing site are designed to expend all HE in the device.

Use of this site as a test-firing site began when TA-39 was established in 1953. Materials used in significant quantities at the TA-39 firing sites over the years include beryllium, mercury, natural and DU, lead, aluminum, copper, brass, iron, stainless steel, and various types of HE. Other materials used at TA-39 firing sites in lesser quantities include thallium, cadmium, chromium, and thorium (as naturally occurring thorium-232). In addition, firing assemblies were covered with dielectric oil (about 100 gal. per shot), much of which ended up in the soil of the firing pad. This oil may have contained PCBs.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 224-1.

Table 224-1 POCs Known or Suspected to Have Been Used Historically at the Sites

Site	Potential POC Source	Potential POCs
39-002(b)	Storage area	Silver, cyanide, and PCBs
39-004(c)	Firing site	Aluminum, beryllium, cadmium, chromium, copper, lead, mercury, thallium, PCBs, HE, and uranium

224.2 Control Measures

All active control measures in use at A-SMA-3 are listed in Table 224-2, and their locations are shown on the project map (Figure 235-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

In 2025, changes were made to the list of existing control measures associated with the SMA that are not associated with corrective action. More information is provided in the inspection and maintenance section of this SMA update and in Attachment 1, located at the end of this volume.

Table 224-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00602040018	Established vegetation	X	-	X	-	5-13-2013
A00603120017	Rock berm	-	X	-	X	5-23-2012
A00603150027	Redi-rock berm	-	X	-	X	5-28-2015
A00603150035	Redi-rock berm	X	-	-	X	5-30-2017
A00604010022	Earthen channel/swale	X	-	X	-	5-28-2015
A00604030025	Rock channel/swale	-	X	X	-	5-28-2015
A00604060024	Riprap	X	-	X	-	5-28-2015
A00606010010	Rock check dam	X	-	-	X	4-5-2010
A00606010011	Rock check dam	X	-	-	X	4-5-2010
A00606010019	Rock check dam	X	-	-	X	11-26-2013
A00606010038	Rock check dam	-	X	-	X	8-25-2021
A00608020029	Rock cap	-	-	X	-	5-28-2015
A00608020030	Rock cap	-	X	X	-	8-9-2016
A00608020036	Rock cap	X	-	X	-	5-30-2017

224.3 Inspections and Maintenance

Rain gage RG265 recorded three storm rain events (0.50 in. or more occurring within 30 min) at A-SMA-3 during the 2025 season, requiring three post-storm inspections, summarized in Table 224-3. Maintenance activities conducted at A-SMA-3 in 2025 are summarized in Table 224-4. No other control measure inspections or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 224-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-112055	5-26-2025	0.53	6-5-2025	10	Yes
BMP-112968	7-1-2025	0.64	7-8-2025	7	Yes
BMP-113993	8-25-2025	0.85	9-8-2025	14	Yes

Table 224-4 Maintenance Activities Conducted during 2025

Maintenance Reference	Maintenance Conducted	Maintenance Date	Response Time	Response Discussion
BMP-114626 (follow up to BMP-112055)	Re-defined spillway and down gradient side of rock check dam A00606010038.	10-23-2025	140 days	Maintenance need was initially identified on 6-5-2025. Field activities to address maintenance using native rock in the area were tentatively scheduled to be completed by 8-14-2025 but were cancelled when the decision was made to use externally sourced riprap material. BMP-114626 was issued to field teams for execution on 9-29-2025 and scheduled for completion by 10-13-2025. Material acquisition delays were also encountered in late September. The control was operating effectively in the interim.

224.4 Stormwater Monitoring

224.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 25, 2013. Analytical results from this sample yielded TAL exceedances for aluminum (997 µg/L), copper (245 µg/L), gross-alpha activity (136 pCi/L), mercury (9.04 µg/L), total PCBs (3.06 µg/L), and selenium (12.1 µg/L). Complete analytical results are presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

Following the installation of enhanced control measures at A-SMA-3, a corrective-action stormwater sample was collected on August 10, 2018. Analytical results from this sample yielded TAL exceedances for copper (50.2 µg/L), gross-alpha activity (90.8 pCi/L), and total PCBs (3.4 µg/L). Complete analytical results are presented in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

A partial volume confirmation-monitoring sample was collected on September 14, 2023. There were no TAL exceedances in this sample. The complete analytical results are presented in the "2023 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2024, 703196) and were included in the SSD in the "2023 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2024, 703133).

Confirmation-monitoring samples were collected on August 26 and September 5, 2024. Analytical results from the August sample yielded a TAL exceedance for copper (6.94 µg/L), while the September sample yielded no TAL exceedances. The complete analytical results are presented in "2024 Update to

the Site Discharge Pollution Prevention Plan – Overview, NPDES Permit no. NM0030759" (N3B 2025, 703800); the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814); and "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

224.4.2 Stormwater Monitoring during 2025

No stormwater monitoring was conducted at A-SMA-3 in 2025. The SMA was in Corrective Action status, as discussed in the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814), and the "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

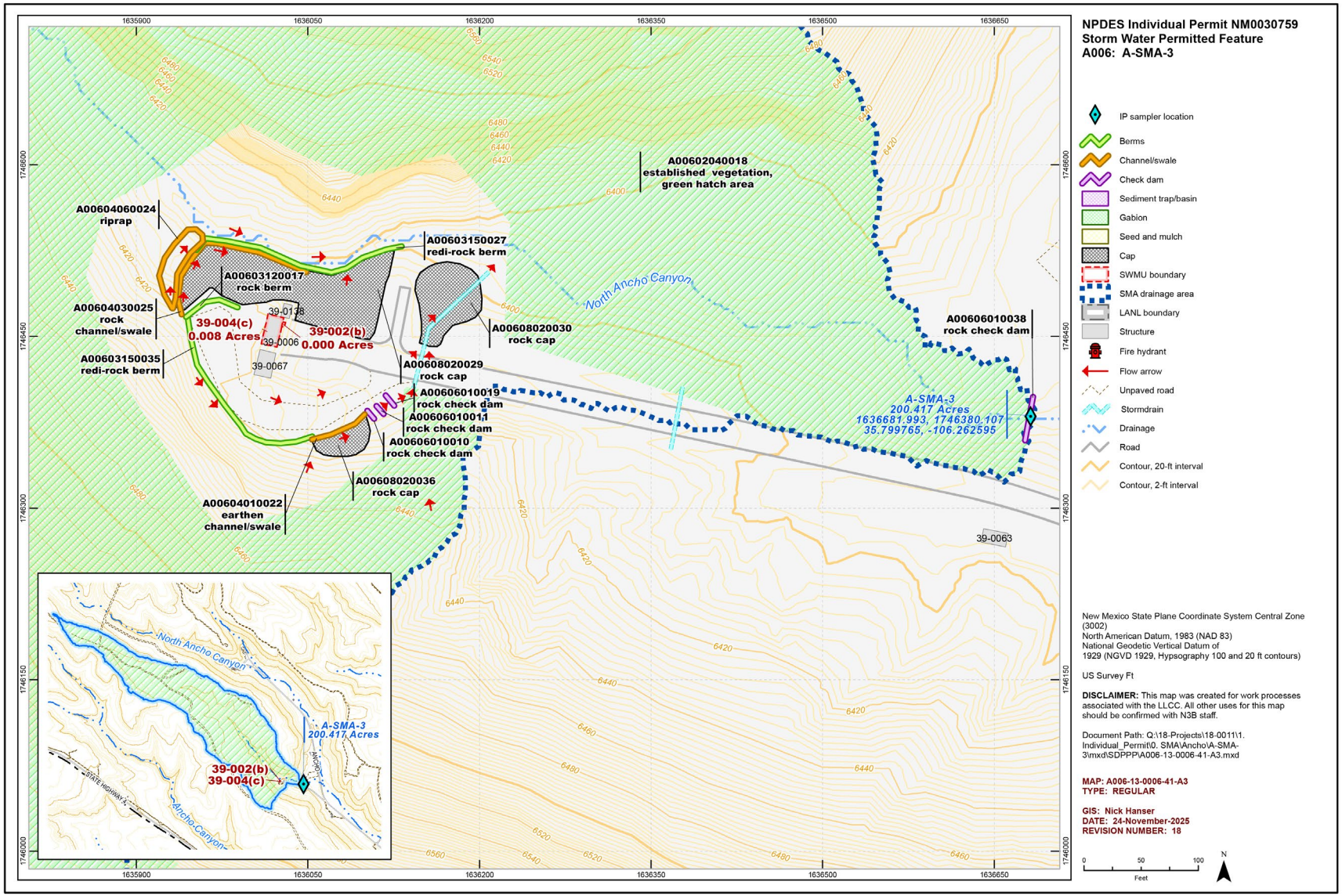


Figure 224-1 A-SMA-3 location map

225.0 A-SMA-3.5: SWMU 39-006(a)

One historical industrial activity area, Site 39-006(a), is associated with A-SMA-3.5 (permitted feature A007). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

225.1 Site Descriptions

39-006(a) (N3B 2024, 703270)

SWMU 39-006(a) consists of a septic system with inactive and active components located east and south of former building 39-2 at TA-39. The 1990 SWMU Report (LANL 1990, 007513) describes SWMU 39-006(a) as an active septic system consisting of a septic tank (structure 39-104), a former septic tank (former structure 39-12), inlet and outlet drainlines, a siphon box, distribution boxes, a subsurface sand filter, and a former outfall that served as a sanitary waste system for former building 39-2. The original/inactive portion of the septic system was constructed in 1952, consisting of a septic tank (former structure 39-12) measuring approximately 12 ft long × 7 ft wide × 6 ft deep, 4-in.- and 6-in.-diameter VCP inlet and outlet drainlines, a subsurface sand filter, three manholes (structures 39-85, 39-86, and 39-87), and an outfall located approximately 225 ft south of the original subsurface sand filter. Septic tank 39-12 was located 100 ft east of former building 39-2 and was connected to a sand filter north of NM 4. The sand filter discharged to an outfall south of NM 4 in North Ancho Canyon. The system received discharges only from building 39-2. Photographic-processing chemicals from former building 39-2 were routinely discharged to septic tank 39-12, eventually causing the septic tank to malfunction. To correct the problem, a chemical seepage pit was installed directly north of former septic tank 39-12 in 1973 to manage the photographic-processing chemicals. The seepage pit handled approximately 75 gal./yr until 1992. The chemical seepage pit consisted of an open pit approximately 12 ft deep and filled with cobble, and a corrugated metal pipe approximately 1 ft in diameter runs vertically through the center of the seepage pit.

In 1973, the entire septic system was upgraded when septic tank 39-12 was enlarged to a capacity of 1860-gal., and a new subsurface sand filter and outfall were installed on the south side of NM 4; use of the original subsurface sand filter and outfall were discontinued at that time. The upgraded septic system consisted of the expanded septic tank 39-12, 4-in.- and 6-in.-diameter VCP inlet and outlet drainlines, a siphon box, two distribution boxes, a new subsurface sand filter, three manholes (structures 39-85, 39-86, and 39-87), and a new outfall located south of NM 4 that continued to serve only former building 39-2.

In 1984, septic tank 39-12 was abandoned in place, and a new 2400-gal. septic tank (structure 39-104) was installed as part of the existing septic system. The new septic tank 39-104 served former buildings 39-2, 39-100, 39-101, 39-103, and 39-107, and buildings 39-62 and 39-98 and discharged to the subsurface sand filter and the outfall located south of NM 4. Septic tank 39-104, the new sand filter south of NM 4, and the still active drainlines are part of the SWMU 39-006(a) active components. In 1989, the 6-in.-diameter VCP outlet from the new sand filter was plugged, eliminating discharge to the outfall. Buildings 39-2, 39-100, 39-101, 39-103, and 39-107 underwent D&D and were removed at various dates. Buildings 39-62 and 39-98 remain in place. The original/inactive septic tank (former structure 39-12), inactive chemical seepage pit, and the original subsurface sand filter were removed during 2009 Phase I Consent Order investigation field activities.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 225-1.

Table 225-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
39-006(a)	Septic system	Silver, inorganic and organic chemicals, and cyanide

225.2 Control Measures

All active control measures in use at A-SMA-3.5 are listed in Table 225-2, and their locations are shown on the project map (Figure 225-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 225-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00702040003	Established vegetation	-	X	X	-	5-13-2013
A00703060007	Straw wattle	X	-	-	X	12-21-2020
A00703060009	Straw wattle	-	X	-	X	10-28-2024

225.3 Inspections and Maintenance

A-SMA-3.5 was in long-term stewardship in 2025, subject to inspection requirements outlined in the Permit Part I.B.8.c. Rain gage RG340 recorded one storm event equal to or greater than a 3-yr, 24-hr storm event in 2025, requiring one post-storm inspection, summarized in Table 225-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 225-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	3-yr, 24-hr Storm Total (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114060	8-25-2025	1.57	9-5-2025	11	Yes

225.4 Stormwater Monitoring

225.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 25, 2013. Analytical results from this sample yielded no TAL exceedances and were presented in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

A second baseline-confirmation sample was collected on July 12, 2022. Analytical results from this sample yielded TAL exceedances for gross-alpha activity (272 pCi/L) and total PCBs (0.00155 µg/L). Complete analytical results from that sample were presented in the "2022 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2023, 702681).

In the initial SIP (N3B 2023, 702792; EPA 2023, 704169) for the 2022 Permit, A-SMA-3.5 screened into Long-Term Stewardship status per Permit Part 1.C.3, effective July 5, 2023.

225.4.2 Stormwater Monitoring during 2025

No stormwater monitoring was conducted at A-SMA-3.5 in 2025. The SMA continued in Long-Term Stewardship status, as discussed in the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814), and "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

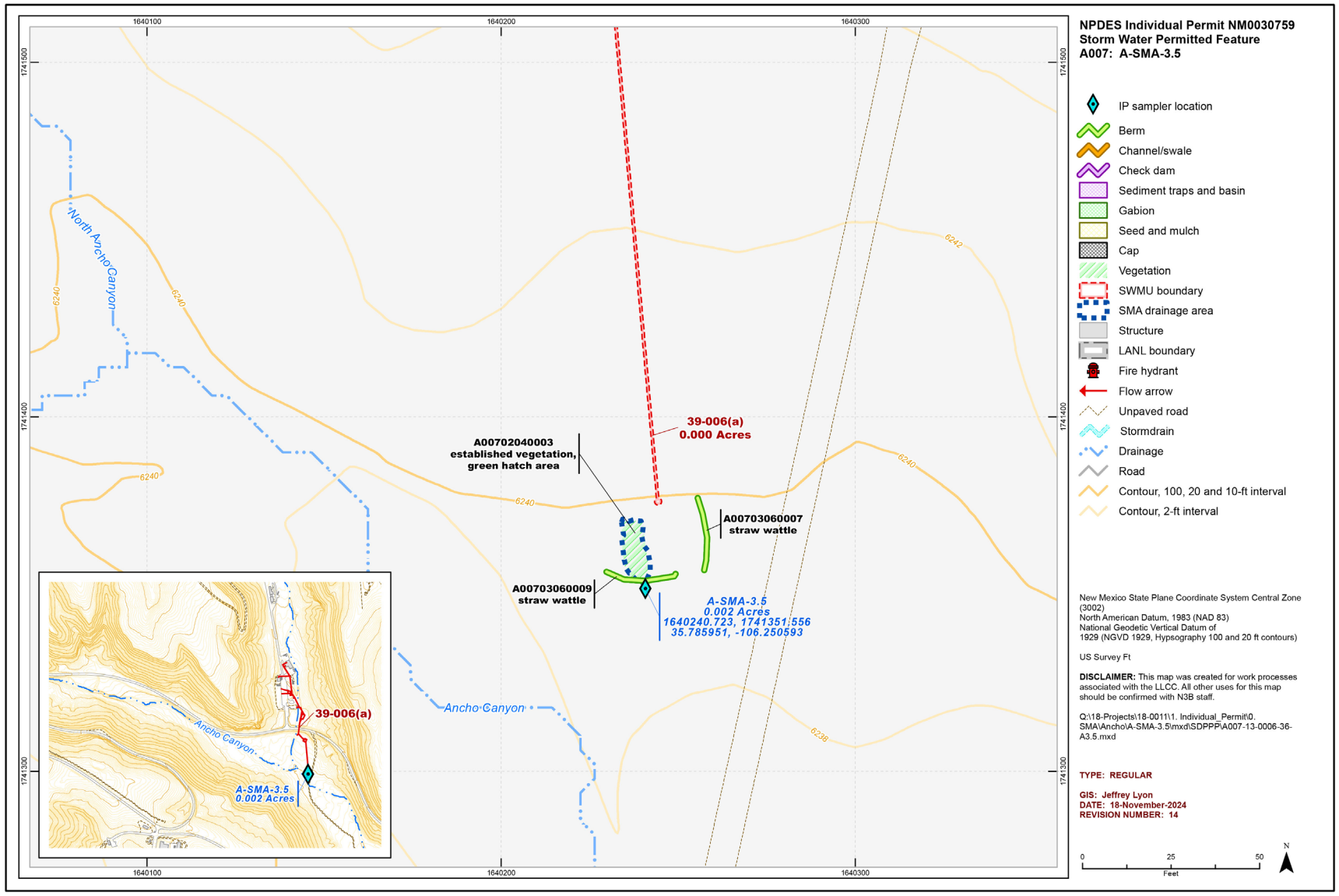


Figure 225-1 A-SMA-3.5 location map

226.0 A-SMA-4: SWMU 33-010(d)

One historical industrial activity area, Site 33-010(d), is associated with A-SMA-4 (permitted feature A008). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

226.1 Site Descriptions

33-010(d) (N3B 2023, 702802)

SWMU 33-010(d) is a former canyon-side disposal area situated in the northeastern portion of East Site at TA-33. This site is located on a steep slope directly north of the former gun-firing site berms [SWMU 33-006(b)]. Debris scattered along the canyon rim and in a small drainage leading to Ancho Canyon consisted of concrete blocks, empty glass specimen vials, pieces of foam, cable, and metal cans. The date this debris was deposited at the site is not known; however, operations at East Site occurred between 1948 and 1972 (LANL 1995, 243475, p. 10). Much of the debris was removed from SWMU 33-010(d) during the 1984 surface cleanup of East Site.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Sites are listed in Table 226-1.

