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Bureau

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Date: January 18, 2018
Refer To: ADEM-18-0003
LAUR: 18-20211

John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Replacement Pages for the Interim Facility-Wide Groundwater Monitoring Plan for Monitoring Year 2018 issued in January 2018

Dear Mr. Kieling:

Enclosed please find two hard copies of the Interim Facility-Wide Groundwater Monitoring Plan for Monitoring Year (MY) 2018, October 2017 to September 2018, (2018 IFGMP) with replacement pages issued January 2018. The replacement pages reflect the changes listed below.

- Section 6.4, Page 22. Monitoring location 16-612309 (alias is Surge Bed Monitoring Well) has been added to the TA-16 260 monitoring group. (Pages 23 and 24 are also provided as replacement pages because of shifted text.)

- Section 9.1, Page 30. Two references have been added that are pertinent to the Surge Bed Monitoring Well.

- Figure 3.1-1, Page 35. Monitoring location MCOI-4, an intermediate water-level monitoring only location, has been added to the figure. (Note: MCOI-4 was included on Plate 1 of the 2018 IFGMP submitted to the New Mexico Environment Department [NMED] in May 2017).

- Figure 6.1-1, Page 38. The Surge Bed Monitoring Well and 16-61439 (alias is PRB Alluvial Seep) have been added to the figure. The symbol for R-63i has been changed from a "water-level monitoring only location" to an "intermediate well monitoring location." These changes have also been made to the site map presented on Plate 1.

- Figure 8.1-1, Page 40. The flood-damaged SCA-3 monitoring location has been removed from the figure. This change has also been made to the site map presented on Plate 1.

- Table 1.6-2, Page 46. Laboratory analysis for gross gamma activity is not performed on samples collected under the groundwater monitoring program. Gross gamma has therefore been deleted from the WSP-RAD analytical group list to correctly reflect the monitoring program.

- Table 1.7-1, Page 48. Monthly sampling, designated by "M," has been added to the table to better support implementation of the sampling plan for the Chromium Investigation Monitoring Group. Table note d has been modified to include the full name of monitoring location Vine Tree Spring.

- Table 1.8-1, Page 51. A typographic error has been corrected in the table by changing R-25 S2 to R-25 S3. R-63i has been removed from the water-level monitoring only table. Samples will be collected from R-63i in MY2018.

- Table 3.4-1, Page 53. The column header "Naphthalene Sulfonates" has been changed to "Naphthalene Sulfonate Tracers."

- Table 5.4-1, Pages 55. The sampling frequency row for R-40 S2 shown at the bottom of Page 54 is repeated on the top of Page 55. The second entry on top of Page 55 has been eliminated.

- Table 6.4-1, Pages 56 and 57. The column header "Naphthalene Sulfonates" has been changed to "Naphthalene Sulfonate Tracers."

- Table 6.4-1, Page 56. The classification of 16-61439 (alias is PRB Alluvial Seep) has been changed from "Alluvial" to "Spring," which is consistent with the IFGMP classification for similar monitoring locations.

- Table 6.4-1, Page 57. The Surge Bed Monitoring Well has been added to the table.

- Table 8.3-1, Page 58. The analytical suite specified for tritium analysis of the biennial samples collected from TW-2Ar has been changed from low-level tritium to standard tritium. As noted on IFGMP Crosswalk Table 7 (MY2017 vs MY2018), which was submitted to NMED in October 2017, the tritium activity detected at TW-2Ar has ranged from 188 to 352 pCi/L and as such, regular tritium analysis is the appropriate choice for this monitoring location.

- Table 8.3-1, Page 59. The name of Lower La Mesita Spring has been changed to Upper La Mesita Spring (i.e., the correct name assigned to this monitoring location by the Pueblo de San Ildefonso). Annual sampling for general inorganics analysis has been added for Spring 2. The omission of this analysis was noted on IFGMP Crosswalk Table 7 (MY2017 vs MY2018), which was submitted to NMED in October 2017.

- Plate 1. The Surge Bed Monitoring Well and PRB Alluvial Seep have been added to Plate 1. The flood-damaged SCA-3 monitoring location has been removed from Plate 1. The symbol for R-63i has been changed from a "water-level monitoring only location" to an "intermediate well monitoring location."

If you have any questions, please contact Nita Patel at (505) 665-9273 (npatel@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen@em.doe.gov).

Sincerely,

Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,

David S. Rhodes, Director
Office of Quality and Regulatory Compliance
Environmental Management
Los Alamos Field Office

BR/DR/NP:sm

Enclosures: Replacement pages for Interim Facility Groundwater Monitoring Plan for Monitoring Year 2018, October 2017 to September 2018 (EP2018-0010, LA-UR-18-20211)

Interim Facility-Wide Groundwater Monitoring Plan for the 2018 Monitoring Year, October 2017–September 2018, with replacement pages incorporated (on CD and hardcopy, EP2017-0068, LA-UR-17-24070)

Cy: (w/enc.)
Nita Patel, ADEM ER Program

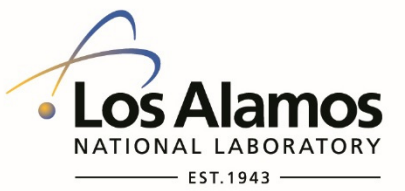
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William Mairson, PADOPS
Craig Leasure, PADOPS

LA-UR-17-24070
May 2017
EP2017-0068

Interim Facility-Wide Groundwater Monitoring Plan for the 2018 Monitoring Year, October 2017–September 2018

(Includes replacement pages issued January 18, 2018)



6.4 Scope of Activities

Active monitoring locations in the TA-16 260 monitoring group include alluvial groundwater wells, perched-intermediate groundwater wells, regional groundwater wells, and springs. These locations are shown in Figure 6.1-1. Sampling locations, analytical suites, and monitoring frequencies for the TA-16 260 monitoring group are presented in Table 6.4-1.

Monitoring of deep groundwater from the perched-intermediate and regional aquifers represents a long-term data set that indicates what constituents are present and their trends and variability. Additional samples are collected for some constituents as early-detection samples to assess potential migration of those constituents from secondary sources in the vadose zone.

The sampling frequency for most locations in the TA-16 260 monitoring group is primarily semiannual, although select locations are sampled quarterly. The objectives for the sampling frequencies and analytical suites are presented in Table C-1.

Samples collected from monitoring well R-25b continue to show the influence of tracers introduced in November 2015 (LANL 2017, 602161) and are not representative. For this reason, R-25b has been listed in the Watch List in Appendix E. Well R-25b will continue to be sampled in MY2018, but the samples will be categorized as screening samples until the geochemistry is more representative.

