

DEPARTMENT OF STATE LANDS



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

(406) 444-2074

1625 ELEVENTH AVENUE
HELENA, MONTANA 59620

August 5, 1992

Dear Reader:

Enclosed for your review is an Environmental Assessment (EA) prepared by the Department of State Lands (DSL). The EA evaluates a proposal by Bill Bahny Construction for stripping and hauling soil from an area north and east of Sierra Road to the East Helena soil replacement project.

Public comment on this EA will be received by the DSL until 5:00 p.m. August 19, 1991. Comments should be about the adequacy of the EA in assessing issues, new information not considered that may influence the analysis, and clarification. Comments should be specific. The DSL will use these comments and staff responses, the EA, and the application to make a final decision on the permit. The decision may be to approve the proposal as modified by reviews, deny the proposal or approve the proposal with additional modifications.

Comments will be accepted by phone (406) 444-2074, or by written comments directed to:

Bob Winegar
Montana Dept. of State Lands
Capitol Station
Helena, MT 59620

Thank you for your time and consideration. Please call if you have any questions.

Sincerely,

Bob Winegar

Robert C. Winegar
Program Supervisor
Hard Rock Bureau
Reclamation Division

/ba

RECEIVED
AUG 06 1992
ENVIRONMENTAL
QUALITY CONTROL

ENVIRONMENTAL ASSESSMENT

RECEIVED

AUG 06 1992

ENVIRONMENTAL
QUALITY COUNCIL

APPLICANT: Bill Bahny Construction

TYPE OF OPERATION: Topsoil Stripping

LOCATION: 2 sites in portions of Sec 28, 34,
T11N, R3W and Sec 3, T10N, R3W

COUNTY: Lewis and Clark

PERSON PREPARING E.A.: Bob Winegar, Pat Plantenberg, Jeff Snyder

APPLICATION COMPLETE: July 28, 1992
Date

E.A. COMPLETE: August 5, 1992
Date

	POTENTIAL IMPACTS					
	A	B	C	LONG TERM	SHORT TERM	AMPLIFICATION
PHYSICAL ENVIRONMENT						
1. <u>TOPOGRAPHY</u>			X	X		1 foot less elevation
2. <u>GEOLOGY</u> ; Stability			X			
3. <u>SOILS</u> ; Quality, Distribution			X	X		See Reclamation and Proposed Mitigations
4. <u>WATER</u> ; Quality; Quantity; Distribution			X			See Water
5. <u>AIR</u> ; Quality			X		X	See Air
6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources			X			
BIOLOGICAL ENVIRONMENT						
1. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats			X			
2. <u>VEGETATION</u> ; quantity, quality, species			X	X	X	See Vegetation
3. <u>AGRICULTURE</u> ; grazing, crops production			X		X	See Objectives and Post Operation Land Use
HUMAN ENVIRONMENT						
1. <u>SOCIAL</u> ; structures and mores			X			
2. <u>CULTURAL</u> uniqueness, diversity			X			
3. <u>POPULATION</u> ; quantity and diversity			X			
4. <u>HOUSING</u> ; quantity and distribution			X			
5. <u>HUMAN HEALTH & SAFETY</u>						

	POTENTIAL IMPACTS					
	A	B	C	LONG TERM	SHORT TERM	AMPLIFICATION
6. <u>COMMUNITY & PERSONAL INCOME</u>			X			
7. <u>EMPLOYMENT</u> ; quantity and distribution			X		X	Maximum 7 Employees
8. <u>TAX BASE</u> ; local and state tax revenue			X			
9. <u>GOVERNMENT SERVICES</u> ; demand			X		X	Inspections by DSL
10. <u>INDUSTRIAL, COMMERCIAL and AGRICULTURAL</u> activities			X		X	
11. <u>HISTORICAL and ARCHAEOLOGICAL</u>			X			
12. <u>AESTHETICS</u>			X		X	
13. <u>ENVIRONMENTAL PLANS and GOALS</u> ; local and regional			X			
14. <u>DEMANDS on ENVIRONMENTAL RESOURCES</u> of land, water, air and energy			X			
15. <u>TRANSPORTATION</u> ; networks and traffic flows			X		X	See Proposal