Table 226-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-010(d)	Surface disposal site	Metals, organic chemicals, and radionuclides

226.2 Control Measures

All active control measures in use at A-SMA-4 are listed in Table 226-2, and their locations are shown on the project map (Figure 226-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 226-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00802040010	Established vegetation	-	X	X	-	5-6-2013
A00803010007	Earthen berm	X	-	-	-	4-12-2010
A00803010009	Earthen berm	-	X	-	X	5-20-2011
A00806010003	Rock check dam	X	-	-	X	4-7-2010
A00806010004	Rock check dam	-	X	-	X	4-7-2010

226.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at A-SMA-4 during the 2025 season, requiring one post-storm inspection, summarized in Table 226-3. No other control

measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 226-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-113977	8-25-2025	0.96	9-4-2025	10	Yes

226.4 Stormwater Monitoring

226.4.1 Previous Stormwater Monitoring Results

SWMU 33-010(d) is monitored within A-SMA-4. A baseline stormwater sample was collected on July 23, 2018. Analytical results from this sample yielded a TAL exceedance for gross-alpha activity (122 pCi/L) and are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

226.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at A-SMA-4 from April 16 through October 29, 2025, resulting in a monitoring season of 196 days. Nine inspections performed during the monitoring season are summarized in Table 226-4. RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 226-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111462	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111724	5-27-2025	No	5-6-2025 5-9-2025 5-25-2025 5-26-2025	0.04/0.27 0.22/0.23 0.17/0.23 0.3/0.3
SMPLR-112115	6-20-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112600	7-29-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17
SMPLR-113476	8-26-2025	No	7-30-2025 8-23-2025 8-24-2025 8-25-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57

Table 226-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-114103	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68
SMPLR-114397	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114454	10-7-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114782	10-29-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

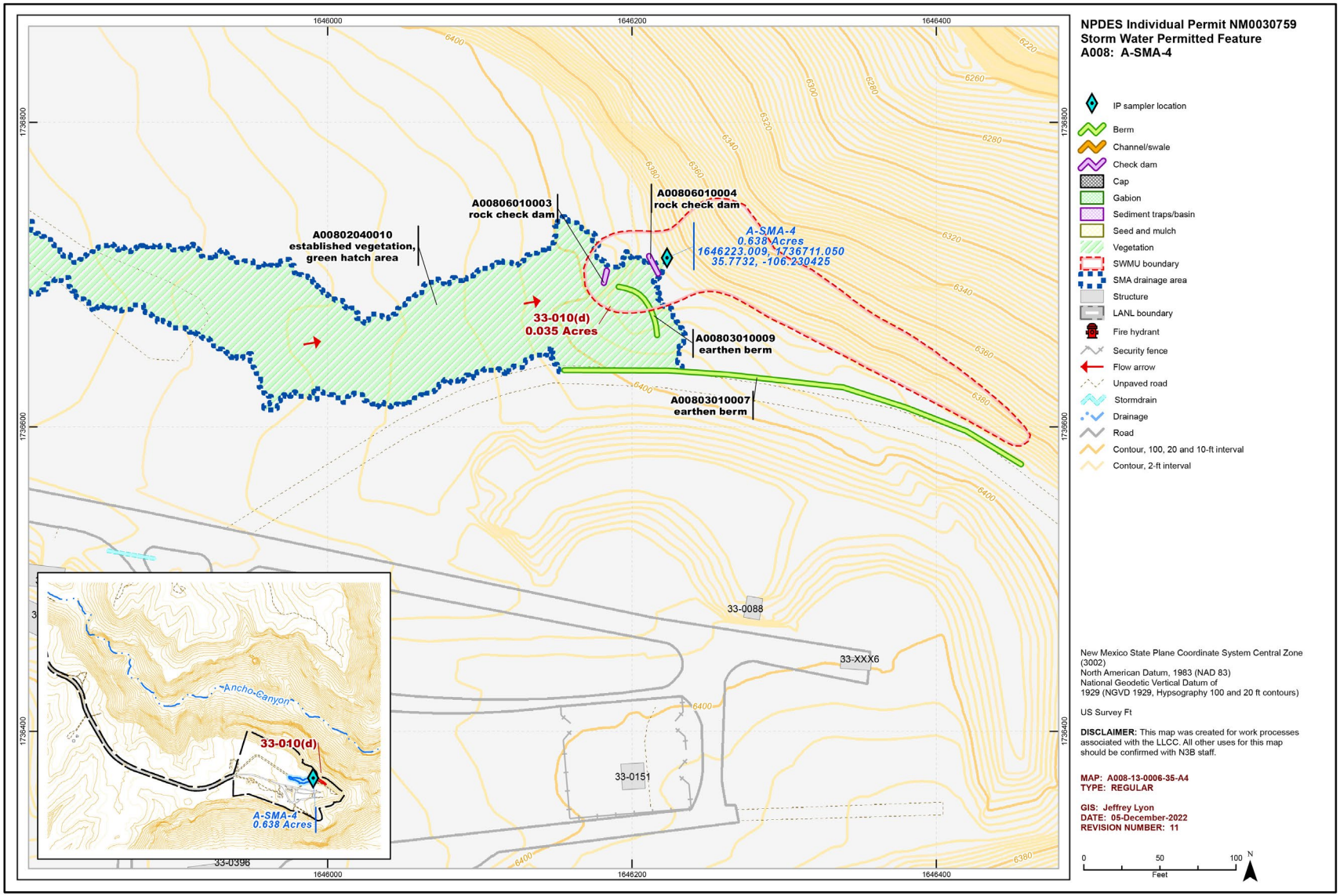


Figure 226-1 A-SMA-4 location map

227.0 A-SMA-6: SWMUs 33-004(k), 33-007(a), 33-010(a), and 33-010(b)

Four historical industrial activity areas, Sites 33-004(k), 33-007(a), 33-010(a), and 33-010(b), are associated with A-SMA-6 (permitted feature A009). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

227.1 Site Descriptions

33-004(k) (N3B 2023, 702802)

SWMU 33-004(k) is described in the 1990 SWMU Report (LANL 1990, 007513) as two parallel drainlines for structure 33-87 that merged and discharged to a single outfall located near gun mount 33-116. The outfall reportedly received discharges from a toilet, a sink, floor drains, and an electrical water cooler within the structure. The engineering drawing C-3304, sheet number 3 (stamped "As Built" in 1955) for structure 33-87 depicts a CI drainline exiting the south wall of the structure and extending approximately 125 ft southeast of the structure to an inactive outfall (LASL 1955, 600499). Engineering drawing C34651-00001 from 1967 (LASL 1967, 602835) shows the planned extension of the 8-in. CMP to a ditch and outfall southeast of control bunker 33-87. Structure 33-87 was constructed in 1955 to support firing site experiments that were conducted until the early 1970s. Control bunker 33-87 was constructed in 1955 as a bunkered concrete structure covered on all sides and the roof with earthen fill to support firing site tests that were conducted until the early 1970s. There is no documented use of hazardous or radioactive materials within control bunker 33-87.

Attempts to locate the drainline and outfall in 1994 and 1995, using geophysics and test trenches, were unsuccessful. An inspection of the structure performed in 1996 revealed that no floor drains existed in the structure. The sink and toilet in the structure discharge to septic tank 33-96 [SWMU 33-004(c)], located north of the structure.

33-007(a) (N3B 2023, 702802)

SWMU 33-007(a) is a former gun-firing site consisting of three gun mounts (structures 33-116 and 33-135 and former structure 33-117), two former catcher boxes (former structures 33-118 and 33-136), and a former recoil box, within East Site at TA-33. Concrete gun mounts 33-116 and 33-135 were located at the west end of the site, and the former catcher boxes were located at the east end. A sandbag barricade was located east of the catcher boxes. The recoil box was located immediately west of gun mount 33-116.

Firing-site activities began in the early 1950s and included firing projectiles from large cannons into the catcher boxes filled with vermiculite and sand (LANL 1995, 051903). Other activities included experiments using scintillation fluids and x-rays. Cobalt-60 was used in some of the firing site activities (LANL 1992, 007671).

Firing-site activities ceased in 1972 (LANL 1995, 051903). In 1984, the catcher boxes and their contents were removed and disposed of in a landfill [SWMU 33-008(b)], located at East Site (Buhl 1988, 009726).

33-010(a) (N3B 2023, 702802)

SWMU 33-010(a) is an inactive surface disposal site located southeast of structure 33-151 on the slope at the eastern edge of East Site at TA-33. Much of the debris disposed of at this site was associated with the initial clearing of East Site and included dead tree trunks, rocks, and scraped earth. Other debris, such as metal scrap, timber, and plastic foam, is associated with firing-site operations conducted from 1955 to 1972. Debris was scattered at the rim of White Rock Canyon and extends approximately 15 ft below the canyon rim.

33-010(b) (N3B 2023, 702802)

SWMU 33-010(b) is a former canyon-side disposal site that was located on a narrow ledge in the middle of a 60-ft cliff at the southern edge of East Site at TA-33. This disposal area consisted of a large pile of metal turnings, strapping strips, timbers, and asbestos boards (LANL 1996, 063065). The debris was likely disposed of between 1947 and 1972. The ledge is approximately 10 ft to 15 ft wide. At the base of the cliff, a succession of steep slopes and cliffs extends into White Rock Canyon.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 227-1.

Table 227-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-004(k)	Drainline and outfall associated with building 33-87	No known POCs
33-007(a)	Firing range (inactive)	Beryllium, cadmium, lead, HE, tritium, and uranium
33-010(a)	Surface disposal site	Metals, beryllium, lead, organic chemicals, and radionuclides
33-010(b)	Surface disposal site	Metals, asbestos, and radionuclides

227.2 Control Measures

All active control measures in use at A-SMA-6 are listed in Table 227-2, and their locations are shown on the project map (Figure 227-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Enhanced controls were certified and submitted to EPA on October 16, 2025, as part of corrective action, as described in "NPDES Permit No. NM0030759 - Certification of Installation of Enhanced Control Measures for A-SMA-6, CHQ-SMA-6, and W-SMA-5" (N3B 2025, 703941). Photographs of the enhanced controls are available at https://ext.em-la.doe.gov/IPS/Home/ConstructionCertifications.

Table 227-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00902040023	Established vegetation	-	X	X	-	5-6-2013
A00903010024	Earthen berm	-	X	X	X	8-12-2025
A00903140025	Coir log	-	X	X	X	8-12-2025

Table 227-2 Active Control Measures (continued)

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
A00904020007	Concrete/asphalt channel/swale	-	X	X	-	6-1-2009
A00904060005	Riprap	-	X	X	-	4-1-2009
A00906010008	Rock check dam	-	X	-	X	6-1-2009
A00906010009	Rock check dam	-	X	-	X	6-1-2009
A00906010013	Rock check dam	X	-	-	X	4-7-2010
A00906010014	Rock check dam	-	X	-	X	4-7-2010
A00906010015	Rock check dam	-	X	-	X	4-7-2010
A00906010016	Rock check dam	-	X	-	X	4-7-2010
A00906010017	Rock check dam	-	X	-	X	4-7-2010
A00906010018	Rock check dam	-	X	-	X	4-7-2010

227.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at A-SMA-6 during the 2025 season, requiring one post-storm inspection, summarized in Table 227-3. All other control measure inspections conducted at A-SMA-6 in 2025 are summarized in Table 227-4. No maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 227-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-113975	8-25-2025	0.96	9-4-2025	10	Yes

Table 227-4 Other Control Measure Inspections during 2025

Inspection Type	Inspection Reference	Inspection Date	Summary of Findings
Control Measure Verification	BMP-113662	8-12-2025	Control installation is satisfactory, certification documentation for installation of enhanced controls as a corrective action can be prepared.

227.4 Stormwater Monitoring

227.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on August 4, 2013. Analytical results from this sample yielded TAL exceedances for copper (5.86 µg/L) and gross-alpha activity (29.6 pCi/L). Complete analytical results from those samples are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

Confirmation-monitoring samples were collected on May 22 (partial volume) and August 8, 2023. Analytical results from these samples yielded TAL exceedances for total PCBs (0.00974 µg/L and 0.524 µg/L, respectively) and for total aluminum (7310 µg/L and 6170 µg/L, respectively). The complete analytical results are presented in the "2023 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2024, 703196) and were included in the SSD in the "2023 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2024, 703133).

A confirmation-monitoring sample was collected on July 24, 2024. Analytical results from this sample yielded no TAL exceedances. The complete analytical results are presented in "2024 Update to the Site Discharge Pollution Prevention Plan – Overview, NPDES Permit no. NM0030759" (N3B 2025, 703800); in the July 2025 submittal of the response to EPA's comments on the SIP, dated April 29, 2025 (N3B 2025, 703881; EPA 2025, 703814); and "2024 Annual Sampling Implementation Plan, NPDES Permit No. NM0030759, Revision 1" (N3B 2025, 703881; EPA 2025, 703922).

227.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at A-SMA-6 from April 16 through October 29, 2025, resulting in a monitoring season of 196 days. Twelve inspections performed during the monitoring season are summarized in Table 227-5. RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered. Soil disturbance associated with enhanced control installation was not significant and did not require shutdown of the sampling equipment at this SMA.

Table 227-5 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111463	5-5-2025	No	5-4-2025	0.26/0.95
SMPLR-111725	5-6-2025	No	5-5-2025	0.28/0.72
SMPLR-111793	5-12-2025	No	5-6-2025 5-9-2025	0.04/0.27 0.22/0.23
SMPLR-111897	5-27-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112116	6-4-2025	No	6-2-2025 6-3-2025	0.12/0.18 0.21/0.64
SMPLR-112269	7-17-2025	No	6-4-2025 6-24-2025	0.14/0.23 0.13/0.39
SMPLR-113247	8-13-2025	No	7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.14/0.16 0.11/0.12 0.08/0.17 0.07/0.13
SMPLR-113706	8-26-2025	No	8-23-2025 8-24-2025 8-25-2025	0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114104	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68

Table 227-5 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-114398	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114455	10-7-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114783	10-29-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

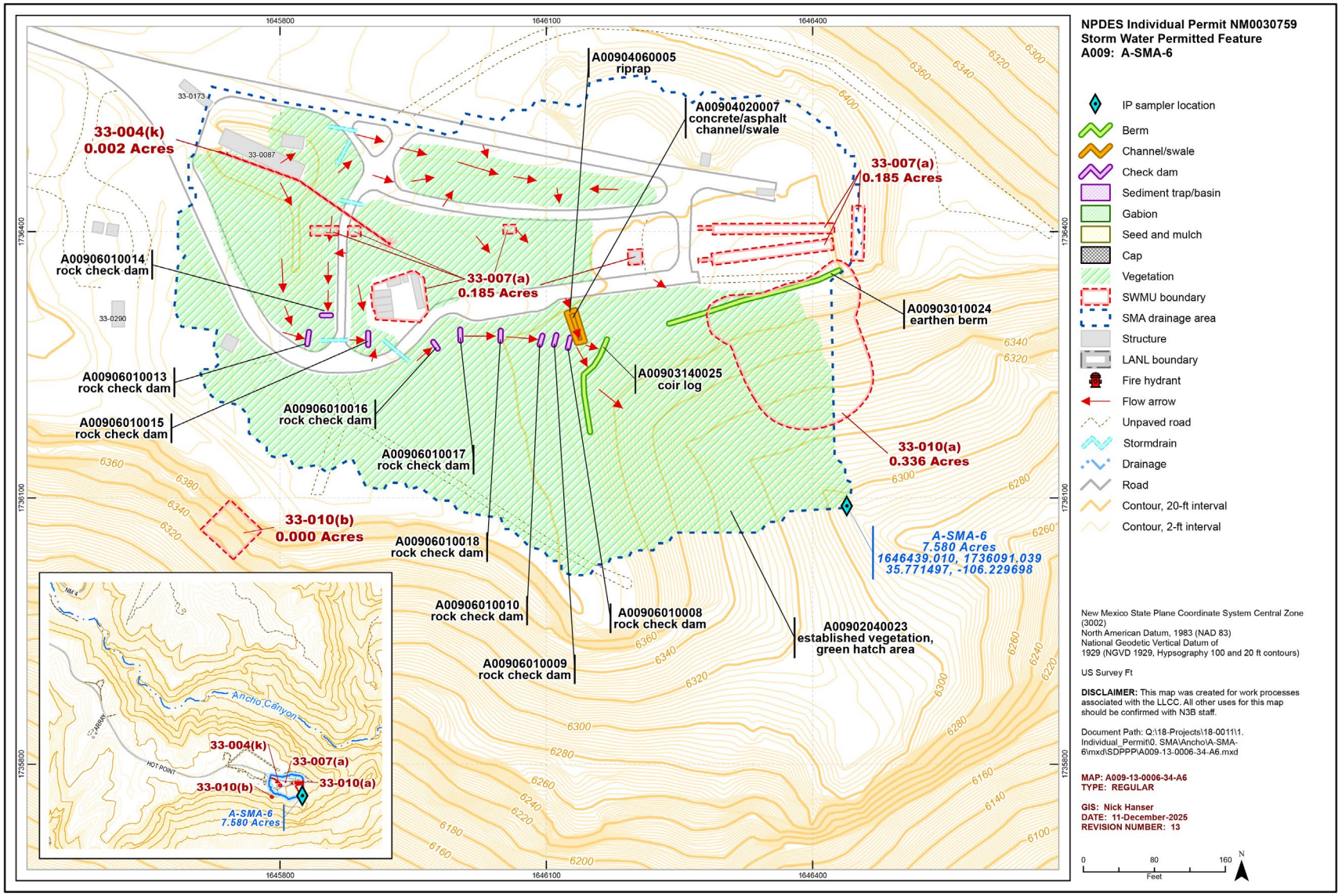


Figure 227-1 A-SMA-6 location map

228.0 CHQ-SMA-0.5: SWMUs 33-004(g), 33-007(c), and 33-009

Three historical industrial activity areas, Sites 33-004(g), 33-007(c), and 33-009, are associated with CHQ-SMA-0.5 (permitted feature Q001). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

228.1 Site Descriptions

33-004(g) (N3B 2020, 701046)

SWMU 33-004(g) is an inactive drainline and outfall that discharged wastewater from building 33-16 at Area 6. The outfall is located at the end of a VCP that runs west approximately 50 ft from the northwest corner of building 33-16. The pipe daylights at the edge of a level area above a drainage channel that leads to a tributary of Chaquehui Canyon. The ground surface below the outfall slopes steeply down to the tributary channel, which is approximately 70 ft lower than the outfall. A culvert under a roadway, approximately 60 ft southwest of the outfall, receives runoff from most of the paved portion of Area 6.

Building 33-16 was constructed in 1949, as a gun building for initiator tests. It housed a gas gun that was used to fire projectiles, as well as electronic equipment used to measure neutron production. Large-bore (2-in.- to 5-in. -diameter) guns were also mounted on concrete pads around building 33-16 and used to fire projectiles containing initiator test assemblies. These activities continued until 1955.

Photographs may have been developed in building 33-16 or in a small trailer parked next to the drainage from the site (LANL 1992, 071262). In 1956, building 33-16 was used to make and machine laminating materials that contained barium, lead, titanium, and zinc (Milford 1956, 007934). Toxic fumes were reportedly released from a fume hood in the building used to cure epoxy resins (Hyatt 1957, 007939). Building 33-16 later was used as a library and storage building and has been empty since 1991.

According to the 1990 SWMU Report, building 33-16 was originally built for office space and was converted to the gun-firing building in 1961 (LANL 1990, 007513). A long-time TA-33 staff member reported that the drainline from building 33-16 also served two trailers that were parked on the pad north of the building when Area 6 was occupied. One trailer was used for assembly, and the other contained a darkroom (Hoard 1991, 009734).

In 1992, a study of drains and discharges at TA-33 was conducted to identify all sources of discharges from buildings throughout TA-33. This study identified no discharges from building 33-16 (Santa Fe Engineering, Ltd. 1992, 062036). Thus, the source of the reported discharges from the SWMU 33-004(g) outfall is not known.

33-007(c) (N3B 2024, 703265)

SWMU 33-007(c) consists of two abandoned gun-firing areas associated with the initiator tests conducted at Area 6 in the west-central portion of TA-33.

The first gun-firing area included a gun building (former structure 33-16), a gun mount (structure 33-64), and an earthen berm (structure 33-60). Structure 33-16 was completed in 1949 and housed an air gun, and then electronic equipment, to measure neutron production in gun-type initiators containing beryllium and polonium-210. Gun sizes with bore diameters ranging from 4-in. to 8-in. fired projectiles into berms where two 6-ft × 6-ft catcher boxes constructed of wood timbers were embedded in the north end of berm structure 33-60. Each catcher box contained soil, wood chips, and vermiculite.

The second gun-firing area included a large gun (structure 33-65), a hillside embankment (structure 33-61), and two barricades (structures 33-62 and 33-72), located north and east of the gun.

One concrete firing pad was located immediately west of structure 33-16, on which a large bore gun was mounted. The pad measured 6 ft × 10 ft and was surrounded by a concrete apron. The other two concrete firing pads were located in a level area excavated into a basaltic cinder cone, approximately 100 ft southwest of structure 33-16. Two wooden barricades constructed of 8-in. × 8-in. timbers are located north and east of the shot pads. This area was used to test nuclear gun mockups. A 4-in. to 5-in. bore gun was used to fire projectiles into the back of the excavation. The back of the excavation currently extends about 75 ft farther back than when the site was used (Hoard 1991, 009734).

The two catcher boxes were located approximately 20 ft south of structure 33-16 and measured approximately 6 ft × 6 ft, were constructed of timber, and were filled with soil, wood chips, and vermiculite. Guns with a 2-in.- to 5-in.- bore diameter were placed on the concrete pads and used to fire projectiles containing test assemblies into targets placed in front of the catcher boxes. Materials used in the projectiles included beryllium, polonium-210, uranium, copper, lead, tungsten, and stainless steel (Hoard 1991, 009733). The projectiles frequently cracked open, contaminating the pads and surrounding area with polonium-210. Contaminated areas on the guns and pads were painted with lead-based paint to fix surface contamination (LANL 1992, 007671).

A 1951 memorandum describes a test at Area 6 that resulted in a release of radioactive material from a projectile. The site was cleaned up using a bulldozer to scrape away the contaminated soil and embankment (Buckland 1951, 007845). A 1954 memorandum describes decontamination of one of the Area 6 gun barrels. The memorandum describes removing loose material and leaving impregnated spots as high as 1 million cpm (Jordan 1954, 007918). Contaminated surface soil was bulldozed from the shot area into the adjacent canyon (LASL 1954, 107465).

Shots were discontinued at Area 6 by 1955. In 1956, structure 33-16 was used to make and machine laminating materials containing barium, titanium, lead, and zinc, using epoxy resins. An exhaust blower and stack were installed along with an emissions stack. The buildings in Area 6 have been vacant since the late 1950s.

The cinder cone has been further excavated. Currently, an aluminum tower (structure 33-192) is used for atmospheric physics monitoring within the excavated portion of the cinder cone.

33-009 (N3B 2020, 701046)

SWMU 33-009 consists of an inactive surface disposal area located at Area 6 in the northwest portion of TA-33. The disposal site measures approximately 100 ft long × 75 ft wide and was leveled into the side of a natural basaltic cinder cone and includes an area that extends approximately 80 ft down the slope of the cinder cone. The slope continues below the disposal site until it reaches a tributary of Chaquehui Canyon.

The debris within this surface disposal area is believed to be associated with the activities at a nearby former gun-firing site [SWMU 33-007(c)]. This gun-firing site operated from 1949 to 1955. When the firing area became contaminated as a result of firing activities, contaminated soil and debris was bulldozed over the edge of the canyon. SWMU 33-009 also received various types of debris from general operations at TA-33, including metal wastes, light bulbs, tires, and drums. In 1960, the site received uranium turnings from the building 33-113 machine shop. In addition, from 1967 until 1972, the site served as a storage and disposal site for defective electrical capacitors from the Sherwood Project. These capacitors had an average weight of 300 lb with an approximately 4- to 6- ft^3 volume for dielectric

fluid (Reider 1967, 007471). Disposal of the capacitors at this site ceased in 1972, at which time defective capacitors were sent to Area L at TA-54 for disposal (Reider 1972, 008204).

