Final Environmental Impact Statement
Thacker Pass Lithium Mine Project

Appendix D

Design Features

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APPENDIX D. DESIGN FEATURES

Table D.1. Applicant-committed Design Features for the Proposed Action

Feature Number	Resource Affected	Design Feature
AQ-01	Air Quality	LNC would develop a Fugitive Dust Control Plan for the approved project to ensure consistency with NDEP Bureau of Air Pollution Control (BAPC) operating permits.
AQ-02	Air Quality	LNC would control fugitive emissions at the crusher and conveyor drop points using water sprays or baghouses, as necessary.
AQ-03	Air Quality	LNC would install, operate, and maintain pollution control devices installed by equipment manufacturers where required.
AQ-04	Air Quality	LNC would apply surface treatments (chemical stabilization), additional watering and traffic control regulations (such as reduction in speed and traffic volume restrictions on unpaved roads), as necessary.
AQ-05	Air Quality	LNC would stabilize the surface of areas adjoining roads which are fugitive dust sources by vegetating or mulching, as necessary.
AQ-06	Air Quality	LNC would restrict travel of unauthorized vehicles on unestablished roads, as necessary.
AQ-07	Air Quality	LNC would minimize the area of disturbed land during ongoing surface mining activities as much as possible and practical.
AQ-08	Air Quality	LNC would compact unpaved roads to stabilize the road surface and promptly remove ore, rock, soil, and other debris from roads, as necessary.
AQ-09	Air Quality	LNC would minimize the loss of material to wind and spills by watering and/or treating loaded haul trucks, as necessary.
AQ-10	Air Quality	LNC would ensure prompt revegetation of disturbed lands, as necessary.
AQ-11	Air Quality	LNC would restrict activities causing fugitive dust during periods of air stagnation whenever possible.
WA-01	Water Resources	See the SPPP (**Plan NVN-098586, Appendix C**).
NW-01	Noxious Weed Management	See the Noxious and Invasive Weed Management Plan (**PoO, Appendix D**).
LS-01	Livestock	LNC would install cattle guards at the entrance to the plant and mine area if necessary.
MB-01	Migratory Birds	If possible, LNC would time land clearing and surface disturbance to prevent destruction of active bird nests or young birds during the avian breeding season (March 1 to July 31, annually in accordance with BLM policies), in compliance with the Migratory Bird Treaty Act. If surface disturbing activities are unavoidable during the avian breeding and nesting season, LNC would have a qualified biologist survey area proposed for disturbance to determine the presence of active nests immediately prior to the disturbance. Should active nests be located, or other evidence of nesting be observed (i.e., mating pairs, territorial defense, carrying nesting material, transporting of food, etc.), LNC will avoid the area to prevent destruction or disturbance of nests until the birds are no longer present.
MB-02	Migratory Birds	LNC would install raptor anti-perch devices on the proposed 25-kV power poles that are located within the portions of Project area that support sage grouse habitat. Anti-perch devices would also be installed on tall structures (where appropriate) within the mine facilities and plant site (e.g., communication tower, weather station, some areas of the lithium

