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Date: April 30, 2008
Refer To: EP2008-0199

James P. Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Submittal of a Summary of the Stormwater Sampling Work Plan for Guaje/Barrancas/Rendija Canyons Aggregate Area

Dear Mr. Bearzi:

The New Mexico Environment Department (NMED) approval with direction letter for the investigation report for Guaje/Barrancas/Rendija Canyons, revision 1, dated December 20, 2007, requires Los Alamos National Laboratory (the Laboratory) to submit a work plan for stormwater monitoring at Solid Waste Management Units (SWMUs) 00-011(a, c, d, and e) and Areas of Concern (AOCs) C-00-020 and C-00-041. Stormwater discharges from SWMU 00-011(d) and AOC-C-00-041 are currently monitored under the Federal Facility Compliance Agreement (FFCA) between the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy. The stormwater monitoring plan for these sites is included in the Laboratory's Stormwater Pollution Prevention Plan for SWMUs and AOCs and Stormwater Monitoring Plan (SWMU/SWPPP). The current version of the SWMU/SWPPP was submitted to EPA and the NMED Surface Water Quality Bureau (SWQB) in March 2007. Stormwater discharges from SWMUs 00-011(a, c, and e) and AOC C-00-041 will be added to the FFCA monitoring program in 2008, and the stormwater monitoring plan for these sites is included in the 2008 update to the SWMU/SWPPP that will be submitted to EPA and SWQB on April 30, 2008.

Because stormwater monitoring at the sites referenced in the approval with direction letter is being performed pursuant to the FFCA in accordance with the SWMU/SWPPP, the Laboratory did not prepare a separate stormwater monitoring work plan for these sites. Instead, Attachment 1 presents a summary of the FFCA stormwater monitoring activities that will be performed at these sites. Attachment 1 identifies the locations for collection of stormwater samples and summarizes sampling and analysis methods and the reporting schedule. The details of stormwater monitoring are included in the SWMU/SWPPP.

In the approval with direction letter, NMED states that the Laboratory has not provided stormwater or other data to evaluate the potential for sites within Guaje/Barrancas/Rendija Canyon Aggregate, and particularly AOC C-00-041, to impact surface water. However, in a letter dated March 16, 2007, the Laboratory provided NMED a summary of available stormwater and sediment data for

AOC-C-00-041. An update of available stormwater data from two active samplers [B-SMA-1 at SWMU 00-011(d) and R-SMA-1 at AOC C-00-041] is also provided on CD with this submittal.

If you have any questions, please contact Becky Coel-Roback at (505) 665-5011 (becky_cr@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (crodriguez2@doeal.gov).

Sincerely,

Susan G. Stiger, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David R. Gregory, Project Director
Environmental Operations
Los Alamos Site Office

SS/DG/DM/BCR:sm

Enclosures: 1) Stormwater data for B-SMA-1 and R-SMA-1 on CD

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
Becky Coel-Roback, EP-CAP, MS M992
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)
Laurie King, EPA Region 6, Dallas, TX
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Steve Veenis, EP-LWSP, MS K490
Peggy Reneau, WES-DO, MS M992
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Tom Skibitski, NMED-OB, Santa Fe, NM
Melanie Skeet, DOE-LASO (date-stamped letter emailed)
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Attachment 1

Summary of Stormwater Monitoring Activities at Site Monitoring Areas in the Guaje/Barrancas/Rendija Canyons Aggregate

1.0 INTRODUCTION

Stormwater discharges from solid waste management units (SWMUs) and areas of concern (AOCs) in the Guaje/Barrancas/Rendija Canyons Aggregate Area that are subject to permitting under the Clean Water Act (CWA) will be monitored under the 2008 annual update to the Los Alamos National Laboratory (the Laboratory) Stormwater Pollution Prevention Plan for SWMUs and AOCs ("sites") and Stormwater Monitoring Plan (SWMU/SWPPP). The SWMU/SWPPP has been developed in accordance with regulations governing stormwater discharge controls at the Laboratory. Monitoring requirements pursuant to the CWA, 33 U.S.C. Section 1251–1387 include the 2005 Federal Facility Compliance Agreement (FFCA) (Administrative Order Docket No. CWA-06-205-1701) between the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) and those established by EPA for National Pollutant Discharge Elimination System (NPDES) Stormwater Multi-Sector General Permits (MSGP) for Industrial Activities.