In December 1974, the site was partially cleaned up as part of general cleanup activities conducted at TA-33. Several truckloads of debris were disposed of at MDA G at TA-54. Debris removed from the site included pieces of DU, electrical capacitors, metal turnings, old tires, and fluorescent light tubes (Ahlquist 1983, 006854). A radiation survey was performed after the cleanup. The area was surveyed at intervals of about 10 ft across the slope and 16 ft up and down the slope. Radiation above background was not detected (Smith 1974, 006911). Not all material was removed in 1974.

Broken glass and chunks of metal were still present at the site when the Phase I RFI was conducted at the site in 1993. An empty capacitor containing small amounts of PCB-contaminated oil was also discovered partially buried on the site in 1994 and was removed (LANL 1995, 071300).

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 228-1.

Table 228-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-004(g)	Drainline and outfall associated with building 33-16	Barium, lead, silver, zinc, and cyanide
33-007(c)	Firing site	Beryllium, copper, lead, polonium-210, and uranium
33-009	Surface disposal site	Metals, beryllium, copper, lead, organic chemicals, PCBs, polonium-210, and uranium

228.2 Control Measures

All active control measures in use at CHQ-SMA-0.5 are listed in Table 228-2, and their locations are shown on the project map (Figure 228-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 228-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00102040008	Established vegetation	-	X	X	-	5-9-2013
Q00103010010	Earthen berm	-	X	-	X	9-23-2015
Q00103010011	Earthen berm	-	X	-	X	9-23-2015
Q00103140009	Coir log	-	X	-	X	9-23-2015
Q00104050006	Waterbar	X	-	-	X	4-19-2010
Q00104050007	Waterbar	X	-	-	X	4-19-2010
Q00106010003	Rock check dam	X	-	-	X	4-19-2010
Q00106010004	Rock check dam	X	-	-	X	4-19-2010
Q00106010005	Rock check dam	X	-	-	X	4-19-2010

228.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-0.5 during the 2025 season, requiring one post-storm inspection, summarized in Table 228-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 228-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-113973	8-25-2025	0.96	9-4-2025	10	Yes

228.4 Stormwater Monitoring

228.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 23, 2014. Analytical results from this sample yielded TAL exceedances for gross-alpha activity (88.3 pCi/L) and total PCBs (0.0119 µg/L). Complete analytical results from this sample are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2014, NPDES Permit No. NM0030759" (LANL 2015, 600241).

Following the installation of enhanced control measures, a corrective-action stormwater sample was collected on August 3, 2021. Analytical results from this sample yielded TAL exceedances for gross-alpha activity (312 pCi/L) and total PCBs (0.00582 µg/L). Complete analytical results from this sample are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2021, NPDES Permit No. NM0030759" (N3B 2022, 701895).

228.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-0.5 from April 16 through October 29, 2025, resulting in a monitoring season of 196 days. Eight inspections performed during the monitoring season are summarized in Table 228-4. RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 228-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111454	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111706	5-30-2025	No	5-6-2025 5-9-2025 5-25-2025 5-26-2025	0.04/0.27 0.22/0.23 0.17/0.23 0.3/0.3
SMPLR-112150	6-24-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23

Table 228-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-112695	7-30-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17
SMPLR-113487	8-28-2025	No	7-30-2025 8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114163	9-10-2025	No	9-5-2025	0.32/0.68
SMPLR-114387	9-17-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114487	10-29-2025	No	9-27-2025 9-28-2025 10-11-2025 10-13-2025	0.1/0.28 0.06/0.13 0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

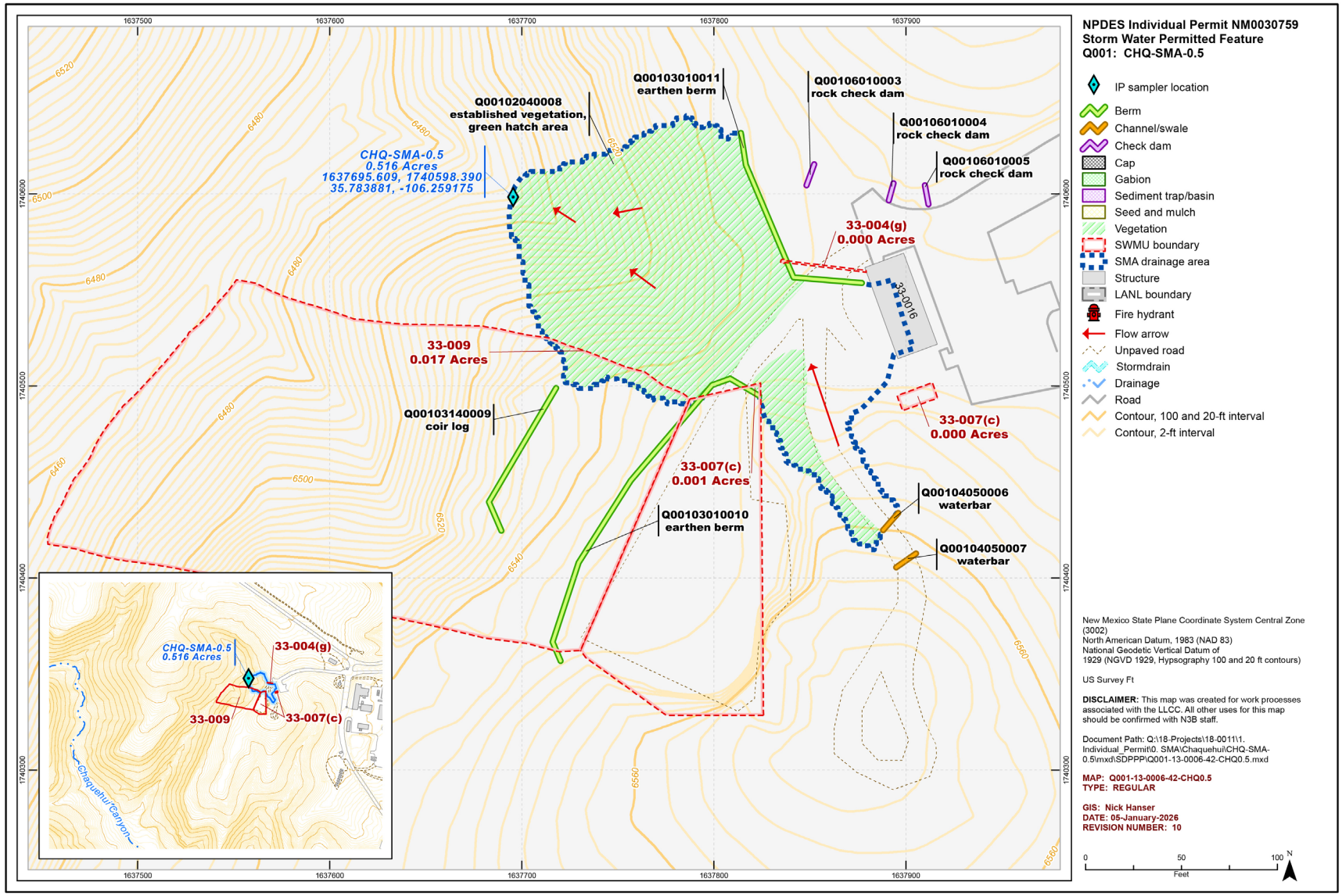


Figure 228-1 CHQ-SMA-0.5 location map

229.0 CHQ-SMA-1.01: SWMU 33-002(d)

One historical industrial activity area, Site 33-002(d), is associated with CHQ-SMA-1.01 (permitted feature Q002). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

229.1 Site Descriptions

33-002(d) (N3B 2025, 703910)

SWMU 33-002(d) is a former outfall and associated 90-ft outlet drainline that discharged noncontact cooling water from former building 33-86. This outfall was created when the SWMU 33-002(c) seepage pit was deactivated and disconnected from the building 33-86 inlet drainline to the sump in 1959 (LANL 1990, 007513). At that time, a 4-in. VCP outlet drainline was attached to the inactive CI inlet to former sump 33-133 [SWMU 33-002(c)] and was extended 90 ft to the east of former sump 33-133 to create an outfall for the discharge of noncontact cooling water from building 33-86 (LANL 2003, 107491).

The outfall operated under the LANL NPDES permit (Outfall 04A147) until July 11, 1995, when it was removed from the permit. Tritium and metals were potential contaminants in the noncontact cooling water. The 90-ft outlet drainline that discharged to the outfall was removed during the 2005 VCA implemented at the site (LANL 2010, 110352).

SWMU 33-002(d) is a component of MDA K, which consists of a former septic system and two seepage pits and associated drainlines and outfalls that served the former tritium facility (former building 33-86) and a former surface disposal area. MDA K is located in the southeast area of Main Site at TA-33.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 229-1.

Table 229-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-002(d)	Drainline and outfall from former building 33-86	Metals and tritium

229.2 Control Measures

All active control measures in use at CHQ-SMA-1.01 are listed in Table 229-2, and their locations are shown on the project map (Figure 229-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 229-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00202040008	Established vegetation	-	X	X	-	5-6-2013
Q00203060016	Straw wattle	X	-	-	X	5-21-2019
Q00203060017	Straw wattle	-	X	-	X	9-21-2023
Q00203060018	Straw wattle	X	-	-	X	10-15-2024
Q00203060019	Straw wattle	-	X	-	X	10-15-2024
Q00203060020	Straw wattle	X	-	-	X	10-15-2024

229.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-1.01 during the 2025 season, requiring one post-storm inspection, summarized in Table 229-3. All other control measure inspections are summarized in Table 229-4. No maintenance activities were conducted at the SMA in 2025.

In early 2025, the SWPP team members continued to conduct inspections at CHQ-SMA-1.01 until site stabilization was reached in relation to the 2024 Consent Order investigation activities within the SMA, as described in the approved "Phase II Investigation Report for Chaquehui Canyon Aggregate Area, Revision 1" (N3B 2024, 703265; NMED 2024, 703419). The SWPP team members conducted inspections at the SMA during active soil disturbance in the immediate area to assess potential impacts to the SMA, Sites, and control measures.

Table 229-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-113971	8-25-2025	0.96	9-4-2025	10	Yes

Table 229-4 Other Control Measure Inspections during 2025

Inspection Type	Inspection Reference	Inspection Date	Summary of Findings
Remediation Construction Activity	COMP-109922	2-4-2025	No findings.
Remediation Construction Activity	COMP-110541	4-10-2025	No findings. Closeout inspection.

229.4 Stormwater Monitoring

229.4.1 Previous Stormwater Monitoring Results

A sample was collected on July 12, 2022. Analytical results from this sample yielded TAL exceedances for copper (20.0 µg/L), gross-alpha activity (169 pCi/L), mercury (151 µg/L), selenium (16.5 µg/L), and total PCBs (0.474 µg/L). Complete analytical results from this sample were presented in the "2022 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2023, 702681).

229.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-1.01 from April 8 through October 30, 2025, resulting in a monitoring season of 205 days. Eight inspections performed during the monitoring season are summarized in Table 229-5. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 229-5 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111313	5-20-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111986	5-30-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112151	6-24-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112696	8-7-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17 0.07/013
SMPLR-113640	8-26-2025	No	8-23-2025 8-24-2025 8-25-2025	0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114078	9-17-2025	No	8-26-2025 9-5-2025 9-12-2025 9-13-2025	0.11/0.17 0.32/0.68 0.05/0.11 0.41/0.58
SMPLR-114488	10-3-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114751	10-30-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

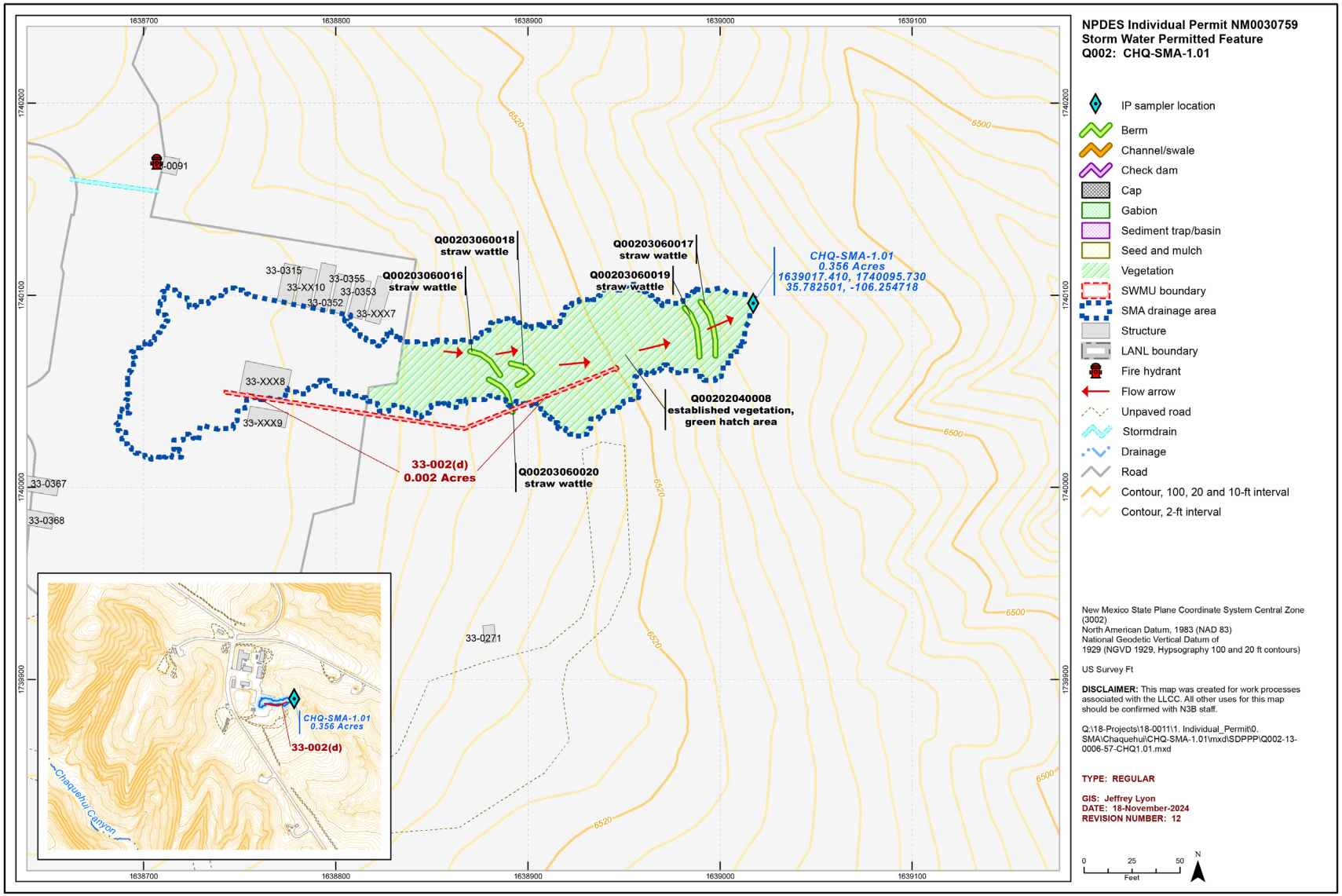


Figure 229-1 CHQ-SMA-1.01 location map

230.0 CHQ-SMA-1.02: SWMUs 33-004(h), 33-008(c), 33-011(d), and 33-015

Four historical industrial activity areas, Sites 33-004(h), 33-008(c), 33-011(d), and 33-015, are associated with CHQ-SMA-1.02 (permitted feature Q002A). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

230.1 Site Descriptions

33-004(h) (N3B 2020, 701046)

SWMU 33-004(h) reportedly consists of an inactive drainline and outfall associated with a warehouse (building 33-20) located at the south end of Main Site. The warehouse was constructed in 1950 and used from 1952 to 1972 to store materials associated with initiator tests, including beryllium and uranium. The building subsequently was cleaned and used by other groups as a light laboratory and for general storage.

The RFI work plan for OU 1122 (LANL 1992, 007671) states historical engineering drawings show an 8-in. VCP drain exiting the southeast corner of the building, which reportedly discharged to an outfall (LANL 1992, 007671). A study of building drains at TA-33 identified two floor drains in building 33-20 but could not locate an outfall. The study also noted there was no source of water in the building (Santa Fe Engineering, Ltd. 1992, 062036).

33-008(c) (N3B 2025, 703910)

SWMU 33-008(c) is a former surface disposal area located east of Main Site buildings 33-39 and 33-113 outside of the Main Site security fence. This former disposal site consists of two areas, one near a culvert outfall directly east of building 33-39 where glass bottles and other debris were discovered, and the other, consisting of surface debris, situated north of the culvert. The culvert receives stormwater runoff from Main Site and is located in a drainage channel that leads to a tributary of Chaquehui Canyon. Debris observed at the site included machined metal turnings, cable, glass bottles, and general trash on the ground surface and in the channel downstream of the culvert.

The outlines of a possible trenched area are visible in aerial photographs from 1958 (USAF 1958, 015987). A small asphalt pad is located at the west end of the northern area, and a partially full bottle was present on the ground surface. In 1999, a BMP was performed at the site, during which all visible debris was removed from the watercourse (LANL 2000, 068748). Residual debris was removed from SWMU 33-008(c) during the 2019–2020 investigation.

33-011(d) (N3B 2024, 703265)

SWMU 33-011(d) consists of a former storage area that was located on an asphalt pad around building 33-20 (a warehouse) in the southwest corner of Main Site at TA-33. Beryllium and uranium were stored in and outside of building 33-20 from 1950 until 1972. In addition, recovered scrap from shots containing uranium, beryllium, and tungsten was stored on the asphalt south of building 33-20. The amount of uranium stored at this site is reported to have been tons (Ahlquist 1983, 006854). Much of the material stored at the site was salvaged for use elsewhere. A 1987 site survey found no materials remaining in storage at this location (LANL 1992, 007671).

33-015 (N3B 2020, 701046)

SWMU 33-015 is the location of an inactive incinerator (structure 33-110) located approximately 50 ft southeast of building 33-39 on a hillside that slopes to a side wash of Chaquehui Canyon in the southeast corner of Main Site. The incinerator measured approximately 4 ft × 4 ft × 6 ft high and was mounted on a concrete base. The incinerator was used to burn uncontaminated office trash and was first used in 1955. The date the incinerator ceased to be used is not known; however, it was no longer in use during the 1993 Phase I RFI. The incinerator (structure 33-110) and the associated concrete base were removed during the 2019–2020 Consent Order investigation.

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 230-1.

Table 230-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-004(h)	Drainline and outfall associated with building 33-20	Beryllium and uranium
33-008(c)	Landfill	Metals, inorganic and organic chemicals, and PAHs
33-011(d)	Storage area	Beryllium and uranium
33-015	Incinerator	Metals, dioxins/furans, PAHs, and uranium

230.2 Control Measures

All active control measures in use at CHQ-SMA-1.02 are listed in Table 230-2, and their locations are shown on the project map (Figure 230-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 230-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q002A02040018	Established vegetation	-	X	X	-	5-6-2013
Q002A03010010	Earthen berm	-	X	-	X	8-22-2012
Q002A03010011	Earthen berm	-	X	-	X	8-22-2012
Q002A03010012	Earthen berm	-	X	-	X	8-22-2012
Q002A03010013	Earthen berm	X	-	-	X	8-22-2012
Q002A03010019	Earthen berm	-	X	-	X	4-27-2023
Q002A03150014	Redi-rock berm	-	X	-	X	2-4-2015
Q002A06010007	Rock check dam	X	-	-	X	4-20-2010
Q002A06010009	Rock check dam	-	X	-	X	10-12-2010
Q002A06010015	Rock check dam	-	X	-	X	2-9-2021
Q002A06010016	Rock check dam	-	X	-	X	2-9-2021
Q002A06010017	Rock check dam	-	X	-	X	2-9-2021
Q002A08030004	Concrete/asphalt cap	-	-	X	-	6-1-2009

230.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-1.02 during the 2025 season, requiring one post-storm inspection, summarized in Table 230-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 230-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-113969	8-25-2025	0.96	9-4-2025	10	Yes

230.4 Stormwater Monitoring

230.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on August 21, 2011. Analytical results from this sample yielded TAL exceedances for copper (8 µg/L) and total PCBs (0.00922 µg/L). Complete analytical results from that sample are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2011, NPDES Permit No. NM0030759" (LANL 2012, 211408).

Following the 2012 installation of enhanced control measures at CHQ-SMA-1.02, corrective-action stormwater samples were collected on July 25, 2013, and September 15, 2013. Analytical results from this corrective-action monitoring sample yielded TAL exceedances for copper (4.46 µg/L) and total PCBs (0.0066 µg/L and 0.016 µg/L). Complete analytical results from that sample are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

Following the 2015 installation of enhanced control measures, corrective-action stormwater samples were collected on July 23, 2018, and August 10, 2018. Analytical results from these corrective-action monitoring samples yielded a TAL exceedance for copper (6.79 µg/L). Complete analytical results from that sample are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

Following the 2021 installation of enhanced control measures, corrective-action stormwater samples were collected on May 31 and August 3, 2021. Analytical results from these samples yielded TAL exceedances for copper (5.2 µg/L and 8.5 µg/L), gross-alpha concentrations (24.8 pCi/L and 50.2 pCi/L), and total PCBs (0.0143 µg/L and 0.0194 µg/L). Complete analytical results from that sample are presented in the 2021 Storm Water Individual Permit Annual Report (N3B 2022, 701895).