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		processing plant, and sulfuric acid plant). Anti-perch devices (usually triangle shaped, cone-shaped, or are spike-type structures) are designed to be mounted on utility poles or tall structures to prevent or dissuade raptors from landing or nesting on the structure.
MB-03	Migratory Birds	LNC would implement a Bird & Bat Conservation Strategy (BBCS) for the Project. The Project BBCS is a Project-specific document that delineates a program designed to reduce the potential risks of raptor, avian, and bat mortality that may result from the interaction of these species with Project facilities. On-site operations will implement measures as outlined in the BBCS.
MB-04	Eagles	LNC would implement an Eagle Conservation Strategy (ECP) for the Project. The Project ECP is a Project-specific document that delineates a program designed to reduce the potential risks of eagle mortality that may result from the interaction of these species with Project facilities. On-site operations will implement measures as outlined in the ECP. LNC is coordinating with the USFWS to apply and obtain an Eagle Take Permit (ETP) to account for effects to Golden Eagles from disturbance related to Project construction and operation.
WR-01	Wildlife Resources	LNC would dispose of any animal road kills occurring within the Project site and along the Quinn River Well access road in self-closing trash bins or another secure method.
WR-02	Wildlife Resources	All trash associated with the Project during construction and operation would be contained in secure receptacles to prevent the introduction of subsidized food resources for ravens and other wildlife. LNC would use closed bins during construction for organic waste. To reduce the possibility of ravens or other wildlife from ripping into the bags and exposing the trash, plastic bags containing trash would not be left out for pickup. All trash and food items generated by construction and operation activities would be promptly contained and regularly removed from the Project site to reduce the attractiveness of the area to common ravens and other wildlife.
WR-03	Wildlife Resources	LNC would install the proposed transmission infrastructure such that they are incompatible with the establishment of raven nests. As suggested in Avian Power Line Interaction Committee guidelines, LNC will attach polyvinyl chloride pipe or corrugated drainpipe to the proposed 25-kV distribution line structures to discourage nesting (APLIC 2006). However, ravens are resourceful and, in some cases, have nested around such perch and nest discouraging features. Therefore, LNC would also regularly monitor the usefulness of the deterrence measures and implement different measures if the current effort is unsuccessful.
WR-04	Wildlife Resources	During exploration activities, LNC would install wildlife escape ramps in all open trenches and drilling sumps or areas where wildlife could become trapped. LNC would coordinate with BLM to minimize any potential mortality associated with drilling sumps.
VR-01	Visual Resources	LNC would develop and implement BMPs for the Project to reduce light pollution and impacts to visual resources including implementation of “Dark Sky” practices such as screening light sources, directing light towards intended targets, minimizing new disturbance areas, and utilizing colors found in the natural environment for structures and building. The height and angle of illumination from which floodlights are fixed would be reduced as much as possible while still maintaining the required levels of brightness and safety per operations protocol and MSHA/OSHA regulations.

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VR-02	Visual Resources	Concurrent reclamation of mine areas for which mining has been completed would be implemented to mitigate effects to visual resources. During mining operations, this would allow for vegetation to establish where mining has been completed, while mining activities are in progress elsewhere within the Project area. Concurrent reclamation would result in reduced effects to visual resources and visual contrast.
VR-03	Visual Resources	Site-wide post-production reclamation contours and topography would be designed to blend with form, line, color, and texture of the existing landscape. Post-production reclamation would include recontouring, cover placement, placement of growth media, and seeding activities.
VR-04	Visual Resources	Mitigation measures, such as painting buildings and structures to blend with the existing landscape, and when feasible, concurrently sloping and reclaiming stockpiles would minimize permanent visual contrasts within the Project area.
WF-01	Wildland Fire	LNC and its contractors would comply with all applicable agency and state fire laws and regulations and will implement reasonable measures to prevent and suppress fires within the Project area.
WF-02	Wildland Fire	LNC would not allow open fires within the Project area during the life of the Project.
WF-03	Wildland Fire	LNC would coordinate with the BLM to keep vegetation mowed to serve as a fire break at appropriate locations along the fence line at the base of the Montana Mountains. LNC will immediately contact the appropriate firefighting entity in the event of a fire and report all wildland fires to the BLM Central Nevada Interagency Dispatch Center.
WF-04	Wildland Fire	Vehicles and equipment operated on public and private lands and roads would meet appropriate wildfire preparedness requirements. All vehicles would carry fire extinguishers. Vehicle catalytic converters would be inspected regularly and cleaned of brush and grass debris. Power equipment would be equipped with fire extinguishers, buckets, and shovels.
WF-05	Wildland Fire	Smoking would only be permitted in designated areas that are free of flammable materials and only if allowed by state law or federal regulations.
CR-01	Cultural Resources	Should avoidance to a known site not be feasible due to land disturbance requirements associated with Project development or if adverse effects cannot be prevented, LNC would implement mitigation measures such as data recovery, documentation and reporting at the affected cultural sites. If an unevaluated site cannot be avoided, LNC would gather additional information to evaluate the site. If the site does not meet eligibility criteria, no further cultural survey work will be performed. If the site meets eligibility criteria, LNC would develop a data recovery plan or appropriate mitigation.
CR-02	Cultural Resources	LNC would inform Project employees and contractors that knowingly disturbing cultural resources (historic or archaeological) or collecting artifacts is illegal. Project employees and contractors would be informed on how to proceed with chance finds.
WM-01	Waste Management	LNC would develop and implement a Solid and Hazardous Waste Management Plan that will identify wastes generated at the Project site and their appropriate means of disposal. Employee training would outline appropriate disposal practices, which includes the allowable wastes that can be placed in a landfill, management of used filters, oily rags, fluorescent light bulbs, aerosol cans, and other regulated substances.

