

EXHIBIT 2

To

**PLAINTIFFS, WWP ET AL'S MOTION ON THE
ADMINISTRATIVE RECORD**

FINAL EIS, EXCERPTS



Thacker Pass Lithium Mine Project

Final Environmental Impact Statement DOI-BLM-NV-W010-2020-0012-EIS

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Prepared by:

U.S. Bureau of Land Management
Winnemucca District Office
Humboldt River Field Office
5100 East Winnemucca Blvd.
Winnemucca, NV 89445-2921

In cooperation with:

U.S. Fish and Wildlife Service
Pacific Southwest Region
Division of Migratory Bird Management
2800 Cottage Way, W-2650
Sacramento, CA 95825

Estimated Costs to Develop
and Produce this Draft EIS:

BLM: \$230,000

USFWS: \$36,000

Proponent: \$8,700,000

Cooperating Agencies: The United States (U.S.) Fish and Wildlife Service (USFWS), the Nevada Department of Wildlife (NDOW), Nevada Department of Natural Resources Sagebrush Ecosystem Technical Team (DCNR/SETT), and Humboldt County Commissioners are official cooperating agencies for preparation and review of this EIS. The U.S. Environmental Protection Agency (EPA) and the Nevada Division of Environmental Protection (NDEP) have agency-wide Memorandums of Understanding (MOUs) with the BLM for coordination on National Environmental Policy Act of 1969 (NEPA) projects, and the EPA and NDEP actively coordinated with the BLM on this EIS.

1.2 SUMMARY OF PROPOSED ACTION

The *Thacker Pass Mine and Reclamation Plan of Operations* (LNC 2019a) and the *Thacker Pass North and South Area Exploration Plan of Operations* (hereafter referred to as the Project) (LNC 2019b) were submitted to the BLM HRFO for review and potential approval of the Project in accordance with BLM Surface Management Regulations under 43 Code of Federal Regulations (CFR) 3809. The BLM prepared this EIS to analyze the effects associated with the proposed Project as described in the Plans.

The Project area would include a total of approximately 17,933 acres (Mine Plan boundary of 10,468 acres; Exploration Plan boundary of 7,465 acres) with an estimated total disturbance footprint of approximately 5,695 acres (Mine Plan area disturbance of 5,545 acres; Exploration Plan area disturbance of 150 acres). The surface and subsurface mineral estates associated with the Project are located on public lands administered by the BLM, Winnemucca District (WD); no state or private lands are included in the Project area. The Project would be an open pit mine with a life expectancy of approximately 41 years. Closure and reclamation of the Project is anticipated to require another five years. The Project would be developed in two phases over the estimated life-of-mine. Phase 1 would include two-years of construction of the support and processing facilities, pre-production waste rock removal, and then mining and processing for the first 4 years of the mine life. Phase 2 would be a continuation of mining and processing between years 5 to 41, after which the Project would enter the reclamation and closure period (for a minimum of 5 years).

The Proposed Action presented in this EIS is based on the recently submitted Plans. For a detailed discussion of the Proposed Action, see Section 2.2, *Proposed Action*. Facilities associated with the Proposed Action include:

- Development of an open pit mine;
- Pit dewatering;
- Construction of two Waste Rock Storage Facilities (WRSFs);
- Construction and operation of mine facilities to support mining operations;
- Construction of a Run-of-Mine (ROM) stockpile;
- Construction and operation of an attrition scrubbing process;
- Construction of a coarse gangue stockpile (CGS);
- Construction and operation of lithium processing facility;