230.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-1.02 from April 8 through October 30, 2025, resulting in a monitoring season of 205 days. Ten inspections performed during the monitoring season are summarized in Table 230-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 230-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111641	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111700	5-22-2025	No	5-6-2025 5-9-2025	0.04/0.27 0.22/0.23
SMPLR-112031	5-27-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112110	6-20-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112592	7-29-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17
SMPLR-113462	8-26-2025	No	7-30-2025 8-23-2025 8-24-2025 8-25-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114072	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68
SMPLR-114378	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114444	10-3-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114750	10-30-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

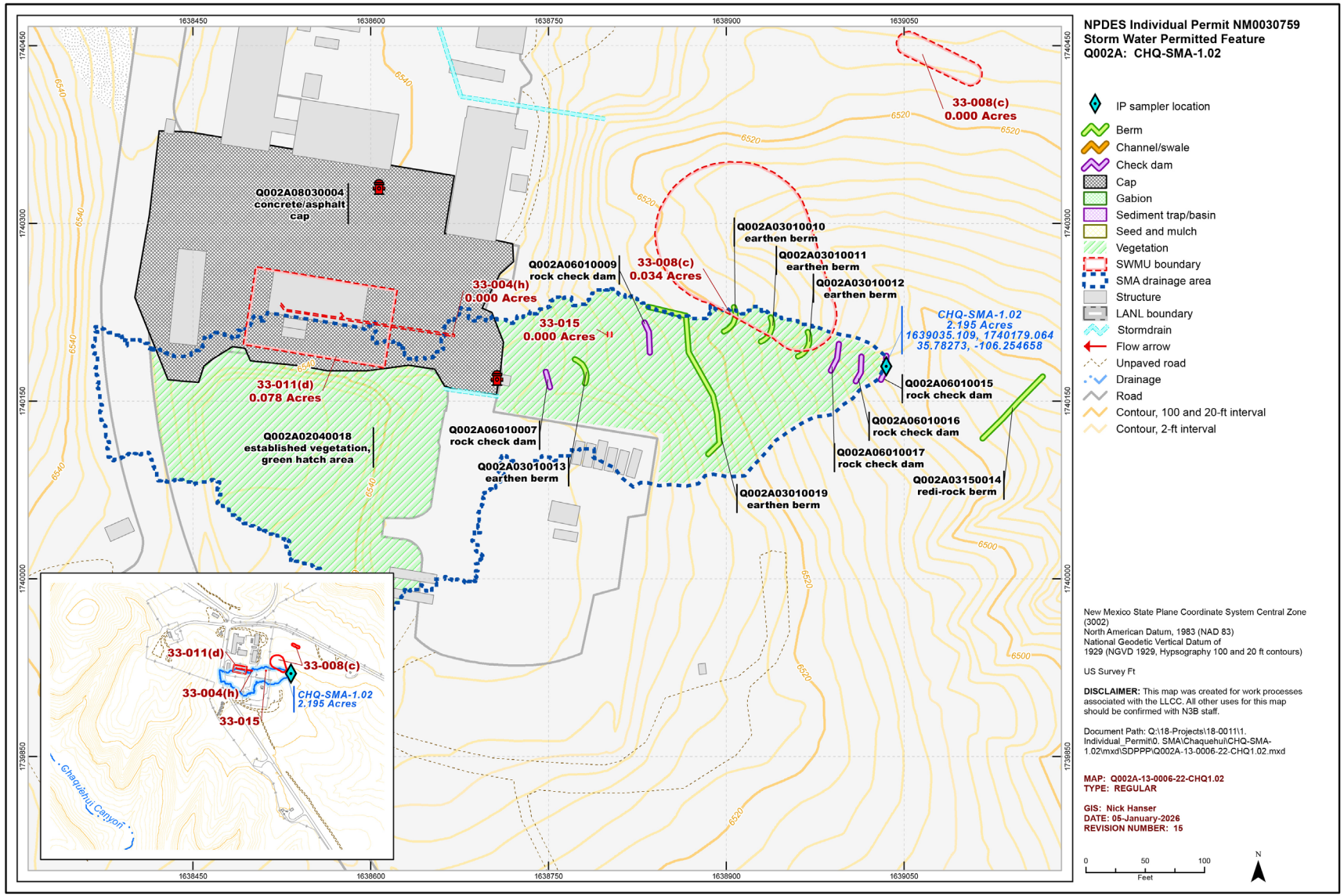


Figure 230-1 CHQ-SMA-1.02 location map

231.0 CHQ-SMA-1.03: SWMUs 33-008(c), 33-012(a), and 33-017 and AOCs C-33-001 and C-33-003

Five historical industrial activity areas, 33-008(c), 33-012(a), 33-017, C-33-001, and C-33-003, are associated with CHQ-SMA-1.03 (permitted feature Q002B). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

231.1 Site Descriptions

33-008(c) (N3B 2025, 703910)

SWMU 33-008(c) is a former surface disposal area located east of Main Site buildings 33-39 and 33-113, outside the Main Site security fence. This former disposal site consists of two areas, one near a culvert outfall directly east of building 33-39, where glass bottles and other debris were discovered, and the other, consisting of surface debris, situated north of the culvert. The culvert receives stormwater runoff from Main Site and is located in a drainage channel that leads to a tributary of Chaquehui Canyon. Debris observed at the site included machined metal turnings, cable, glass bottles, and general trash on the ground surface and in the channel downstream of the culvert.

The outlines of a possible trenched area are visible in aerial photographs from 1958 (USAF 1958, 015987). A small asphalt pad is located at the west end of the northern area, and a partially full bottle was present on the ground surface. In 1999, a BMP was performed at the site, during which all visible debris was removed from the watercourse (LANL 2000, 068748, p.5). Residual debris was removed from SWMU 33-008(c) during the 2019–2020 investigation.

33-012(a) (N3B 2025, 703910)

SWMU 33-012(a) is an SAA for a former machine shop in building 33-39 at the Main Site. This SAA was located on an asphalt pad (approximately 20 ft wide × 20 ft long) on the east side of building 33-39, between the building and a storage shed. The area was used to accumulate spent solvents and solvent-contaminated oil, in one 55-gal. drum at a time, in accordance with RCRA requirements (40 CFR 262, "Standards Applicable to Generators of Hazardous Waste"). Each drum was placed on a pallet or directly on the asphalt pad. Drums containing PCB-contaminated oil and used oil with heavy metals may have also been stored on the asphalt pad. The SAA was established in the mid-1980s, deactivated by 1992, and moved to the interior of building 33-39.

The 1990 SWMU Report (LANL 1990, 007513) noted the presence of multiple oil stains at this site. The 1992 RFI work plan for OU 1122, however, states no evidence of oil staining was observed (LANL 1992, 007671).

33-017 (N3B 2025, 703910)

SWMU 33-017 consists of areas potentially impacted by operational releases from former operations within Main Site at TA-33. SWMU 33-017 is located at the northern and eastern edges of the Main Site and is approximately 600 ft long × 100–600 ft wide. The site generally slopes downward to the east and is located at the head of a small drainage tributary of Chaquehui Canyon. SWMU 33-017 is potentially impacted by runoff from the paved areas of the Main Site complex, by deposition from airborne releases from TA-33 Main Site facilities, and by operational releases from an area east of building 33-39 used for vehicle maintenance.

Operations conducted within Main Site included uranium processing and machining, cadmium and silver welding and soldering, lead melting and casting, cadmium and beryllium machining, and tritium processing and decontamination. Additional materials handled at Main Site facilities included mercury and organic solvents. Operations at Main Site began in 1949 and continued until 1972. When these operations ceased, some of the facilities were used for offices and electronics laboratories.

C-33-001 (N3B 2025, 703910)

AOC C-33-001 consists of a former PCB transformer (former structure 33-124) in the northern portion of the Main Site at TA-33. The transformer was mounted on a 15-ft-long × 50-ft-wide concrete pad next to the northeast wall of building 33-114 and was bounded by asphalt to the north, east, and south. The pad was enclosed by a fence and accessible only through a locked gate.

The transformer was placed into service in the 1950s, and the mineral oil in the transformer contained PCBs. Oil stains were observed on the concrete pad, and leaks from the transformer were observed during routine inspections conducted between September 1985 and March 1992.

In 1992, the transformer was removed and replaced with a non-PCB transformer as part of the DOE program to remove all PCB-containing electrical equipment. The stained areas on the concrete pad were double-washed and double-rinsed; however, post-cleanup sampling was not conducted to verify the completion of cleanup as required by the TSCA PCB spill cleanup requirements (40 CFR 761.130). Sampling conducted during the transformer replacement was limited to the area where the old transformer had been placed temporarily during removal.

C-33-003 (N3B 2020, 701046)

AOC C-33-003 consists of two fill areas located at the Main Site area at the northern end of TA-33. This fill was used to level sites for two portable trailers. One of the trailers (former structure 33-169) was installed next to the Main Site water tower. The area filled to accommodate trailer 33-169 is approximately 100 ft × 100 ft × 4 ft deep. The other trailer (former structure 33-170) was installed north of building 33-114. The area filled to accommodate trailer 33-170 is approximately 70 ft × 90 ft × 7 ft deep.

Both trailers were installed in January 1984 and removed in June 1988. After the trailers were removed, no further improvements were made to these sites.

Three projectiles, one of which contained uranium, were discovered in the fill area next to the water tower during brush-clearing activities conducted during the spring of 1996. The source of these projectiles appears to have been the fill material that had been obtained from the cinder cone located in Area 6, just west of Main Site. Projectiles historically were fired into the base of the cinder cone during experiments conducted at the Area 6 firing area [SWMU 33-007(c)].

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 231-1.

Table 231-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-008(c)	Landfill	Metals, inorganic and organic chemicals, and PAHs
33-012(a)	Drum storage area	Metals and PCBs
33-017	Operational release	Beryllium, cadmium, lead, mercury, silver, PCBs, polonium, tritium, DU and enriched uranium, and pesticides
C-33-001	Former transformer	PCBs
C-33-003	Soil contamination	Metals and uranium

231.2 Control Measures

All active control measures in use at CHQ-SMA-1.03 are listed in Table 231-2, and their locations are shown on the project map (Figure 231-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 231-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q002B02040012	Established vegetation	-	X	X	-	5-6-2013
Q002B03150013	Redi-rock berm	-	X	-	X	4-9-2014
Q002B04060006	Riprap	X	-	X	-	4-20-2010
Q002B04060007	Riprap	-	X	X	-	6-14-2010
Q002B04060010	Riprap	-	X	X	-	7-27-2010
Q002B06010004	Rock check dam	-	X	-	X	3-14-2006
Q002B06010008	Rock check dam	-	X	-	X	7-27-2010
Q002B06010011	Rock check dam	-	X	-	X	8-17-2010
Q002B08030003	Concrete/asphalt cap	-	X	X	-	6-1-2009

231.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-1.03 during the 2025 season, requiring one post-storm inspection, summarized in Table 231-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 231-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114044	8-25-2025	0.96	9-4-2025	10	Yes

231.4 Stormwater Monitoring

231.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 4, 2012. Analytical results from this sample yielded TAL exceedances for copper (14.4 µg/L), gross-alpha activity (63.5 pCi/L), and total PCBs (0.0155 µg/L) and are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2012, NPDES Permit No. NM0030759" (LANL 2013, 237680).

Following the installation of enhanced control measures at CHQ-SMA-1.03, a corrective-action stormwater sample was collected on August 10, 2018. Analytical results from this corrective-action monitoring sample yielded TAL exceedances for copper (4.6 µg/L), gross-alpha activity (16.2 pCi/L), and total PCBs (0.000863 µg/L). Complete analytical results from this sample are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

A partial volume confirmation-monitoring sample was collected on August 8, 2023. Analytical results from this sample yielded no TAL exceedances. The complete analytical results are presented in the "2023 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2024, 703196) and were included in the SSD in the "2023 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2024, 703133).

231.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-1.03 from April 8 through October 30, 2025, resulting in a monitoring season of 205 days. Twelve inspections performed during the monitoring season are summarized in Table 231-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 231-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111316	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111713	5-12-2025	No	5-6-2025 5-9-2025	0.04/0.27 0.22/0.23
SMPLR-111893	5-22-2025	No	None	None
SMPLR-112036	5-27-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112114	6-6-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112371	7-17-2025	No	6-24-2025	0.13/0.39
SMPLR-113242	8-13-2025	No	7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.14/0.16 0.11/0.12 0.08/0.17 0.07/013

Table 231-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-113699	8-26-2025	No	8-23-2025 8-24-2025 8-25-2025	0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114091	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68
SMPLR-114392	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114452	10-3-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114753	10-30-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

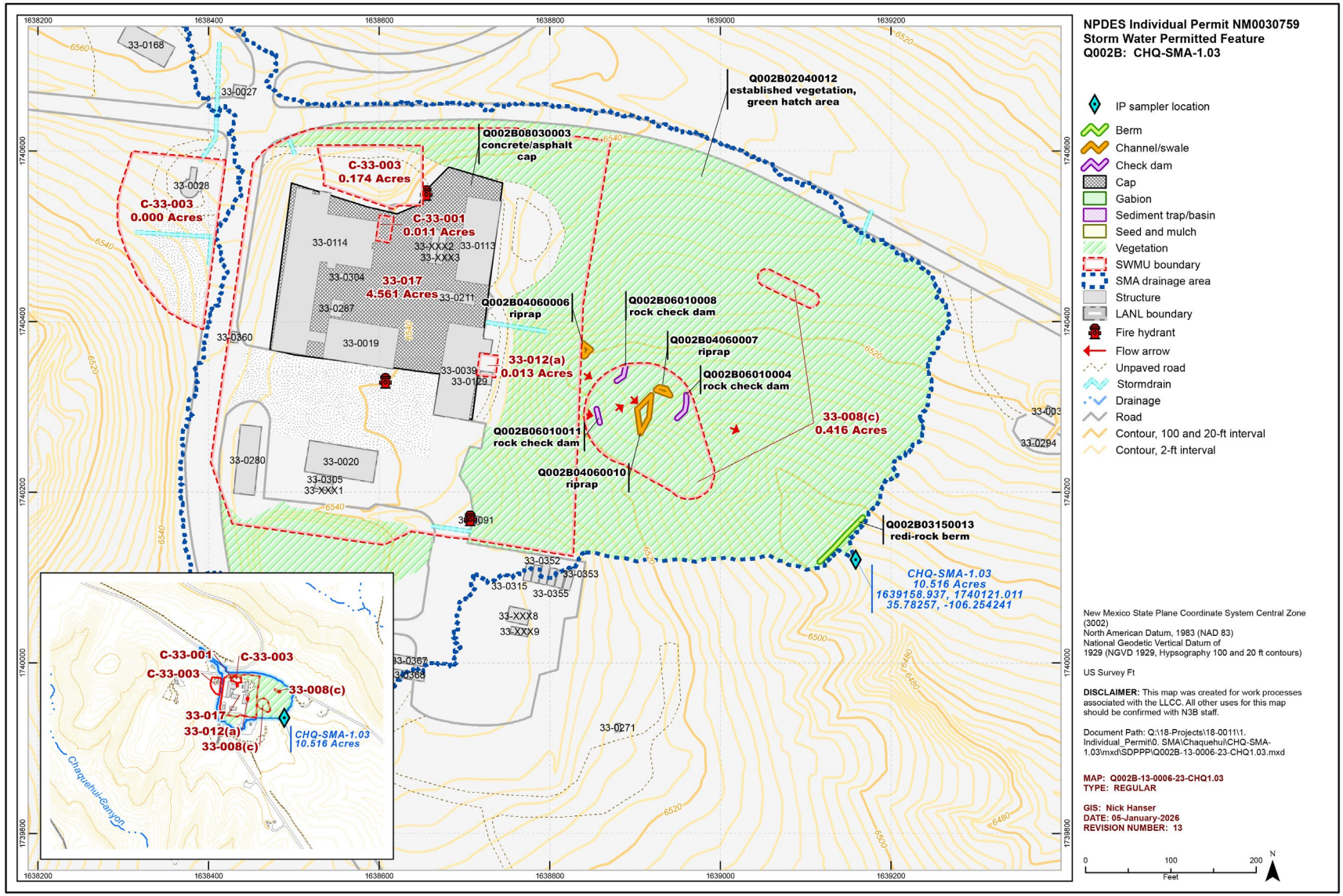


Figure 231-1 CHQ-SMA-1.03 location map

232.0 CHQ-SMA-2: SWMUs 33-004(d) and 33-007(c) and AOC C-33-003

Three historical industrial activity areas, Sites 33-004(d), 33-007(c), and C-33-003, are associated with CHQ-SMA-2 (permitted feature Q003). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

232.1 Site Descriptions

33-004(d) (N3B 2020, 701046)

SWMU 33-004(d) is an abandoned septic system consisting of a septic tank (structure 33-121), inlet and outlet drainlines, an outfall, and an associated tile drain field located at Area 6. Septic tank 33-121 is located approximately 100 ft east of building 33-16 in the northwest portion of TA-33. The septic tank is constructed of corrugated iron and has a capacity of 500 gal.

Septic tank 33-121 received wastewater from a toilet and sink in former laboratory building 33-01. Building 33-01 and an associated machine shop (former building 33-02) were constructed on skids and moved on-site in 1946 or 1947 (Ahlquist 1983, 006854). Use of building 33-01 was discontinued in 1991, and the building was removed in 1994; the septic system was abandoned in place. While building 33-01 was occupied, effluent was discharged from the septic tank to a drain field located approximately 20 ft east of the tank. The 1992 RFI work plan for OU 1122 (LANL 1992, 007671) identifies a small drain field 20 ft east of the tank and a 4-in. PVC pipe that drained to a buried outfall in a side wash of Chaquehui Canyon. The 1995 RFI report (LANL 1995, 071262) describes the septic tank as a 500-gal. corrugated iron tank (structure 33-121) located 50 ft southeast of building 33-01, 4-in. inlet and outlet drainlines, and a single line of vitrified clay tiles at the end of the outlet line, laid in gravel and terminating 5 ft belowgrade, which would be the outfall (LANL 1995, 07262). Land surface at the tank location slopes east approximately 200 ft to a shallow drainage eroded into the bedrock that flows south. The septic system components were uncovered during the 1993 RFI.

Building 33-01 was used from 1948 to 1955 to support nonexplosive initiator tests conducted at Area 6. In 1958, the building was used to grow crystals of potassium niobate, and possibly other types of crystals (aluminates, titanates, tungstates, etc.) (Schulte 1958, 007946). Silver plating was also reportedly performed in this building (Ahlquist 1983, 006854). Later, building 33-01 was used as office space and for storage, until use of the building was discontinued in 1991. A 1993 study of drains and discharges at TA-33 determined that the only discharges to the septic system were from a lavatory, toilet, and sink drain (Santa Fe Engineering, Ltd. 1992, 062036).

The septic tank (structure 33-121) was removed during the 2019–2020 Consent Order investigation. The inlet and outlet were plugged but the drainlines and seepage pit remain in place.

33-007(c) (N3B 2024, 703265)

SSWMU 33-007(c) consists of two abandoned gun-firing areas associated with the initiator tests conducted at Area 6 in the west-central portion of TA-33. The first gun-firing area included a gun building (former structure 33-16), a gun mount (structure 33-64), and an earthen berm (structure 33-60). Structure 33-16 was completed in 1949 and housed an air gun, and then electronic equipment, to measure neutron production in gun-type initiators containing beryllium and polonium-210. Gun sizes with bore diameters ranging from 4-in. to 8-in. fired projectiles into berms

where two 6-ft × 6-ft catcher boxes constructed of wood timbers were embedded in the north end of berm structure 33-60. Each catcher box contained soil, wood chips, and vermiculite. The second gun-firing area included a large gun (structure 33-65), a hillside embankment (structure 33-61), and two barricades (structures 33-62 and 33-72), located north and east of the gun.

One concrete firing pad, on which a large bore gun was mounted, was located immediately west of structure 33-16. The pad measured 6 ft × 10 ft and was surrounded by a concrete apron. The other two concrete firing pads were located in a level area excavated into a basaltic cinder cone, approximately 100 ft southwest of structure 33-16. Two wooden barricades constructed of 8-in. × 8-in. timbers are located north and east of the shot pads. This area was used to test nuclear gun mockups. A 4-in. to 5-in. -bore gun was used to fire projectiles into the back of the excavation. The back of the excavation currently extends about 75 ft farther back than when the site was used (Hoard 1991, 009734).

The two catcher boxes were located approximately 20 ft south of structure 33-16 and measured approximately 6 ft × 6 ft, were constructed of timber, and were filled with soil, wood chips, and vermiculite. Guns with a 2-in.- to 5-in.-bore diameter were placed on the concrete pads and used to fire projectiles containing test assemblies into targets placed in front of the catcher boxes. Materials used in the projectiles included beryllium, polonium-210, uranium, copper, lead, tungsten, and stainless steel (Hoard 1991, 009733). The projectiles frequently cracked open, contaminating the pads and surrounding area with polonium-210. Contaminated areas on the guns and pads were painted with lead-based paint to fix surface contamination (LANL 1992, 007671).