In accordance with facility activity, the SWMU/SWPPP complies with the industry-specific permit requirements for Hazardous Waste Treatment Storage or Disposal, Section XI subpart K of the NPDES Stormwater MSGP for Industrial Activities (65 Federal Register 64746). The applicable Stormwater Discharge Permit is EPA MSGP Number NMR05A734 and NMR05A735. The SWMU/SWPPP is applicable to discharges of stormwater associated with the identified Laboratory sites during the period of the FFCA, and as stated above, incorporates FFCA requirements for sites and MSGP monitoring and reporting requirements for SWMUs and AOCs.

EPA Region 6 has provided the following information on the definition of a SWMU and its coverage under the NPDES Stormwater Program.

> *Any discernible waste management unit from which hazardous constituents may migrate, irrespective of whether the unit was intended for management of solid or hazardous wastes. The types of units considered SWMUs are landfills, surface impoundments, waste piles, land treatment units, incinerators, injection wells, tanks and container storage areas, waste water treatment system, and transfer stations. In addition, areas associated with production processes at facilities that have become contaminated as a result of routine, systematic, and deliberate releases of wastes (which may include abandoned or discarded product), or hazardous constituents from wastes, are considered SWMUs. SWMUs usually meet the definition of industrial activity in 40 CFR 122.26(b)(14)(iv-v), thereby requiring an NPDES stormwater permit.*

Analytical monitoring of stormwater discharges from sites is governed by requirements set forth in the FFCA and in the MSGP. The purpose of the stormwater monitoring mandated by the FFCA is to determine if there is a release or transport of a pollutant or contaminant from a site into surface water that could cause or contribute to a violation of applicable surface water quality standards, including the antidegradation policy, or an applicable waste load allocation. Monitoring under the FFCA is not performed to demonstrate compliance with surface water quality standards. Based on common drainage patterns, stormwater and erosion control structures, pollutant sources, and receiving streams, the monitored sites are grouped within site monitoring areas (SMAs). An SMA may consist of more than one site in locations where site boundaries overlap or where sites share a common drainage. Stormwater runoff from FFCA sites is monitored in the site-specific drainage(s) contained within the SMA, using either automated samplers or single stage samplers.

The Guaje/Barrancas/Rendija Aggregate SWMUs and AOCs are being monitored within the following SMAs:

- SWMU 00-011(a)—R-SMA-2.5
- SWMU 00-011(c)—R-SMA-2
- SWMU 00-011(d)—B-SMA-1
- SWMU 00-011(e)—R-SMA-2.3
- AOC C-00-020—R-SMA-0.5
- AOC C-00-041—R-SMA-1

The locations of the SMA samplers relative to the Guaje/Barrancas/Rendija Canyons Aggregate SWMUs and AOCs are shown in Figures 1 through 6.

Analytical monitoring under the FFCA is conducted only for those constituents for which a stormwater screening action level (wSAL) has been developed or for which an applicable water-quality criterion has been established by the New Mexico Water Quality Control Commission (NMWQCC). The potential pollutants at sites are identified by evaluation of the following:

- constituents present above background levels in surface soil and/or sediment samples collected at the site by the Laboratory's Corrective Actions Project to identify chemicals of potential concern (COPCs);
- site descriptions of history of use and process knowledge to identify COPCs; and/or
- constituents present above wSALs in site-specific stormwater runoff samples collected pursuant to the Laboratory SWMU/SWPPP.

Details of the sampling and analysis for the Guaje/Barrancas/Rendija Canyons Aggregate SWMUs and AOCs are provided in Table 1.

2.0 METHODS AND PROCEDURES FOR SAMPLE COLLECTION AND ANALYSIS

To conform to the FFCA and the compliance schedule, a maximum of four samples are collected during each calendar year, following precipitation events that produce a discharge in volumes large enough to allow for collecting samples. Fewer than four samples may be collected if four precipitation events of sufficient magnitude do not occur. One of the four samples may be collected during snowmelt runoff. Telemetry at gage stations is used to alert staff of a storm event, at which time samples are collected from gage stations and surrounding SMA sampling locations. Sufficient volume is collected to perform each required analysis (see Table 1).

Grab samples are collected within the first 30 min of flow from the discharge resulting from a storm event that is greater than 0.1 in. in magnitude and that occurs at least 72 h from the previously measurable (i.e., greater than 0.1 in. rainfall) storm event. The 72-h storm interval is waived when the preceding measurable storm did not yield a measurable discharge or if the facility can document that less than a 72-h interval is representative for local storm events during the sampling period.

