

Appendix B
Standard Construction and Operation Procedures

APPENDIX B

Standard Construction and Operation Procedures

This appendix describes a number of standard procedures intended to reduce the potential for short- and long-term impacts. These procedures will be implemented during construction and operation of all features of the Toquop Energy Project. Each of these procedures will be incorporated into all construction specifications and contract documents, as appropriate, and all contractors will be required to follow them. These procedures are an integral part of the Proposed Action and Alternatives 1, 2, and 3.

Landscape Preservation and Impact Avoidance

1. To the maximum extent practicable, all trees, native shrubs, and other vegetation will be preserved and protected during construction operations and equipment except where clearing operations are required for permanent structures, approved construction roads, and excavation operations.
2. To the maximum extent practicable, all maintenance yards, field offices, and staging areas will be arranged to preserve trees, shrubs, and other native vegetation.
3. Clearing will be restricted to that area needed for construction.
4. All areas around structures will be backfilled, compacted, and returned as close as possible to the original condition and grade.
5. In order to reduce environmental damage, washes, steep slopes, or sensitive environmental areas will not be used for equipment or materials storage or stockpiling; construction staging or maintenance; field offices; hazardous material or fuel storage, handling, or transfer; or temporary access roads.
6. Excavated or graded materials will not be stockpiled or deposited on or within 100 feet of any steep slopes (defined by industry standards) or washes (including seasonally active ephemeral drainages).
7. The width of all new permanent access roads will be kept to the absolute minimum needed for operation, avoiding sensitive areas and trees where possible, and limiting disturbance to vegetation.
8. When and where applicable, landscaping standards, including clearing of native vegetation, will be followed as prescribed by local land use and management agencies when work is within their jurisdictions.

Erosion and Sediment Control

1. Planting native grasses, forbs, trees, or shrubs beneficial to wildlife, or placing riprap and other materials as appropriate, will be used to prevent and minimize the potential for

erosion and siltation during construction of project features and during the period needed to reestablish permanent vegetative cover on disturbed sites. Sediment fences will be used where appropriate to limit wind and water erosion, and water trucks will be used in disturbed areas during construction to limit wind erosion.

2. Final erosion control and site restoration measures will be initiated as soon as a particular area is no longer needed for construction, stockpiling, or access. Clearing schedules will be arranged to minimize exposure of soils.
3. Cuts and fills for access roads and utility corridors will be sloped to prevent landslides and to facilitate revegetation.
4. Signs will be placed along the access road to discourage OHV use of adjacent areas.
5. Borrow areas will be contoured and shaped to carry the natural contour of adjacent undisturbed terrain into the borrow area.
6. Soil or rock stockpiles, excavated materials, or excess soil materials will not be placed near sensitive habitats, including washes, where they may erode into these habitats or be washed away by high water or storm runoff. Plastic will be placed over stockpiles to prevent wind erosion if the stockpiles are intended to be long-term. Waste piles will be revegetated using suitable native species after they are shaped to provide a natural appearance.
7. Treading on areas not immediately involved in project construction activities will be avoided to reduce potential wind erosion and fugitive dust generated during construction.

Pipeline and Utility Corridor Construction

1. Construction rights-of-way (ROWs) will be limited to the minimum practicable width.
2. The upper 12 to 18 inches of soil will be removed from the trench area and stockpiled for later use.
3. Surface elevations will be returned to pre-project conditions, taking into account expected settling.
4. Where the pipeline crosses fences, a wire gate will be installed to standard BLM specifications. The gates will be built prior to the corridor construction, and will be kept closed except during active construction at the fence site.
5. If construction activities cause damage to existing range improvements (such as pipelines, fences, troughs, etc.), they will be fixed using material that meets or exceeds the quality of the existing improvement. If damage occurs the BLM and livestock operator will be notified immediately. If damage occurs during active livestock grazing, repairs will be made within 24 hours.