A 1951 memorandum describes a test at Area 6 that resulted in a release of radioactive material from a projectile (the site was cleaned up using a bulldozer to scrape away the contaminated soil and embankment) (Buckland 1951, 007845). A 1954 memorandum describes decontamination of one of the Area 6 gun barrels. The memorandum describes removing loose material and leaving impregnated spots as high as 1 million cpm (Jordan 1954, 007918). Contaminated surface soil was bulldozed from the shot area into the adjacent canyon (LASL 1954, 107465).

Shots were discontinued at Area 6 by 1955. In 1956, structure 33-16 was used to make and machine laminating materials containing barium, titanium, lead, and zinc, using epoxy resins. An exhaust blower and stack were installed along with an emissions stack. The buildings in Area 6 have been vacant since the late 1950s.

The cinder cone has been further excavated. Currently, an aluminum tower (structure 33-192) is used for atmospheric physics monitoring within the excavated portion of the cinder cone.

C-33-003 (8/31/2022)

AOC C-33-003 consists of two fill areas located at the Main Site area at the northern end of TA-33. This fill was used to level sites for two portable trailers. One of the trailers (former structure 33-169) was installed next to the Main Site water tower. The area filled to accommodate trailer 33-169 is approximately 100 ft × 100 ft × 4 ft deep. The other trailer (former structure 33-170) was installed north of building 33-114. The area filled to accommodate trailer 33-170 is approximately 70 ft × 90 ft × 7 ft deep.

Both trailers were installed in January 1984 and removed in June 1988. After the trailers were removed, no further improvements were made to these sites. Three projectiles, one of which contained uranium, were discovered in the fill area next to the water tower during brush-clearing activities conducted during the spring of 1996. The source of these projectiles appears to have been the fill material that had

been obtained from the cinder cone located in Area 6, just west of Main Site. Projectiles historically were fired into the base of the cinder cone during experiments conducted at the Area 6 firing area [SWMU 33-007(c)].

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 232-1.

Table 232-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-004(d)	Septic system	Metals, aluminum, iron, beryllium, silver, cyanide, organic chemicals, and natural uranium
33-007(c)	Firing site	Beryllium, barium, copper, lead, polonium-210, uranium, and zinc
C-33-003	Soil contamination	Metals and uranium

232.2 Control Measures

All active control measures in use at CHQ-SMA-2 are listed in Table 232-2, and their locations are shown on the project map (Figure 232-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Enhanced controls were certified and submitted to EPA on July 21, 2025, as part of corrective action, as described in "NPDES Permit No. NM0030759 – Certification of Installation of Enhanced Control Measures at CHQ-SMA-2" (N3B 2025, 703872). Photographs of the enhanced controls are available at https://ext.em-la.doe.gov/IPS/Home/ConstructionCertifications.

Table 232-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00302040023	Established vegetation	-	X	X	-	5-9-2013
Q00303010030	Earthen berm	X	-	-	X	10-8-2015
Q00303020028	Base course berm	-	X	-	X	10-8-2015
Q00303020029	Base course berm	-	X	-	X	10-8-2015
Q00303020053	Base course berm	X	-	-	X	10-8-2015
Q00303020054	Base course berm	X	-	-	X	10-8-2015
Q00303040015	Asphalt berm	X	-	-	X	4-19-2010
Q00303060063	Straw wattle	-	X	-	X	2-6-2024
Q00303060064	Straw wattle	-	X	-	X	2-6-2024
Q00303140065	Coir log	-	X	-	X	2-6-2024
Q00303140066	Coir log	-	X	X	X	5-30-2025
Q00301400067	Coir log	-	X	X	X	5-30-2025
Q00303140068	Coir log	-	X	X	X	5-30-2025
Q00306010035	Rock check dam	X	-	-	X	10-8-2015
Q00306010036	Rock check dam	-	X	-	X	10-8-2015

Table 232-2 Active Control Measures (continued)

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00306010037	Rock check dam	-	X	-	X	10-8-2015
Q00306010038	Rock check dam	-	X	-	X	10-8-2015
Q00306010039	Rock check dam	-	X	-	X	10-8-2015
Q00306010040	Rock check dam	-	X	-	X	10-8-2015
Q00306010041	Rock check dam	-	X	-	X	10-8-2015
Q00306010042	Rock check dam	-	X	-	X	10-8-2015
Q00306010043	Rock check dam	-	X	-	X	10-8-2015
Q00306010044	Rock check dam	-	X	-	X	10-8-2015
Q00306010045	Rock check dam	-	X	-	X	10-8-2015
Q00306010046	Rock check dam	-	X	-	X	10-8-2015
Q00306010047	Rock check dam	-	X	-	X	10-8-2015
Q00306010048	Rock check dam	-	X	-	X	10-8-2015
Q00306010049	Rock check dam	-	X	-	X	10-8-2015
Q00306010050	Rock check dam	-	X	-	X	10-8-2015
Q00306010051	Rock check dam	-	X	-	X	10-8-2015
Q00306010052	Rock check dam	-	X	-	X	10-8-2015
Q00306010055	Rock check dam	-	X	-	X	10-23-2019
Q00306010056	Rock check dam	-	X	-	X	10-23-2019
Q00306010057	Rock check dam	-	X	-	X	2-4-2021
Q00306010058	Rock check dam	-	X	-	X	2-4-2021

232.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-2 during the 2025 season, requiring one post-storm inspection. All other control measure inspections conducted at CHQ-SMA-2 are summarized in Table 232-4, and maintenance activities conducted at CHQ-SMA-2 are summarized in Table 232-5. No facility modifications affecting discharge were conducted at the SMA in 2025.

Table 232-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114042	8-25-2025	0.96	9-5-2025	11	Yes

Table 232-4 Other Control Measure Inspections during 2025

Inspection Type	Inspection Reference	Inspection Date	Summary of Findings
Control Measure Verification	BMP-112086	5-30-2025	Control installation is satisfactory, certification documentation for installation of enhanced controls as a corrective action can be prepared.

Table 232-5 Maintenance Activities Conducted during 2025

Maintenance Reference	Maintenance Conducted	Maintenance Date	Response Time	Response Discussion
BMP-113072 (follow up to BMP-112086)	Added additional base course material to holes in base course berm Q00303020054.	7-21-2025	52 days	Maintenance was delayed.

232.4 Stormwater Monitoring

232.4.1 Previous Stormwater Monitoring

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 4, 2012. Analytical results from this sample yielded TAL exceedances for aluminum (967 µg/L), copper (6.75 µg/L), and gross-alpha activity (91.2 pCi/L). The complete analytical results are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2012, NPDES Permit No. NM0030759" (LANL 2013, 237680).

Two corrective-action stormwater samples were collected on July 23 and August 15, 2018. Analytical results from the corrective-action monitoring samples yielded TAL exceedances for copper (4.82 µg/L), and gross-alpha activity (36.8 pCi/L and 99.7 pCi/L) and are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

Confirmation-monitoring samples were collected on May 22, 2023, and August 8, 2023. There were no TAL exceedances in the sample from May, and the analytical results from the August sample yielded a TAL exceedance for copper (4.93 µg/L). The complete analytical results are presented in the "2023 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2024, 703196) and were included in the SSD in the "2023 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2024, 703133).

232.4.2 Stormwater Monitoring during 2025

Following certification of enhanced controls, stormwater monitoring was conducted at CHQ-SMA-2 from July 30 through October 29, 2025, resulting in a monitoring season of 91 days. Five inspections performed during the monitoring season are summarized in Table 232-6. Rain gage RG340 recorded 12 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active.

A confirmation-monitoring sample was collected on August 25, 2025. Analytical results from this sample yielded no TAL exceedances. The complete analytical results are presented in Appendix B of the Overview and in the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269), which has been updated with the inclusion of this sample into the SSD.

Table 232-6 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-113571	8-15-2025	No	7-30-2025	0.07/013
SMPLR-113732	8-28-2025	Yes	8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114158	9-10-2025	No	9-5-2025	0.32/0.68
SMPLR-114382	9-17-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114486	10-29-2025	No	9-27-2025 9-28-2025 10-11-2025 10-13-2025	0.1/0.28 0.06/0.13 0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

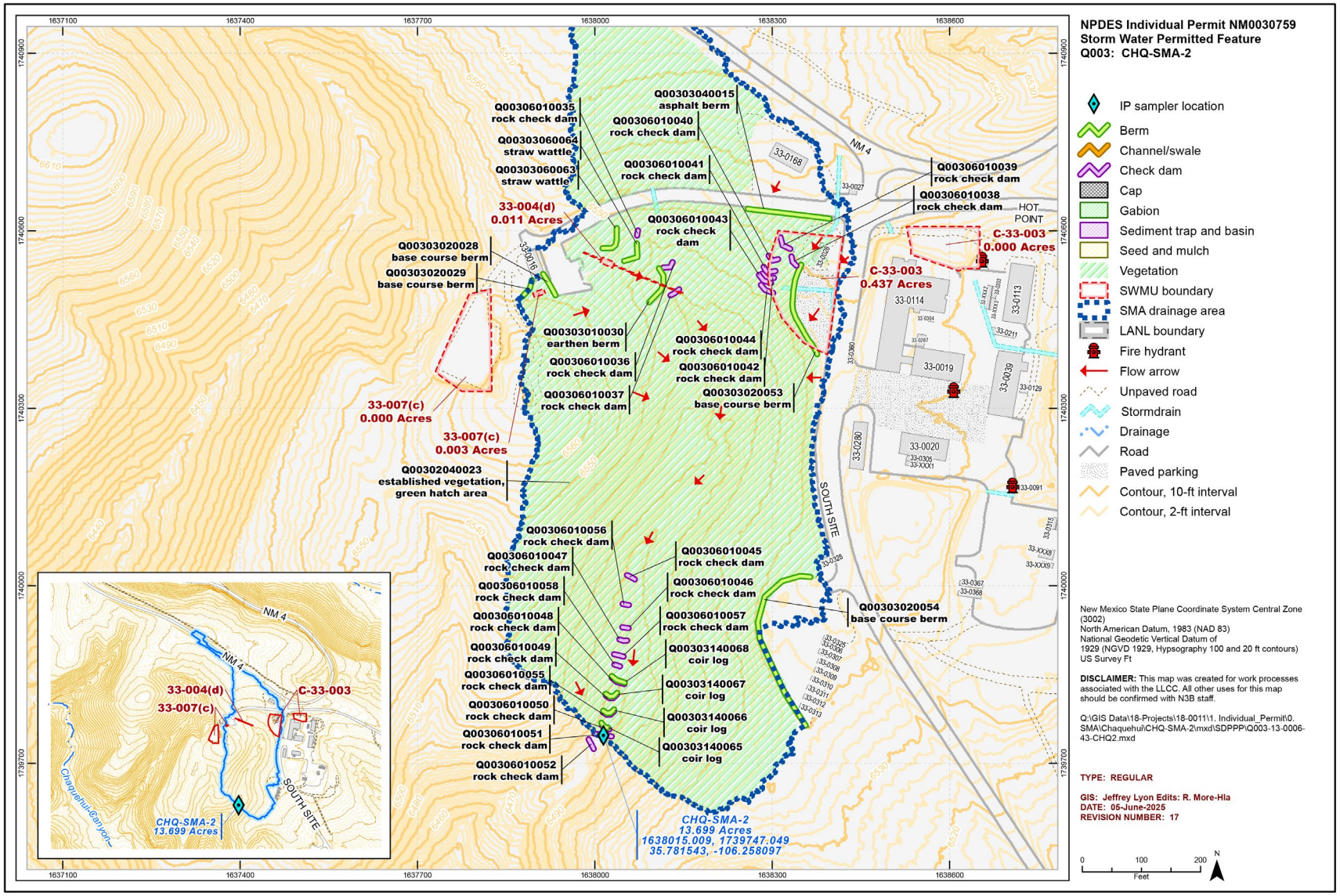


Figure 232-1 CHQ-SMA-2 location map

233.0 CHQ-SMA-3.05: SWMU 33-010(f)

One historical industrial activity area, Site 33-010(f), is associated with CHQ-SMA-3.05 (permitted feature Q004). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

233.1 Site Descriptions

33-010(f) (N3B 2021, 701735)

SWMU 33-010(f) is a reported surface disposal area consisting of two small surface disposal areas, located 300 ft southeast of former building 33-86 and approximately 50 ft apart at Main Site. The history of the site and the origins of the wastes are not known.

The 1990 SWMU Report (LANL 1990, 007513) states that the SWMU was identified during a 1987 ER Project reconnaissance, and describes the site as concrete, cans, and metal pieces that littered the area east of the former Tritium Facility (former building 33-86). The 1995 RFI report (LANL 1995, 071262) describes this SWMU as consisting of two small surface disposal areas, located 300 ft southeast of former building 33-86 and approximately 50 ft apart. One of the areas is described as approximately 15 ft^2 and the other as approximately 10 ft × 20 ft. Materials at the site included pieces of concrete; piles of tuff and cured asphalt; rusted metal cans, rebar, and strapping bands; and other miscellaneous construction debris. Although the source of these materials is not known, some were believed to be associated with roadwork activities. During the 2005 VCA conducted at SWMUs 33-002(a-e) directly north and east of SWMU 33-010(f), only small piles of soil and a few pieces of concrete were observed to be present at the site. Residual debris was removed from SWMU 33-010(f) during the 2019–2020 Consent Order investigation.

SWMU 33-010(f) is a component of MDA K, which consists of the former locations of a septic system and two seepage pits with drainlines and outfalls that served the former Tritium Facility (building 33-86) and a former surface disposal area. MDA K is in the southeast area of Main Site at TA-33.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 233-1.

Table 233-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-010(f)	Surface disposal site	Iron, PAHs, and tritium

233.2 Control Measures

All active control measures in use at CHQ-SMA-3.05 are listed in Table 233-2, and their locations are shown on the project map (Figure 233-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 233-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00402040009	Established vegetation	-	X	X	-	5-9-2013
Q00403010015	Earthen berm	-	X	-	X	6-9-2015
Q00403120014	Rock berm	-	X	-	X	6-9-2015
Q00403140010	Coir log	X	-	-	X	6-9-2015
Q00403140011	Coir log	-	X	-	X	6-9-2015
Q00403140012	Coir log	X	-	-	X	6-9-2015
Q00403140013	Coir log	-	X	-	X	6-9-2015
Q00403140017	Coir log	X	-	-	X	8-22-2022

233.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-3.05 during the 2025 season, requiring one post-storm inspection, summarized in Table 233-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 233-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114045	8-25-2025	0.96	9-4-2025	10	Yes

233.4 Stormwater Monitoring

233.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on September 10, 2013. Analytical results from this sample yielded TAL exceedances for gross-alpha activity (60.3 pCi/L) and total PCBs (0.000851 µg/L). The complete analytical results are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL, 254067).

233.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-3.05 from April 10 through October 30, 2025, resulting in a monitoring season of 203 days. Nine inspections performed during the monitoring season are summarized in Table 233-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 233-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111340	5-20-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111990	5-30-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112153	6-24-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112697	8-7-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17 0.07/013
SMPLR-113644	8-26-2025	No	8-23-2025 8-24-2025 8-25-2025	0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114092	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68
SMPLR-114393	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114453	10-3-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114754	10-30-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

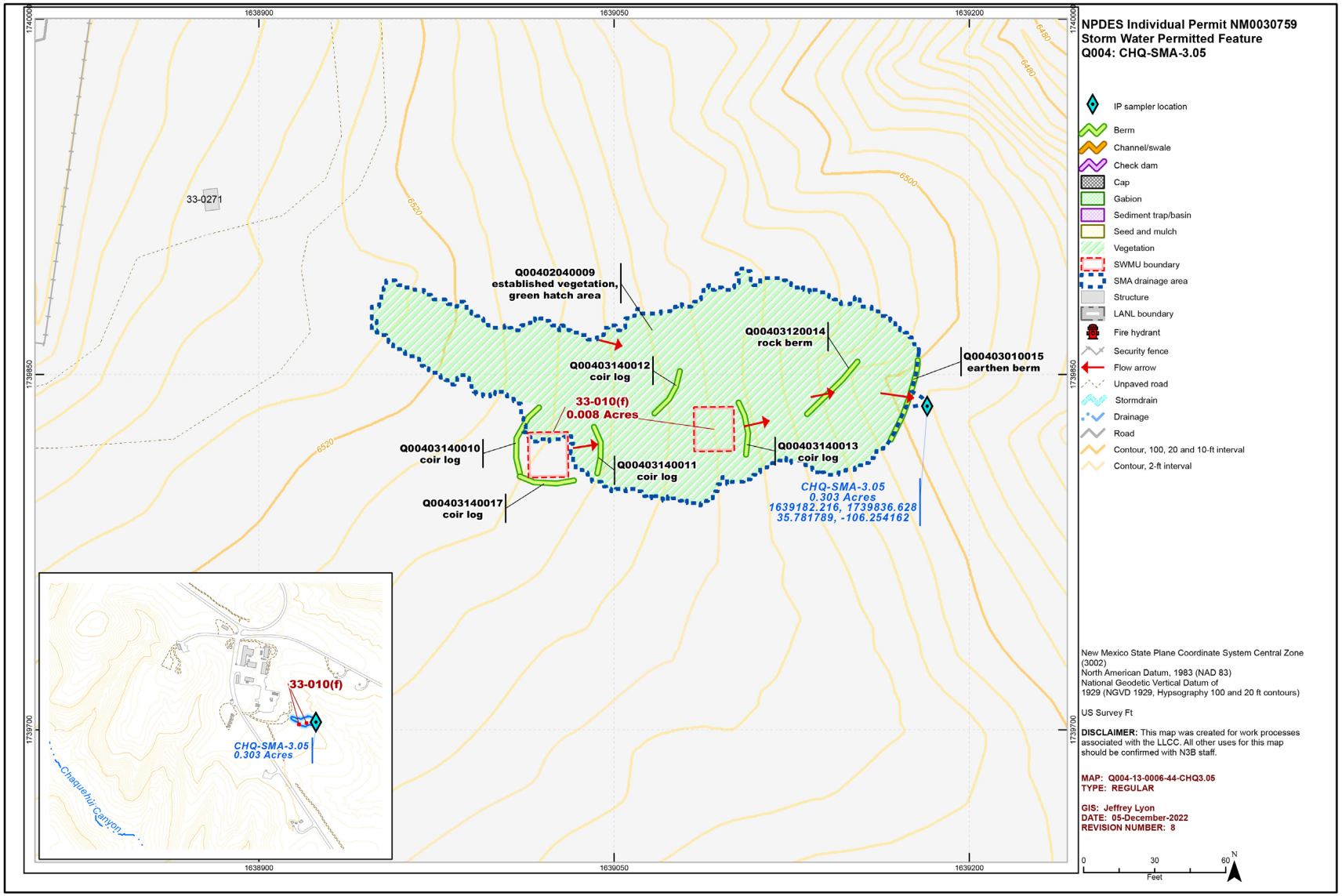


Figure 233-1 CHQ-SMA-3.05 location map

234.0 CHQ-SMA-4: SWMU 33-011(e)

One historical industrial activity area, Site 33-011(e), is associated with CHQ-SMA-4 (permitted feature Q005). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

234.1 Site Descriptions

33-011(e) (N3B 2020, 701046)

SWMU 33-011(e) is a former drum-storage area located south of Main Site at TA-33. The storage area was reportedly a 20-ft × 100-ft area located approximately 30 ft northwest of building 33-22, a former HE storage magazine. The area is unpaved and gradually slopes to the southwest.

Drums containing unknown materials were previously stored on the ground at this area. The date the materials were first stored at this site is not known.

During the 1987 DOE Environmental Survey conducted in support of the 1990 SWMU Report (LANL 1990, 007513), all drums had been removed from the site; however, stained soil was observed in the former storage area (LANL 1992, 007671). The site is currently not used.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 234-1.

