



Department of Energy
National Nuclear Security Administration
NEPA Determination Form



*Categorical Exclusion for San Ildefonso Services Fiber Optic Cable Installation and
Los Alamos County Waterline Replacement Project*

Proposed Action Title: Categorical Exclusion for San Ildefonso Services Fiber Optic Cable Installation and Los Alamos County Waterline Replacement Project

Program or Field Office: NA-LA

Location(s) (City/County/State): Los Alamos, NM and other Offsite Locations

Proposed Action Description

The Proposed Action includes two connected projects that would be located in part on U.S. Department of Energy/National Nuclear Security Administration property. San Ildefonso Services (SIS) proposes the installation of a fiber optic line, and Los Alamos County (LAC) proposes the replacement of a waterline. These lines would be located within Los Alamos National Laboratory (LANL) Technical Area 72 and the New Mexico Department of Transportation rights-of-way for New Mexico State Road (NM) 4 and NM 502. The waterline and fiber optic line would be collocated for a portion of their length. The National Telecommunications and Information Administration (NTIA) is conducting an environmental analysis for the fiber optic line and is anticipated to publish a separate Categorical Exclusion. The NNSA Los Alamos Field Office (NALA) coordinated closely with NTIA on the *National Environmental Policy Act* (NEPA) analysis and commitments to perform mitigation actions required by this determination. Routine coordination meetings with LAC include discussion on mitigation actions related to LAC work on DOE property. Similarly, LAC is responsible to perform mitigations for their activities on DOE property..

SIS Fiber Optic Line Project

SIS proposes to install approximately 4.4 miles of underground fiber optic line within a 10-foot-wide easement from the Pueblo to the community of White Rock. The underground line will consist of fiber optic cable and tracer wire encased in a high-density polyethylene conduit. Installation would be accomplished by cable plowing, backhoe excavation, or directional drilling, depending on the location. Excavation with spoils will be approximately 12 feet wide and 3 feet deep, which will include equipment access and restoration. Handhole boxes will be provided along the route for fiber storage and restoration. The handhole boxes will be placed atop a 6-inch gravel bed and secured in place using an 8-inch, copperclad ground rod. Storage of equipment and materials will take place within an established laydown area on the Pueblo's property that is not evaluated in this NEPA document.

The fiber optic line alignment is collocated with the waterline for the length of Segment 1 of the LAC Waterline Project. Where Segment 1 ends, the fiber optic line will be installed using directional drilling under the NM 4/East Jemez Road (Truck Route) intersection. No waterline work will take place in this section. The fiber optic line would then rejoin the waterline for the lengths of Segments 2 and 3. From the end of Segment 3, the fiber optic line will continue north along NNSA property, meeting NM 502 at the approximate location of the NM 4 entrance ramp. The line extends north under NM 502 to a point just east of the intersection with Pueblo Canyon Road (approximately 0.07 miles west of milepost 6). It then follows the fenceline to the east, ending at an existing fiber optic line on Pueblo land approximately 0.21 miles east of milepost 7.



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Potential spills or releases from directional boring would be managed by SIS utilizing best management practices for surface water and spoil piles (i.e., silt fencing, mulching). Cable plowing, backhoe excavation, and directional drilling would be used to install the line. SIS or their contractors will be responsible for proper disposal of any construction waste; materials management; any unplanned releases during directional drilling; implementing BMPs; and fulfilling any necessary requirements for reporting to the New Mexico Environment Department (NMED).

LAC Waterline

LAC proposes to replace approximately 3.13 miles (16,520 linear feet) of existing 16-inch waterline with a new waterline from the community of White Rock along NM 4 to NM 502. Approximately 0.2 miles of the project would be located within DOE/NNSA TA-72; the remainder is along NM 4 and NM 502. Most of the new line would be replaced in-kind with 16-inch line, but a portion of the line that extends from NM 4 onto NM 502 would be a 12-inch line. The fiber optic line would be collocated within the waterline trench; SIS and LAC would coordinate the construction timing. All work would remain within existing waterline easements. Construction would consist of the excavation of 60- to 100-foot lengths of trench, with a minimum trench depth of approximately 5.5 feet and maximum width of approximately 2 feet on either side of the pipe (wide enough to allow worker access on either side for pipe installation). Trenches will be benched to prevent cave-in. Excavated soils will be placed to the side of each trench, and after pipe replacement, soils would be returned to the trench, compacted, and graded. A concrete barrier will be placed between the trench and NM 4 to provide for worker safety.