Table 1 presents analytical suites and filtration requirements for each SWMU and AOC. Both filtered (0.45 µm) and unfiltered water samples will be collected and preserved with nitric acid for target analyte list (TAL) and pollutants of concern (POC) metals analysis. Stormwater collected for suspended sediment

concentration (SSC), semivolatile organic compounds (SVOCs), and total petroleum hydrocarbon–diesel range organics (TPH-DRO) analyses are not filtered and are preserved with ice to 4°C. Filtration and preservation are accomplished as soon as practical to meet 40 CFR 136 requirements.

A subcontract analytical laboratory performs all sample analyses pursuant to the most recent version of the 2004 DOE "Model Statement of Work for Analytical Laboratories," prepared for the National Nuclear Security Administration Service Center in Albuquerque, New Mexico. The analytical statement of work specifies analytical and quality-control requirements for the requested analytical methods that are consistent with the promulgated procedures.

3.0 REPORTING SCHEDULE

The reporting schedule for stormwater sampling results and other evaluations required by the MSGP and the FFCA is as follows:

- FFCA requires that the annual results for watershed and site-specific monitoring be submitted to EPA and NMED Surface Water Quality Bureau (SWQB) by March 31 of each calendar year.
- FFCA requires that exceedances of wSALs be reported in writing to EPA and NMED SWQB monthly, by the 28th day of the following month following receipt of the data from the analytical laboratory.
- FFCA requires that DOE and the Laboratory submit a written status report to EPA Region 6 and NMED SWQB no later than 60 d after the end of each quarter, with deadlines that DOE was required to meet during the reporting period, progress made toward meeting deadlines and milestones, reasons for any noncompliance with the FFCA, corrective actions taken to address exceedances of wSALs, and descriptions of any matters relevant to the status of their compliance with the FFCA.

In addition to the above reporting requirements, Surface Water Sampling Field Sheets, which document quarterly visual monitoring results, and MSGP annual Comprehensive Site Compliance Evaluation Reports are maintained by the Laboratory and are available upon request.

Table 1
Stormwater Sampling and Analysis for Guaje/Barrancas/Rendija SMAs

SWMU/ AOC	SMA	Monitoring Year Start	Sampler Type	Inorganic Suites				Organic Suites	
				TAL[a] Metals	POC[b] Metals	SSC[c]	Field pH	SVOC[d]	TPH-DRO[e]
				F[f]/UF[g]	F/UF	UF	UF	UF	UF
C-00-020	R-SMA-0.5	2008	Single stage	4[h]	—[i]	X[j]	X	—	—
C-00-041	R-SMA-1	2005	Single stage	—	4	X	X	4	4
00-011(c)	R-SMA-2	2008	Single stage	4	—	X	X	—	—
00-011(e)	R-SMA-2.3	2008	Single stage	4	—	X	X	—	—
00-011(a)	R-SMA-2.5	2008	Single stage	4	—	X	X	—	—
00-011(d)	B-SMA-1	2004	Single stage	—	4	X	X	—	—

[a] TAL = Target analyte list (consists of 29 metals) (EPA Methods 200.8 and 200.7).

[b] POC = Pollutants of concern (Ag, As, Cr, Cu, Tl, Pb, V, Zn) (EPA Methods 200.8 and 200.7).

[c] SSC = Suspended sediment concentration (EPA Method 160.2).

[d] SVOC = Semivolatile organic compounds (EPA Method 625).

[e] TPH-DRO = Total petroleum hydrocarbons–diesel range organics (EPA Method SW-846:8015M).

[f] F = Filtered.

[g] UF = Unfiltered.

[h] Number of samples to be analyzed annually (pending adequate precipitation).

[i] — = Analysis will not be performed at this location.

[j] X = Analysis will be performed each time location is sampled.