Long-term monitoring of location 16-612309 (alias is Surge Bed Monitoring Well) is included in the remedy completion report for Consolidated Unit 16-021(c)-99 (LANL, 2017) (LANL 2017, 602597), which was approved by NMED in November 2017 (NMED 2017, 602758). Samples will be collected from the Surge Bed Monitoring Well in accordance with Table 6.4-1 when sufficient water is available. The well is typically dry and was therefore equipped with a water-level transducer to better understand the timing associated with the presence of water in the well. The Surge Bed Monitoring Well was added to the TA-16 260 monitoring group in December 2017 to support the long-term groundwater monitoring program.

7.0 MDA AB MONITORING GROUP

7.1 Introduction

The MDA AB monitoring group is located in TA-49 and includes one monitoring well completed in perched-intermediate groundwater and three wells completed in the regional aquifer. TA-49, also known as the Frijoles Mesa Site, is located on a mesa in the upper part of the Ancho Canyon drainage and part of the area drains into Water Canyon. The MDA AB monitoring group is shown in Figure 7.1-1.

TA-49 was used for underground hydronuclear testing in the early 1960s. The testing consisted of criticality, equation-of-state, and calibration experiments involving special nuclear materials and produced large inventories of radioactive and hazardous materials: isotopes of uranium and plutonium, lead, and beryllium; explosives such as TNT, RDX, and HMX; and barium nitrate. Much of this material remains in shafts on the mesa top. Further information about activities and SWMUs and AOCs at TA-49 is presented in Laboratory reports (LANL 2010, 109318; LANL 2010, 109319). A total of 20 SWMUs and AOCs are located within TA-49.

7.2 Background

Both Ancho Canyon and the north fork of Ancho Canyon head on the Pajarito Plateau in the south-central part of the Laboratory. Approximately 2.2 mi^2 (5.6 km^2) is drained by the north fork of Ancho Canyon and approximately 2.3 mi^2 (5.8 km^2) is drained by Ancho Canyon. Surface-water flow is ephemeral and occurs as runoff, primarily following infrequent, intense thunderstorms or during snowmelt. Its source is direct precipitation and runoff from surrounding mesa tops. No perennial sources of surface water exist at TA-49.

In 1960, the USGS drilled three deep wells (test wells DT-5A, DT-9, and DT-10) to monitor the water quality in the regional aquifer. No contaminants were found in these wells at concentrations near or above standards. As with other wells installed around the Laboratory during that period using mild carbon steel, samples from these three test wells have shown elevated metals concentrations related to corrosion or flaking of well components. In 2010, the total lead concentration in a sample from test well DT-9 of 20.1 µg/L was above the EPA drinking water system action level of 15 µg/L. Another sample collected during the year had a total lead result of less than 2 µg/L. Some results during the 1990s were above 50 µg/L. The source of lead was believed to be galvanized piping used for pump or transducer installation.

Several deep mesa-top boreholes and wells have been drilled to intermediate depths of 300 ft to 700 ft bgs (49-CH-1 through 49-CH-4, 49-2-700) and to the regional aquifer (DT-5A, DT-9, DT-10, R-29, and R-30). No perched-intermediate groundwater zones were encountered when these wells were drilled (LANL 2006, 093714; LANL 2010, 110478; LANL 2010, 110518). A moisture profile for the 700-ft-deep mesa-top borehole 49-2-700-1 shows low moisture content (<17% by weight) throughout the profile; the profile is similar to that beneath other dry mesas and indicates percolation along neighboring canyons does not impact moisture beneath the mesa at TA-49. In addition, 49-Gamma was drilled to 54 ft bgs in upper Ancho Canyon, and wells 49-9M-2 through 49-9M-4 were drilled in the drainage of the upper north fork of Ancho Canyon; these boreholes were dry when drilled. These observations show a lack of shallow perched groundwater in the upper portions of the Ancho watershed.

Perched-intermediate groundwater was encountered in Water Canyon, approximately 3500 ft northeast of MDA AB during the drilling of R-27 in 2005. The perched zone was detected at 628 ft bgs in the Puye Formation immediately above the Cerros del Rio basalt. Monitoring well R-27i was subsequently installed in September 2009 with a single screen to evaluate water quality and measure water levels in the perched zone.

Springs and seeps are known to occur in the lower reaches of Water and Ancho Canyons, far downgradient of TA-49 (near the Rio Grande), but none have been identified within the boundaries of TA-49 (LANL 2007, 098492; LANL 2007, 098523).

The top of the regional aquifer occurs approximately 1126 ft to 1153 ft bgs, based on water levels in monitoring wells R-29 and R-30. The potentiometric surface of the regional aquifer beneath TA-49 lies completely within the Puye Formation and the Cerros del Rio basalt. Groundwater flow in the upper portion of the regional aquifer at TA-49 is generally eastward.

Contaminant Sources and Distributions

The primary contaminants at MDA AB and other disposal areas in TA-49 include tritium; radionuclides (plutonium-238, plutonium-239/240, americium-241, and cesium-137); arsenic; chromium; copper; lead; and perchlorate. Radionuclides have been detected in canyon sediments, but no elevated levels of contaminants have been detected in groundwater in the wells that comprise the MDA AB monitoring group. Three decades of water-quality records from regional wells in this area (test wells DT-5A, DT-9, and DT-10) show no substantial changes in water chemistry or the presence of Laboratory contaminants in the regional aquifer. Perchlorate has been detected slightly above background in well R-27i.

7.3 Monitoring Objectives

The monitoring objectives for the MDA AB monitoring group are to characterize the groundwater beneath MDA AB and ultimately to support the MDA AB CME process. Regional aquifer wells R-29 and R-30 have been drilled immediately downgradient of MDA AB at TA-49. The older test wells, DT-5A, DT-9, and DT-10, have been plugged and abandoned because of their potential for producing nonrepresentative

data associated with well casing and screen material and their long well screen intervals (617 ft, 681 ft, and 329.6 ft bgs, respectively); these wells have been replaced by wells R-29 and R-30.

7.4 Scope of Activities

Groundwater monitoring for MDA AB has historically been conducted primarily at the DT-series regional aquifer wells. Recently installed wells R-29 and R-30 have been incorporated into the monitoring network for MDA AB and will be monitored annually to support the corrective action process for MDA AB.

Table 7.4-1 presents the sampling locations, analytical suites, and monitoring frequencies for the MDA AB monitoring group. The objectives for the sampling frequencies and analytical suites are presented in Table C-1. The analytical suites and frequencies specified are based on the results of applicable IRs, previous reviews of monitoring data, and direction from NMED as stated in its approval with modifications for the 2011 Interim Plan, Revision 1 (LANL 2011, 208811; NMED 2012, 520410).

8.0 GENERAL SURVEILLANCE MONITORING GROUP

8.1 Overview

Monitoring locations not associated with project-specific monitoring groups are included in the General Surveillance monitoring group. This group includes most base-flow locations, alluvial monitoring wells, and springs, except for those assigned to the TA-16 260 monitoring group. The General Surveillance group also includes some wells completed in perched-intermediate zones or in the regional aquifer that are not associated with area-specific monitoring groups.