Table 234-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-011(e)	Storage area	Uranium

234.2 Control Measures

All active control measures in use at CHQ-SMA-4 are listed in Table 234-2, and their locations are shown on the project map (Figure 234-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 234-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00502040019	Established vegetation	-	X	X	-	5-9-2013
Q00503010020	Earthen berm	-	X	-	X	11-13-2013
Q00503010023	Earthen berm	X	-	-	X	7-27-2021
Q00503010024	Earthen berm	-	X	-	X	7-27-2021
Q00504060025	Riprap	-	X	X	-	7-27-2021
Q00506010003	Rock check dam	-	X	-	X	4-20-2010
Q00506010004	Rock check dam	-	X	-	X	4-20-2010
Q00506010005	Rock check dam	-	X	-	X	4-20-2010

234.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-4 during the 2025 season, requiring one post-storm inspection, summarized in Table 234-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 234-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114043	8-25-2025	0.96	9-4-2025	10	Yes

234.4 Stormwater Monitoring

234.4.1 Previous Stormwater Monitoring Results

A baseline stormwater sample was collected on July 23, 2018 (Figure 245-2). Analytical results from this sample yielded TAL exceedances for gross-alpha activity (978 pCi/L), total PCBs (0.635 µg/L), and selenium (16 µg/L). The complete analytical results are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

234.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-4 from April 17 through November 6, 2025, resulting in a monitoring season of 203 days. Seven inspections performed during the monitoring season are summarized in Table 234-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 234-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111468	5-20-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111992	6-24-2025	No	5-25-2025 5-26-2025 6-2-2025 6-3-2025 6-4-2025	0.17/0.23 0.3/0.3 0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112698	7-30-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17

Table 234-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-113489	8-28-2025	No	7-30-2025 8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114172	9-16-2025	No	9-5-2025 9-12-2025 9-13-2025	0.32/0.68 0.05/0.11 0.41/0.58
SMPLR-114470	10-10-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114820	11-6-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

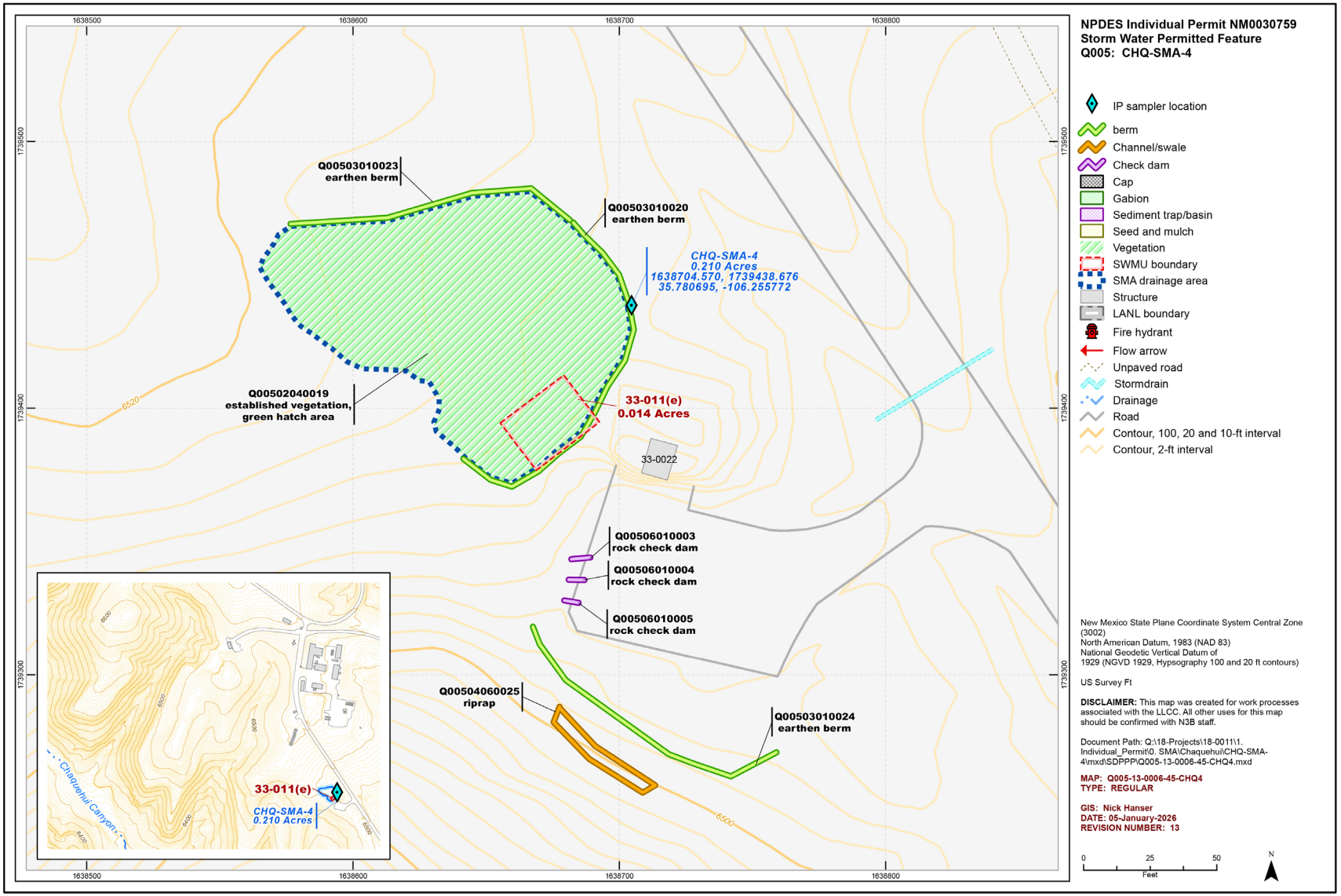


Figure 234-1 CHQ-SMA-4 location map

235.0 CHQ-SMA-4.1: SWMU 33-016

One historical industrial activity area, Site 33-016, is associated with CHQ-SMA-4.1 (permitted feature Q006). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

235.1 Site Descriptions

33-016 (N3B 2020, 701046)

SWMU 33-016 is an inactive HE sump, outlet drainline, and outfall that served inactive HE-processing bunker 33-23, directly south of Main Site at TA-33. The 1990 SWMU Report (LANL 1990, 007513) describes SWMU 33-016 as a sump with approximate dimensions of 3 ft long × 2 ft wide × 2 ft deep, located next to the northwest corner of the exterior wall of the bunker, near the door that discharged to an outfall approximately 150 ft west of the building in Chaquehui Canyon. The 1995 RFI report (LANL 1995, 071300) correctly identified the concrete sump dimensions as 5 ft long × 2.5 ft wide × 7 ft deep; these dimensions were confirmed during the 2020 Chaquehui Aggregate Area investigation. Engineering drawing ENG-C 11644 shows the sump located adjacent to the western outside wall of building 33-23, and the outlet drainline extending directly from the sump to an outfall approximately 150 ft west of the sump, to a side canyon of Chaquehui Canyon (Black and Veatch 1949, 025170).

The sump was connected to a sink and floor drain in the bunker, which was constructed in 1950. From 1950 to 1972, the bunker was used as a trim building to prepare propellant charges for gun tests conducted at South Site. Structure 33-23 was subsequently used until 1994, to store lithologic cores from the Hot Dry Rock Program. In addition to the sink and floor drain, the sump also may have received rainwater and snowmelt.

The sump was decommissioned during a VCA implemented at the Site in 1995 (LANL 1995, 050113).

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 235-1.

Table 235-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-016	Sump	PAHs, SVOCs, and HE

235.2 Control Measures

All active control measures in use at CHQ-SMA-4.1 are listed in Table 235-2, and their locations are shown on the project map (Figure 246-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 235-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00602040008	Established vegetation	-	X	X	-	5-9-2013
Q00603060009	Straw wattle	X	-	-	X	10-20-2014
Q00603060010	Straw wattle	X	-	-	X	10-20-2014
Q00606010002	Rock check dam	-	X	-	X	4-19-2010
Q00606010003	Rock check dam	-	X	-	X	4-19-2010

235.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-4.1 during the 2025 season, requiring one post-storm inspection, summarized in Table 235-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 235-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114046	8-25-2025	0.96	9-4-2025	10	Yes

235.4 Stormwater Monitoring

235.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on September 13, 2013. Analytical results from this sample yielded a TAL exceedance for gross-alpha activity (34.5 pCi/L) and are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

235.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-4.1 from April 17 through November 6, 2025, resulting in a monitoring season of 203 days. Eleven inspections performed during the monitoring season are summarized in Table 235-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 235-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111469	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111719	5-12-2025	No	5-6-2025 5-9-2025	0.04/0.27 0.22/0.23

Table 235-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111895	5-30-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112154	6-6-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112375	7-17-2025	No	6-24-2025	0.13/0.39
SMPLR-113245	8-13-2025	No	7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.14/0.16 0.11/0.12 0.08/0.17 0.07/013
SMPLR-113705	8-28-2025	No	8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114173	9-10-2025	No	9-5-2025	0.32/0.68
SMPLR-114395	9-16-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114471	10-10-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114822	11-6-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

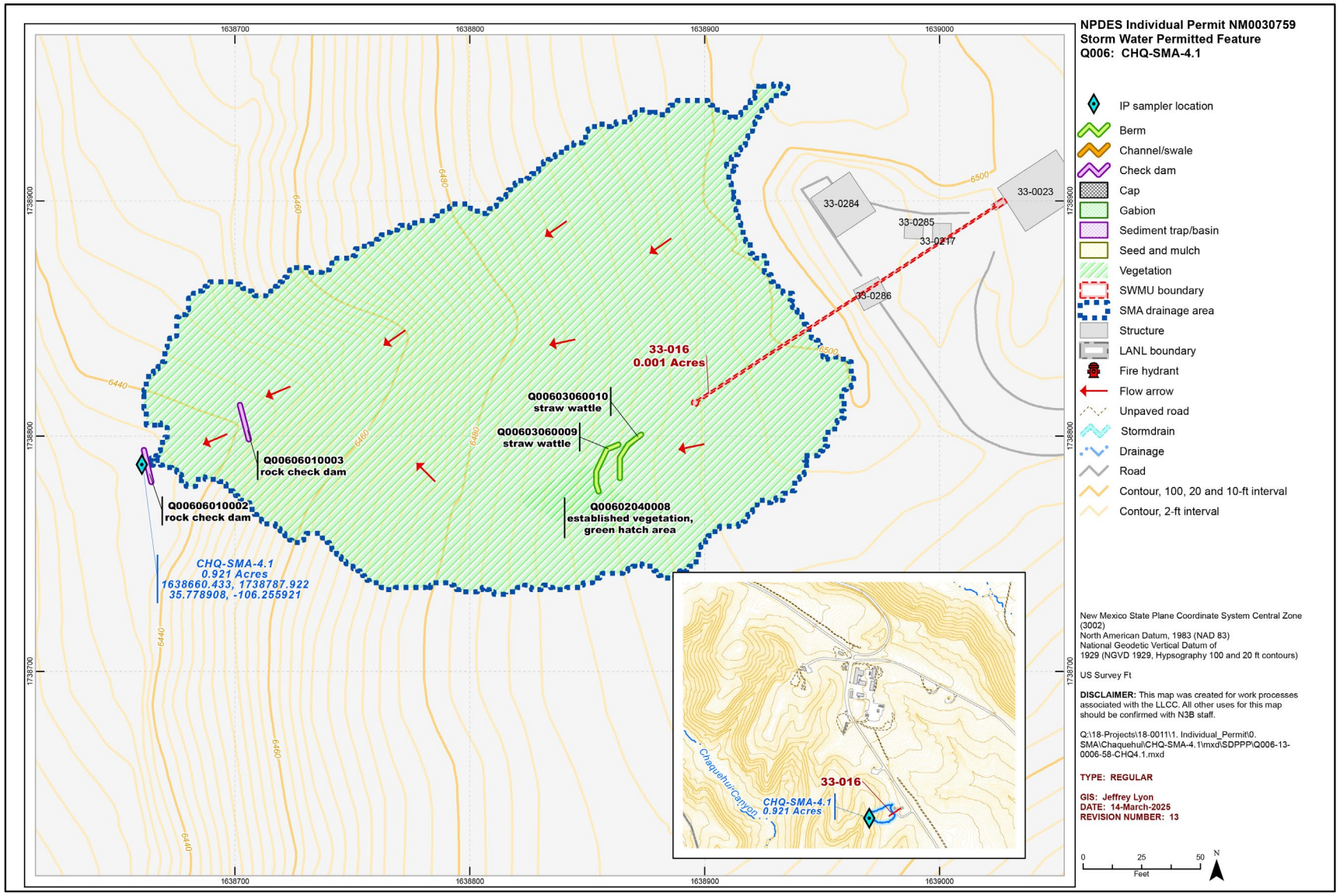


Figure 235-1 CHQ-SMA-4.1 location map

236.0 CHQ-SMA-4.5: AOC 33-011(b)

One historical industrial activity area, Site 33-011(b), is associated with CHQ-SMA-4.5 (permitted feature Q007). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

236.1 Site Descriptions

33-011(b) (N3B 2020, 701046)

AOC 33-011(b) is a former storage area located directly west of the National Radio Astronomy Observatory Site in the eastern portion of TA-33. This storage area was approximately 300 ft wide × 600 ft long. The storage area was established in 1948 around the former elevator building (building 33-3) and was used to store equipment used at the TA-33 firing sites. The equipment was stored until a sufficient quantity was accumulated to allow a strategic materials recovery program to recover materials including tungsten, uranium, and beryllium. HE from firing site equipment may have also been present at the site.

The storage area was cleaned up in 1984. Most materials and debris were removed at that time, although some debris consisting of scrap iron and a large, insulated tank remained on-site. All remaining debris was removed from the site during the 1996 VCA. Approximately 75% of the storage area had been scraped and leveled to or near the tuff bedrock, and the area remains vacant.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 236-1.

Table 236-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-011(b)	Storage area	Metals, beryllium, organic chemicals, HE, and uranium

236.2 Control Measures

All active control measures in use at CHQ-SMA-4.5 are listed in Table 236-2 and their locations are shown on the project map (Figure 236-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 236-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00702040010	Established vegetation	-	X	X	-	5-6-2013
Q00703010009	Earthen berm	-	X	-	X	7-18-2011
Q00703060022	Straw wattle	-	-	-	-	5-21-2019
Q00703140018	Coir log	-	X	-	X	9-25-2014
Q00703140020	Coir log	-	X	-	X	8-30-2018

Table 236-2 Active Control Measures (continued)

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00703140023	Coir log	-	X	-	X	9-21-2023
Q00706010002	Rock check dam	-	X	-	X	4-20-2010
Q00706010003	Rock check dam	-	X	-	X	4-20-2010

236.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-4.5 during the 2025 season, requiring one post-storm inspection, summarized in Table 236-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 236-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114047	8-25-2025	0.96	9-4-2025	10	Yes

236.4 Stormwater Monitoring

236.4.1 Previous Stormwater Monitoring Results

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 25, 2013. Analytical results from this sample yielded a TAL exceedance for gross-alpha activity (103 pCi/L). Complete analytical reports from this sample are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

236.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-4.5 from April 17 through November 6, 2025, resulting in a monitoring season of 203 days. Ten inspections performed during the monitoring season are summarized in Table 236-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampling operability issues were encountered.

Table 236-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111470	5-6-2025	No	5-4-2025 5-5-2025	0.26/0.95 0.28/0.72
SMPLR-111726	5-27-2025	No	5-6-2025 5-9-2025 5-25-2025 5-26-2025	0.04/0.27 0.22/0.23 0.17/0.23 0.3/0.3

Table 236-4 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-112118	6-20-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112601	7-17-2025	No	6-24-2025	0.13/0.39
SMPLR-113248	8-13-2025	No	7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.14/0.16 0.11/0.12 0.08/0.17 0.07/013
SMPLR-113707	8-26-2025	No	8-23-2025 8-24-2025 8-25-2025	0.11/0.47 0.08/0.17 0.96/1.57
SMPLR-114105	9-10-2025	No	8-26-2025 9-5-2025	0.11/0.17 0.32/0.68
SMPLR-114399	9-15-2025	No	9-12-2025 9-13-2025	0.05/0.11 0.41/0.58
SMPLR-114456	10-7-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114784	11-6-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Intensity = Maximum amount of precipitation in any 30-min interval.

[b] Total = Total amount of precipitation in 24 hr.

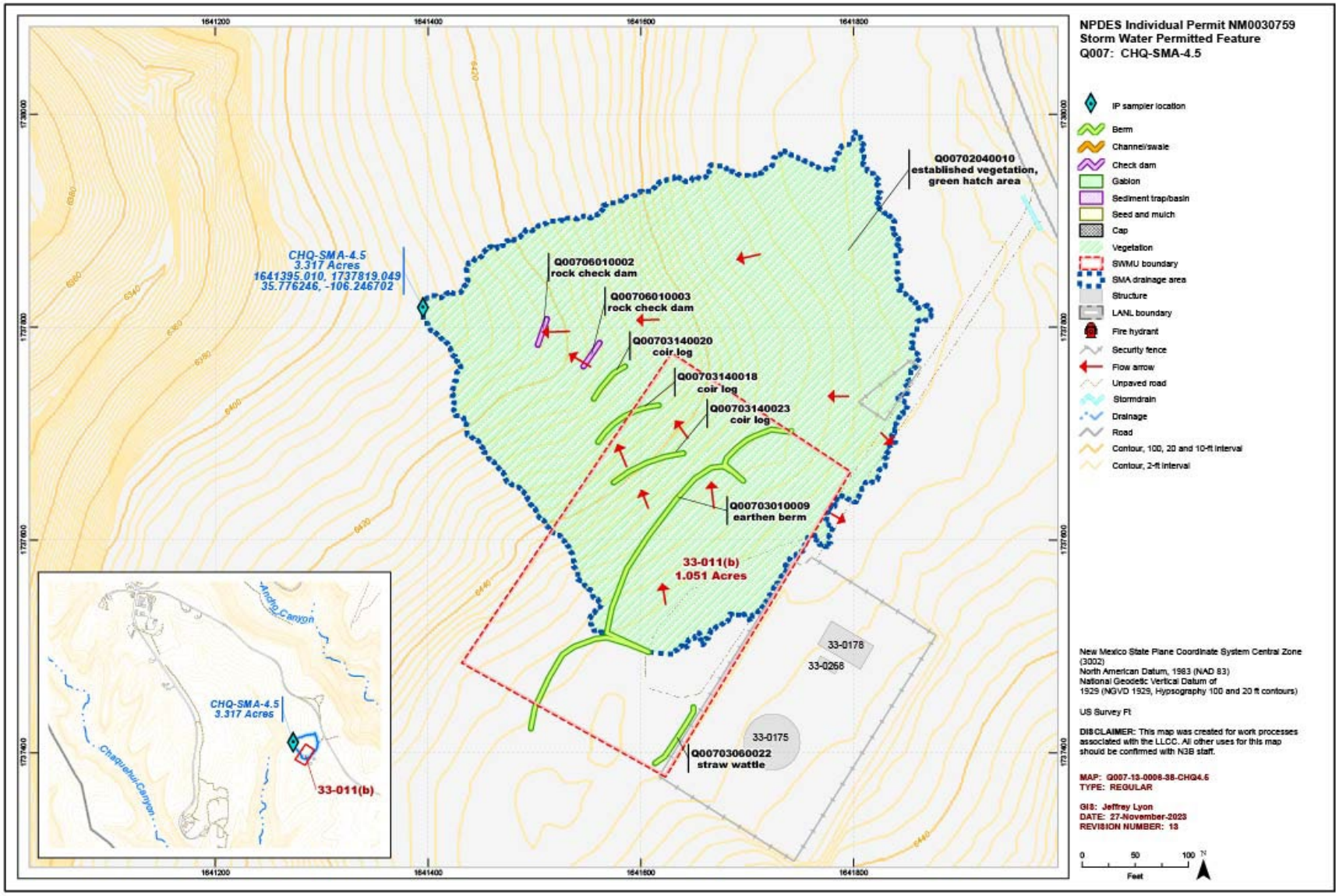


Figure 236-1 CHQ-SMA-4.5 location map

237.0 CHQ-SMA-5.05: SWMU 33-007(b)

One historical industrial activity area, Site 33-007(b), is associated with CHQ-SMA-5.05 (permitted feature Q008). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

237.1 Site Descriptions

33-007(b) (N3B 2020, 701046)

SWMU 33-007(b) consists of two former gun-firing sites located within what was known as the tower area at South Site at the southern end of TA-33. The first and northern gun-firing site consisted of a 6-ft × 6-ft concrete pad and gun mount (former structure 33-85), a u-shaped soil berm (structure 33-43), and a catcher box. The u-shaped berm measured approximately 50 ft wide and 10 ft high, with an inner diameter of approximately 125 ft, and the former catcher box was located in the soil embankment northeast of the gun mount.

The berm and catcher box were constructed in August 1950, and the concrete pad and gun mount were constructed in June 1952. This gun site was used to test free-recoil weapons. Tests involved firing projectiles into the berm and the catcher box. Projectiles fired from the guns contained uranium, beryllium, titanium, and tritium housed inside steel casings.

The second and southern gun-firing site included a gun building (structure 33-25) and a soil barricade (former structure 33-63). Both structures were built in 1950. The gun building housed 2-in. to 4-in.-bore guns that were used to fire projectiles into berm 33-63. The projectiles used at this site contained uranium, beryllium, and tungsten. Components of both former gun sites are shown in engineering drawings AB1114 (2 of 7) (LANL 2003, 107491) and ENG-R-4461 (LASL 1974, 095146.27), and a 1958 aerial photograph of the site (USAF 1958, 015985). Firing-site activities at SWMU 33-007(b) were discontinued in the late 1950s. This area was used to support atmospheric physics measurements during the late 1980s and early 1990s. Structures associated with these activities included a tower (former structure 33-203) constructed in 1987 and two trailers (former structures 33-201 and 33-202). All structures have been removed.

During the 1999 VCA performed at the structure 33-63 barricade, the berm was removed and treated to remove radioactively contaminated soil and debris exceeding dose-based cleanup levels and any projectiles. Treated soil was returned to the location of the former berm. The site was graded, compacted, and reseeded. Approximately 1 to 2 ft of engineered fill was placed over the location of the former berm when building 33-25 was renovated in 2005 and 2006.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 237-1.