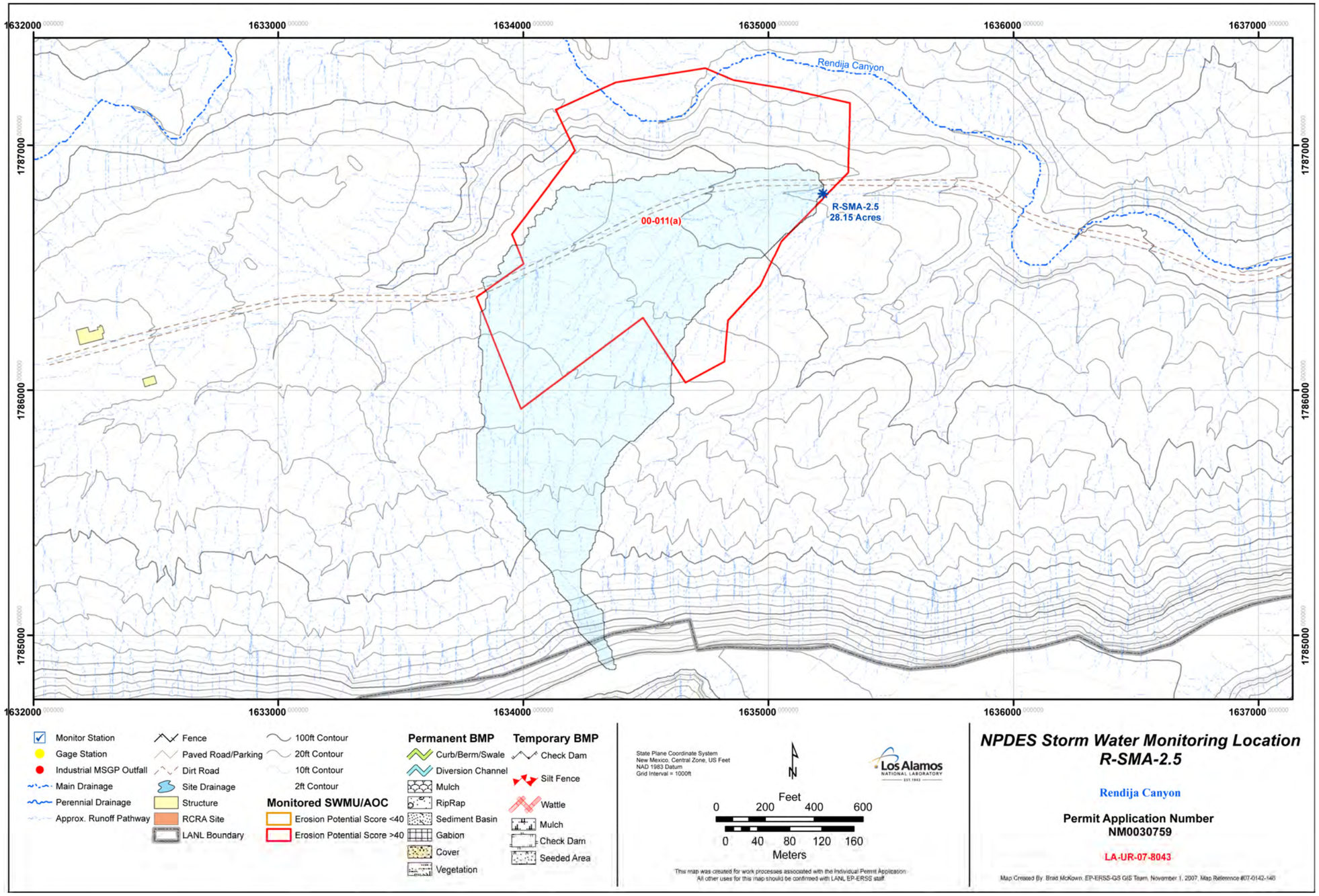

Figure 1 SWMU 00-011(a) stormwater monitoring location