General Surveillance monitoring group locations are sited across the Pajarito Plateau in all the major watersheds. Some are upgradient of project-specific areas or are in areas where contamination was historically present but where concentrations have since decreased and are stable and below standards. General Surveillance monitoring locations for Los Alamos/Pueblo Canyons, Sandia Canyon, Mortandad Canyon, Pajarito Canyon, Water Canyon/Cañon de Valle, and Ancho Canyons are shown in Figure 8.1-1. The locations for White Rock Canyon within the General Surveillance monitoring group are shown in Figure 8.1-2.

Most general surveillance locations are well characterized and have a long history of sampling data. Some locations show little or no contamination, while others show residual contamination from past operations or effluent releases. The residual contamination may be present in surface water, alluvial groundwater, and occasionally in perched-intermediate groundwater. In many cases, contaminant concentrations at these locations are fairly steady over time or decrease as a result of reductions in sources over the years.

8.2 Monitoring Objectives

The primary monitoring objectives for the General Surveillance locations are to

- continue monitoring long-term water-quality trends;
- continue verifying decreasing contaminant trends at General Surveillance locations in some watersheds (Los Alamos, Sandia, and Mortandad);
- monitor for potential impacts from ongoing operations under DOE requirements for environmental surveillance; and
- continue surveillance for potential Laboratory impacts to the groundwater, as expressed at the springs in White Rock Canyon.

LANL (Los Alamos National Laboratory), July 2015. "Work Plan for a Tracer Test at Consolidated Unit 16-021(c)-99, Technical Area 16, Revision 1," Los Alamos National Laboratory document LA-UR-15- 24089, Los Alamos, New Mexico. (LANL 2015, 600535)

LANL (Los Alamos National Laboratory), July 2015. "Work Plan for Chromium Plume Center Characterization," Los Alamos National Laboratory document LA-UR-15-24861, Los Alamos, New Mexico. (LANL 2015, 600615)

LANL (Los Alamos National Laboratory), August 2015. "Work Plan for Intermediate Groundwater System Characterization at Consolidated Unit 16-021(c)-99," Los Alamos National Laboratory document LA-UR-15-24545, Los Alamos, New Mexico. (LANL 2015, 600686)

LANL (Los Alamos National Laboratory), January 2017. "Field Summary Report for Alluvial Piezometers in Sandia Canyon," Los Alamos National Laboratory document LA-UR-17-20200, Los Alamos, New Mexico. (LANL 2017, 602134)

LANL (Los Alamos National Laboratory), February 2017. "Status Report for the Tracer Tests at Consolidated Unit 16-021(c)-99, Technical Area 16," Los Alamos National Laboratory document LA-UR-17-20782, Los Alamos, New Mexico. (LANL 2017, 602161)

LANL (Los Alamos National Laboratory), April 2017. "Summary Report for Intermediate Groundwater System Characterization Activities at Consolidated Unit 16-02l(c)-99," Los Alamos National Laboratory document LA-UR-17-22550, Los Alamos, New Mexico. (LANL 2017, 602288)

LANL (Los Alamos National Laboratory), September 2017. "Remedy Completion Report for Corrective Measures Implementation at Consolidated Unit 16-021(c)-99," Los Alamos National Laboratory document LA-UR-17-27678, Los Alamos, New Mexico. (LANL 2017, 602597)

NMED (New Mexico Environment Department), May 21, 2012. "Approval with Modifications, 2011 Interim Facility-Wide Groundwater Monitoring Plan, Revision 1," New Mexico Environment Department letter to P. Maggiore (DOE-LASO) and M.J. Graham (LANL) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2012, 520410)

NMED (New Mexico Environment Department), March 2017. "Risk Assessment Guidance for Site Investigations and Remediation, Volume 1, Soil Screening Guidance for Human Health Risk Assessments," Hazardous Waste Bureau and Ground Water Quality Bureau, Santa Fe, New Mexico. (NMED 2017, 602273)

NMED (New Mexico Environment Department), March 2017. "Risk Assessment Guidance for Site Investigations and Remediation, Volume 2, Soil Screening Guidance for Ecological Risk Assessments," Hazardous Waste Bureau and Ground Water Quality Bureau, Santa Fe, New Mexico. (NMED 2017, 602274)

NMED (New Mexico Environment Department), November 27, 2017. "Approval with Modifications, Remedy Completion Report for Corrective Measures Implementation at Consolidated Unit 16-021(c)-99," New Mexico Environment Department letter to D. Hintze (DOE-NA-LA) and B. Robinson (LANL) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2017, 602758)

Table 1.6-2 (continued)

Analytical Suite	Analytical Group	Field Preparation	Analytical Method	Analytes
Radionuclides	WSP-GrossA/B	Unfiltered	EPA:900	Gross alpha, gross beta
	WSP-RAD	Unfiltered	EPA:901.1	Cesium-137, cobalt-60, neptunium-237, potassium-40, sodium-22
			EPA:905.0	Strontium-90
			HASL-300:AM-241	Americium-241
			HASL-300:ISOPU	Plutonium-238, plutonium-239/240
			HASL-300:ISOU	Uranium-234, uranium-235/236, uranium-238
Tritium	WSP-H-3	Unfiltered	EPA:906.0	Tritium
Low-Level Tritium	WSP-LL-H-3	Unfiltered	Generic:Low_Level_Tritium	Tritium
General Inorganics	WSP-GENINORG+PerChlorate	Filtered	EPA:120.1	Specific conductance
			EPA:150.1	Acidity or alkalinity of a solution
			EPA:160.1	Total dissolved solids
			EPA:300.0	Bromide, chloride, fluoride, sulfate
			EPA:310.1	Alkalinity-CO_3, alkalinity-CO_3+HCO_3
			SW-846:6010	Silicon dioxide
			SW-846:6850	Perchlorate
	WSP-NH3+NO3/NO2+PO4	Filtered	EPA:350.1	Ammonia as nitrogen
			EPA:353.2	Nitrate-nitrite as nitrogen
			EPA:365.4	Total phosphate as phosphorus
	WSP-TKN+TOC	Unfiltered	EPA:351.2	Total Kjeldahl nitrogen
			SW-846:9060	Total organic carbon
	WSP-CN(T)	Unfiltered	EPA:335.4	Cyanide (Total)

[a] The following metals suite analytical groups and field preparations apply to groundwater samples (i.e., alluvial, intermediate, regional, and springs): WSP-All Metals (Filtered) and MSGP-HG (Unfiltered).

[b] The following metals suite analytical groups and field preparations apply to surface water samples (i.e., base flow): WSP-All Metals (Unfiltered) and WSP-All Metals (Filtered).

[c] HEXP analytical suite = Analysis of samples for HE by SW-846:8330B.

[d] HEXMOD analytical suite = Analysis of samples for HE and RDX-degradation products by SW-846:8330B.