6. Big Galleta grass will be included within the seed mix used to revegetate the disturbed corridor.

Biological Resources

1. Specific measures that will be implemented to protect desert tortoises and their habitat are described in Appendix A.
2. Bird nests encountered during land disturbing construction activities will be avoided while the birds are fledging. To the extent practicable, land disturbing construction activities will be scheduled outside of the breeding season (March 15 through July 30). If construction is required during the breeding season, the area impacted will be surveyed for nests prior to construction.
3. Collapsing suitable burrows or other potential nesting cavities within the construction zone prior to the nesting season can largely prevent direct impacts that may otherwise occur on burrowing owls. This will be accomplished, where appropriate, as part of the surveys for the desert tortoise. If owl-occupied burrows are located during their nesting or brooding season (mid-March through August), burrows will be avoided until the young owls leave the nest or it is determined that the nesting attempt failed.
4. Gila monsters in immediate danger from construction activities will be captured and confined in a cool, shaded environment by a biologist in accordance with NDOW regulations. Injured Gila monsters will be transferred to a veterinarian. Dead Gila monsters will be preserved for NDOW.
5. Impacts to chuckwalla will be minimized by restricting activity in upland areas occupied by this species. Chuckwallas typically hide in rock crevices and other similar shelters when approached or threatened, making it difficult to capture and relocate them. However, trained personnel will remove them prior to construction if necessary.
6. If significant bat roosts are located within or adjacent to a construction zone, the roost will be avoided until the animals naturally vacate the site. Certain types of bat refuges, such as winter roosts used by non-hibernating California leaf-nosed bats, will be completely avoided if practicable. Certain naturally occurring caves, and even some abandoned mines, can provide the necessary temperature regimes critical to maintaining some local bat populations.
7. Signs warning of bighorn sheep crossing will be placed along the access road in order to reduce potential mortalities resulting from collisions with vehicles.
8. Agency review and assessment of project-associated impacts on vegetation may precipitate a mitigation requirement to salvage various plants located inside the construction zone. Protected or otherwise sensitive plants (such as Joshua trees and numerous species of cactus and yuccas) will have to be identified and removed from the construction corridor prior to the onset of construction. Salvaged plants will then be held for replanting along construction zone margins, other project-affected areas (for example,

former equipment staging grounds), or alternate lands. Plant salvage activities will probably have the greatest likelihood for success if carried out in other than the spring flowering season.

9. Vegetation salvage and replanting will be implemented and completed as required by the BLM in accordance with their established guidelines. Adopting roadway signage that discourages off-road travel will help protect vegetation along road margins.
10. The project proponent will adhere to an integrated pest management plan prepared for the project.

Cultural Resources

Appendix C of this document contains the Cultural Resources Programmatic Agreement between BLM and the Nevada SHPO for the Toquop Energy Project. This Programmatic Agreement contains stipulations to ensure that those historic and prehistoric properties eligible for nomination to the National Register of Historic Places will be treated to avoid or mitigate project-related effects to the extent practicable and to satisfy BLM Section 106 responsibilities.

Reclamation

1. Reclamation will normally be accomplished with native species only. These will be representative of the indigenous species present in the adjacent habitat. Rationale for potential planting with selected non-natives will be documented. Possible exceptions could include use of non-natives for a temporary cover crop to out-compete weeds.
2. Seeding will occur during November 15 through March 15 to ensure a greater chance of success.
3. Reclamation release criteria are as follows:
 - 100 percent of the perennial plant cover of selected comparison areas, normally like adjacent habitat. If the adjacent habitat is severely disturbed, a range site description may be used as a cover standard. Cover is normally crown cover as estimated by the point intercept method. Selected cover can be determined using a method as described in *Sampling Vegetation Attributes, Interagency Technical Reference* (1996, BLM/RS/ST-96/002+1730). The reclamation plan for the project area will identify the site-specific release criteria and associated statistical methods in the reclamation plan or permit.
 - No noxious weeds will be allowed on the sites for reclamation release. Control of noxious weeds will follow an integrated pest management plan approved by the authorizing officer. A list of Nevada noxious weeds will be provided by the authorized officer.

