

HB In-Situ Solution Mine Project EIS



Project Overview and NEPA Process

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Presentation Will Cover:

- Project Overview
 - Background
 - Proposal: What, Where, Why, Who
- NEPA Process
 - How, When
 - Public Input

Potash:

Salt primarily used for fertilizer that supplies potassium, an essential nutrient for crops.

Project Background

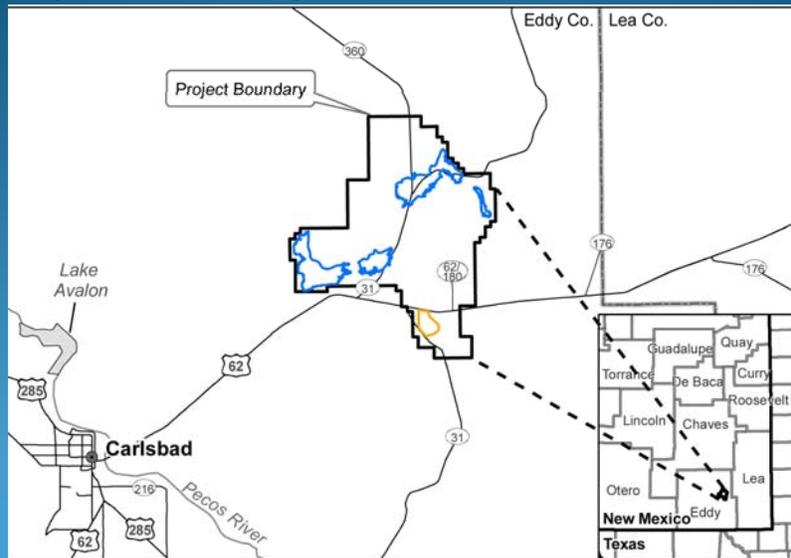
- HB Mine is the old PCA or Eddy Potash mine, inactive since 1997
- Room-and-pillar mining method used
- A combination of primary and secondary mining
- Approximately 5-foot thick ore zone, 500 to 1500 feet below surface



Project Background

- Approximately 30% of the potash remains in the inactive mines
- Solution mining provides a way to extract more potash from inactive mines
- After preparation of an environmental assessment began September 2008, BLM determined additional analysis is needed.

Proposed Project Area



BLM Authorities

- Potash leased from the federal government and managed by BLM
- Compliance with federal Mineral Leasing Act of 1920, Federal Land Policy and Management Act of 1976 govern BLM decision-making
- Mining and Minerals Policy Act of 1970
- Proposed project located within the Secretary's Potash Area

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DEPARTMENT OF THE INTERIOR

Office of the Secretary

**Oil, Gas and Potash Leasing and
Development Within the Designated
Potash Area of Eddy and Lea
Counties, New Mexico**

BLM Project Purpose

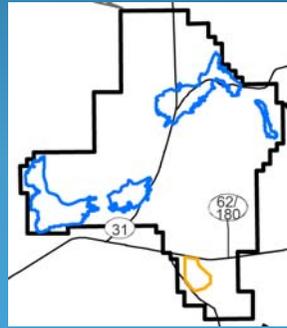
- Consider and evaluate the impacts of solution mining to extract remaining available potash from inactive mine workings
- Allow the orderly and economic development of leasable minerals

Land Ownership and Acreage

- Surface Ownership
 - 82% federal
 - 13% state
 - 5% private
- Relevant Project Acreage
 - Total project area = 38,453 acres
 - Targeted open mine workings = 11,100 acres
 - Flooded areas with mine workings = 4,330 acres
- Total surface disturbance currently estimated to be 800 acres, 20% on public lands

Proposed Project

- Pump water from 4 wells in the Rustler Formation (<500 feet below surface)
- Average projected water extraction: 1,100 gpm every day for the life of the project; approx. 1,774 acre-feet
- Rustler water for this project is high in NaCl (sodium chloride as in table salt) so is not usable for drinking water, irrigation, or livestock use
- Injection of saline water into existing mines via “injection wells”



Proposed Project

- Extraction of potassium-rich solution by pumping to the surface via extraction wells
- Transport of brine solution by surface pipes (4” to 20” diameter)
- Pipes to be located along existing roads or trails where possible.