PUBLIC INVOLVEMENT: Public Notices in Independent Record

ALTERNATIVES CONSIDERED: Permit denial; Proposal with modifications suggested and implemented in completeness review of permit application

COMPLIANCE STATUS: New permit; Avoid exceeding SME acreage limits; No violation as of permit date

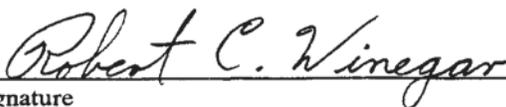
RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS: Not necessary at this level of disturbance

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION:

Water Quality Bureau, Air Quality Bureau

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA:

- A: Significant Unavoidable Impacts
- B: Insignificant as a result of conditioned mitigation
- C: Insignificant as proposed


Signature

BACKGROUND

An application for an Operating Permit was received by the Department of State Lands (DSL) on May 13, 1992, from Bill Bahny Construction (Bahny). Bahny is a Helena based construction and excavating company. Bahny has been mining soil under an Small Miner Exclusion (SME). An Operating Permit is needed to prevent exceeding acreage limitations under an SME. The present and proposed topsoil mining is in two locations. Site 1 is east of Interstate 90 and north of Sierra Road, SW ¼, Sec. 28, T11N, R3W. Site 2 is just east of the end of Sierra Road, SE ¼, Sec. 34, T11N, R3W, and NE¼, Sec. 3, T10N, R3W (Figure 1).

The topsoil stripping is primarily to provide areas in East Helena with replacement topsoil under an EPA cleanup order. Some of the topsoil may be sold for other purposes in the area.

Metal contaminated soil in East Helena is being removed by American Smelting and Refining Company (ASARCO) and is being replaced by the topsoil provided by Bahny.

PROPOSAL

Bahny proposes to strip soil to a depth of approximately 1 foot over 25 to 30 acres per year. The project would take approximately 5 years. The area to be stripped would be sprayed with a biodegradable herbicide (Roundup) according to label instructions. The soil would be stockpiled, then hauled by truck to East Helena. Figure 1 shows the haul routes in the vicinity of the project. The number of truck trips transporting topsoil will be dependent on the demand at the East Helena site. The average number of trips per day will be approximately 7, and the maximum would be 12.

A maximum estimate of water used daily would be 7,500 gallons. Bahny has a water right at Site 1 and can acquire the water right at Site 2. Most water would be used for dust control.