4. All available growth medium will be salvaged and stockpiled prior to disturbance. All disturbance areas will be recontoured to blend as nearly as possible with the natural topography prior to revegetation. All compacted portions of the disturbance will be ripped to a depth of 12 inches unless solid rock is encountered. Adequate, fine-grain seedbed must be established to provide good seed to soil contact. Large blocks and clumps of soil with deep pockets should be avoided. This normally requires some type of tillage procedure after ripping.
5. All portions of access roads not needed for other uses as determined by the authorized officer will be reclaimed.
6. Mulching of the seedbed following seeding may be required under certain conditions, such as severe erosion.
7. The success of the vegetative growth on a reclaimed site may be evaluated for release no sooner than during the third growing season after earthwork and planting have been completed. Where it has been determined that revegetation success criteria have not been met, the agencies and the operator will meet to decide on the best course of actions necessary to meet the reclamation goal.
8. Where applicable, the following agencies will be consulted to determine the recommended plant species composition, seeding rates, and planting dates:
 - U.S. Fish and Wildlife Service (FWS)
 - U.S. Natural Resources Conservation Service (NRCS)
 - U.S. Bureau of Land Management (BLM)
9. Grasses, forbs, shrubs, and trees appropriate for site conditions and surrounding vegetation will be included on the plant list. Species chosen for a site will be matched for site drainage, climate, shading, resistance to erosion, soil type, slope, aspect, and vegetation management goals. Upland revegetation shall match the plant list to the site's soil type, topographic position, elevation, and surrounding natural communities.
10. Construction areas, including storage yards, will be free of waste material and trash accumulations at all times.
11. All unused materials and trash will be removed from construction and storage sites during the final phase of work. All removed material will be placed in approved sanitary landfills or storage sites and work areas will be left to conform to the natural landscape.
12. Upon completion of construction, any land disturbed will be graded to provide proper drainage and blend with the natural contour of the land. Following grading, it will be revegetated using plants native to the area, suitable for the site conditions, and beneficial to wildlife.
13. Following completion of construction, all yards, offices, and construction buildings, including concrete footings and slabs, will be removed from the site.

14. All temporary construction roads will be obliterated and restored to the original contour, and made to discourage vehicular traffic when no longer needed by contractors. Culverts will be removed as appropriate, road escarpments will be contoured and vegetated, and all road surfaces will be scarified to establish conditions appropriate for reseeding, drainage, and erosion prevention.

Visual Resources

1. All structures, stacks, buildings, and tanks will be constructed of materials that will restrict glare, and will be finished with flat tones intended to blend with the surrounding environment. The project applicant will consult with Lincoln County and BLM regarding the final selection of colors for the features of the property.
2. All fencing will be constructed of nonreflective materials, and will be treated or painted to blend with the surrounding environment.
3. Signs at the plant site will be constructed of materials that are nonglare, and will be painted using unobtrusive colors.
4. Lighting will be limited to areas required for safety and security, and will be shielded and directed downward to the extent possible.
5. Lighting will be directed and shielded to reduce light scatter and glare. Highly directional, high-pressure sodium vapor fixtures (or other fixtures that meet the criteria specified) will be used where practicable.
6. Switches will be used as appropriate to allow use of lighting only when needed.
7. The transmission structures would be finished with flat, neutral gray tones that would relate to the colors of the structures in the existing transmission corridors and that would blend with the surrounding environment.
8. Nonspecular conductors and nonreflective and nonrefractive insulators would be used to reduce conductor and insulator visibility.

Water Pollution Prevention and Monitoring

1. A groundwater monitoring plan will be developed by Toquop Energy and approved by BLM. Results of monitoring will be provided to the FWS and the Nevada State Engineer annually.
2. Pumped ground water will be monitored periodically to ensure its quality is suitable for power plant operation.
3. All federal and state laws related to control and abatement of water pollution will be complied with. All waste material and sewage from construction activities or project-related features will be disposed of according to federal and state pollution control regulations.