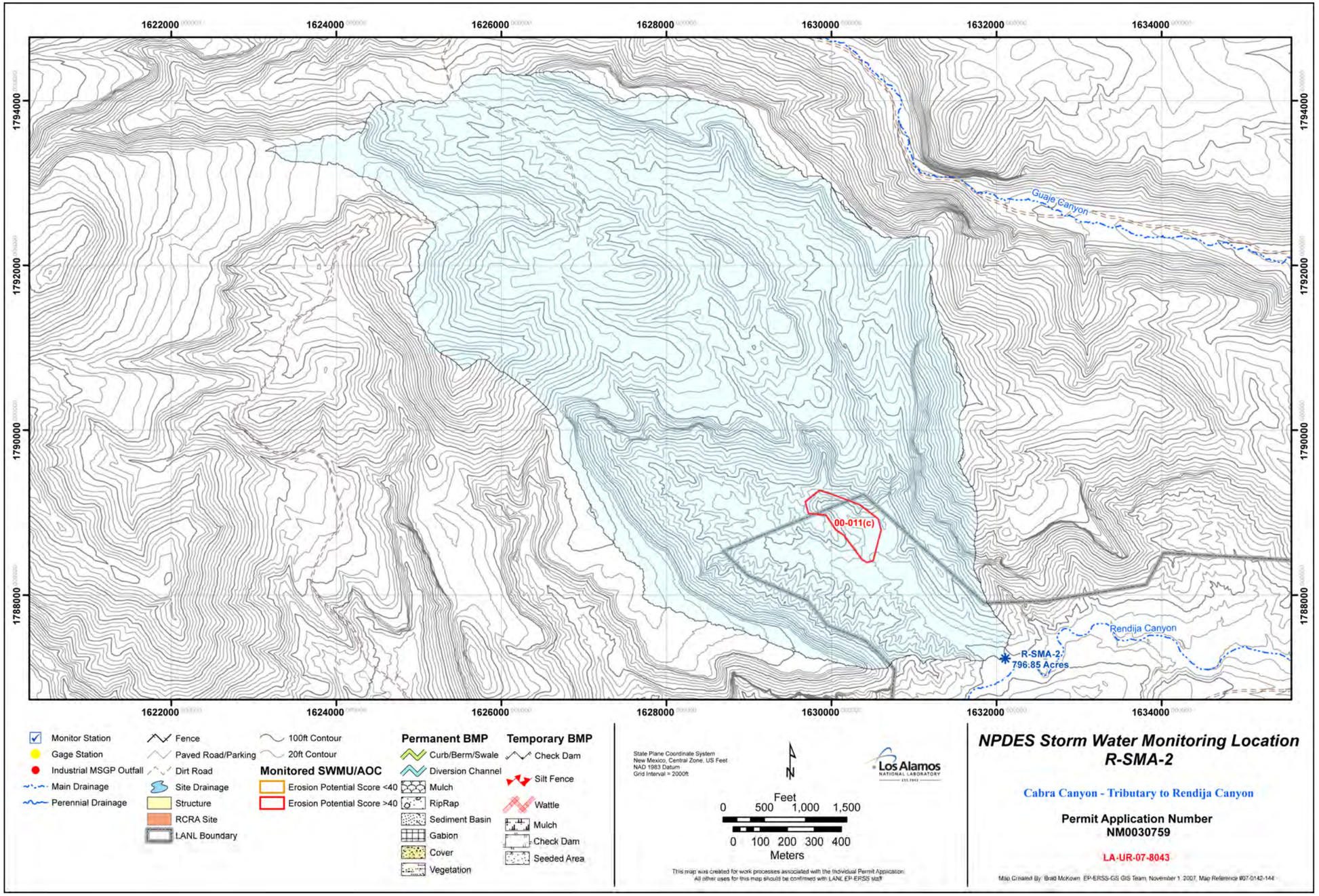

Figure 2 SWMU 00-011(c) stormwater monitoring location

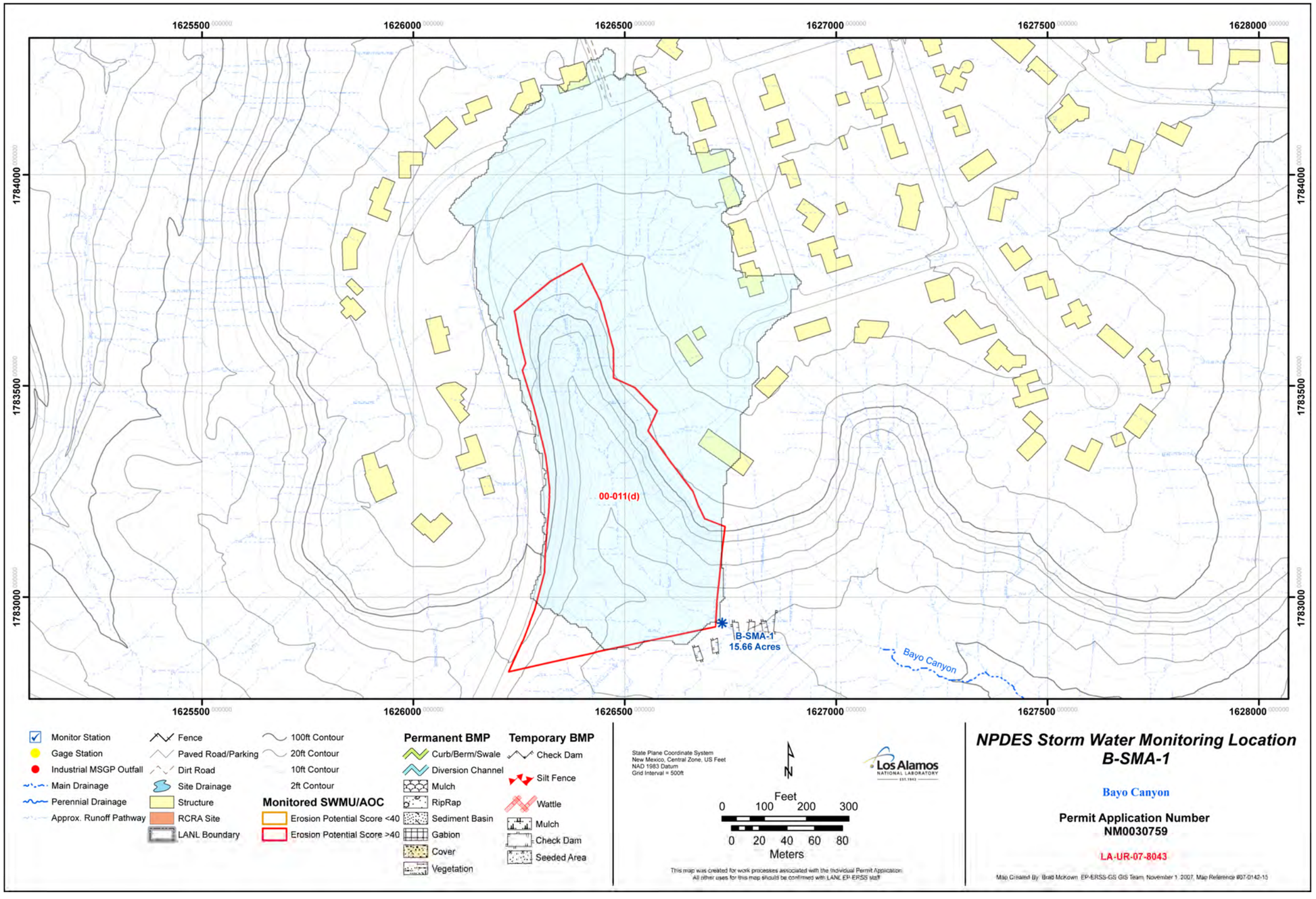