Table 1.7-1
Sampling Schedule for MY2018: October 1, 2017–September 30, 2018

Primary Watershed/ Monitoring Group	Sampling Table	First Quarter Oct–Dec 2017	Second Quarter Jan–Mar 2018	Third Quarter Apr–Jun 2018	Fourth Quarter Jul–Sep 2018
Pajarito Watershed					
TA-54	Table 5.4-1	A, S	—[a]	S	—
General Surveillance	Table 8.3-1	S	—	A, S	—
Mortandad and Sandia Canyons					
Chromium Investigation	Table 3.4-1	B^{2018}, A, S, Q, M	Q[b], M	S, Q, M	Q, M
MDA C	Table 4.4-1	A	—	—	—
General Surveillance	Table 8.3-1	T^{2018}, A[c], S	—	S	B^{2018}, A
Los Alamos and Pueblo Canyons					
TA-21	Table 2.4-1	—	—	—	B^{2018}, A
General Surveillance	Table 8.3-1	T^{2018}, A[d], S	—	B^{2018}, A, S	—
Water/ Cañon de Valle Watershed[e]					
TA-16 260	Table 6.4-1	Q	B^{2018}, A, S, Q	Q	S, Q
General Surveillance	Table 8.3-1	—	S	—	B^{2018}, A, S
Ancho Watershed					
MDA AB	Table 7.4-1	—	A	—	—
White Rock Canyon					
General Surveillance	Table 8.3-1	T^{2018}, B^{2018}, A	—	—	—
Characterization					
All Watersheds	Characterization	Q	Q	Q	Q

Notes: Sampling frequencies: M = monthly (12 times/yr); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr); B = biennial (1 time/2 yr); T= triennial (1 time/3 yr); V = quinquennial (1 time/5 yr).

[a] — = No samples are scheduled to be collected from this monitoring group during this period.

[b] An 8-h extended purge will be conducted at R-62 during the second quarter (January–March) of MY2018.

[c] R-10 S1, R-10 S2, R-34.

[d] LA Canyon near Otowi Bridge, Vine Tree Spring.

[e] Semiannual sampling events in the Water/Cañon de Valle watershed will be conducted in March and August, when possible, to improve the likelihood that water will be sufficient to collect samples from base-flow, springs and alluvial well locations.

Table 1.8-1 (continued)

Assigned Monitoring Group	Location	Rationale for Selection of Location	Source Aquifer	Water Level*
Water Canyon/Cañon de Valle Watershed				
TA-16 260 Monitoring Group	CdV-9-1(i) PZ-1 CdV-9-1(i) PZ-2	Intermediate well located north of Cañon de Valle. Completed on January 19, 2015.	Intermediate	C
	R-25 S3 R-25 S6 R-25 S7 R-25 S8	Located at TA-16 within the Cañon de Valle watershed. Water-level data at R-25 S3, R-25 S6, R-25 S7 and R-25 S8 will be used to continue development of the sitewide conceptual model and to support groundwater flow modeling and aquifer test activities.	Intermediate (S3) Regional (S6, S7, S8)	C
Ancho Canyon Watershed				
General Surveillance	R-31 S1	Located in the north Ancho Canyon tributary. Zone initially showed water during drilling but has been dry since installation of the Westbay system in April 2000. Water-level data will continue to be monitored in this screen, will be used for continued development of the sitewide conceptual model, and will support groundwater flow modeling and aquifer test activities.	Intermediate	C^{HD}
	R-31 S2 R-31 S3 R-31 S4 R-31 S5	The collection of water-quality samples from these screens is suspended because they remain impacted by drilling products. Water-level data will continue to be monitored in these screens, will be used for continued development of the sitewide conceptual model, and will support groundwater flow modeling and aquifer test activities.	Regional	C

* Sampling frequency: C = continuous; M =monthly (12 times/yr at set time periods); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr). The superscript HD indicates this sampling location is historically dry. Continuous monitoring for groundwater refers to the measurement of groundwater-level measurements by a transducer placed in a well and programmed to collect groundwater-level measurements at highly frequent intervals (e.g., every 60 or 120 min daily throughout the year).

Table 3.4-1
Interim Monitoring Plan for Chromium Investigation Monitoring Group

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXP	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics	Chromium Isotopes	$^{15}N/^{18}O$ Isotopes in Nitrate	Naphthalene Sulfonate Tracers	Sodium Bromide Tracer	Sodium Perrhenate Tracer	Deuterated Water Tracer
MCOI-5	Mortandad	Chromium	Intermediate	Q	S	S	—[a]	—	—	A	A	—	Q	S	A	—	—	—	—
MCOI-6	Mortandad	Chromium	Intermediate	Q	S	S	B (2018)[b]	—	—	A	A	—	Q	S	A	—	—	—	—
SCI-1	Sandia	Chromium	Intermediate	S	B (2018)	B (2018)	B (2018)	—	—	A	—	A	S	A	A	—	—	—	—
SCI-2	Sandia	Chromium	Intermediate	Q	B (2018)	B (2018)	B (2018)	—	—	A	A	—	Q	S	A	—	—	—	—
R-1	Mortandad	Chromium	Regional	S	B (2018)	B (2018)	B (2018)	—	—	B (2018)	—	A	S	A	A	—	—	—	—
R-11	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	B (2018)	Q	A	A	—	—	—	—
R-13	Mortandad	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-15	Mortandad	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	B (2018)	Q	A	A	—	—	—	—
R-28[c]	Mortandad	Chromium	Regional	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
R-33 S1	Mortandad	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-33 S2	Mortandad	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-35a	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-35b	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-36	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	B (2018)	Q	A	A	—	—	—	—
R-42[c]	Mortandad	Chromium	Regional	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
R-43 S1	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	Q	A	—	—	—	—
R-43 S2	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	A	A	—	—	—	—
R-44 S1	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	A	M	S	S	M	M	M	M
R-44 S2	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	A	M	A	A	M	M	M	M
R-45 S1	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	A	M	S	S	M	M	M	M
R-45 S2	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	A	M	S	S	M	M	M	M
R-50 S1	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	S	M	S	A	M	—	—	—
R-50 S2	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	S	M	A	A	M	—	—	—
R-61 S1	Mortandad	Chromium	Regional	M	—	—	—	—	—	—	—	—	M	S	—	—	—	—	—
R-62[d]	Mortandad	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	A	Q	S	A	—	—	—	—
R-67	Sandia	Chromium	Regional	Q	B (2018)	B (2018)	—	—	—	B (2018)	—	S	Q	S	A	—	—	—	—
SIMR-2[e]	Mortandad	Chromium	Regional	M	B (2018)	B (2018)	—	—	—	B (2018)	—	S	M	S	A	M	—	—	—

Notes: Sampling suites and frequencies: M = monthly (12 times/yr); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr); B = biennial (1 time/2 yr); T = triennial (1 time/3 yr); V = quinquennial (1 time/5 yr).