4. Activity with a high potential for causing sediment movement into washes will not be conducted during potentially high runoff periods, typically July and August.
5. All disturbed ephemeral washes considered to be waters of the United States will be reclaimed as soon as possible according to the conditions of a Section 404 Clean Water Act Permit. The highest standards for aesthetic value will be adhered to during restoration of the washbed. Where appropriate and as required by conditions of the Section 404 Permit, native species capable of bank stabilization will be used to revegetate all disturbed banks.
6. Diversion structures will be used to re-direct flows from the wash potentially impacted by the southern plant site and will be designed to minimize potential destabilization and erosion of adjacent and downgradient ephemeral washes.
7. Stormwater management plans will be implemented for project construction and facility operation to minimize and control erosion from stormwater runoff. Stormwater during project construction will be managed in compliance with applicable state and federal regulations, including compliance with requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater general permits, which will be obtained for the project. Stormwater management elements will include:
 - Application of best management practices for erosion, sedimentation, and stabilization control during construction activities, and management of oils and other substances during operation to minimize contact with stormwater
 - Structural controls during operation that could include stabilized stormwater conveyance systems (swales), oil-water separators for runoff that comes in contact with affected plant site surfaces, and sedimentation detention basins
 - Monitoring and maintenance to ensure long-term effectiveness of the management system.
8. A stormwater retention basin will be constructed with sufficient dimensions to accommodate runoff from the impervious surfaces at the plant site generated by the local maximum daily rainfall event with a return frequency of 100 years or less. All runoff from the impervious surfaces will be directed to this retention basin prior to being released to the natural drainage system at flow rates equivalent to pre-development conditions. Stormwater runoff likely to contain contaminants will flow first to onsite treatment facilities (such as an oil-water separator), as appropriate, prior to being directed to the stormwater retention basin.
9. Construction specifications will require construction methods that prevent entrance or accidental spillage of pollutants into flowing or dry watercourses, and ground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil and other petroleum products, aggregate processing tailings, mineral salts, drilling mud, and thermal pollution.

10. Any construction wastewater discharged into surface waters will be essentially free of settling material. Wastewater from aggregate processing, concrete batching, or other construction operation will not enter drainages without water quality treatment. Turbidity control methods may include settling ponds; gravel-filter entrapment dikes; recirculation systems for washing aggregates; or other approved methods.

Transportation

To improve traffic flow at the one-lane underpass at the East Mesa Interchange during project construction, vehicles coming from opposing sides of the underpass will be required to give the right-of-way to the vehicle that arrived first at the underpass, in accordance with current traffic laws. At certain times during project construction (such as periods of heavy traffic at the underpass resulting from materials/equipment delivery coupled with construction worker transport vehicles and non-project traffic) traffic management will be implemented that could include, but not be limited to, the following:

1. Providing a traffic flag person at both ends of the one-lane underpass to direct traffic during periods of heavy traffic flow.
2. Scheduling project vehicles during peak construction periods so that they arrive at the one-lane underpass at intervals considered suitable to provide smooth traffic flow patterns.
3. Scheduling materials/equipment vehicle deliveries so that they do not arrive at the one-lane underpass during the beginning or end of a work shift.
4. See Noise and Air Pollution Prevention for traffic-related SOPs.

Noise and Air Pollution Prevention

1. Contractors will be required to comply with all applicable federal, state, and local laws and regulations concerning prevention and control of noise and air pollution. Contractors are expected to use reasonably available methods and devices to control, prevent, and reduce atmospheric emissions or discharges of atmospheric contaminants and noise.
2. Contractors will obtain applicable air quality permits before starting construction or operating equipment that will result in regulated atmospheric emissions. The approvals require best available control technology for regulated emissions vented through stacks and vents and sources of fugitive dust emissions. Methods such as wetting exposed soil or roads with water or chemical dust suppressants where dust is generated by passing vehicles will be employed.

3. Contractors will be required to reduce dust from construction operations and prevent it from causing a nuisance to people. To accomplish this, the following measures will be implemented:
 - For the duration of construction activities, actively disturbed areas will be stabilized through the use of wet suppression as required to meet ambient air quality standards. Surfactants may be used to aid in wet suppression, thereby reducing the volume of water required to effectively treat the site. Disturbed areas of the site, including storage piles not being actively used for a period of 1 week or longer, will be stabilized as appropriate to minimize dust emissions. Active stabilization may not be required if soil moisture or natural crusting is sufficient to limit ambient impacts.
 - Bulk material stored onsite that is a possible fugitive dust source will be actively wetted, as needed, to minimize ambient impacts. It is anticipated that the majority of the material will be used onsite upon arrival. Should bulk materials require onsite storage for an extended period of time, the application of active wet suppression or the installation of a porous wind fence will be used as necessary to minimize fugitive dust generation.
 - Many of the unpaved surfaces, such as onsite access roads, will be covered with gravel and watered as necessary to minimize dust generation.
 - Onsite fugitive dust emissions will be limited by reducing vehicle speeds and a combination of active and passive dust suppression measures. Additional mitigation practices will include the following:
 - Onsite access roads, parking lots, and lay-down areas will be maintained with a gravel cover to the maximum extent practical.
 - Traffic off maintained onsite access roads will be restricted and a posted speed limit of 15 miles per hour will be enforced to minimize emissions from unpaved road segments.
 - Unpaved road segments will be watered as necessary.
 - Gaseous emissions from mobile sources will be minimized by proper maintenance and tune-up of equipment.