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Appendix R

Comment Responses

Comment #	Comment	BLM Response
		rock and process materials that would be disposed of on site would exceed the U.S. EPA SSLs for industrial soil (230 mg/kg; EPA, 2020). Uranium concentrations for each type of waste rock material would be below the EPA SSL for uranium for residential soils (16 mg/kg) with the exception of the maximum values.
P218	72) Whereas the extensive acid leaching will concentrate radioactive materials and make them much more dangerous, the final EIS must mandate that LNC extract uranium and radium encountered, processing it into marketable products rather than dumping this hazardous waste on the tailings pile.	Comment noted.
P219	73) If uranium and radium is not extracted prior to dumping on the tailings pile; the tailings pile (CTFS) should be considered a hazardous waste facility.	Tailings impoundments for disposal of mining and processing wastes are subject to regulation and permitting by the Nevada Department of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR) under Nevada regulations for Mining Facilities (NAC 445A.350-NAC 445A.447). Major permits that would be required for construction and operation of the facility are identified in EIS Appendix O, Regulatory Setting and Project Permits, Table O.2. Major Permits and Approvals. The NDEP BMRR has established requirements for waste rock, overburden, and ore characterization and evaluation and for ecological risk assessment for proposed mining projects, including for disposal of naturally-occurring radioactive material from mining operations. NDEP mining regulations do not require or anticipate separation of naturally-occurring radioactive material prior to disposal of mining and processing wastes. Drainage from the CTFS would not discharge to groundwater or surface water. The Thacker Pass facility Clay Tailings Filter Stack is being designed as a zero-discharge facility as defined under Nevada regulation NAC 445A.385. "Zero discharge" means the standard of performance for the protection of surface waters which requires the containment of all process fluids.
P220	74) The final EIS must analyze the amounts of uranium sulfate that will be formed in all areas of the project (pit backfill, waste rock storage, and the CTFS), and it's potential impact on the environment. Given that there are sulfate naturally present in the soil, an enormous amounts of sulfuric acid will be used in processing, the formation of uranium sulfate is very probable. Uranium Sulfate is highly toxic, and it is water soluble. The water soluble nature of uranium sulfate allows it to contaminate groundwater in a much more efficient manner.	<p>A summary table of the amounts of lithium products and other products that would be produced at the facility and transported off site has been added to the EIS.</p> <p>A simple PHREEQC model was applied to address the potential for uranium sulfate formation within the Thacker Pass tailings impoundment. Source terms were generated for each tailings component (i.e., clay tailings, neutralization solids, and sulfate salts) by averaging the available Meteoric Water Mobility Procedure (MWMP) data for those materials. This included three samples of clay tailings, two samples of neutralization solids and one sample of sulfate salts. The average MWMP leachate chemistry for each of these materials was input into PHREEQC, and the solutions were mixed in the approximate proportions of the planned tailings impoundment (i.e., 64% clay tailings, 17% neutralization solids, 18% sulfate salts). Based on the results of this</p>