Figure 3 SWMU 00-011(d) stormwater monitoring location

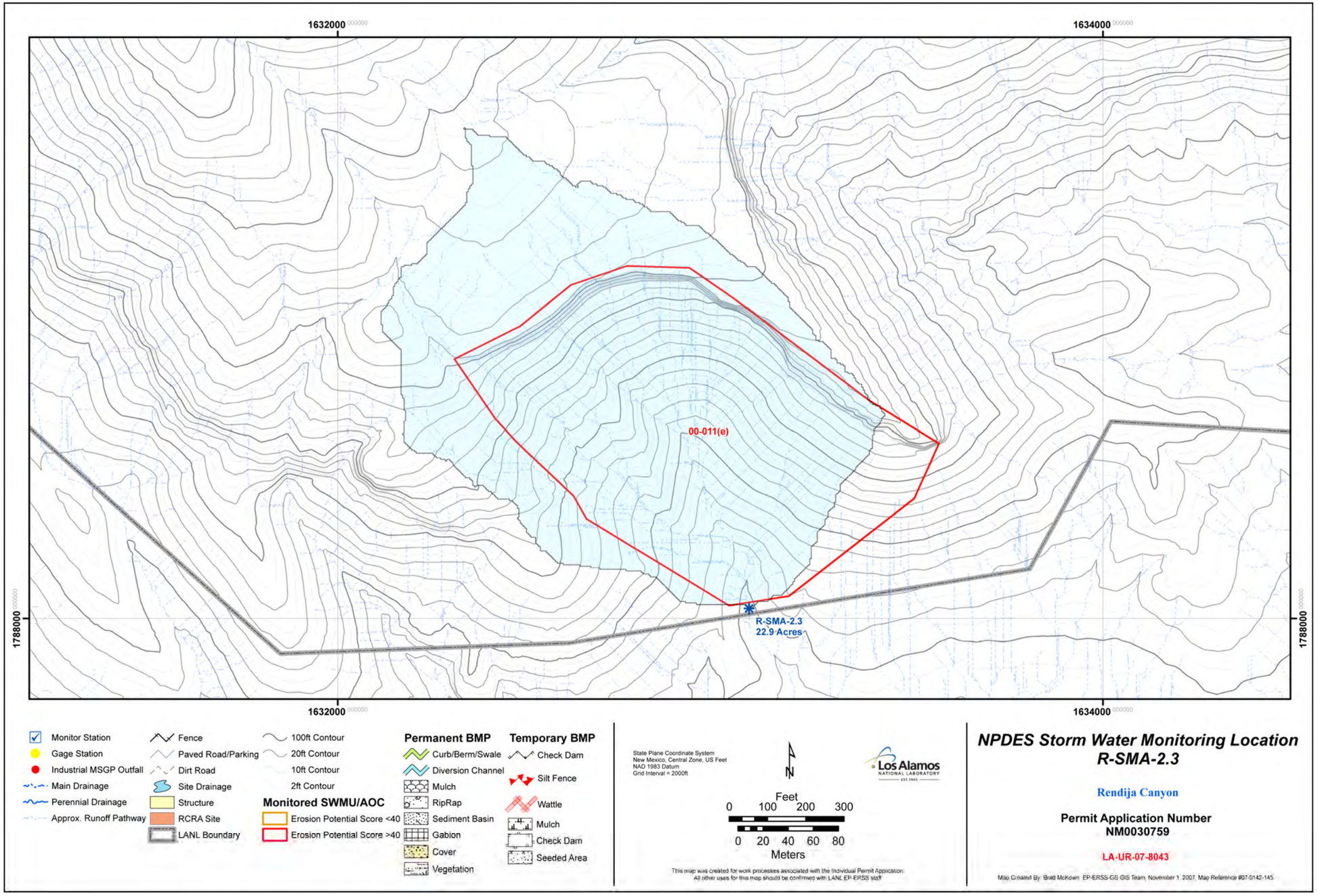