[a] — = This analytical suite is not scheduled to be collected for this type of water at locations assigned to this monitoring group.

b 2018 = Samples scheduled to be collected during implementation of MY2018 Interim Plan.

c Gray shading indicates wells are included in the pilot amendments test and will be sampled per the NMED-approved work plan.

d Conduct an 8-h extended purge at R-62 during the second quarter (January–March) of MY2018.

e Orange shading indicates sampling location is on Pueblo de San Ildefonso land.

Table 5.4-1 (continued)

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXP	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics
R-41 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-49 S1	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-49 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-51 S1	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-51 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-52 S1	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-52 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-53 S1	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-53 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-54 S1	Pajarito	TA-54	Regional	—	—	—	—	—	—	—	—	S	—
R-54 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-55 S1	Mortandad	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-55 S2	Mortandad	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-56 S1	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-56 S2	Pajarito	TA-54	Regional	A	S	A	V (2020)	V (2020)	—	A	—	S	A
R-57 S1[c]	Pajarito	TA-54	Regional	A	S	A	A	V (2020)	A	A	—	S	A
R-57 S2[c]	Pajarito	TA-54	Regional	A	S	A	A	V (2020)	A	A	—	S	A

Notes: Sampling suites and frequencies: M = monthly (12 times/yr); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr); B = biennial (1 time/2 yr); T = triennial (1 time/3 yr); V = quinquennial (1 time/5 yr).

[a] 2020 = Samples scheduled to be collected during implementation of MY2020 Interim Plan.

[b] — = This analytical suite is not scheduled to be collected for this type of water at locations assigned to this monitoring group.

[c] The Interim Plan sampling and analysis specified for R-57 S1 and R-57 S2 for analysis of VOCs, SVOCs, and PCBs also satisfies the TA-54 Area G PCB Compliance Monitoring requirements stipulated by EPC-CP-QP-205.

Table 6.4-1
Interim Monitoring Plan for TA-16 260 Monitoring Group

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXMOD	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics	Naphthalene Sulfonate Tracers	Sodium Bromide Tracer	$^{15}N/^{18}O$ Isotopes in Nitrate
Canon de Valle below MDA P	Water	TA-16 260	Base flow	S	S	B (2018)[a]	V (2020)[b]	S	V (2020)	B (2018)	—[c]	—	S	—	—	—
Between E252 and Water at Beta	Water	TA-16 260	Base flow	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
Water at Beta	Water	TA-16 260	Base flow	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
Pajarito below S&N Ancho E Basin Confluence	Pajarito	TA-16 260	Base flow	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
Bulldog Spring	Pajarito	TA-16 260	Spring	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	A
SWSC Spring	Water	TA-16 260	Spring	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	A
Burning Ground Spring	Water	TA-16 260	Spring	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	A	S	—	—	A
Martin Spring	Water	TA-16 260	Spring	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	A	S	—	—	A
16-61439 (alias: PRB Alluvial Seep)	Water	TA-16 260	Spring	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
FLC-16-25280	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
CdV-16-02656	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
CdV-16-02657r	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
CdV-16-02659	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
CdV-16-611923	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
MSC-16-06293	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
MSC-16-06294	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
CdV-16-611937	Water	TA-16 260	Alluvial	S	S	B (2018)	V (2020)	S	V (2020)	B (2018)	—	—	S	—	—	—
16-26644	Water	TA-16 260	Intermediate	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	—	—	A
CdV-9-1(i) S1	Water	TA-16 260	Intermediate	S	S	B (2018)	V (2020)	Q	A	A	—	A	S	Q	Q	A
CdV-16-1(i)	Water	TA-16 260	Intermediate	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	A
CdV-16-2(i)r	Water	TA-16 260	Intermediate	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	A
CdV-16-4ip S1	Water	TA-16 260	Intermediate	S	S	B (2018)	V (2020)	Q	V (2020)	B (2018)	—	A	S	Q	—	A
CdV-37-1(i)	Water	TA-16 260	Intermediate	S	S	B (2018)	—	S	—	B (2018)	—	A	S	—	—	—
R-25 S1	Water	TA-16 260	Intermediate	—	—	—	—	—	—	—	—	—	—	Q	Q	—
R-25 S2	Water	TA-16 260	Intermediate	—	—	—	—	—	—	—	—	—	—	Q	Q	—
R-25 S4	Water	TA-16 260	Intermediate	—	—	—	—	—	—	—	—	—	—	Q	Q	—
R-25b	Water	TA-16 260	Intermediate	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	—
R-26 PZ-2	Water	TA-16 260	Intermediate	S	S	B (2018)	—	S	—	B (2018)	—	A	S	—	—	—
R-26 S1	Water	TA-16 260	Intermediate	S	S	B (2018)	—	S	—	B (2018)	—	A	S	—	—	—
R-47i	Water	TA-16 260	Intermediate	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	A
R-63i	Water	TA-16 260	Intermediate	S	S	—	—	S	—	A	—	A	S	S	S	A

Table 6.4-1 (continued)

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXMOD	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics	Naphthalene Sulfonate Tracers	Sodium Bromide Tracer	$^{15}N/^{18}O$ Isotopes in Nitrate
16-612309 (alias: Surge Bed Monitoring Well)	Water	TA-16 260	Intermediate	S	S	S	—	S	—	—	—	—	S	—	—	—
R-47	Water	TA-16 260	Regional	S	Q	B (2018)	V (2020)	Q	V (2020)	B (2018)	—	A	S	Q	Q	A
CdV-R-15-3 S4	Water	TA-16 260	Regional	S	S	B (2018)	—	S	—	B (2018)	—	A	S	—	—	—
CdV-R-37-2 S2	Water	TA-16 260	Regional	A	—	—	—	A	—	—	—	A	A	—	—	—
R-18	Pajarito	TA-16 260	Regional	S	Q	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	A
R-25 S5	Water	TA-16 260	Regional	—	—	—	—	—	—	—	—	—	—	Q	Q	A
R-48	Water	TA-16 260	Regional	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	A
R-58	Water	TA-16 260	Regional	Q	Q	B (2018)	V (2020)	Q	V (2020)	B (2018)	—	S	Q	Q	Q	A
R-63	Water	TA-16 260	Regional	S	S	B (2018)	—	Q	—	B (2018)	—	A	S	Q	Q	—
R-68[d]	Water	TA-16 260	Regional	Q1	Q1	Q1	—	Q1	Q1	Q1	—	Q1	Q1	Q1	Q1	Q1
R-68[e]	Water	TA-16 260	Regional	S	Q	S	—	Q	—	B (2018)	—	A	S	Q	Q	A

Notes: Sampling suites and frequencies: M = monthly (12 times/yr); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr); B = biennial (1 time/2 yr); T = triennial (1 time/3 yr); V = quinquennial (1 time/5 yr); Q1 = Monitor Year 2018 Q1 only.

