

MOAB MASTER LEASING PLAN

POTASH

Potash refers to a group of potassium salts soluble in water. The most common potassium salt is sylvite (potassium chloride – KCl).

- About 95% of the potash produced is used as fertilizer for food production.
- The U.S. imports over 85% of its potash, mainly from Canada.
- Price in 2000 – \$100/ton; price in 2011 – \$386/ton; projected price in 2012 – \$490/ton.

Potential Methods of Potash Extraction and Processing within the Master Leasing Plan Area

Underground Solution Mining — Crystallization Processing

Well Field—hot water injection and extraction wells

1-2 well pads per square mile

Potash Processing

- Mechanical crystallizers for cooling brines, and/or production cooling ponds, up to 180 acre footprint
- Drying, compacting, sizing, and shipment storage facilities
- Plant site; varies from 100 to 500 acre footprint, depending on production
- Water usage, recirculation; 4-12 times less than solar evaporation
- Uses electricity and gas for heating and cooling
- Surge pond and tailings pond may be required



Underground Solution Mining — Solar Evaporation Processing

Well Field—hot water injection and extraction wells

1-2 well pads per square mile

Potash Processing

- Evaporation ponds (400 acres/100,000 tons potash/year); includes milling and flotation systems
- Drying, compacting, sizing, and shipment storage facilities
- Plant site; up to 400 acre footprint
- Water usage about 5,000 gal/ton; most water lost to evaporation
- Utilizes solar energy; lower electrical and gas consumption
- Tailings pond may be required