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		<p>PHREEQC model, uranium speciation is dominated in solution by a combination of uranyl fluoride and uranyl phosphate species. Only a very small proportion of the total uranium in solution is predicted to form uranyl sulfate. Approximately 0.00007% of the total uranium is predicted to form uranyl sulfate across all uranium sulfate species. Based on PHREEQC calculations using mass balanced MWMP leachate chemistry for all the tailings components, uranyl (IV) and (VI) sulfate species comprise a minimal portion of total uranium in solution. As such, these sulfate species in the tailings impoundment leachate do not present an environmental risk.</p>
P221	<p>75) The proposed tailings pile (CTFS) liner is woefully inadequate. The only thing standing between the CTFS and groundwater contamination is a geomembrane liner. Moreover haul trucks may be driving on the CTFS increasing the chance of liner failure according to the draft EIS "The dewatered tailings would be transported to the CTFS using either conveyors or haul trucks or a combination of the two." (DEIS pg. 2-9). The final EIS must analyze the consequences of liner failure. The final EIS must mandate design specs for the liner of the CTFS to contain radioactive waste indefinitely. The liner should be multi-layered with a leak detection system between the liners and should also contain a concrete component.</p>	<p>The Thacker Pass facility Clay Tailings Filter Stack is designed to store the mechanically placed filtered tailings solids (filter cakes and sulfate salts) generated during lithium production. The CTFS is being designed as a zero-discharge facility as defined under Nevada regulation NAC 445A.385. "Zero discharge" means the standard of performance for the protection of surface waters which requires the containment of all process fluids. Drainage from the CTFS would not discharge to groundwater or surface water. The CTFS will be fully lined with an HDPE geomembrane, underlain with a six-inch liner bedding material. The facility will include an underdrain collection system above the geomembrane to collect drainage from the stack. Drainage from the stack will report to the geomembrane lined reclaim ponds. Water collected in the reclaim ponds will be pumped to the processing plant to be used as make-up water for processing operations or will evaporate from the reclaim ponds.</p>
P222	<p>76) The DEIS says that local groundwater will be sampled for evidence of leaks in the liner. This is entirely inadequate. By the time leaks show up in groundwater it is too late, and the area of the leak in the liner will be under millions of tons of tailings making it impossible to repair.</p>	<p>The liner and tailings facility will be constructed to industry standards with monitoring and mitigation requirements as permitted by Nevada Division of Environmental Protection, Bureau of Mining Regulation & Reclamation, NRS 445A.300-NRS 445A.730. Per State of Nevada regulations, the design of the facility must be sufficient to protect the waters of the State from degradation.</p>
P223	<p>77) This project will result in groundwater contamination according to LNC's own research. "However geochemical characterization testing indicates that neutral pH drainage from the waste rock and coarse gangue material have the potential to generate leachate with concentrations of arsenic, antimony, fluoride, iron, magnesium, sulfate, and uranium that exceed NDEP Profile I reference values (i.e., based on the Nevada drinking water standards) (SRK 2020a, SRK 2020b)." (DEIS pg. 4-14). (emphasis added) All of these impacts must be analyzed in detail in the final EIS.</p>	<p>See Common Response WATER-4. Discharge from the Proposed action was analyzed in Section 4.3 of the EIS. Additional details are provided in Sections 5-7 of the Water Quality and Quantity Impacts Report and concluded antimony was the only constituent of concern discharging from the pit. The LNC committed monitoring and mitigation measures to address antimony were summarized in Section 4.3.2 of the EIS.</p>
P224	<p>78) The Company is planning on knowingly contaminating pit groundwater by placing naturally contaminated waste rock in the pit where it will have contact with groundwater. "The modeling results predict that the groundwater quality would be moderately alkaline (pH 7.6-7.8) with concentrations of antimony, arsenic, sulfate, and total dissolved solid (TDS) that would exceed the NDEP Profile I reference</p>	<p>See Common Response WATER-4.</p>

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	<p>values (based on the Nevada Primary and Secondary Drinking Water Standards) in one or more of the sub-pit areas. Sulfate is predicted to exceed the Profile I reference values for approximately 50 years, and TDS for 140 years post-closure (Piteau 2020a) Concentration of both constituents (sulfate, TDS) gradually declines as the backfill is subsequently rinsed by groundwater. The concentrations of arsenic and antimony in the pit backfill pore water are predicted to exceed drinking water standards over the entire 300 years post-closure simulation period in each sub-pit area. The source of arsenic and antimony is waste rock (claystone/ash and ash) placed in the backfill (Piteau 2020a).” (emphasis added) Groundwater is naturally protected by layers of clay. These layers of clay will be removed and naturally contaminated waste rock will be placed back in the pit. The act of extracting waste rock, storing it, then placing it in the pit will crush the waste rock. Waste rock will also be exposed to the atmosphere. This will greatly increase surface area such that toxins will be released when it is placed back in the pit and contacts groundwater.</p>	
P225	"79) Placing this contaminated waste rock back in the pit is unlawful under 43 CFR § 3809.420 (b)	See Common Response WATER-4.
P226	80) While the pit should be backfilled, it must be backfilled with imported soil that is not contaminated with toxins. The DEIS should have considered importing fill dirt.	See Common Response WATER-4.
P227	81) The DEIS and LNC tries to justify placing this contaminated waste rock back in the pit by asserting that “Although outflow from the West Pit Lake would have the potential to degrade groundwater quality, it is unlikely that this small amount of flow (1.1 gpm) would result in measurable degradation (new exceedances of groundwater quality standards) at a compliance point located downgradient of the pit.” (DEIS pg. 4-21). Asserting a flow of 1.1 gpm 300’ underground is highly speculative.	See Common Response WATER-4. Detailed analysis of the fate and transport of dissolved constituents in pore water from the proposed Thacker Pass project are analyzed in the Final EIS and described in sections 6 and 7 of the Water Quantity and Quality Impacts report in included in Appendix P of the Final EIS. These analyses incorporated several sensitivities which evaluated a range of hypothetical hydrogeologic parameters. The BLM proposed monitoring and mitigation measure to address potential adverse effects to water quality is outlined in measure WR-3 in Section 4.3.2 of the Final EIS. In the event that constituent concentrations exceed established regulatory thresholds at one or more established compliance monitoring points, and the exceedance is attributable to contamination originating from mine facilities or operations, LNC would provide the BLM and NDEP with a groundwater quality management plan for review and approval. LNC would be responsible for implementation of any approved groundwater quality management plans; and any required supplemental verification monitoring.
P228	82) As is noted above, LNC’s consultants have proven themselves utterly incapable of accurately documenting water flowing on the surface, or even conducting basic tasks of distinguishing between perennial streams and ephemeral springs. Yet the DEIS accepts on blind faith that the flow of water is being accurately documented 300’ below the surface. In reality, given the geology of this being an extinct volcano there are likely a multitude of cracks, fissures, lava tubes and etc. Water cannot be accurately modeled in the pit. There may be features that are currently packed in clay	This topic is addressed in response to comment P184 and Common Response WATER-1. The BLM has reviewed the hydrologic baseline studies prepared for the Thacker Pass project and deemed these reports complete for the purposes of describing the affected environment and evaluating impacts in the Final EIS. As described under Measure WR-1 (Final EIS Section 4.3.2) BLM may require reasonable modifications and adjustments to include additional monitoring sites or increased monitoring frequencies based on the results of