[a] 2018 = Samples scheduled to be collected during implementation of MY2018 Interim Plan.

[b] 2020 = Samples scheduled to be collected during implementation of MY2020 Interim Plan.

[c] — = This analytical suite is not scheduled to be collected for this type of water at locations assigned to this monitoring group.

[d] R-68 sampling plan for MY2018 first quarter (Q1) only. This Q1 sampling plan for R-68 produces the fourth "full analytical suite" sampling round (out of four required) for this new regional well.

[e] R-68 sampling frequencies for MY2018 quarters 2, 3, and 4. The specified sampling frequencies are used in conjunction with Table 1.7-1 to develop the R-68 sampling plan for MY2018 quarters 2, 3, and 4.

Table 7.4-1
Interim Monitoring Plan for MDA AB Monitoring Group

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXP	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics
R-27i	Water	MDA AB	Intermediate	A	A	A	—*	—	—	A	—	A	A
R-27	Water	MDA AB	Regional	A	A	A	—	—	—	A	—	A	A
R-29	Ancho	MDA AB	Regional	A	A	A	—	A	—	A	—	A	A
R-30	Ancho	MDA AB	Regional	A	A	A	—	A	—	A	—	A	A

Notes: Sampling suites and frequencies: M = monthly (12 times/yr); Q = quarterly (4 times/yr); S = semiannual (2 times/yr); A = annual (1 time/yr); B = biennial (1 time/2 yr); T = triennial (1 time/3 yr); V = quinquennial (1 time/5 yr).

* — = This analytical suite is not scheduled to be collected for this type of water at locations assigned to this monitoring group.

Table 8.3-1
Interim Monitoring Plan for General Surveillance Monitoring Group

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXP	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics
LA Canyon near Otowi Bridge[a]	Los Alamos	General Surveillance	Base flow	A	A	A	V (2020)[b]	T (2018)[c]	V (2020)	A	—[d]	A	A
Los Alamos Spring	Los Alamos	General Surveillance	Spring	A	A	T (2018)	T (2018)	T (2018)	V (2020)	A	—	A	A
Vine Tree Spring	Los Alamos	General Surveillance	Spring	S	S	T (2018)	T (2018)	T (2018)	V (2020)	A	—	A	S
LLAO-1b	Los Alamos	General Surveillance	Alluvial	A	A	T (2018)	T (2018)	T (2018)	V (2020)	A	—	—	A
LLAO-4	Los Alamos	General Surveillance	Alluvial	A	A	T (2018)	T (2018)	T (2018)	V (2020)	A	—	—	A
LAO-3a	Los Alamos	General Surveillance	Alluvial	A	B (2018)	B (2018)	V (2020)	—	V (2020)	A	—	—	A
LAUZ-1	Los Alamos	General Surveillance	Alluvial	A	A	A	—	A	—	A	—	A	A
PAO-5n	Pueblo	General Surveillance	Alluvial	A	B (2018)	B (2018)	V (2020)	—	V (2020)	A	—	—	A
POI-4	Pueblo	General Surveillance	Intermediate	A	B (2018)	B (2018)	—	—	—	A	—	B (2018)	A
R-3i	Pueblo	General Surveillance	Intermediate	A	B (2018)	B (2018)	—	—	—	A	—	B (2018)	A
TW-2Ar	Pueblo	General Surveillance	Intermediate	A	B (2018)	B (2018)	—	—	—	A	B (2018)	—	A
R-2	Pueblo	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	A	A
R-24	Pueblo	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	B (2018)	A
R-3	Pueblo	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	B (2018)	A
R-4	Pueblo	General Surveillance	Regional	A	A	A	—	—	—	A	—	B (2018)	A
Sandia right fork at Pwr Plant	Sandia	General Surveillance	Base flow	A	A	A	A	V (2020)	V (2020)	A	—	—	A
Sandia below Wetlands	Sandia	General Surveillance	Base flow	A	A	A	A	V (2020)	V (2020)	A	—	—	A
R-12 S1	Sandia	General Surveillance	Intermediate	—	—	—	—	—	—	—	—	B (2019)[e]	—
R-12 S2	Sandia	General Surveillance	Intermediate	—	—	—	—	—	—	—	—	B (2019)	—
R-10 S1	Sandia	General Surveillance	Regional	A	A	A	T (2018)	T (2018)	—	A	—	A	A
R-10 S2	Sandia	General Surveillance	Regional	A	A	A	T (2018)	T (2018)	—	A	—	A	A
R-10a	Sandia	General Surveillance	Regional	S	S	S	T (2018)	T (2018)	—	S	—	S	S
CDBO-6	Mortandad	General Surveillance	Alluvial	B (2018)	B (2018)	B (2018)	V (2020)	—	V (2020)	A	—	—	B (2018)
MCO-5	Mortandad	General Surveillance	Alluvial	A	B (2018)	B (2018)	V (2020)	—	V (2020)	A	—	B (2018)	A
MCO-7	Mortandad	General Surveillance	Alluvial	A	A	A	A	—	V (2020)	A	—	B (2018)	A
R-16 S2	Mortandad	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	A	A
R-16 S4	Mortandad	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	A	A
R-16r	Mortandad	General Surveillance	Regional	A	B (2018)	B (2018)	—	—	—	A	—	A	A
R-34	Mortandad	General Surveillance	Regional	A	A	A	T (2018)	T (2018)	—	A	—	A	A

Table 8.3-1 (continued)