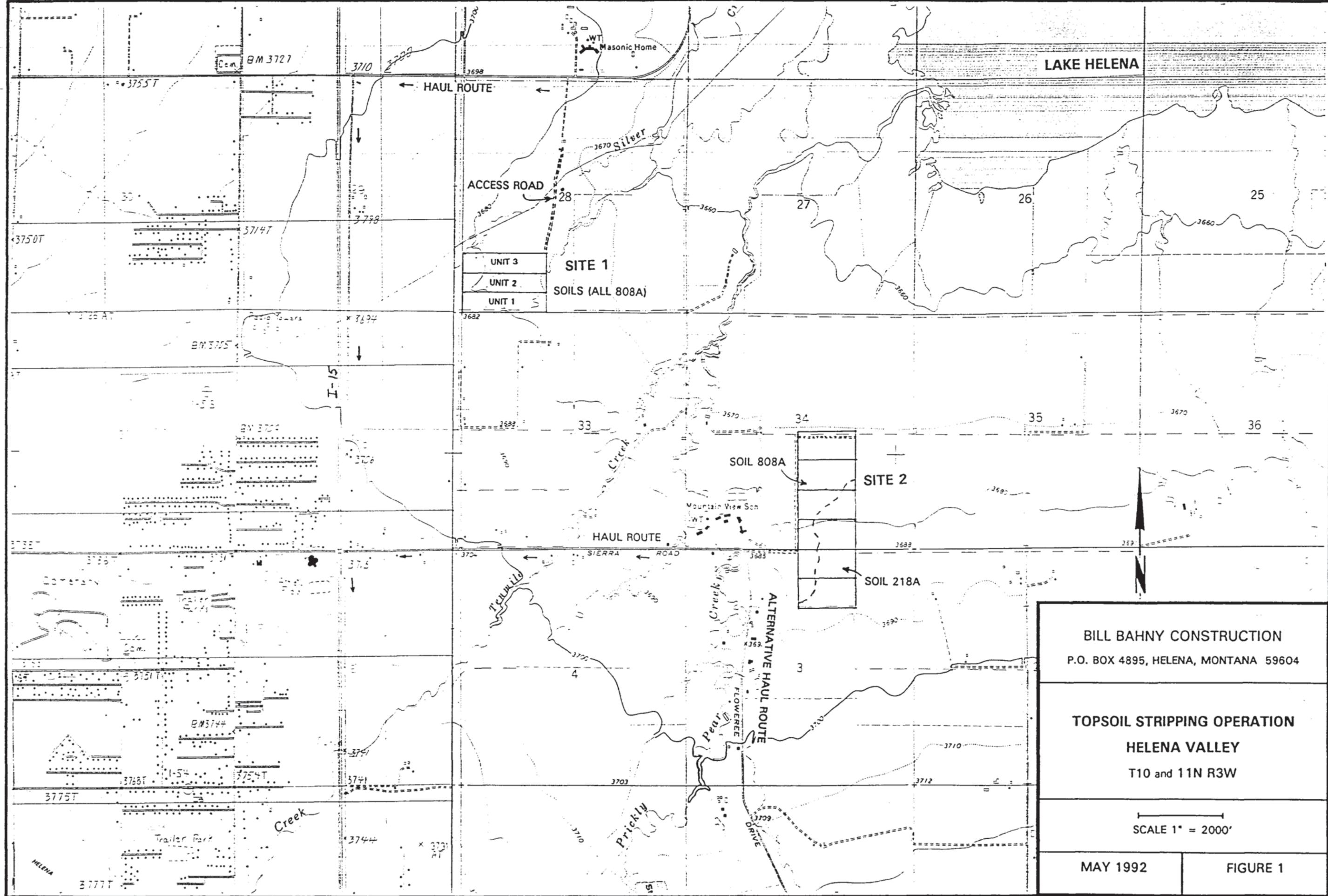
Employment would be 5 to 7 persons, including equipment operators and truck drivers.

RECLAMATION and PROPOSED MITIGATIONS¹

Objectives and Post-Operation Land Use

The short-term objectives of reclamation would be to stabilize disturbed areas through erosion and sedimentation control, to prevent air and water pollution and to control noxious weeds. This would be achieved by a combination of operational practices, sediment and erosion control systems and concurrent revegetation.

¹ The following text was modified from the Application for Operating Permit by Bill Bahny Construction.



The long-term objective of reclamation would be to establish a post-operational environment that would be compatible with existing land uses of the area. The proposed post-operation land use is livestock pasture, which is the same as pre-disturbance land use and is compatible with adjacent land uses.

Post-Operation Topography and Grading

The stripping of one foot of topsoil would not notably affect pre-disturbance topography. Grading would be restricted to blending the edge of stripped areas with adjacent undisturbed areas. Grading would be done with a tracked dozer so that the one-foot high transition slope would be 3H:1V or less. Additional grading would be done where minor swales enter and leave stripped areas so that ephemeral surface water flows would not be impeded. No surface depressions are proposed.

Soil Handling

Since the purpose of the operation would be topsoil stripping, the soil below the one-foot depth would form the material to be revegetated. The following profiles show that textures are suitable for revegetation:

Villy silt loam	Meadowcreek loam	Fairway loam
0-12" - gray silt loam (removed)	0-12" - grayish brown loam (removed)	0-12" - grayish brown silt loam (removed)
12-50" - gray silt loam (revegetation medium)	12-15" - gray silt loam (revegetation medium)	12-15" - grayish brown loam (revegetation medium)
50-60" - light brownish gray loam	15-27" - light brownish gray loam	15-30" - light olive gray silt loam
	27-35" - gray sandy loam	30-45" - light brownish gray silty clay loam
	35-60" - very gravelly sand	45-60" - light brownish gray sand

Chemical characteristics of soils to be revegetated are expected to be similar to the surface 12 inches (except for lower nutrients and less organic matter content) and would pose limited revegetation problems. Soils with high EC (electrical conductivity) and SAR (sodium adsorption ratio) do not meet EPA criteria and would not be salvaged for use in East Helena unless mixing would lower these parameters to acceptable levels.