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	that once exposed could transport substantial amounts of water, both into the mine and out of it. Features such as this would spread groundwater contamination far and wide, this must be considered in the Final EIS	the proponent's proposed operational and post-mine groundwater and surface water monitoring program to ensure water resource impacts are adequately monitored and mitigated as necessary. Additionally, the BLM proposed monitoring and mitigation measure to address potential adverse effects to water quality is outlined in measure WR-3 in Section 4.3.2 of the Final EIS.
P229	83) In fact, such highly permeable features near the pit have been documented in the DEIS "A 300-foot thick sequence of basalt was observed in WSH-3 [an observation well] and at other exploration holes on the eastern fringe of the project area... Hydrologic testing indicates that basalt can be very permeable (30.1 ft/d at WSH3)." See DEIS Appendix P pg. 16. Three large basalt quarries are also shown within the main body of the pit. (See Appendix A figure 2-3). Given this documented basalt in the pit and nearby basalt features, it is unlikely that modeling data is accurate. Furthermore, as Dr. Powell notes below: the model, in fact, has a high degree of uncertainty, and was calibrated to flow data that is known to be inaccurate.	WSH-3 resides well outside the pit extent (see Figure 2.9 in the Water Quantity and Quality Impacts Report included in Final EIS Appendix P). Drillholes within the pit footprint indicate the primary material is claystone/ash, as shown in detail from geologic logs and cross-sections shown in Figures 2.16 to 2.22 of the Baseline Hydrologic Data Collection report (Piteau [2019a] included in Final EIS Appendix P). Basalt would occupy ~ 2.5% of rock exposed in pit walls and is interbedded with claystone such that it is not a pervasive hydrogeologic unit with capacity to convey substantial amounts of water from the pit area.
P230	84) LNC will not allow us to conduct independent measurements of their wells, and we have already found that one of their transducers in one well is not accurately recording elevation data. Given that data cannot be independently verified, and given the critical nature of potential contamination and model inaccuracies, BLM must conduct independent research to verify the data on each and every monitoring well and modeling inputs throughout the project.	This topic is addressed in response to comment P184 and Common Response WATER-1.
P231	85) LNC is proposing to create a massive acid plant producing 5800 tons of acid a day in phase 2. They plan on storing up to 14550 tons of sulfuric acid. (For reference purpose semi can haul about 25 tons) They will be storing the equivalent of 580 semi loads of acid. Making this acid will require burning about 75 semi loads of sulfur a day. By any measure, this is a massive plant that must be thoroughly analyzed.	Potential impacts to water resources were summarized in Section 4.3 of the EIS. The model results predict that measurable impacts to baseflow associated with LCT habitat are not expected to occur. However, monitoring and mitigation are included in Section 4.3.2 to verify the model prediction and address any unforeseen impacts.
P232	86) BLM has no basis to make any decisions on impacts because they have failed to determine the quantities and types of waste products produced. In my scoping comments I noted. "BLM should require Lithium Nevada to provide a budget in the EIS showing where each of these chemicals/elements will be at the end of each year, and what form they will be in. Specifically including but not limited to 1) how much will be released into the atmosphere 2) how much will remain in the tailings pile 3) how much will be exported in the form of finished products 4) how much will be exported in the form of waste 5) how much will be remain elsewhere (and if so where). 6) how much will remain outside of containment, where it will have increased impacts on the environment." Unfortunately my scoping comments were not considered. Thus I make the same comments again.	Air emissions of air pollutants from facility operations are reported in EIS Table 4.10. Facility-Wide On-Site Operational Emissions. The amounts of chemical reagents and fuels and fluids that would be used in production operations are reported in EIS Table 4.17. Chemicals and Reagents (Hazardous Materials) on Site and Table 4.18. Storage and Use of Fuels and Equipment Maintenance Fluids on Site including the annual consumption of chemicals and reagents and fuels and fluids and maximum quantities that would be stored on site at any one time. A summary table of the amounts of lithium products and other products that would be produced at the facility and transported off site has been added to the EIS. A summary table of the projected output and tailings pile constituents has been added to the EIS.
P233	"87) According to the DEIS page 4-100 LNC will be importing the following enormous amounts of chemicals into our community on an annual basis: Limestone	Air emissions of air pollutants from facility operations are reported in EIS Table 4.10. Facility-Wide On-Site Operational Emissions. The amounts of

