



DEPARTMENT OF ENERGY
Environmental Management Los Alamos Field Office (EM-LA)
Los Alamos, New Mexico 87544

EMLA-2020-1461-02-001

May 28, 2020

Mr. Kevin Pierard
Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

Subject: Submittal of the Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020

Dear Mr. Pierard:

Enclosed please find two hard copies with electronic files of the “Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020.” This report is the first of a series of quarterly reports fulfilling the reporting requirement specified by the New Mexico Environment Department’s Hazardous Waste Bureau in correspondence dated March 18, 2020, “Approval of Request for Extension of Fiscal Year 2020 Appendix B Milestone #6, Westbay Well Plugging and Abandonment Completion Report for R-25, Los Alamos National Laboratory.”

If you have any questions, please contact Mark Everett at (505) 309-1367 (mark.everett@em-la.doe.gov) or Cheryl Rodriguez at (505) 414-0450 (cheryl.rodriguez@em.doe.gov).

Sincerely,

Arturo Duran
Digitally signed by Arturo Duran
Date: 2020.05.21
08:59:10 -06'00'

Arturo Q. Duran
Compliance and Permitting Manager
Environmental Management
Los Alamos Field Office

Enclosures:

1. Two hard copies with electronic files – Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020 (EM2020-0225)

CC (letter and enclosure[s] emailed):

Laurie King, EPA Region 6, Dallas, TX

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Pamela T. Maestas

From: Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>
Sent: Thursday, May 28, 2020 11:12 AM
To: Pamela T. Maestas
Subject: RE: Submittal to NMED on 5/28/2020 of R-25 quarterly status rpt

Good Morning,
Received.... Thank you stay safe!!!

From: Pamela T. Maestas <pamela.maestas@em-la.doe.gov>
Sent: Thursday, May 28, 2020 10:56 AM
To: Pierard, Kevin, NMENV <Kevin.Pierard@state.nm.us>
Cc: Dhawan, Neelam, NMENV <neelam.dhawan@state.nm.us>; Emily M. Day <Emily.Day@em-la.doe.gov>; Regulatory Documentation <RegDocs@EM-LA.DOE.GOV>; Martinez, Cynthia, NMENV <cynthia.martinez1@state.nm.us>; Mark C. Everett <mark.everett@em-la.doe.gov>; cheryl.rodriquez@em.doe.gov
Subject: [EXT] Submittal to NMED on 5/28/2020 of R-25 quarterly status rpt

Mr. Pierard,

Attached for submittal is a pdf of the following:

- Submittal of the Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020 (letter and enclosure)

Please acknowledge receipt of this submittal by responding to this email.

Let me know if you have any questions.

Thank you.

Pamela T. Maestas**Regulatory Documentation Manager**

Newport News Nuclear BWXT-Los Alamos, LLC

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Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020

Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document pursuant to the Compliance Order on Consent, signed June 24, 2016. The Compliance Order on Consent contains requirements for the investigation and cleanup, including corrective action, of contamination at Los Alamos National Laboratory. The U.S. government has rights to use, reproduce, and distribute this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.

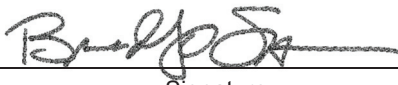
Quarterly Status Report for Westbay Well R-25 Plugging and Abandonment Activities, February 28, 2020–May 15, 2020

May 2020

Responsible program director:

Bruce Robinson		Program Director	N3B Water Program	5/20/20
Printed Name	Signature	Title	Organization	Date

Responsible N3B representative:

Bradley Smith		Acting Program Manager	N3B Environmental Remediation Program	5/20/20
Printed Name	Signature	Title	Organization	Date

Responsible DOE EM-LA representative:

Arturo Q. Duran	Arturo Duran <small>Digitally signed by Arturo Duran Date: 2020.05.21 08:59:41 -06'00'</small>	Compliance and Permitting Manager	Office of Quality and Regulatory Compliance	
Printed Name	Signature	Title	Organization	Date