Proposed Project

- Evaporation ponds to be constructed as a system of about 25 ponds, 20-25 acres each for total of approximately 520 acres
- Cascading pond layout facilitates pond management of varying stages of salt concentrations
- Intrepid solution mine evaporation ponds near Moab, Utah



Proposed Project

- Water evaporates, leaving potash and other salts
- Potash crystals to be harvested from ponds
- Potash transported to new processing plant in existing West Mine facility
- Estimated project length 28 years



Effects of Proposed Project

- Projected impacts to the human environment (natural, cultural, social, economic) will be analyzed in an environmental impact statement (EIS)
- Procedures and requirements for an EIS are governed and guided by the National Environmental Policy Act

National Environmental Policy Act (NEPA)



Public Scoping

“Scoping is a process, not an event or meetings.”

Council on Environmental Quality (CEQ), 1981

Purpose:

To identify the scope of issues for in-depth analysis in the EIS.

Objectives:

- Identify the affected public and agency concerns.
- Facilitate efficient EIS preparation by adequately addressing relevant issues.
- Define issues and alternatives to be examined in the EIS.

CEQ Memorandum, 1981



Scoping Document

- Define purpose of scoping
- Summarize government/tribal consultation
- Summary of scoping process
 - Notification
 - Scoping Meetings
 - Scoping Comments
 - Issues to be evaluated

(CEQ Memorandum: Scoping Guidance, April 30, 1981, II(b)(6))

The EIS Analysis

- **Purpose and Need**
- **Proposed Action (Project)**
- **Alternatives**
 - **Action Alternatives**
 - **No Action Alternative**
- **Affected Environment**
- **Environmental Consequences**

Reasonable Alternatives

- Agencies shall “rigorously explore and objectively evaluate all reasonable alternatives,” and briefly discuss the reasons that some alternatives were eliminated from detailed study.
40 CFR 1502.14(a)
- Must satisfy the purpose and need statement.
Citizens Against Burlington, Inc. v. Busey (1991)
- Must not be remote or speculative.
Vermont Yankee Nuclear Power Corp. v. NRDC (1978);
NRDC v. Morton (1972)
- Must be practical or feasible from the technical and economic standpoint.
CEQ’s NEPA’s Forty Most Asked Questions-2a (1981)

The EIS Analysis

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- Proposed Action (Project)
- Alternatives
- **Affected Environment**
- Environmental Consequences

BLM Elements of the Environment

From BLM NEPA Handbook (2008) (H-1790-1, Appendix 1)

- Air Quality
- Cultural Resources
- Fish Habitat
- Forests and Rangelands
- Migratory Birds
- Native American Religious Concerns
- Threatened or Endangered Species
- Wastes, Hazardous or Solid
- Water Quality (Drinking - Ground)
- Wild and Scenic Rivers
- Wilderness
- Environmental Justice
- Floodplains
- Wetland/Riparian Zones

Other resources identified in BLM Instruction Memoranda and Executive Orders that should be addressed, if relevant

- Areas of Critical Environmental Concern
- Farm Lands (prime or unique)
- Invasive, Nonnative Species
- Off Highway Vehicles
- Paleontological Resources
- Wild Horses and Burros
- Statement of Adverse Energy Impact

The EIS Analysis

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Three Types of Impacts

- Direct effects
- Indirect effects
- Cumulative impacts

(40 CFR 1508.8, 40 CFR 1508.7)

Mitigation

An EIS should “include appropriate mitigation measures not already included in the proposed action or alternatives.”
[40 CFR 1502.14(f)]

“Mitigation includes:

- (a) Avoiding the impact altogether...
- (b) Minimizing impacts...
- (c) Rectifying the impact...
- (d) Reducing or eliminating the impact over time...
- (e) Compensating for the impact...”

(40 CFR 1508.20)



Thank you for attending this public scoping meeting.

We encourage you to ask questions about the proposed project, the project area, or the NEPA process.

There are BLM resource and NEPA specialists, AECOM NEPA specialists, and Intrepid Potash staff available to answer questions.

Please submit your written comments tonight, or by mail or e-mail (nmcfo_comments@blm.gov)