Location	Watershed	Monitoring Group	Surface Water Body or Source Aquifer	Metals	VOCs	SVOCs	PCBs	HEXP	Dioxins/Furans	Radionuclides	Tritium	Low-Level Tritium	General Inorganics
Two Mile Canyon Below TA-59	Pajarito	General Surveillance	Base flow	A	A	A	V (2020)	A	V (2020)	A	—	—	A
Homestead Spring	Pajarito	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
Starmer Spring	Pajarito	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
18-MW-18	Pajarito	General Surveillance	Alluvial	A	B (2019)	B (2019)	V (2020)	V (2020)	V (2020)	A	—	B (2019)	A
PCAO-8	Pajarito	General Surveillance	Alluvial	A	B (2019)	B (2019)	V (2020)	V (2020)	V (2020)	A	—	—	A
03-B-13	Pajarito	General Surveillance	Intermediate	S	S	S	—	V (2020)	—	A	B (2019)	—	S
PCI-2	Pajarito	General Surveillance	Intermediate	S	S	S	—	S	—	A	—	A	S
R-17 S1	Pajarito	General Surveillance	Regional	A	A	A	—	A	—	A	—	A	A
R-17 S2	Pajarito	General Surveillance	Regional	A	A	A	—	A	—	A	—	A	A
WCO-1r	Water	General Surveillance	Alluvial	S	B (2018)	B (2018)	V (2020)	S	V (2020)	A	—	A	S
Ancho at Rio Grande	White Rock and Rio Grande	General Surveillance	Base flow	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	—	—	B (2019)
Frijoles at Rio Grande	White Rock and Rio Grande	General Surveillance	Base flow	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	—	—	B (2019)
Mortandad at Rio Grande	White Rock and Rio Grande	General Surveillance	Base flow	B (2018)	B (2018)	B (2018)	B (2018)	B (2018)	B (2018)	B (2018)	—	—	B (2018)
Pajarito at Rio Grande	White Rock and Rio Grande	General Surveillance	Base flow	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	—	—	B (2019)
Rio Grande at Frijoles	White Rock and Rio Grande	General Surveillance	Base flow	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	B (2019)	—	—	B (2019)
Rio Grande at Otowi Bridge	White Rock and Rio Grande	General Surveillance	Base flow	A	A	A	A	—	A	A	—	A	A
Ancho Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
La Mesita Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	T (2018)	T (2018)	—	A	—	A	A
Upper La Mesita Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	T (2018)	T (2018)	—	A	—	A	A
Sacred Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	T (2018)	T (2018)	—	A	—	A	A
Sandia Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	B (2018)	B (2018)	—	A	—	A	A
Lower Sandia Spring	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	B (2018)	B (2018)	—	A	—	A	A
Spring 1	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	A	A	—	A	—	A	A
Spring 2	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	B (2018)	B (2018)	—	A	—	A	A
Spring 3[f]	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	B (2019)	A	B (2019)	A	—	B (2019)	A
Spring 3A	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
Spring 3AA	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
Spring 4[f]	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	A	A	A	A	—	B (2019)	A
Spring 4A	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A
Spring 4AA	White Rock and Rio Grande	General Surveillance	Spring	A	A	A	—	A	—	A	—	A	A