Hazardous Material Storage, Handling, and Disposal and Safety Measures

1. Contractors will be required to comply with Nevada State Regulations established under the authority of the Federal Resources Conservation and Recovery Act of 1976.
2. “Hazardous material” means any substance, pollutant, or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 USC 9601 et seq., and its regulations (CERCLA). The definition of hazardous substances under CERCLA includes any “hazardous waste”

as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended 42 USC 6901 et seq., and its regulations. The term hazardous materials also includes any nuclear byproduct material as defined by the Atomic Energy Act of 1954 as amended, 42 USC 2011 et seq.

3. As necessary, process wastewater solid precipitant will be transported for disposal at a licensed landfill. Solid precipitant stored onsite will be covered until transported offsite for disposal.
4. Aboveground chemical tanks will be located within a containment structure that is paved and bermed, and that is sufficient to contain a release from the largest tank within the area, plus sufficient freeboard to prevent overflow. Tanks will be registered, constructed, and managed using accepted engineering best practices, which may include high-level alarms or indicators to prevent overflow and locking valves. Tanks will be subject to a regular inspection regime.
5. The potential for adverse impacts from oil and fuel spills will be reduced through careful handling and designation of specific equipment repair and fuel storage areas.
6. Outdoor oil storage areas will be bermed with a capacity sufficient to contain the oil inventory contained in the single largest tank/equipment plus sufficient freeboard to prevent overflow. These areas will be equipped with a normally locked valve. Regular inspections will determine if there had been a leak requiring special attention. Otherwise, the valve will be opened to drain any rainwater to a plant oil/water separator. Any oil collected in the separator will be pumped out and removed by a licensed oil disposal contractor.
7. Outdoor chemical and hazardous waste storage areas will be within diked containment areas. Chemicals and wastes will be stored in accordance with the fire safety, hazardous materials management, and hazardous waste management standards of practice, which include segregation of incompatibles, protection of water-reactive materials from precipitation or moisture, adequate aisle space, etc.
8. Waste materials known or found to be hazardous will be disposed of in approved treatment or disposal facilities in accordance with federal, state, and local regulations, standards, codes, and laws.
9. Solid waste will be stored in closed onsite roll-off bins. Recyclable materials will be separated from the solid waste stream. Solid waste will be collected periodically and transported to a local licensed landfill.
10. Generation of wastes during construction will be minimized through detailed estimating of materials needed and through efficient construction practices. Any wastes generated during construction will be recycled as much as feasible. Concrete waste will be used as fill onsite, or, if not suitable for reuse, will be removed to a local licensed landfill. Any non-recyclable wastes will be collected and transported to a local licensed landfill.

11. Fuels, lubricant chemicals, and welding gases used during construction will be in controlled storage until used. Any empty containers or waste material will be segregated in storage and properly recycled or disposed of by licensed handlers.
12. Concrete trucks will not be washed at construction sites. All spilled concrete will be removed from construction areas and disposed of properly.
13. Portable toilets will be provided for onsite sewage handling during construction and will be pumped out and cleaned regularly. Sewage will be treated onsite during operation of the power plant.
14. A Spill Prevention Control and Countermeasures Plan (SPCCP) will be put in place for project features and include the following:
 - Program components and assignments
 - Professional engineer certification coordinator
 - Site information
 - Site drainage and storm water management
 - Emergency procedures/spill response
 - Emergency reporting contacts
 - Tank schematics
 - Material safety data sheets
 - Management approval
 - Plans reviews and amendments
 - Personnel training
 - Reporting procedures/emergency reporting contacts
 - Site inspections
 - Notice to tank truck drivers
 - Spill, fire, and safety equipment
15. Operators of the Toquop Energy Project will provide onsite fire and emergency medical equipment and services; and develop a police, fire, and medical aid agreement with Lincoln County to provide additional personnel and services to the project site.
16. To minimize the exposure of personnel and equipment to potential flood hazards, construction activities in the washes will be scheduled to occur when the probability for flash flooding is minimal.