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	169,036 tons, Quicklime 126,204, tons Soda Ash 86,343, tons Molten Sulfur 340,247 tons	chemical reagents and fuels and fluids that would be used in production operations are reported in EIS Table 4.17. Chemicals and Reagents (Hazardous Materials) on Site and Table 4.18. Storage and Use of Fuels and Equipment Maintenance Fluids on Site including the annual consumption of chemicals and reagents and fuels and fluids and maximum quantities that would be stored on site at any one time. A summary table of the amounts of lithium products and other products that would be produced at the facility and transported off site has been added to the EIS. A summary table of the projected output and tailings pile constituents has been added to the EIS.
P234	89) The EIS must prohibit any additional chemicals or quantities of chemicals on the CTFS except those analyzed.	LNC would be permitted to use the amounts of hazardous materials as indicated in the Mine Plan of Operations and as indicated in hazardous materials storage permits and other permits issued by regulatory agencies for the facility. Major permits that would be required for mine construction, operation, and reclamation are identified in EIS Appendix O, Regulatory Setting and Project Permits, Table O.2. Major Permits and Approvals. Major permits identified in Appendix O include hazardous materials storage permits that would be issued by regulatory agencies for storage and management of hazardous materials. The types and quantities of hazardous materials identified in the EIS, and their impacts, are representative of the types and quantities of hazardous materials that would be stored and managed at the facility.
P235	90) Once amounts of waste products dumped on the CFTS an impacts analysis must be made. This must include a) An evaluation of whether waste in the tailing pile can react together to form other chemicals, and what the impacts may be b) whether waste products can react with products naturally occurring in the tailings to form other chemicals (i.e. Uranium Sulfate or Lead Sulfate), and what the impacts may be. c) whether waste products can be naturally broken down over time by the soil, bacteria, or the elements, to form other chemicals (i.e. hydrogen sulfide), and what the impacts may be.	LNC would be permitted to use the amounts of hazardous materials as indicated in the Mine Plan of Operations and as indicated in hazardous materials storage permits and other permits issued by regulatory agencies for the facility. Major permits that would be required for mine construction, operation, and reclamation are identified in EIS Appendix O, Regulatory Setting and Project Permits, Table O.2. Major Permits and Approvals. Major permits identified in Appendix O include hazardous materials storage permits that would be issued by regulatory agencies for storage and management of hazardous materials. The types and quantities of hazardous materials identified in the EIS, and their impacts, are representative of the types and quantities of hazardous materials that would be stored and managed at the facility.
P236	91) Sulfate salts including gypsum have been shown to break down in landfills, forming dangerous quantities of hydrogen sulfide. The Plan of Operations says gypsum will be a byproduct dumped on the CTFS. Yet the DEIS doesn't even mention gypsum, much less quantify it or analyze the impacts. This must be corrected in the Final EIS.	Unbleached clay solids and the solids generated during acid leaching, primarily gypsum, will be removed by pressure filtration prior to being conveyed to the CTFS for disposal. Methanogenic bacteria can decompose gypsum into hydrogen sulfide under wet anaerobic conditions; activity of methanogenic bacterial depends on the presence of a carbon source, e.g., in a municipal solid waste landfill or construction/demolition debris (C&D) landfill.
P237	92) Given that these compounds are made up of imported chemicals and many of them will come out of processing as specific compounds. The Final EIS should	Recycling of tailings and process wastes generated from mining and processing activities is not feasible. Gypsum (calcium sulfate) recycling would