The work would be accomplished in three segments. It is anticipated that construction will take place on Segment 1 first, followed by Segment 2, and then Segment 3. Segment 1 is the highest priority for replacement due to the prevalence of waterline breaks. Only a small portion of Segment 1 is on DOE property. The remaining portion of Segment 1 on the Pueblo and LAC property is not evaluated for environmental impacts in this NEPA evaluation. Each of the segments is described as follows:

- Segment 1 begins at an existing waterline on LAC property adjacent to White Rock Fire Station #3, crosses NM 4, and extends along the east side of the road to tie-in to a recently replaced waterline at the Truck Route intersection. The portion of the waterline through the Truck Route intersection was replaced as part of the Tsankawi entrance/Truck Route intersection project.
- Segment 2 begins at the recently replaced 16-inch waterline just north of the Truck Route intersection. It changes to a 12-inch line as it continues along the east side of NM 4.
- Segment 3 continues as a 12-inch line, crossing NM 4, leaving NMDOT NM 4 and entering TA-72 within DOE property. The waterline terminates at the connection to an existing 12-inch waterline within TA-72 just south of the fence line along NM 502.

Water utility disruptions could occur during the change from the old pipe to the new pipe; such disruptions would be short term in duration. Backhoe excavation would be used to install the line. Potential spills or releases from construction would be managed by LAC utilizing best management practices for surface water and spoil piles (i.e., silt fencing, mulching). LAC will be responsible for proper disposal of any construction waste such as the old pipe; materials management; any unplanned releases of clean, potable water from the waterline; implementing BMPs; and fulfilling any necessary requirements for reporting to NMED.



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Mitigations Required on DOE Property

The below table summarizes the mitigation actions based on the NEPA analysis of these projects.

Resources	Impact Identified	Mitigation Required
Visual Resources	Temporary visual impacts from generation of dust and particulate matter will occur during construction as a result of vegetation clearing and excavation.	Best management practices (BMPs), including application of water for dust suppression, will minimize dust in the project area
Soils	Temporary and minimal impacts to disturbed soils at the project area. Approximately 2.4 acres of disturbance is anticipated for the projects.	Disturbed soil will remain on site. BMPs for reducing soil erosion (i.e., stormwater pollution prevention plans [SWPPPs] under the required National Pollutant Discharge Elimination System [NPDES] Construction General Permit, sediment fences, and mulching) will be used during construction.
Water Resources	Disturbances could occur within the Pueblo, Los Alamos, and Sandia canyon systems; these disturbances could require a Section 404 Dredge and Fill permit.	SWPPP will be prepared for each project by SIS or their contractor under the required NPDES Construction General Permit and will include BMPs for reducing soil erosion (i.e., sediment fences and mulching) during construction.
Air Quality	Fugitive dust generated by use of heavy machinery during construction activities.	Fugitive dust emissions will be minimized during construction by application of water for dust suppression
Noise	Noise experienced away from the worksite is anticipated to be below threshold levels that are attributed to hearing loss (70 dB; EPA 1974). ¹	Noise impacts during construction will be mitigated by use of hearing protection for workers.
Ecological Resources	Construction activities that take place during migratory bird nesting season, from May 15 to July 31, are required to coordinate with Triad National Security, LLC (Triad) Biological Resources staff before vegetation removal.	To prevent noxious weeds from establishing, the LANL Invasive Plant Species Management Plan must be followed. BMPs to protect migratory birds (vegetation removal during May 15 to July 31) would be implemented if work

¹ For every doubling of distance, the sound level reduces by 6 dB (e.g., moving from 10 to 20 meters away from a sound source). The next 6 dB reduction means moving from 20 to 40 meters, then from 40 to 80 meters for a further 6 dB reduction (<https://www.acoustical.co.uk/distance-attenuation/how-sound-reduces-with-distance-from-a-point-source/>).