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1.0 PURPOSE

This is the first of a series of quarterly status reports on plugging and abandonment activities for Westbay Well R-25. The report fulfills the quarterly reporting requirement specified by the New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) in correspondence dated March 18, 2020, “Approval of Request for Extension of Fiscal Year 2020 Appendix B Milestone #6, Westbay Well Plugging and Abandonment Completion Report for R-25, Los Alamos National Laboratory” (NMED 2020, 700808). This report covers the period from February 28, 2020, through May 15, 2020, the first quarter since the extension for R-25 plugging and abandonment activities was requested by the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) on February 24, 2020 (DOE 2020, 700774). The report summarizes activities related to Westbay System removal from well R-25, reviews planned activities for the next quarter, and provides expectations for project completion.

2.0 OVERVIEW

EM-LA and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) are in the process of removing the Westbay system and components from R-25 with plans to plug and abandon the well following the Westbay system removal. Requirements for work at well R-25 were set forth in the “Work Plan to Plug and Abandon Well R-25” (LANL 2012, 232352), NMED’s approval with direction received January 11, 2013 (NMED 2013, 521801), and guidance provided in the Compliance Order on Consent (Consent Order) Appendix F, Sampling/Analytical/Field Method Regulatory Guidance, Section II.D, Well Abandonment. The New Mexico Office of the State Engineer (NMOSE) approved the Plugging Plan of Operations for RG-98113 (R-25) in correspondence to Los Alamos National Laboratory (LANL or the Laboratory) dated July 15, 2019 (NMOSE 2019, 700876).

Monitoring well R-25, located in Technical Area 16 on the mesa top above Cañon de Valle in the southwestern portion of the Laboratory, was the third well installed as part of the implementation of the “Hydrogeologic Workplan” (LANL 1998, 059599). Well R-25 was primarily designed to provide water-quality, geochemical, hydrologic, and geologic information that would contribute to the understanding of the hydrogeologic setting beneath the Laboratory. Drilling, well installation, and site restoration operations occurred from July 1998 through May 2001. The location of well R-25 is depicted in Figures 2.0-1 and 2.0-2.

The R-25 borehole was drilled to a depth of 1942 ft below ground surface (bgs) using air-rotary drilling methods. Well R-25 was constructed with nine screened intervals; however, two of the screens, screens 3 and 9, were damaged during well-installation activities. Screens 3 and 9 were restored to partial usefulness, and all well screen intervals were developed before installation of a Westbay multiport sampling system. Because of groundwater sample quality concerns, NMED directed that well R-25 be removed from service from the LANL monitoring network and plugged and abandoned. A plugging and abandonment plan was submitted on December 13, 2012 (LANL 2012, 232352), and NMED approved the plan with modifications on January 11, 2013 (NMED 2013, 521801).

The original scope of the R-25 plugging and abandonment project included extraction of the 1834-ft, 9-port Westbay sampling system from the R-25 well casing using a hoist rig, perforation of select intervals of well casing, and plugging of the well. Work completed through February 2020 includes the removal of approximately 1155 ft of the Westbay system to above packer 11 (of 26 packers total on the Westbay system) using a hoist rig. During retrieval or “fishing” operations to remove the Westbay system, a portion of the steel pipe fishing string (BQ pipe) became lodged adjacent to and at the top of the remaining Westbay casing and debris. Conventional operations have been unable to retrieve the remainder of the

components in the well. Current depth of the top of the Westbay fish (remaining Westbay system and BQ pipe) is approximately 1088 ft bgs. Approximately 681 ft of the Westbay system remains in the well.

3.0 SUMMARY OF WORK COMPLETED DURING THE REPORTING PERIOD

As required, EM-LA has submitted two monthly status reports to NMED. These two monthly status reports were transmitted to NMED on March 26, 2020, and April 21, 2020. This quarterly report summarizes project work completed through the end of the first quarter of the reporting period (February 28–May 15, 2020).

Before the beginning of this quarter, stuck BQ pipe was removed from the well down to 1102 ft bgs using enhanced oilfield methods. First, the pipe was backed off at approximately 1062 ft bgs by lowering larger diameter pipe over the BQ and latching onto the stuck pipe. Once the 1062 ft of BQ pipe was extracted, a jarring tool was deployed downhole. Jarring extracted an additional 40 ft of BQ pipe, leaving approximately 23 ft either within or next to the Westbay sampling system.