Revegetation

Prior to revegetation, compacted areas (especially stockpile sites and mixing areas) would be ripped to a depth of six inches. Seedbed preparation and ripping of lightly compacted areas would be done by discing. If large clods remain after discing, the site will be harrowed.

Fertilizer would be applied at rates and using methods determined in consultation with the Soil Conservation Service (SCS). It is anticipated that a fertilizer containing

nitrogen, phosphorus and perhaps potassium would be spread (using a conventional dry fertilizer spreader behind a tractor) to mitigate nutrient loss from topsoil stripping.

Stripped areas would be drill seeded (at a depth of 0.5 to 1 inch) using the mixture in Table 4. Drill rows would be oriented north to south to be perpendicular to prevailing winds. The seed mix is designed for moderately saline and sodic soils and to provide for livestock pasture. Seeding would be conducted in the fall, after October 1.

Revegetated areas would be evaluated by field reconnaissance during the first season following seeding to determine initial revegetation success. Areas with poor germination and/or growth would be noted and evaluated to determine probable causes. Bahny would seek the advice of DSL and the SCS to evaluate any revegetation failures. Reclamation techniques would be revised and the site reseeded as necessary to address any identified problems.

Hydrology

Bahny would comply with all relevant water quality standards. Stripping would occur above groundwater levels and no impact to groundwater is anticipated. No permanent impoundments, diversions or depressions that would accumulate stagnant water are proposed. Surface flows of small swales across the sites would be maintained by grading as discussed previously. Drainage ditches would not be disturbed. No surface or groundwater monitoring sites are proposed.

Table 4. Seed mix, Bill Bahny Construction

SPECIES	VARIETY	DRILL SEEDING RATE	
		Pounds PLS/acre*	PLS/ sq. ft.
Crested wheatgrass (<i>Agropyron cristatum</i>)	Ephraim	2.0	9
Russian wildrye (<i>Elymus junceus</i>)	Bozoiski	2.0	8
Slender wheatgrass (<i>Agropyron trachycaulum</i>)			
Streambank wheatgrass (<i>Agropyron riparium</i>)	Sodar	2.0	7
Meadow brome (<i>Bromus biebersteinii</i>)	Regar	5.0	5
Alsike clover (<i>Trifolium hybridum</i>)		<u>1.0</u>	<u>16</u>
	TOTAL	15.0	52

*PLS = pure live seed

Stability

The shallow topsoil stripping would not cause any geotechnical stability problems. Wind erosion and soil loss would be controlled by watering and revegetation as discussed elsewhere in this plan.

Reclamation of Surface Support Facilities

Surface support facilities would be limited to a portable toilet and a small storage shed. These facilities would be removed at the conclusion of operations and the sites reclaimed as described in this plan. Any post-mining solid waste would be disposed of off-site in compliance with local and state ordinances.

Noxious Weed Control

Noxious weeds are present on both sites. Noxious weeds on-site prior to stripping would be eradicated by application of a short-lived, broad-based herbicide as discussed in the Operating Plan. Topsoil stripping would remove the noxious weed seed bank from the site restricting the source of noxious weeds to adjacent property. It is anticipated that some noxious weeds will invade the periphery of the revegetated areas. Measures to reduce or control noxious weed invasion of stripped areas include:

areas stripped early in the growing season or when soil moisture is suitable for revegetation would be seeded immediately with barley or the permanent seed mix (depending on level of optimism of the individual doing the seeding, long range weather forecasts, e.g. Farmer's Almanac or other sources).

areas stripped later in the growing season or when soil moisture is unfavorable would not be seeded until fall. Any noxious weeds invading these areas would be spot sprayed as necessary using chemicals and techniques recommended in consultation with a professional weed control specialist. Any chemical control would be conducted in accordance with manufacture's label instructions.