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WM-02	Waste Management	All solid wastes generated by the mine and process operations would be collected in dumpsters near the point of generation. The roll-off container would be picked up within 90 days (or sooner) of initial waste accumulation and shipped off-site for disposal or disposed of onsite in a Class III Landfill.
WM-03	Waste Management	Hazardous wastes would be properly stored and placed in roll-off containers near their points of generation for no more than 90 days. Hazardous wastes would be picked up and disposed of at a facility licensed to treat, store, and dispose of the wastes. LNC would place appropriate labels on the roll-off containers at the time of delivery.
WM-04	Waste Management	LNC would place signs in the waste storage area at the accumulation facility to indicate the locations where drums, five-gallon pails, and/or boxes containing various materials are to be placed, including an area for hazardous wastes. Full and labeled drums would be placed in the designated areas on pallets with enough aisle space. Empty drums would be stored in a designated area within the fenced accumulation facility.
WM-05	Waste Management	LNC would isolate parts-washer contents from the oil/water separator and the general septic systems. These parts washers would be self-contained and will be located in the maintenance shop. The solvent collected in nearby drums would be returned to a certified recycling/disposal firm.
WM-06	Waste Management	LNC would have a trained response team at the site 24 hours per day to manage potential spills of regulated materials at the site. LNC would implement steps described in the Spill Contingency Plan (**Appendix E** of the proposed **Plan NVN-098586**).
SM-01	Survey Monuments	To the extent practicable, LNC would protect all survey monuments, witness corners, reference monuments, bearing trees, and line trees against unnecessary or undue destruction, obliteration, or damage. During operations, if any monuments, corners, or accessories are destroyed, LNC would immediately report the matter to the authorized officer. Prior to obliteration, destruction, or damage during surface disturbing activities, LNC would contact BLM to develop a plan for any necessary restoration or reestablishment activity of the affected monument in accordance with the Manual of Surveying Instructions (DOI 2009). LNC would bear the cost for the restoration or re-establishment activities including the fees for a Nevada Professional Land Surveyor.
RC/LV-01	Recreation & Livestock	The applicant acknowledges the past and current public use of the Thacker Pass corral and staging area located on Pole Creek Road approximately 2.5 miles north of State Highway 293 as shown on **Figure 4.8-1**. This area is commonly used by livestock grazing permittees for gathering cattle and by the public as a staging area for recreational activities farther up Pole Creek Road in the Montana Mountains. Under all alternatives analyzed in this EIS, with the exception of Alternative D (No Action Alternative), to ensure continued public access to the staging area, the applicant would not intentionally stage or store mine vehicles or exploration equipment within the designated Livestock and Recreation Staging Area, nor would the applicant close public access to the area via fencing or signage. This area would remain under the administration of the BLM for multiple use including ongoing livestock operations and recreational activity. The applicant would assume no financial or management responsibility or liability for the staging area beyond any commitments included in the North and South Exploration Area Plan of Operations.