Table 237-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-007(b)	Firing site	Beryllium, iron, tritium, uranium, and radionuclides

237.2 Control Measures

All active control measures in use at CHQ-SMA-5.05 are listed in Table 237-2, and their locations are shown on the project map (Figure 237-1) located at the end of this SMA update. Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 237-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00802040008	Established vegetation	-	X	X	-	5-9-2013
Q00803020006	Base course berm	-	X	-	X	6-1-2009
Q00804060002	Riprap	-	X	X	-	3-14-2006
Q00804060005	Riprap	X	-	X	-	6-1-2009
Q00804060007	Riprap	-	X	X	-	6-1-2009
Q00806010003	Rock check dam	-	X	-	X	8-23-2006

237.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-5.05 during the 2025 season, requiring one post-storm inspection, summarized in Table 237-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 237-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114050	8-25-2025	0.96	9-4-2025	10	Yes

237.4 Stormwater Monitoring

237.4.1 Previous Stormwater Monitoring Results

Through Calendar Year 2024, stormwater flow was not sufficient for sample collection at CHQ-SMA-5.05.

237.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-5.05 from April 3 through November 6, 2025, resulting in a monitoring season of 217 days. Eight inspections performed during the monitoring season are summarized in Table 237-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025, and no sampler operability issues were encountered.

Table 237-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111069	5-12-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111898	5-28-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112126	7-14-2025	No	6-2-2025 6-3-2025 6-4-2025 6-24-2025	0.12/0.18 0.21/0.64 0.14/0.23 0.13/0.39
SMPLR-113189	8-7-2025	No	7-18-2025 7-19-2025 7-21-2025 7-30-2025	0.14/0.16 0.11/0.12 0.08/0.17 0.07/013
SMPLR-113650	8-28-2025	No	8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114174	9-16-2025	No	9-5-2025 9-12-2025 9-13-2025	0.32/0.68 0.05/0.11 0.41/0.58
SMPLR-114481	10-10-2025	No	9-27-2025 9-28-2025	0.1/0.28 0.06/0.13
SMPLR-114824	11-6-2025	No	10-11-2025 10-13-2025	0.05/0.16 0.11/0.58

[a] Maximum amount of precipitation in any 30-min interval.

[b] Total amount of precipitation in 24 hr.

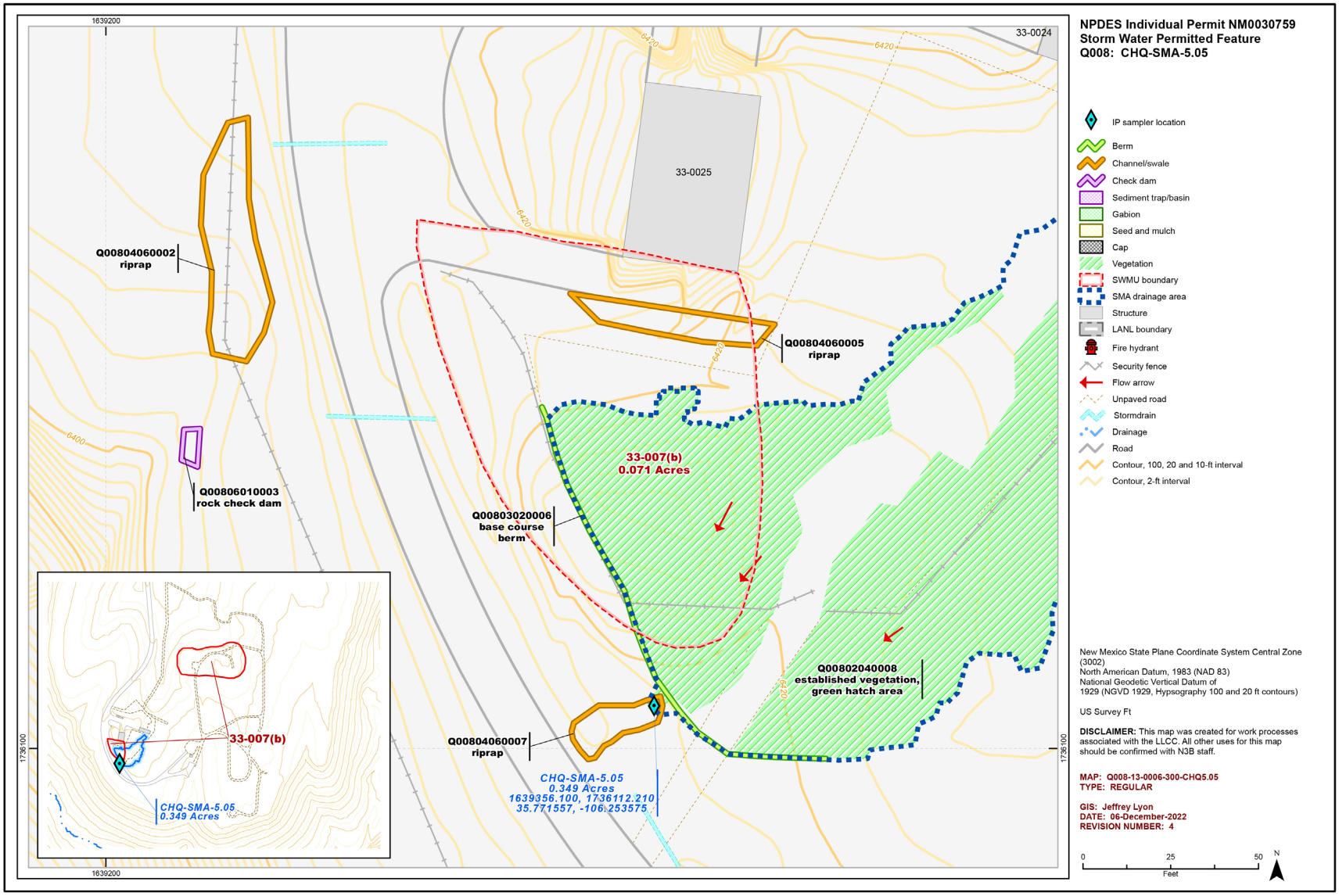


Figure 237-1 CHQ-SMA-5.05 location map

238.0 CHQ-SMA-6: SWMUs 33-004(j), 33-006(a), 33-007(b), 33-010(c), 33-010(g), 33-010(h), and 33-014

Seven historical industrial activity areas, Sites 33-004(j), 33-006(a), 33-007(b), 33-010(c), 33-010(g), 33-010(h), and 33-014, are associated with CHQ-SMA-6 (permitted feature Q009). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

238.1 Site Descriptions

33-004(j) (N3B 2020, 701046)

SWMU 33-004(j) consists of a 4-in. steel stormwater drainline and outfall that drained the entrance to the South Site x-unit vault (structure 33-26) at South Site in the southern portion of TA-33. The drainline is connected to a drain located on the concrete pad at the entrance to structure 33-26. The storm drainline extends 75 ft southeast to the outfall that discharged to an open drainage channel that empties into Chaquehui Canyon. A stormwater culvert, situated beneath the unpaved portion of the road that extends beyond structure 33-26, also discharges to the open drainage channel below the SWMU 33-004(j) outfall. At the upper portion of the drainage channel, both the SWMU 33-004(j) storm drainline and the culvert discharge have been cut into the tuff (LANL 1995, 051903). The 1990 SWMU report (LANL 1990, 007513) describes SWMU 33-004(j) as an inactive outfall system from structure 33-26. The outfall system includes an outlet drainline coming off the east side of building 33-26, a channel cut into the tuff, a culvert, and an arroyo draining into Chaquehui Canyon. However, review of engineering drawing AB26 (LANL 2006, 110681) and a 1958 aerial photograph of South Site (USAF 1958, 015984) confirmed the unit boundary should include only the storm drain at the entrance of structure 33-26, the 75-ft long storm drainline, and the outfall discharge point at the end of the drainline.

Structure 33-26 stored electronic devices used to detonate initiators for experiments conducted on the shot pad [SWMU 33-006(a)] located directly above the structure. The SWMU 33-006(a) shot pad was built in 1948, and the associated support building known as an x-unit vault (structure 33-26) was constructed in 1950. Use of the site ceased in 1956 and structure 33-26 has remained vacant since then. The shots conducted at the SWMU 33-006(a) shot pad spread debris over much of South Site, including the drainage channel below the SWMU 33-004(j) outfall.

33-006(a) (N3B 2025, 703910)

SWMU 33-006(a) is an inactive shot pad at South Site, where implosion tests were conducted at the southern end of TA-33. The shot pad is a 50-ft-diameter circular area located immediately north of and next to the roof of structure 33-26, an x-unit chamber (i.e., a control chamber that housed a firing voltage distribution system used for the remote detonation of test firings). The SWMU 33-006(a) shot pad was built in 1948, and the associated support building, known as an x-unit vault (structure 33-26), was constructed in 1950. Implosion tests performed at the shot pad contained up to 5000 lb of HE. Before detonations, wooden boxes covered the assemblages. Use of the site ceased in 1956, and structure 33-26 has remained vacant since then.

The detonations conducted at the SWMU 33-006(a) shot pad scattered debris, shrapnel, and wood fragments over the mesa top of South Site and into Chaquehui Canyon. Shrapnel has been found at distances up to a mile away from the shot pad. The shot pad has not been used since 1955, when implosion testing was discontinued at TA-33. Currently, the pad is covered with up to a foot or more of sand (LANL 1995, 051903, p. 58).

33-007(b) (N3B 2020, 701046)

SWMU 33-007(b) consists of two former gun-firing sites located within what was known as the tower area at South Site at the southern end of TA-33. The first and northern gun-firing site consisted of a 6-ft × 6-ft concrete pad and gun mount (former structure 33-85), a U-shaped soil berm (structure 33-43), and a catcher box. The U-shaped berm measured approximately 50 ft wide and 10 ft high, with an inner diameter of approximately 125 ft, and the former catcher box was located in the soil embankment northeast of the gun mount.

The berm and catcher box were constructed in August 1950, and the concrete pad and gun mount were constructed in June 1952. This gun site was used to test free-recoil weapons. Tests involved firing projectiles into the berm and the catcher box. Projectiles fired from the guns contained uranium, beryllium, titanium, and tritium housed inside steel casings.

The second and southern gun-firing site included a gun building (structure 33-25) and a soil barricade (former structure 33-63). Both structures were built in 1950. The gun building housed 2-in. to 4-in.-bore guns that were used to fire projectiles, containing uranium, beryllium, and tungsten, into berm 33-63. The projectiles used at this site contained uranium, beryllium, and tungsten. Components of both former gun sites are shown in engineering drawings AB1114 (2 of 7) (LANL 2003, 107491) and ENG-R-4461 (LASL 1974, 095146.27), and a 1958 aerial photograph of the site (USAF 1958, 015984). Firing site activities at SWMU 33-007(b) were discontinued in the late 1950s. This area was used to support atmospheric physics measurements during the late 1980s and early 1990s. Structures associated with these activities include a tower (former structure 33-203) constructed in 1987 and two trailers (former structures 33-201 and 33-202). All structures have been removed.

During the 1999 VCA performed at the structure 33-63 barricade, the berm was removed and treated to remove radioactively contaminated soil and debris exceeding dose-based cleanup levels and any projectiles. Treated soil was returned to the location of the former berm. The site was graded, compacted, and reseeded. Approximately 1 to 2 ft of engineered fill was placed over the location of the former berm when building 33-25 was renovated in 2005 and 2006.

33-010(c) (N3B 2024, 703265)

SWMU 33-010(c) is a former surface disposal area located at South Site on the northern rim of Chaquehui Canyon at the southern end of TA-33. The disposal area measured approximately 50 ft × 30 ft × 2–4 ft deep and was approximately 230 ft south of structure 33-26 [SWMU 33-006(a)] along the western edge of the main South Site drainage channel. From approximately 1950 to 1955, this site was used to dispose of debris from the implosion tests conducted at SWMU 33-006(a). Debris disposed of at the site included copper and aluminum shrapnel, pieces of electronic cable, sand and soil with residual HE, and wood. Between shots, the shot pad and surrounding area were scraped and the debris bulldozed over the canyon edge and onto the hillside below (LANL 1992, 007671). During the VCA performed at the site in 1999, all debris was removed from the site (LANL 2000, 066889). Residual debris was removed from SWMU 33-010(c) during the 2019–2020 Consent Order investigation.

33-010(g) (N3B 2020, 701046)

SWMU 33-010(g) is a former surface disposal area, located on the northern rim of Chaquehui Canyon at South Site at the southern end of TA-33. Debris was scattered along the rim and upper walls of the canyon east and south of MDA E. Chaquehui Canyon is about 200 ft wide at this point, with a 40-ft cliff at the canyon rim. A three-strand barbed-wire fence ran along the east side of the unimproved road adjacent to MDA E, separating SWMU 33-010(g) from the rest of South Site.

Some debris present at SWMU 33-010(g) (such as dead tree trunks, rocks, and scraped earth) appears to have originated from the initial clearing of South Site in the 1940s. Other debris, including shrapnel, cables, and burnt wood, likely originated from shot pad and gun-firing activities. The period of operation for this disposal site is not known, but firing-site operations associated with initiator testing at South Site were conducted from 1950 to 1956 (LANL 1992, 007671). The debris was removed and disposed of off-site during the 1995 VCA (LANL 1996, 054755). Residual debris was removed from SWMU 33-010(g) during the 2019–2020 investigation.

33-010(h) (N3B 2020, 701046)

SWMU 33-010(h) is a surface disposal area located approximately 450 ft northeast of structure 33-26 [SWMU 33-006(a)] and immediately south of berm 33-43 [SWMU 33-007(b)], in the northeast portion of South Site at the southern end of TA-33. The disposal area consists of a mound of dirt and firing-site debris scattered on the soil surface. Debris includes metal, wood, cable, and shrapnel. The area is approximately 100 ft × 100 ft. There is no documentation regarding the history of the disposal area. The main drainage for South Site bounds the disposal area on the west, and an unimproved road is located to the east (LANL 1995, 051903). Residual debris was removed from SWMU 33-010(h) during the 2019–2020 Consent Order investigation.

33-014 (N3B 2020, 701046)

SWMU 33-014 is the former location of an open burn area located approximately 300 ft north of the fence surrounding MDA E [SWMUs 33-001(a-e)] at South Site, at the south end of TA-33. The soil at the burn site has been scraped to bedrock, and some bedrock is blackened from burning. This burn area was believed to have been established in 1950, when operations at South Site began, and may have served all of TA-33. Materials burned at this site included construction debris, timber, and sawdust used in the firing berms at TA-33. These materials contained DU, beryllium black powder, propellant powders, and residual HE. It is not known when burning operations were discontinued at this site (LANL 1992, 007671).

Potential POCs and Sources Associated with the Sites

The potential POCs and sources associated with the Sites are listed in Table 238-1.

Table 238-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-004(j)	Drainline and outfall from building 33-26	No known POCs
33-006(a)	Firing site	Metals, aluminum, copper, iron, lead, HE, and uranium
33-007(b)	Firing site	Beryllium, iron, tritium, and uranium
33-010(c)	Surface disposal site	Aluminum and copper
33-010(g)	Surface disposal site	Metals, beryllium, copper, HE, and uranium
33-010(h)	Surface disposal site	Metals
33-014	Burn site	Metals, beryllium, dioxins/furans, HE, and DU

238.2 Control Measures

All active control measures in use at CHQ-SMA-6 are listed in Table 238-2, and their locations are shown on the project map (Figure 238-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Enhanced controls were certified and submitted to EPA on October 16, 2025, as part of corrective action, as described in "NPDES Permit No. NM0030759 - Certification of Installation of Enhanced Control Measures for A-SMA-6, CHQ-SMA-6, and W-SMA-5" (N3B 2025, 703941). Photographs of the enhanced controls are available at https://ext.em-la.doe.gov/IPS/Home/ConstructionCertifications.

Table 238-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00902040036	Established vegetation	-	X	X	-	5-9-2013
Q00903010017	Earthen berm	-	X	-	X	4-14-2010
Q00903010041	Earthen berm	-	X	-	X	5-28-2015
Q00903120030	Rock berm	X	-	-	X	10-17-2011
Q00903120031	Rock berm	X	-	-	X	10-17-2011
Q00903120032	Rock berm	X	-	-	X	10-17-2011
Q00903140049	Coir log	-	X	-	X	3-15-2022
Q00903140050	Coir log	-	X	-	X	3-15-2022
Q00903140053	Coir log	-	X	X	X	8-14-2025
Q00903140054	Coir log	-	X	X	X	8-14-2025
Q00903140055	Coir log	-	X	X	X	8-14-2025
Q00903140056	Coir log	-	X	X	X	8-14-2025
Q00903140057	Coir log	-	X	X	X	8-14-2025
Q00903140058	Coir log	-	X	X	X	8-14-2025
Q00903150043	Redi-rock berm	X	-	-	X	5-28-2015
Q00906010001	Rock check dam	-	X	-	X	8-31-2005
Q00906010007	Rock check dam	-	X	-	X	10-23-2009
Q00906010008	Rock check dam	-	X	-	X	10-23-2009
Q00906010011	Rock check dam	X	-	-	X	4-14-2010
Q00906010018	Rock check dam	X	-	-	X	4-14-2010
Q00906010021	Rock check dam	-	X	-	X	4-14-2010
Q00906010022	Rock check dam	-	X	-	X	4-14-2010
Q00906010023	Rock check dam	-	X	-	X	4-14-2010
Q00906010024	Rock check dam	X	-	-	X	4-14-2010
Q00906010025	Rock check dam	X	-	-	X	4-14-2010
Q00906010026	Rock check dam	X	-	-	X	4-14-2010
Q00906010027	Rock check dam	X	-	-	X	4-14-2010

Table 238-2 Active Control Measures (continued)

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q00906010037	Rock check dam	X	-	-	X	5-8-2014
Q00906010038	Rock check dam	X	-	-	X	5-8-2014
Q00906010039	Rock check dam	X	-	-	X	5-8-2014
Q00906010042	Rock check dam	X	-	-	X	5-28-2015
Q00906010047	Rock check dam	-	X	-	X	3-15-2022
Q00906010048	Rock check dam	-	X	-	X	3-15-2022

238.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-6 during the 2025 season, requiring one post-storm inspection, summarized in Table 238-3. All other control measure inspections are summarized in Table 238-4, and maintenance activities conducted at CHQ-SMA-6 are summarized in Table 238-5. No facility modifications affecting drainage were conducted at the SMA in 2025.

Table 238-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114048	8-25-2025	0.96	8-28-2025	3	Yes

Table 238-4 Other Control Measure Inspections during 2025

Inspection Type	Inspection Reference	Inspection Date	Summary of Findings
Control Measure Verification	BMP-113687	8-14-2025	Control installation is satisfactory, certification documentation for installation of enhanced controls as a corrective action can be prepared.

Table 238-5 Maintenance Activities Conducted during 2025

Maintenance Reference	Maintenance Conducted	Maintenance Date	Response Time	Response Discussion
BMP-113687	Extended rock berms Q00903120030, Q00903120031, and Q00903120032 by approximately 5 feet each as part of additional maintenance during installation of enhanced controls.	8-14-2025	0 days	Maintenance was conducted as soon as practicable.

238.4 Stormwater Monitoring

238.4.1 Previous Stormwater Monitoring

Following the installation of baseline control measures, a baseline stormwater sample was collected on July 25, 2013. Analytical results from this sample yielded TAL exceedances for copper (87.6 µg/L) and gross-alpha activity (157 pCi/L). Complete analytical results are reported in "Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No. NM0030759" (LANL 2014, 254067).

Following the installation of enhanced control measures, corrective-action stormwater samples were collected on May 31, 2021, and July 25, 2021. Analytical results from these samples yielded TAL exceedances for copper (38.9 µg/L and 39.5 µg/L) and gross-alpha activity (15.9 pCi/L and 30.1 pCi/L). Complete analytical results are reported in the 2021 Storm Water Individual Permit Annual Report (N3B 2022, 701895).

Following the installation of enhanced control measures, a corrective-action stormwater sample was collected on July 12, 2022. Analytical results from this sample yielded TAL exceedances for copper (35.5 µg/L) and gross alpha activity (211 pCi/L). Complete analytical results are reported in the "2022 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2023, 702681).

A confirmation-monitoring sample was collected on September 14, 2023. Analytical results from this sample yielded a TAL exceedance for copper (24.1 µg/L), and the complete analytical results are presented in the "2023 Update to the Site Discharge Pollution Prevention Plan, Overview" (N3B 2024, 703196) and were included in the SSD in the "2023 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2024, 703133).

238.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-6 from April 3 through October 31, 2025, resulting in a monitoring season of 211 days. Seven inspections performed during the monitoring season are summarized in Table 238-6. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. Soil disturbance associated with enhanced control installation was not significant and did not require shutdown of the sampling equipment at this SMA.

A confirmation-monitoring sample was collected on August 26, 2025. Analytical results from this sample yielded no TAL exceedances. The complete analytical results are presented in Appendix B of the Overview and in the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269), which has been updated with the inclusion of this sample into the SSD.

Table 238-6 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111256	5-14-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111925	5-28-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3

Table 238-6 Sampler Inspections during 2025 (continued)

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-112117	6-11-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112417	7-25-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17
SMPLR-113424	8-28-2025	Yes	7-30-2025 8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114438	9-16-2025	No	9-5-2025 9-12-2025 9-13-2025	0.32/0.68 0.05/0.11 0.41/0.58
SMPLR-114473	10-31-2025	No	9-27-2025 9-28-2025 10-11-2025 10-13-2025	0.1/0.28 0.06/0.13 0.05/0.16 0.11/0.58

[a] Maximum amount of precipitation in any 30-min interval.

