



Work Plan to Plug and Abandon Intermediate Well LAWS-01

Primary Purpose	The purpose for plugging and abandoning this borehole is to prevent the migration of surface water in the well to depth. This work plan summarizes the plugging and abandonment methods the Laboratory proposes for alluvial well LAWS-01 located at the weir structure, TA 72 in Mortandad Canyon. Well abandonment will be consistent with Section X.D (Well Abandonment) of the Consent Order and NMOSE regulations. A plugging plan will be submitted to NMOSE before abandonment.
Construction	<p>Well LAWS-01 is a vertical hole drilled in 2001 to a depth of 281 ft and completed as a four screen well to monitor the saturated zones at the Los Alamos Canyon weir site. The hole was drilled in two phases. First, a 12 in diameter hole was augered approximately 9 ft to the top of the basalt. A 10 3/4 in outside diameter stainless steel surface casing was then set. Next the hole was advanced to 281.5 ft using air-rotary, casing-advance methods. No drilling fluids were used during the drilling. The borehole then had a scalloped PVC shield with four screens installed into which a FLUTE™ water monitoring system was deployed with the associated transducers and sampling ports.</p> <p>The well is constructed as follows (Figure 3.1-1):</p> <ul style="list-style-type: none"> • 278 ft of 4.5 in schedule 80 PVC <p>Screens were set as follows:</p> <ul style="list-style-type: none"> • 83-93 ft • 158-168 ft • 188-198 ft • 263-273 ft <p>Annular fill consists of 20/40 filter pack sand, nominally from 5 ft above to 5 ft below each screened interval. A secondary filter pack of 30/70 sand was placed 2 ft above and below the 20/40 sand at each screen. The intervening annular space is filled with bentonite.</p>
Abandonment Methods	All surface and subsurface appurtenances, including the FLUTE™ system will be removed from the well before abandonment. The well will be pressure grouted from 278 to the surface.
Surface Completion	The stainless steel surface casing will be cut off level with the concrete surface pad. A brass marker will be installed in the cement over the well. The marker will be surveyed in accordance with Section IX.B.2.f of the Consent Order, which states that pertinent structures may be horizontally located with a global positioning system with an accuracy of ±0.5 ft.
Waste Disposal	A waste characterization strategy form (WCSF) will be prepared to guide disposal of any wastes generated during abandonment. No waste samples will be collected. Materials removed from the borehole will be reused or recycled if possible. Non-recyclable materials will be disposed in accordance with the WCSF.
Summary Report	A report will be prepared detailing the abandonment methods and the quantities of backfill materials used. A location map and abandonment schematic will also be included in the report.

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