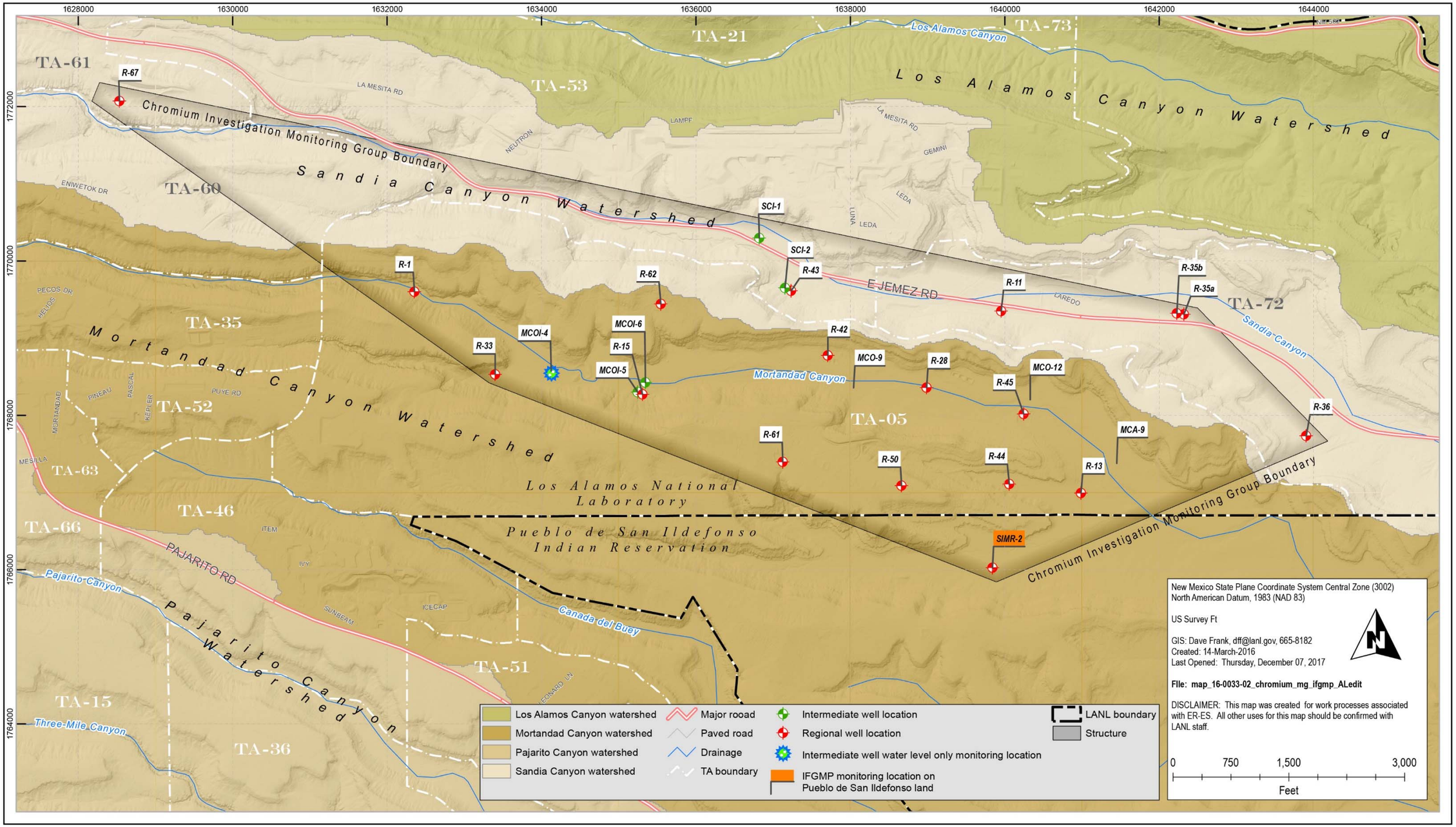


Figure 3.1-1 Chromium Investigation monitoring group

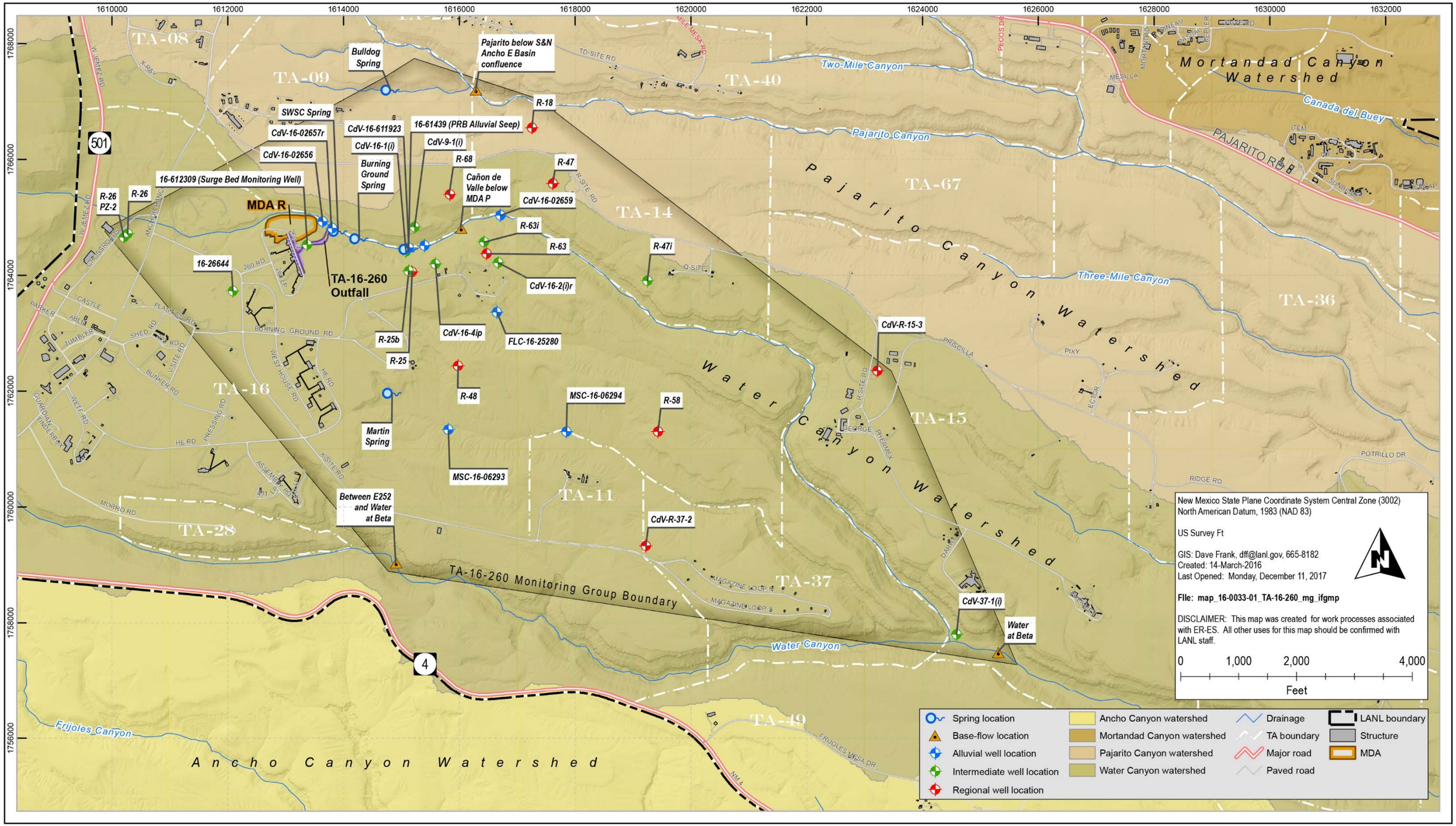


Figure 6.1-1 TA-16 260 monitoring group

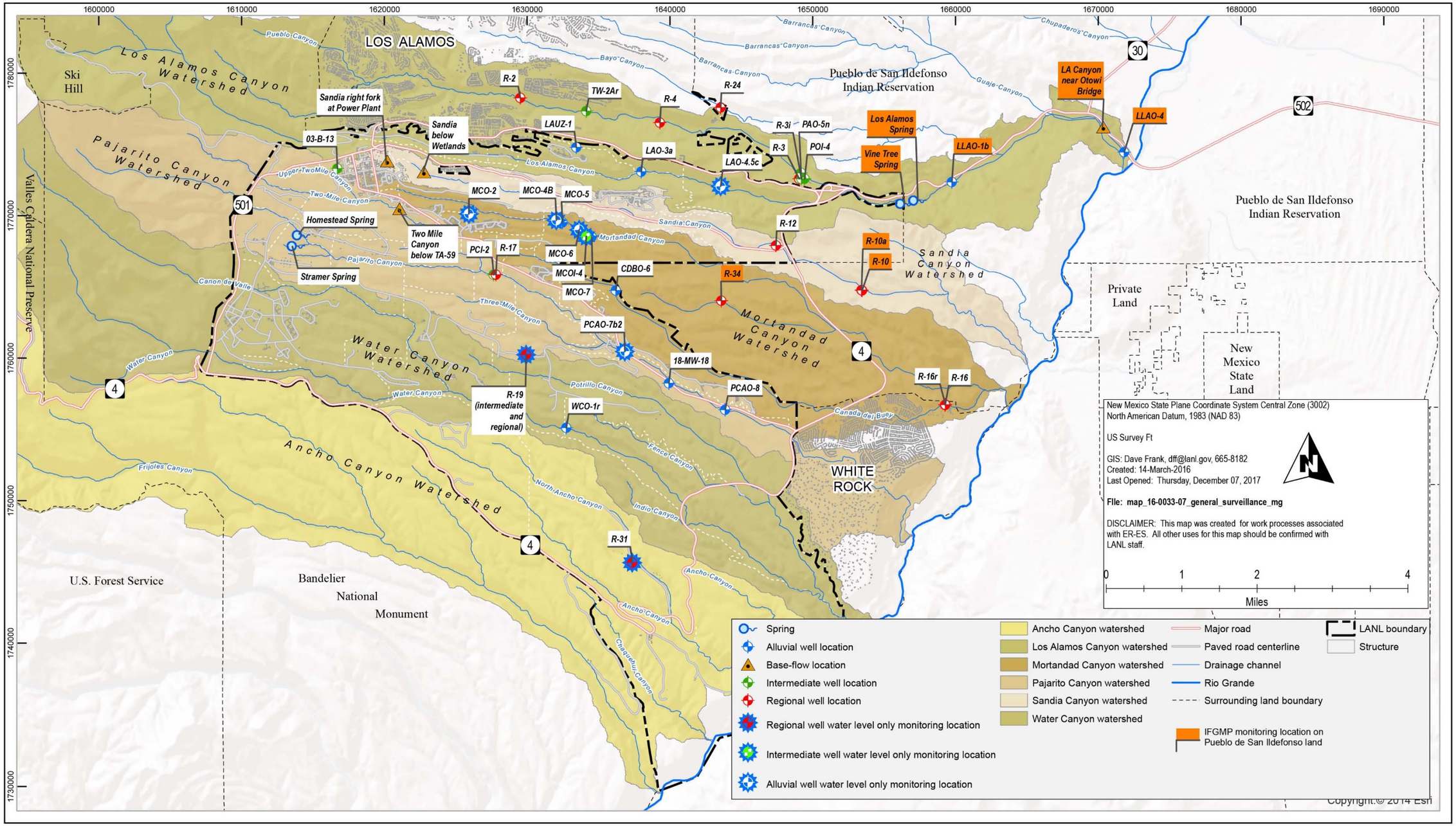


Figure 8.1-1 General surveillance monitoring group (watersheds within the Laboratory)