[b] Total amount of precipitation in 24 hr.

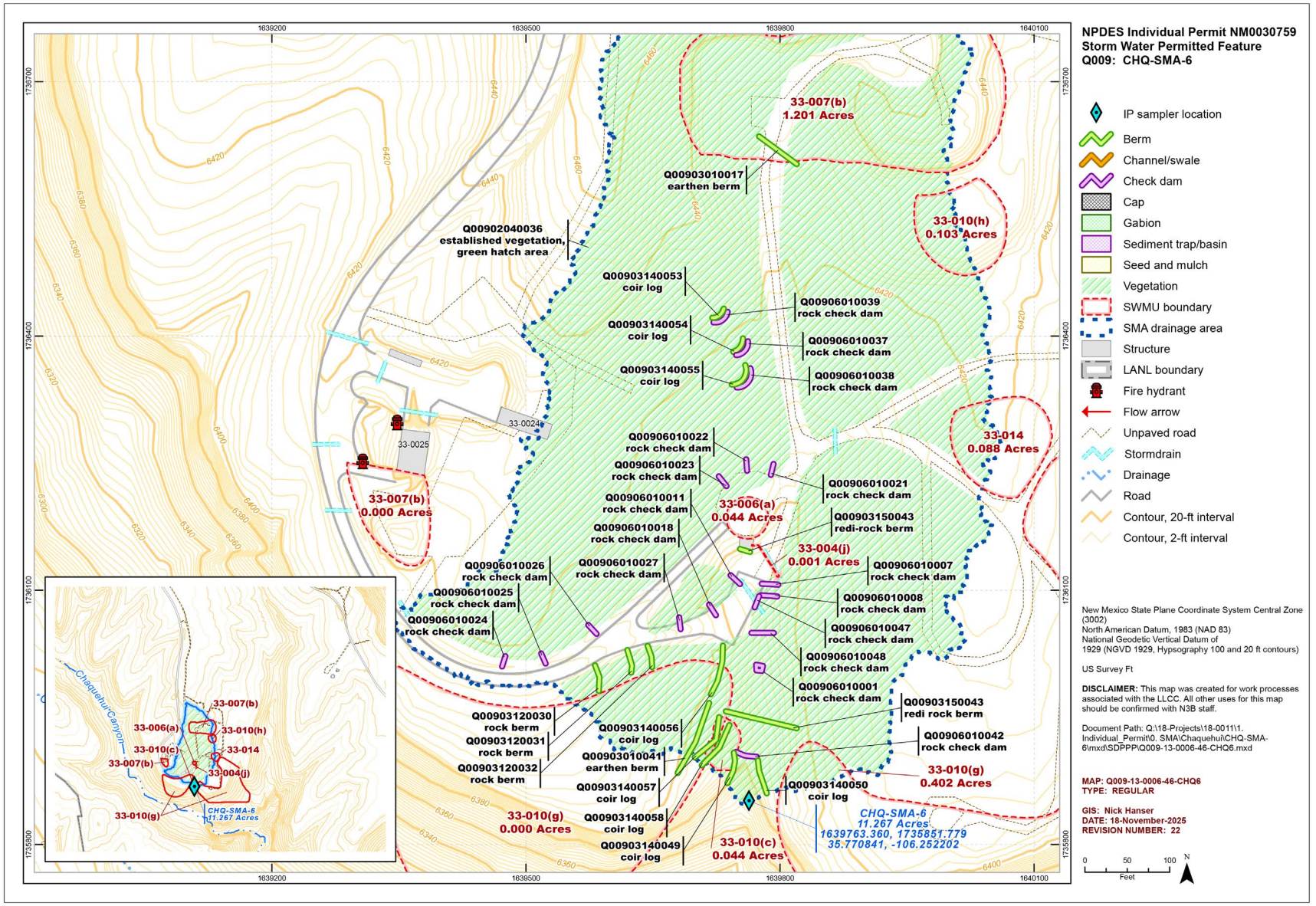


Figure 238-1 CHQ-SMA-6 location map

239.0 CHQ-SMA-7.1: SWMU 33-010(g)

One historical industrial activity area, Site 33-010(g), is associated with CHQ-SMA-7.1 (permitted feature Q010). Summaries of all inspection, monitoring, and maintenance actions conducted in 2025 are provided below. Refer to the "2025 Sampling Implementation Plan, NPDES Permit No. NM0030759" (N3B 2026, 704269) for more information on Consent Order investigation activities, the SSD, and planned stormwater monitoring at the SMA for future monitoring seasons.

239.1 Site Descriptions

33-010(g) (N3B 2020, 701046)

SWMU 33-010(g) is a former surface disposal area located on the northern rim of Chaquehui Canyon at South Site, at the southern end of TA-33. Debris was scattered along the rim and upper walls of the canyon east and south of MDA E. Chaquehui Canyon is about 200 ft wide at this point, with a 40-ft cliff at the canyon rim. A three-strand barbed-wire fence ran along the east side of the unimproved road adjacent to MDA E, separating SWMU 33-010(g) from the rest of South Site.

Some debris present at SWMU 33-010(g) (such as dead tree trunks, rocks, and scraped earth) appears to have originated from the initial clearing of South Site in the 1940s. Other debris, including shrapnel, cables, and burnt wood, likely originated from shot-pad and gun-firing activities. The period of operation for this disposal site is not known, but firing-site operations associated with initiator testing at South Site were conducted from 1950 to 1956 (LANL 1992, 007671). The debris was removed and disposed of off-site during the 1995 VCA (LANL 1996, 054755). Residual debris was removed from SWMU 33-010(g) during the 2019–2020 investigation.

Potential POCs and Sources Associated with the Site

The potential POCs and sources associated with the Site are listed in Table 239-1.

Table 239-1 POCs Known or Suspected to Have Been Used Historically at the Site

Site	Potential POC Source	Potential POCs
33-010(g)	Surface disposal site	Metals, beryllium, copper, HE, and uranium

239.2 Control Measures

All active control measures in use at CHQ-SMA-7.1 are listed in Table 239-2, and their locations are shown on the project map (Figure 239-1). Future map updates will be posted on the IP website: https://ext.em-la.doe.gov/ips/Home/SiteMonitoringAreaMaps.

Table 239-2 Active Control Measures

Control ID	Control Name	Purpose of Control				Install Date
		Run-On	Runoff	Erosion	Sediment	
Q01002040012	Established vegetation	-	X	X	-	5-9-2013
Q01003010010	Earthen berm	X	-	-	X	7-18-2011
Q01003010011	Earthen berm	X	-	-	X	7-18-2011
Q01003140013	Coir log	-	X	-	X	2-4-2021
Q01003140014	Coir log	-	X	-	X	2-4-2021
Q01006010003	Rock check dam	-	X	-	X	10-23-2009

239.3 Inspections and Maintenance

RG340 recorded one storm rain event (0.50 in. or more occurring within 30 min) at CHQ-SMA-7.1 during the 2025 season, requiring one post-storm inspection, summarized in Table 239-3. No other control measure inspections, maintenance activities, or facility modifications affecting discharge were conducted at the SMA in 2025.

Table 239-3 Post-Storm Inspections during 2025

Inspection Reference	Storm Date	30-min Maximum Intensity (in.)	Inspection Date	Days to Inspection	Inspected within 15 days?
BMP-114049	8-25-2025	0.96	8-28-2025	3	Yes

239.4 Stormwater Monitoring

239.4.1 Previous Stormwater Monitoring Results

A baseline stormwater sample was collected on July 23, 2018 (Figure 250-2). Analytical results from this sample yielded TAL exceedances for aluminum (944 µg/L), copper (8.25 µg/L), and gross-alpha activity (75.1 pCi/L) and are reported in "Stormwater Individual Permit Annual Report, Reporting Period: January 1–December 31, 2018" (N3B 2019, 700320).

239.4.2 Stormwater Monitoring during 2025

Stormwater monitoring was conducted at CHQ-SMA-7.1 from April 3 through October 31, 2025, resulting in a monitoring season of 208 days. Seven inspections performed during the monitoring season are summarized in Table 239-4. Rain gage RG340 recorded 25 rain events exceeding 0.1 in. in 24 hr while the sampling equipment was active. No new confirmation-monitoring samples were collected in 2025. The sampler made an unsuccessful attempt to collect a sample during the May 26, 2025, storm. The sampler was reset during the next inspection on May 28, 2025, resulting in a period of inoperability of two days. No rain events exceeding 0.1 in. in 24 hr occurred during this time.

Table 239-4 Sampler Inspections during 2025

Inspection Reference	Inspection Date	Sample Retrieved?	Date(s) of Rain Events Exceeding 0.1 in. in 24 hr since Previous Inspection	Rainfall Intensity[a]/ Total[b] (in.)
SMPLR-111251	5-14-2025	No	5-4-2025 5-5-2025 5-6-2025 5-9-2025	0.26/0.95 0.28/0.72 0.04/0.27 0.22/0.23
SMPLR-111918	5-28-2025	No	5-25-2025 5-26-2025	0.17/0.23 0.3/0.3
SMPLR-112113	6-11-2025	No	6-2-2025 6-3-2025 6-4-2025	0.12/0.18 0.21/0.64 0.14/0.23
SMPLR-112412	7-25-2025	No	6-24-2025 7-18-2025 7-19-2025 7-21-2025	0.13/0.39 0.14/0.16 0.11/0.12 0.08/0.17
SMPLR-113415	8-28-2025	No	7-30-2025 8-23-2025 8-24-2025 8-25-2025 8-26-2025	0.07/0.13 0.11/0.47 0.08/0.17 0.96/1.57 0.11/0.17
SMPLR-114167	9-16-2025	No	9-5-2025 9-12-2025 9-13-2025	0.32/0.68 0.05/0.11 0.41/0.58
SMPLR-114466	10-31-2025	No	9-27-2025 9-28-2025 10-11-2025 10-13-2025	0.1/0.28 0.06/0.13 0.05/0.16 0.11/0.58

[a] Maximum amount of precipitation in any 30-min interval.

[b] Total amount of precipitation in 24 hr.

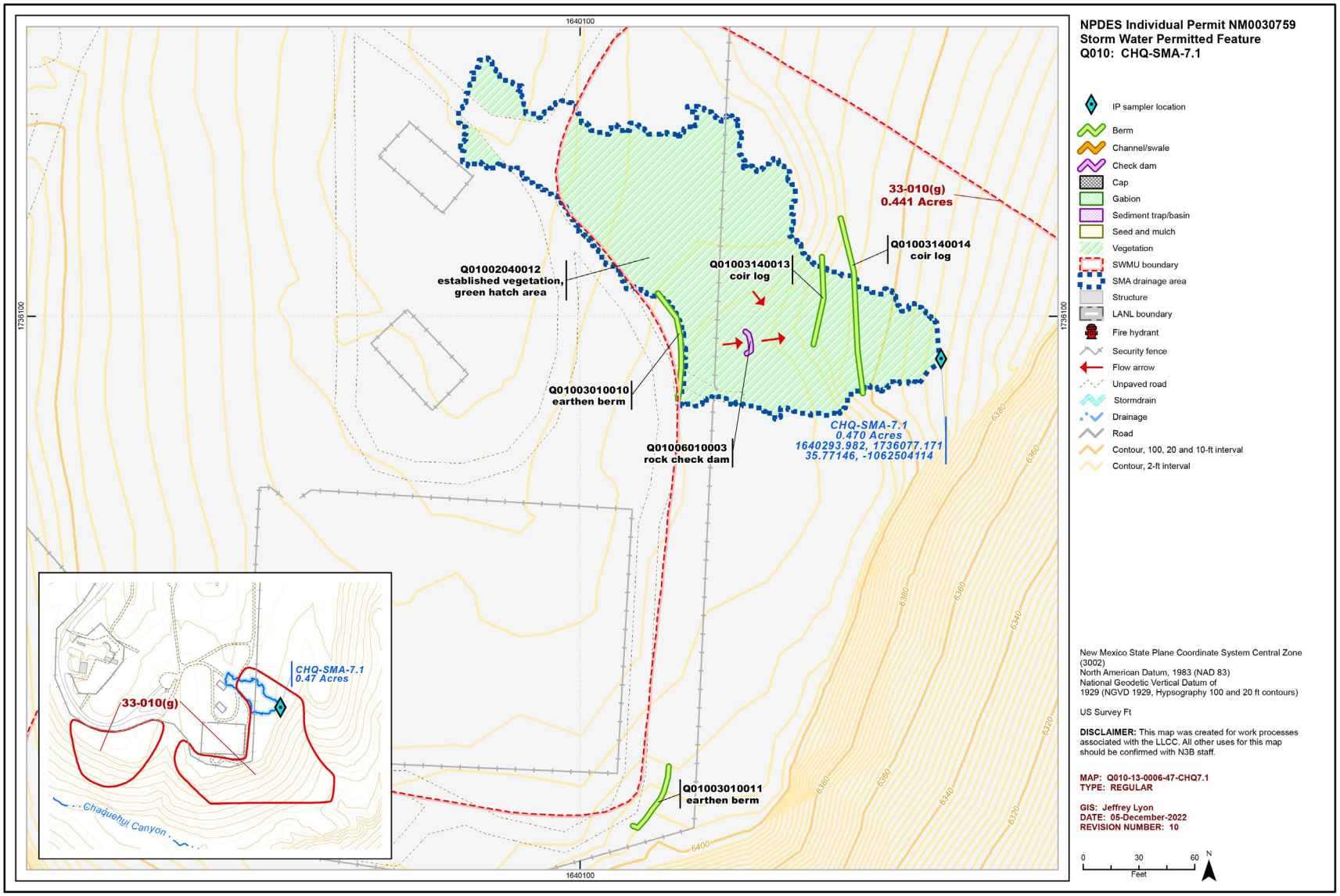


Figure 239-1 CHQ-SMA-7.1 location map

Attachment 1
Amendments

Amendment Number	Effective Date	SMA Number or Section Number	Description of Changes	Type of Change*	Reference
V.5 1451	5-19-2025	Global	Miscellaneous Edit - Activated classification ID for "coir roll" in classification module and added classification ID to all applicable procedure templates in Maintenance Connection database and in SDE.	T	CCN-111876
V.5 1452	7-9-2025	CHQ-SMA-2	New Control - Corrective Action Control ID: Q00303140066 - coir log	T	CCN-112087
V.5 1453	7-9-2025	CHQ-SMA-2	New Control - Corrective Action Control ID: Q00303140067 - coir log	T	CCN-112087
V.5 1454	7-9-2025	CHQ-SMA-2	New Control - Corrective Action Control ID: Q00303140068 - coir log	T	CCN-112087
V.5 1455	7-9-2025	CHQ-SMA-2	Map Revision (17)	T	CCN-112087
V.5 1456	8-4-2025	A-SMA-3	Retire Control - Damaged and/or Replaced-Control ID: A00603020023 - base course berm	T	CCN-113235
V.5 1457	8-4-2025	A-SMA-3	Retire Control - Damaged and/or Replaced-Control ID: A00606010031 - rock check dam	T	CCN-113235
V.5 1458	8-4-2025	A-SMA-3	Retire Control - Damaged and/or Replaced-Control ID: A00606010032 - rock check dam	T	CCN-113235
V.5 1459	8-4-2025	A-SMA-3	Retire Control - Damaged and/or Replaced-Control ID: A00606010033 - rock check dam	T	CCN-113235
V.5 1460	8-4-2025	A-SMA-3	Retire Control - Damaged and/or Replaced-Control ID: A00606010034 - rock check dam	T	CCN-113235
V.5 1461	8-4-2025	A-SMA-3	Map Revision (17)	T	CCN-113235
V.5 1462	8-20-2025	A-SMA-6	New Control - Corrective Action Control ID: A00903010024 - earthen berm	T	CCN-113676
V.5 1463	8-20-2025	A-SMA-6	New Control - Corrective Action Control ID: A00903140025 - coir log	T	CCN-113676
V.5 1464	8-20-2025	A-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: A00903010021 - earthen berm	T	CCN-113676
V.5 1465	8-20-2025	A-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: A00906010011 -rock check dam	T	CCN-113676

Attachment 1, Amendments (continued)

Amendment Number	Effective Date	SMA Number or Section Number	Description of Changes	Type of Change*	Reference
V.5 1466	8-20-2025	A-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: A00906010012 - rock check dam	T	CCN-113676
V.5 1467	8-20-2025	A-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: A00906010019 - rock check dam	T	CCN-113676
V.5 1468	8-20-2025	A-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: A00906010020 - rock check dam	T	CCN-113676
V.5 1469	8-20-2025	A-SMA-6	SMA Boundary Modification, Updated Area in Map Revision 12 (amendment V.5 1470)	T	CCN-113676
V.5 1470	8-20-2025	A-SMA-6	Map Revision (12)	T	CCN-113676
V.5 1471	8-20-2025	CHQ-SMA-6	Miscellaneous Edit - Modification to Q00903120030 - rock berm. Rock media added to extend control 5 ft. Map extent updated on Map Revision 21 (amendment V.5 1482)	T	CCN-113738
V.5 1472	8-20-2025	CHQ-SMA-6	Miscellaneous Edit - Modification to Q00903120031 - rock berm. Rock media added to extend control 5 ft. Map extent updated on Map Revision 21 (amendment V.5 1482)	T	CCN-113738
V.5 1473	8-20-2025	CHQ-SMA-6	Miscellaneous Edit - Modification to Q00903120032 - rock berm. Rock media added to extend control 5 ft. Map extent updated on Map Revision 21 (amendment V.5 1482)	T	CCN-113738
V.5 1474	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140053 - coir log	T	CCN-113738
V.5 1475	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140054 - coir log	T	CCN-113738
V.5 1476	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140055 - coir log	T	CCN-113738
V.5 1477	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140056 - coir log	T	CCN-113738
V.5 1478	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140057 - coir log	T	CCN-113738
V.5 1479	8-20-2025	CHQ-SMA-6	New Control - Corrective Action Control ID: Q00903140058 - coir log	T	CCN-113738
V.5 1480	8-20-2025	CHQ-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: Q00903060051 - straw wattle	T	CCN-113738
V.5 1481	8-20-2025	CHQ-SMA-6	Retire Control - Damaged and/or Replaced-Control ID: Q00903060052 - straw wattle	T	CCN-113738
V.5 1482	8-20-2025	CHQ-SMA-6	Map Revision (21)	T	CCN-113738
V.5 1483	12-8-2025	A-SMA-1.1	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115052
V.5 1484	12-8-2025	A-SMA-1.1	Map Revision (10)	T	CCN-115052

Attachment 1, Amendments (continued)

Amendment Number	Effective Date	SMA Number or Section Number	Description of Changes	Type of Change*	Reference
V.5 1485	12-8-2025	A-SMA-2	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115053
V.5 1486	12-8-2025	A-SMA-2	Map Revision (16)	T	CCN-115053
V.5 1487	12-8-2025	A-SMA-2.5	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115054
V.5 1488	12-8-2025	A-SMA-2.5	Map Revision (10)	T	CCN-115054
V.5 1489	12-8-2025	A-SMA-2.8	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115091
V.5 1490	12-8-2025	A-SMA-2.8	Map Revision (10)	T	CCN-115091
V.5 1491	12-8-2025	A-SMA-3	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115161
V.5 1492	12-8-2025	A-SMA-3	Map Revision (18)	T	CCN-115161
V.5 1493	1-6-2026	CHQ-SMA-0.5	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115103
V.5 1494	1-6-2026	CHQ-SMA-0.5	Map Revision (10)	T	CCN-115103
V.5 1495	1-6-2026	CHQ-SMA-1.02	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115106
V.5 1496	1-6-2026	CHQ-SMA-1.02	Map Revision (15)	T	CCN-115106
V.5 1497	1-6-2026	CHQ-SMA-1.03	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115107
V.5 1498	1-6-2026	CHQ-SMA-1.03	Map Revision (13)	T	CCN-115107
V.5 1499	1-6-2026	CHQ-SMA-4	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115092
V.5 1500	1-6-2026	CHQ-SMA-4	Map Revision (13)	T	CCN-115092
V.5 1501	1-6-2026	CHQ-SMA-6	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115108
V.5 1502	1-6-2026	CHQ-SMA-6	Map Revision (22)	T	CCN-115108
V.5 1503	1-12-2026	A-SMA-6	Miscellaneous Edit - Update Map labels to be consistent per amendment V.5 1505.	E	CCN-115285
V.5 1504	1-12-2026	A-SMA-6	Map Revision (13)	T	CCN-115285
V.5 1505	1-20-2026	Volume 5	Miscellaneous Edit - Updates classification names in Maintenance Connection classification module for consistency on maps. Map labels for all classification names apart from those associated with acronyms will be lower case. Additionally, water bar will be revised to be one word; riprap should be displayed as one word; shotcrete cap label revised to shotcrete; permanent vegetation vegetative buffer strip label revised to vegetative buffer strip; gabion will be labeled in the singular; curb will be labeled as curbing.	T	CCN-115104

*T = Technical, E = Errata.

Attachment 2
Vicinity Map

Attachment 2, Vicinity Map (continued)