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		takes place within the nesting season.
Human Health and Safety	<p>Fiber optic cable installation is proposed at the base of a canyon that could contain legacy high explosives concerns and or unexploded ordnance (UXO) concerns.</p> <p>If an item is found that is suspected to be UXO or cannot be immediately confirmed, LANL Emergency Operations Center must be contacted.</p> <p>Workers could be exposed to various occupational hazards during construction and operational activities. Such hazards could include the presence of routine hazards associated with construction and operation (e.g., heavy machinery and construction materials).</p>	<p>Before the start of work, all personnel conducting the work must complete or be under the direct supervision of an individual who has taken the LANL Unexploded Ordnance recognition course. Before the start of work, a visual sweep of the area—combined with a description of the work to be conducted within the outlined area—will be conducted with Emergency Management Division-Environmental Restoration explosives/UXO subject matter experts.</p> <p>Occupational risks and hazards during construction and operations activities will be minimized through compliance with SIS and LAC safety standards, policies, procedures and controls.</p>
Cultural Resources	No archaeological concerns exist for the fiber optic line installation alignment along NM 502 or along Segment 3 of the waterline alignment.	Boundaries of all areas that must be avoided will be marked with flagging before start of construction. LANL may also require the presence of a monitor during all ground-disturbing activities that are in close proximity to the sites.
Waste Management	LAC and SIS are responsible for the waste generated by from their respective projects.	Waste from the project will be managed in compliance with federal and state regulations and DOE requirements.
Environmental Restoration	The proposed project could impact four Consent Order Sites located within the project segments. These sites include the Pueblo Canyon system (AOC C-00-005), Los Alamos Canyon system (AOC C-00-006), Sandia Canyon system (AOC C-00-007). Canyon systems within LANL are designated as areas of concern (AOC) because water runoff may convey contaminants which then collect in the canyon bottoms.	To the extent possible, disturbance to the Consent Order sites should be avoided. If disturbance is unavoidable, the LANL Consent Order Site Coordinator must be contacted before beginning construction. Boundaries of the Consent Order sites will be marked upon request. Excavated materials should be placed within the Consent Order boundary and returned to point of origin upon



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		<p>project completion; if materials must be placed outside of the Consent Order site, a tarp or other barrier should be used to prevent cross-contamination. Disturbance to the Los Alamos Canyon Weir, located near the easternmost portion of Segment 2, should be avoided due to the risk of encountering potential contaminants, If disturbance is unavoidable, the LANL Consent Order Site Coordinator must be contacted before beginning construction.</p>
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Categorical Exclusion(s) Applied

B4.7 Fiber optic cable.

Adding fiber optic cables to transmission facilities or burying fiber optic cable in existing powerline or pipeline rights-of-way. Covered actions may include associated vaults and pulling and tensioning sites outside of rights-of-way in nearby previously disturbed or developed areas.

and

B5.4 Repair or replacement of pipelines.

Repair, replacement, upgrading, rebuilding, or minor relocation of pipelines within existing rights-of-way, provided that the actions are in accordance with applicable requirements (such as Army Corps of Engineers permits under section 404 of the Clean Water Act). Pipelines may convey materials including, but not limited to, air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water.

Regulatory Requirements in 10 CFR 1021

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR 1021.

To find that a proposal is categorically excluded, DOE shall determine the following:

- (1) The proposal fits within a class of actions listed in Appendix B to 10 CFR Part 1021, Subpart D;
- (2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and
- (3) The proposal has not been segmented to meet the definition of a categorical exclusion. The proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a) (1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.



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The classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, include the following conditions as integral elements of the classes of actions. To fit within the classes of actions in Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those of the Department of Agriculture, the Environmental Protection Agency, and the National Institutes of Health.

NEPA Compliance Officer Determination

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under NNSA NAP 451.1 and DOE P 451.1), I have determined that the proposed actions fit within the specified at 10CFR Part 1021, Subpart D, Appendix B4.7 and B5.4. I have determined that there are no extraordinary circumstances present and that the proposal has not been segmented. If changes are made to the scope of the action so that it is no longer bounded by the above description, or the project is changed to encompass other action, NEPA requirements for the action will need to be reassessed at that time and further analysis may be required. I approve the proposed actions under 10 CFR Part 1021, Subpart D, Appendix B4.7 and B5.4. This determination is made pursuant to the NEPA [42 U.S.C. 4321 et seq.], the U.S. Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA [40 CFR 1500], and the DOE NEPA Implementing Procedures [10 CFR 1021].

NEPA Compliance Officer

Date