Reclamation Schedule

Reclamation would generally be conducted each fall after stripping has been completed for the season or, if moisture conditions are favorable, immediately following stripping. Areas stripped through fall, 1992 would be reclaimed after October 1, 1992. If dust becomes a problem on stripped areas during the operating season and watering becomes burdensome, Bahny would seed an interim mix of barley to assist in dust control until final revegetation is conducted. Final reclamation would be completed the fall following cessation of operations.

AMPLIFICATION OF ENVIRONMENTAL FACTORS

Physical Environment

Water

No intermittent or perennial streams are present on either site (see Figure 1). Minor swales flow only in response to snowmelt or extreme precipitation events. Groundwater is shallow at both sites (3 to 5 feet). Groundwater once was higher but has been lowered by Bureau of Reclamation drainage ditches. Topsoil stripping would occur above groundwater levels and would avoid the drainage ditches.

The biodegradable herbicide precludes impacts to the groundwater.

Bahny will apply for a Storm Water Discharge Permit from the Water Quality Bureau. Discharge from the stripping areas is not expected.

In order to protect the groundwater from a possible fuel spill, all fuel will be stored in a fuel truck. If the need arises to have on site fuel tanks, a containment area will be constructed to contain 1.5 times the volume of the fuel tank. All waste oil, grease, fuel or hydraulic fluids will be collected and salvaged for recycling or disposal.

Air

Dust emissions would be less than 25 tons per year, which precludes the need for an Air Quality permit.

Commitments in the Reclamation Plan would be adequate for dust control. Seeding with the above mixture and watering of the haul roads are essentially the mitigations offered. The interim seeding proposed would be desirable because the stripped area would have some vegetation on it through the winter.

Vegetation

The main issue regarding vegetation is noxious weeds.

The proposed soil stripping locations contain several noxious weeds including two species of whitetop (*Cardaria draba* and *C. pubescens*), canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*) and leafy spurge (*Euphorbia esula*). Two other species on the sites that are potential weed problems in the Helena valley include musk thistle (*Carduus nutans*) and perennial pepperweed (*Lepidium latifolium*). The stripping area is also dominated by quackgrass (*Agropyron repens*) which could be considered a weed.

The applicant has indicated he will spray with a short lived, broad based herbicide to eradicate all vegetation two weeks prior to stripping. The chemical of choice is an acid, glyphosate. This chemical is probably the safest chemical to use in this area with the shallow water table. Unfortunately, glyphosate only kills actively growing

vegetation. Seeds and unattached underground stems or rhizomes will not be killed and will be spread with the soil to the proposed use site.

The soil is to be used to help in the environmental cleanup of the ASARCO/EPA Superfund site in East Helena. Soils in the area have been contaminated with lead from the lead smelter. The soil in the stripping area meets EPA criteria for replacement soil on the Superfund site. The presence of noxious weeds in the replacement soil does not affect its use in the cleanup of lead contaminated soil.

DSL reviewed the proposed area where the soil is to be used for replacing lead contaminated soil in East Helena (Figure 2). The East Helena area is contaminated with several of the weeds found on the applicant's proposed stripping area. DSL observed whitetop, field bindweed, canada thistle and quackgrass in the East Helena area. The East Helena area also contains populations of two other noxious weeds, spotted knapweed (*Centaurea maculosa*) and diffuse knapweed (*C. diffusa*). Another common lawn weed that can be problematic in the East Helena area is creeping bellflower (*Campanula rapunculoides*).

The only problem weed to watch that could be introduced into East Helena from the soil stripping operations is leafy spurge. Control of leafy spurge in lawns is possible but limited to spot control with a limited spectrum of chemicals.

DSL has concluded that the impact associated with introducing noxious weeds with the soil is minimal. Leafy spurge will surely be introduced in the East Helena area from the soil. In contrast, spotted knapweed, diffuse knapweed and creeping bellflower could be introduced in the topsoil stripping areas from dirt in the trucks from East Helena. This is an unavoidable impact associated with the mine plan.

FIGURE 2

AREAS TARGETED FOR REMOVAL ACTIVITIES