Figure 4 SWMU 00-011(e) stormwater monitoring location

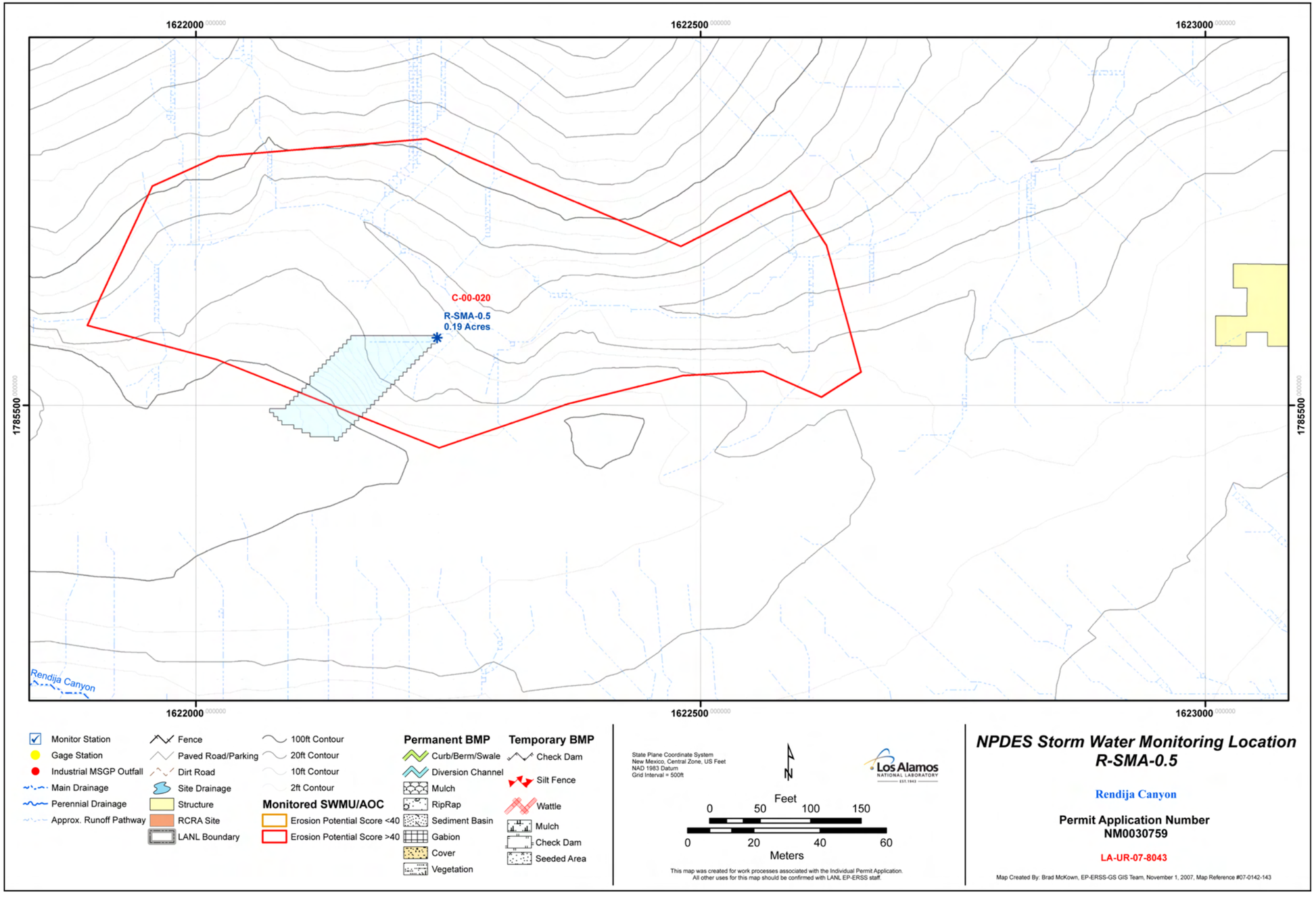

Figure 5 AOC C-00-020 stormwater