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	mandate that these chemicals be recycled into usable products such as gypsum, sodium sulfate, Epsom salt, Potassium Sulfate, rather than dumping them on the tailings pile where they may have adverse impacts.	not be feasible considering that the material, even if processed, would not be usable for manufacturing wallboard or other commercial or residential applications because of the presence of residual concentrations of hazardous materials. Similarly, magnesium sulfate could not feasibly be processed into commercial grade Epsom Salts. Also, recycling of materials would involve transporting the materials off site by truck. The Phase I CTFS storage capacity would be 18 million tons (equivalent to 500 dry tons per hour). Transport of this quantity of materials off site as compared to disposing of the material would increase impacts related to truck traffic on public roads in the vicinity of the project site.
P238	93) BLM failed to analyze the feasibility of recycling sulfate salts rather than using our public lands as a chemical dump.	Management and recycling of materials under the Proposed Action is presented in Section 4.16.1.1 of the EIS. Recycling of tailings and process wastes generated from mining and processing activities is not feasible. Gypsum (calcium sulfate) recycling would not be feasible considering that the material, even if processed, would not be usable for manufacturing wallboard or other commercial or residential applications because of the presence of residual concentrations of hazardous materials. Similarly, magnesium sulfate could not feasibly be processed into commercial grade Epsom Salts. Also, recycling of materials would involve transporting the materials off site by truck. The Phase I CTFS storage capacity would be 18 million tons (equivalent to 500 dry tons per hour). Transport of this quantity of materials off site as compared to disposing of the material would increase impacts related to truck traffic on public roads in the vicinity of the project site.
P239	94) Dumping these sulfide salts resulting from enormous quantities of imported sulfur on the tailings pile that could otherwise be converted into usable products is unlawful under 43 CFR § 3809.420 (b) (2) "All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws."	Management and recycling of materials under the Proposed Action is presented in Section 4.16.1.1 of the EIS. Recycling of tailings and process wastes generated from mining and processing activities is not feasible. Gypsum (calcium sulfate) recycling would not be feasible considering that the material, even if processed, would not be usable for manufacturing wallboard or other commercial or residential applications because of the presence of residual concentrations of hazardous materials. Similarly, magnesium sulfate could not feasibly be processed into commercial grade Epsom Salts. Also, recycling of materials would involve transporting the materials off site by truck. The Phase I CTFS storage capacity would be 18 million tons (equivalent to 500 dry tons per hour). Transport of this quantity of materials off site as compared to disposing of the material would increase impacts related to truck traffic on public roads in the vicinity of the project site. The NDEP and BMRR are responsible for surface water quality and groundwater protection. Tailings disposal is subject to NDEP-BMRR and federal regulations and requires permits and approvals from the NDEP-BMRR including a water pollution control permit and mine reclamation permit. Major permits that would be