The R-25 well site was placed in safe configuration for spotted owl restrictions starting March 1, 2020. The hoist rig and related equipment were demobilized from the site. Spotted owl restrictions were lifted on March 10, 2020, for the R-25 project after Triad National Security, LLC, biologists reevaluated the well maintenance biological assessment (Hathcock et al. 2017, 700877) and determined that the R-25 work would not interfere with spotted owl activities. However, no field activities have taken place since March 1, 2020.

During this quarter, the R-25 Integrated Project Team (IPT) was created to plan, coordinate, and execute project activities. This team meets regularly to delegate and execute project work, discuss progress, and work through planning and project preparedness issues. Several important R-25 project-related communications via correspondence were generated this quarter. These include the following:

- In a letter dated March 17, 2020, EM-LA provided NMED information regarding the methods for the removal of pipe and Westbay components in R-25 and a listing of potential drilling fluid additives that might be required to complete the work (DOE 2020, 700806).
- NMED approved the use a variety of drilling fluids to assist with the recovery of the Westbay system from R-25 in the letter titled Approval, Drilling Fluid Additive Use Options for Well R-25 Westbay Sampling System Removal, dated April 7, 2020 (NMED 2020, 700840). Per the approval letter, details describing the use of drilling fluids and transducer pressure responses recorded at nearby wells R-25b, CdV-16-4ip, and CdV-16-1i will be reported in the monthly project status updates and quarterly reports once the field program resumes. Please note that to date, no fluids have been used and the monitoring of pressure responses in nearby wells has not begun.

On March 23, 2020, N3B transitioned to Essential Mission Critical Activities (EMCA) status as a prudent measure in response to the situation involving COVID-19 in New Mexico. Under the EMCA status, the only Consent Order activity that remains operational is the ongoing maintenance of groundwater monitoring well packer systems. The R-25 location was placed in safe configuration and field activities remain suspended during EMCA status. Under the EMCA status, the IPT staff are actively working on the R-25 project through telecommuting. The IPT continues to meet regularly by teleconferencing.

Project planning this quarter included

- planning for resumption of field activities after the lifting of the EMCA status;
- preparing a scope of work for a rotary rig to remove the remaining BQ pipe and Westbay system from R-25;
- formulating a scope of work to expand the R-25 well pad so there is sufficient room to stage the additional equipment and work safely;
- preparing a tentative field implementation schedule for pad expansion, removal of stuck pipe/Westbay system, and plugging of R-25;
- initiating preparation of necessary health and safety documents, including the site-specific environment, safety, and health plan and integrated work control procedures/documents;
- contracting a consultant for specialized fishing operations and providing necessary LANL badging and training;
- beginning preparation of documentation for site access, including National Environmental Policy Act documentation, storm water pollution prevention plan, and the notice of intent for the construction general permit for the work planned at R-25;
- securing permission for fire hydrant access near the R-25 location for the water supply during the project; and
- preparing the R-25 quarterly report for NMED, due May 29, 2020, in place of the scheduled monthly update for May 2020.

4.0 SUMMARY OF WORK PLANNED FOR THE NEXT QUARTER

Please note that N3B continues to operate under EMCA status in response to the situation involving COVID-19 in New Mexico. The R-25 location remains in safe configuration, and R-25-related field activities remain suspended during EMCA status.

During the EMCA status, IPT personnel are completing permits for site access; preparing environment, health, and safety documents; securing critical subcontractors for the fieldwork; and planning a field implementation schedule for the pad expansion, extraction of the Westbay system, and plugging and abandonment of R-25.

A supplemental plugging plan is being submitted to NMOSE, describing the additional methods planned for the extraction of the Westbay system. The plan of operation for plugging and abandoning R-25 remains in place as originally approved by NMED and NMOSE.

Once Westbay extraction operations resume, details describing the use of drilling fluids and recorded transducer pressure responses at nearby wells, R-25b, CdV-16-4ip, and CdV-16-1i will be reported in the monthly project status updates and quarterly reports. The next required monthly project status updates will be submitted by June 26, 2020, and July 31, 2020, and the next quarterly report will be submitted by August 28, 2020.

