



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

**FEB 24 2020**

EMLA-2020-1275-02-001

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:** 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

Dear Mr. Pierard:

In accordance with the 2016 Compliance Order on Consent (Consent Order) Section XXVIII, Extensions, the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) is seeking an extension to the March 31, 2020, completion date for Consent Order fiscal year (FY) 2020 Appendix B Milestone #6, Westbay Well Plugging and Abandonment Completion Report for R-25. Although six of the seven Westbay wells have been successfully reconfigured over the past year, well R-25 presented significant technical challenges, which are described more fully below. EM-LA believes that these technical challenges provide justification for milestone extension in accordance with Consent Order Section XXVIII.C (7), "Any other event or series of events, including but not limited to new technical information or technological barriers mutually agreed to by the Parties as constituting good cause." Please note that the completion report for Westbay well R-31 (FY 2020 Milestone #2) was submitted to the New Mexico Environment Department (NMED) on February 13, 2020.

The R-25 borehole was drilled in 1999 to a depth of 1942 ft below ground surface (bgs) and completed in 2000 as a 9-screen stainless-steel monitoring well fitted with a 9-port, 26-packer Westbay system. EM-LA's contractor Newport News Nuclear BWXT-Los Alamos, LLC (N3B) based the projected schedule completion date for well R-25 plugging and abandonment on field conditions and the rate of Westbay component removal experienced as of late August 2019. Through late September 2019, an estimated 1155 ft total of the Westbay multipacker system, including 10 packers, had been removed. Technical challenges were then encountered, which have significantly impacted progress, as summarized below:

- On September 23, 2019, retrieval efforts became unsuccessful. Video surveys identified deterioration of screen 3, which significantly limited the ability of retrieved Westbay system components to pass through.
- During a subsequent retrieval attempt, an approximately 964-ft internal spear grapple and pipe assembly was dropped, causing the Westbay material that had been previously elevated to the approximately 1045-ft bgs level to be driven downward to an estimated depth of 1088 ft bgs. The bottom of the grapple and piping is estimated to be at 1123 ft bgs and is either wedged within or next to the Westbay system.

- Multiple additional attempts to extract the retrieval equipment, including the grapple, using up to 50,000 lb of force, have been performed but have been unsuccessful.

Currently, approximately 680 ft of Westbay system components, including 16 packers and the 964-ft internal spear and pipe assembly, remain downhole. A technical team, including outside experts from the oil and gas industry, was assembled the week of December 9, 2019, to evaluate downhole conditions and develop a path forward. Based on input received from the technical team of external drilling experts, several additional approaches to remove the remaining Westbay sampling system have been identified. As discussed with your staff in a meeting on January 28, 2020, retrieval operations are now resuming (beginning with removal of the dropped equipment) using a larger grapple and heavier wall pipe with a jacking system to pull with greater force. Following successful removal of the dropped equipment, screen 3 will be remediated by swaging and/or reaming to increase its diameter and address the current restricted condition. It is expected that some combination of the following will ultimately be successful in removing the remaining Westbay system and allowing for the completion of the plugging and abandonment operation:

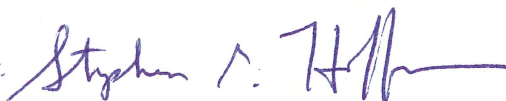
- Implement enhanced retrieval operations by
  - introducing advanced oil field retrieval tools
  - upgrading the hoist rig and existing equipment to allow for enhanced lifting, circulation, and limited milling capabilities
- Implement milling and capture operations using
  - rotary rig
  - hydraulic workover unit
- Use rotary rig to overdrill 5-in. well to bottom of screen 3 (approximately 1100 ft) and then proceed to remove remaining Westbay system components
- Use rotary rig to overdrill 5-in. well from surface to total depth using a rotary rig (capability uncertain)

Based on a more complete understanding of the extent to which the current downhole conditions create physical impediments to retrieval of the Westbay components, there is significant uncertainty regarding the time necessary to implement the above plan and complete all scope associated with Consent Order FY 2020 Milestone #6. As a result, EM-LA is requesting an extension of the milestone into FY 2021. A milestone for which NMED grants an extension pursuant to Section XXVIII (Extensions) beyond the current fiscal year is no longer a milestone. The extension will afford all parties involved the ability to gain more information and determine an appropriate milestone as part of the FY 2021 annual planning process. No other milestones or targets would be affected if this requested extension is granted.

EM-LA remains committed to completing all work required to remove the Westbay sampling system and appropriately plug and abandon well R-25. To ensure NMED receives periodic status of the work being completed, EM-LA is recommending a formal status report be submitted to NMED on a quarterly basis, starting May 29, 2020. Monthly updates will be provided to NMED via email submissions the last full week of each month, starting with the week of March 23, 2020.

Thank you in advance for your consideration of this extension request. If you have any questions, please contact Elizabeth Lowes at (505) 309-1154 (elizabeth.lowes@em-la.doe.gov) or Cheryl Rodriguez at (505) 257-7941 (cheryl.rodriguez@em.doe.gov).

Sincerely,

For: 

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

CC (letter emailed):

Laurie King, EPA Region 6, Dallas, TX  
Raymond Martinez, San Ildefonso Pueblo, NM  
Dino Chavarria, Santa Clara Pueblo, NM  
Steve Yanicak, NMED-DOE-OB  
William Alexander, N3B  
Emily Day, N3B  
Mark Everett, N3B  
Danny Katzman, N3B  
Kim Lebak, N3B  
Joseph Legare, N3B  
Dana Lindsay, N3B  
Frazer Lockhart, N3B  
Elizabeth Lowes, N3B  
Pamela Maestas, N3B  
Christian Maupin, N3B  
Glenn Morgan, N3B  
Bruce Robinson, N3B  
Bradley Smith, N3B  
Steve White, N3B  
David Nickless, EM-LA  
Cheryl Rodriguez, EM-LA  
Hai Shen, EM-LA  
emla.docs@em.doe.gov  
n3brecords@em-la.doe.gov  
Public Reading Room (EPRR)  
PRS Website