monitoring location

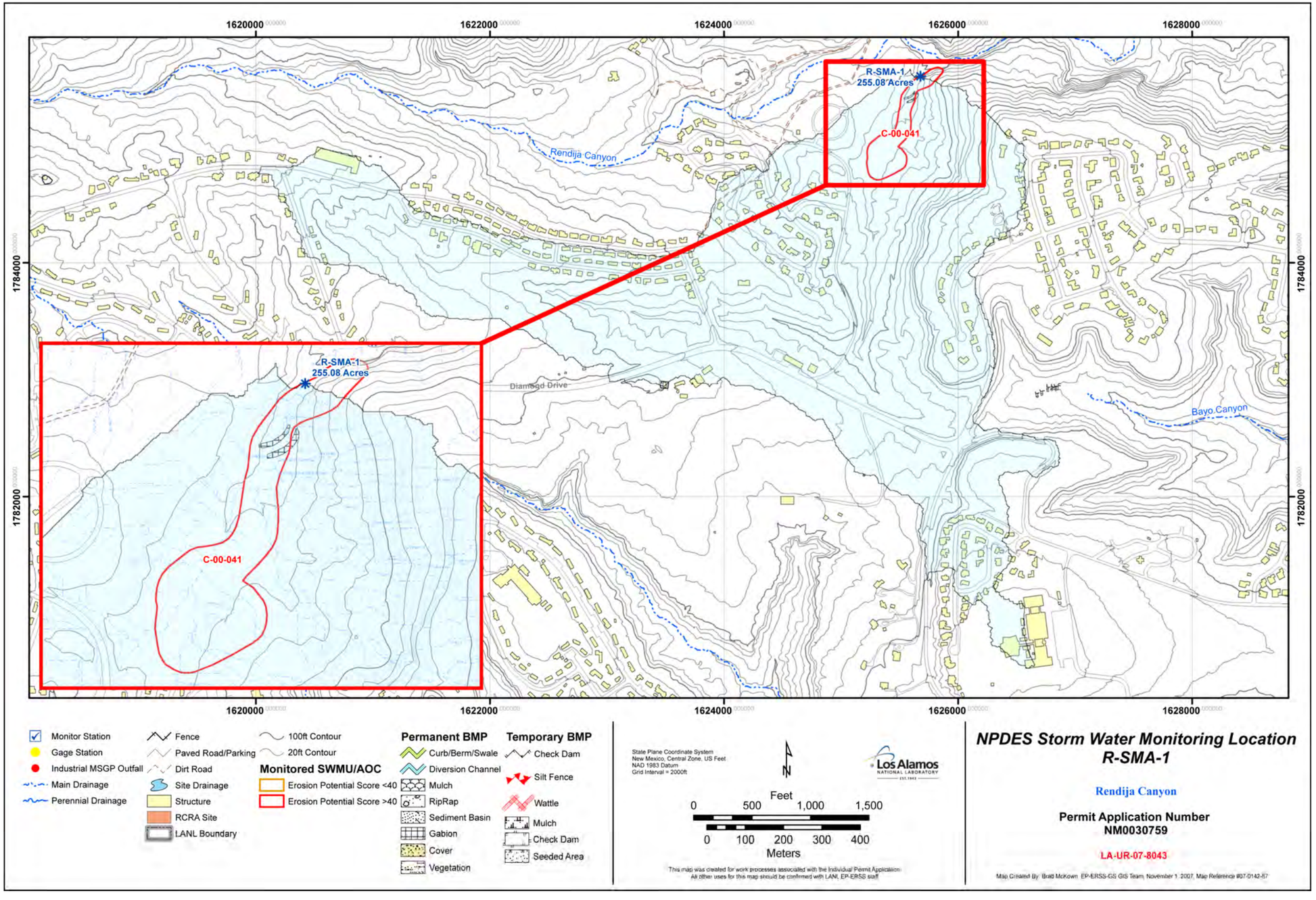

Figure 6 AOC C-00-041 stormwater monitoring location