5.0 PROJECT COMPLETION

N3B/EM-LA will continue to provide NMED with monthly updates and quarterly reports as required through the completion of the project. After the EMCA status has been lifted and the startup of R-25 fieldwork has been approved, the project will be brought to completion by

- setting up designated nearby wells for electronic monitoring,
- removing the Westbay system and components,
- implementing the approved plugging and abandonment plan,
- restoring the well pad, and
- preparing the R-25 plugging and abandonment completion report.

6.0 REFERENCES

The following reference list includes documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ERID, ESHID, or EMID. This information is also included in text citations. ERIDs were assigned by the Laboratory's Associate Directorate for Environmental Management (IDs through 599999); ESHIDs were assigned by the Laboratory's Associate Directorate for Environment, Safety, and Health (IDs 600000 through 699999); and EMIDs are assigned by N3B (IDs 700000 and above). IDs are used to locate documents in N3B's Records Management System and in the Master Reference Set. The NMED Hazardous Waste Bureau and N3B maintain copies of the Master Reference Set. The set ensures that NMED has the references to review documents. The set is updated when new references are cited in documents.

DOE (U.S. Department of Energy), February 24, 2020. "Status of Westbay Well R-25 Reconfiguration Efforts and Request for Extension of Fiscal Year 2020 Appendix B Milestone #6, Westbay Well Plugging and Abandonment Completion Report for R-25," U.S. Department of Energy letter (EMLA-2020-1275-02-001) to K. Pierard (NMED-HWB) from A. Duran (EM-LA), Los Alamos, New Mexico. (DOE 2020, 700774)

DOE (U.S. Department of Energy), March 17, 2020. "Drilling Fluid Additive Use Options for Well R-25 Westbay Sampling System Removal," U.S. Department of Energy letter (EMLA-2020-1274-02-001) to K. Pierard (NMED-HWB) from A. Duran (EM-LA), Los Alamos, New Mexico. (DOE 2020, 700806)

Hathcock, C.D., D.C. Keller, B.E. Thompson, and J. Berryhill, February 2017. "Biological Assessment of the Continued Operation and Expansion of the Water Monitoring Programs at Los Alamos National Laboratory," Los Alamos National Laboratory document LA-UR-17-20753, Los Alamos, New Mexico. (Hathcock et al. 2017, 700877)

LANL (Los Alamos National Laboratory), May 22, 1998. "Hydrogeologic Workplan," Los Alamos National Laboratory document LA-UR-01-6511, Los Alamos, New Mexico. (LANL 1998, 059599)

LANL (Los Alamos National Laboratory), December 2012. "Work Plan to Plug and Abandon Well R-25," Los Alamos National Laboratory document LA-UR-12-26836, Los Alamos, New Mexico. (LANL 2012, 232352)

NMED (New Mexico Environment Department), January 11, 2013. “Approval with Modification, Work Plan to Plug and Abandon Well R-25,” New Mexico Environment Department letter to P. Maggiore (DOE-LASO) and J.D. Mousseau (LANL) from J.E. Kieling (NMED-HWB), Santa Fe, New Mexico. (NMED 2013, 521801)

NMED (New Mexico Environment Department), March 18, 2020. “Approval, Request for Extension of Fiscal Year 2020 Appendix B Milestone #6, Westbay Well Plugging and Abandonment Completion Report for R-25,” New Mexico Environment Department letter to A. Duran (EM-LA) from K. Pierard (NMED-HWB), Santa Fe, New Mexico. (NMED 2020, 700808)

NMED (New Mexico Environment Department), April 7, 2020. “Approval, Drilling Fluid Additive Use Options for Well R-25, Westbay Sampling System Removal,” New Mexico Environment Department letter to A. Duran (EM-LA) from K. Pierard (NMED-HWB), Santa Fe, New Mexico. (NMED 2020, 700840)

NMOSE (New Mexico Office of the State Engineer), July 15, 2019. “Re: Plugging Plan of Operations for RG-98113 (R-25),” NMOSE letter to M. Everett (N3B) from L. Garcia (NMOSE), Santa Fe, New Mexico. (NMOSE 2019, 700876)

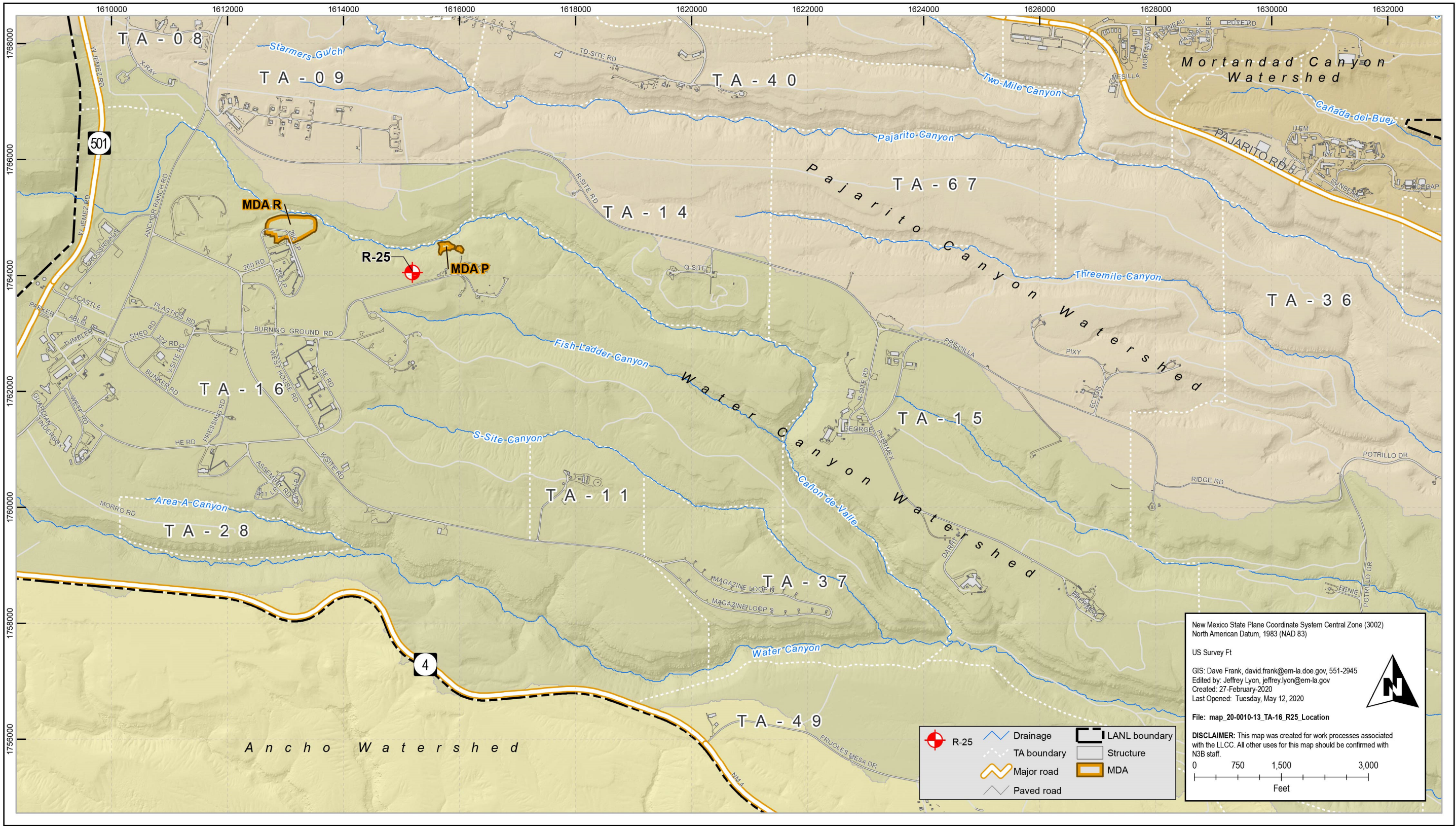


Figure 2.0-1 Location of well R-25

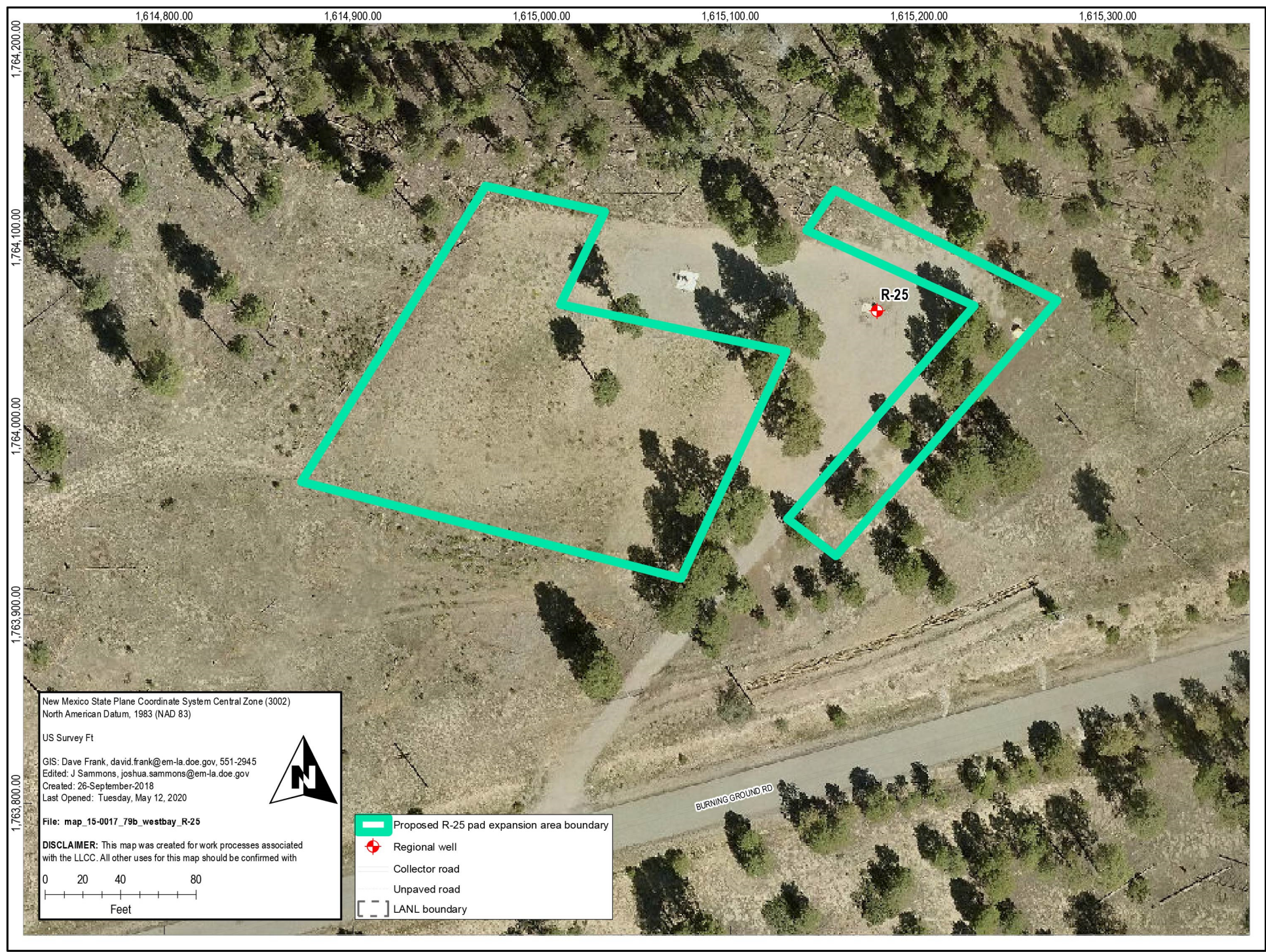


Figure 2.0-2 Aerial photo location of well R-25 with proposed pad expansion area