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**SAVAGE**

Savage Services Corporation  
2025 East 5000 South  
Price, UT 84501

(435) 637-5664  
Fax (435) 637-3418

Pamela Grubaugh-Littig  
Permit Supervisor  
Utah Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

*Incoming of  
C/007/0022*

Re: Clean Copies and Additional Topsoil Data  
Expansion of Disturbed Area  
Savage Coal Terminal, Task #2613  
C\007\022  
Carbon County, Utah

Dear Pam:

Enclosed are 3 clean copies of the As-Built Topsoil/Subsoil Plan and Additional Soil Information per the conditional approval of Task #2613.

A required C<sub>1</sub>/C<sub>2</sub> Form is included.

If you have any questions, or need additional information, please contact Dan Guy at (435)637-2422.

Sincerely,



Dan W. Guy  
for  
Boyd Rhodes, Manager

cc: Pricilla Burton - DOGM  
Boyd Rhodes - Savage  
File

RECEIVED

MAR 12 2007

Creative Solutions for Materials Management and Transportation Systems and Facilities

DIV. OF OIL, GAS & MINING

# APPLICATION FOR PERMIT PROCESSING

Permit Change <input checked="" type="checkbox"/>	New Permit <input type="checkbox"/>	Renewal <input type="checkbox"/>	Transfer <input type="checkbox"/>	Exploration <input type="checkbox"/>	Bond Release <input type="checkbox"/>	Permit Number: C/007/022
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Title of Proposal: As-Built Topsoil/Subsoil Plan and Additional Soil Information.	Mine: Savage Coal Terminal
Clean Copies. Task # 2613	Permittee: Savage Services Corp.

Description, include reason for application and timing required to implement:  
**For New Settling Ponds.**

**Instructions:** If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation

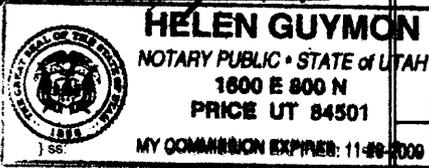
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	1. Change in the size of the Permit Area? ____ acres Disturbed Area? ____ acres <input type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2. Is the application submitted as a result of a Division Order? DO #
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Does application include operations in hydrologic basins other than as currently approved?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6. Does the application require or include public notice/publication?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	9. Is the application submitted as a result of a Violation? NOV #
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10. Is the application submitted as a result of other laws or regulations or policies? Explain: Division Request
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	11. Does the application affect the surface landowner or change the post mining land use?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P??)
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	13. Does the application require or include collection and reporting of any baseline information?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	15. Does application require or include soil removal, storage or placement?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	17. Does the application require or include construction, modification, or removal of surface facilities?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	20. Does the application require or include subsidence control or monitoring?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	21. Have reclamation costs for bonding been provided for?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

**X Attach 3 complete copies of the application.**

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

*Helen W. Guymon*  
 Signed - Name - Position - Date  
 Subscribed and sworn to before me this 24 day of March, 2007

*Helen W. Guymon*  
 Notary Public  
 My Commission Expires: 11-28, 2009  
 Attest: STATE OF Utah COUNTY OF Cash



Received by Oil, Gas & Mining  
**RECEIVED**  
**MAR 12 2007**  
 DIV. OF OIL, GAS & MINING  
 ASSIGNED TRACKING NUMBER



Table 8-6  
SEEDBED QUALITY MATERIAL VOLUMES  
 (Including Acres Disturbed in 2006)

Seedbed Quality Material - Approximate Volumes

Mapping Unit	Suitable Stripping Depth	Acreage	Volume - Bank Cubic Yards BCY
*Killpack - KmB	12" Topsoil 12" Subsoil	1.77	5490
*Billings - Blbm	12" Topsoil 12" Subsoil	2.43	7538
**Topsoil Stockpile	NA	NA	49,286
Total Seedbed Quality			62,314
Material Available			
(After 2006 Stripping)			

\* Actual Volumes Stripped in 2006.

\*\* From Appendix 8-1.

### 8.7 Removal Storage and Protection of Soils (continued)

The in-place depths of seedbed quality material available for reclamation of the project area is listed on Table 8-8 by map unit. The table includes the map unit, map unit components, depth of horizon, rating (from Table 8-4), percent of map unit, recommended depth of stripping and the restrictive features of the suitable material. Volumes of seedbed quality material in stockpile or in-place and to be disturbed in the future can be found in Table 8-6.

All of map unit ChC can be stripped to 6 inches. Included with the Chipeta are other soils that can be stripped to the same depth. The soils report in Appendix 8-2 indicates the Chipeta in the track loop area can be stripped from 2" to 7", with an average of approximately 6".

Based on a recent soils study for the settling pond area (Appendix 8-3), the Map Unit Blb (Billings) was subdivided into 2 units - B1Be and B1Bm, as shown on Plate 8-1. Based on analyses, it was determined that the top 12" of B1Bm (and KmB) could be salvaged as topsoil and the next 12" of both B1Bm and KmB could be salvaged as subsoil. It was also determined that none of map unit B1Be should be salvaged due to poor quality.

Disturbed lands in the mapped area have variable surface materials. Gravelly road till does not have adverse chemical characteristics but may be too gravelly to be used as a reclamation material. Clayey subsoil in areas mapped as disturbed lands may be excessively salty. Much of the area mapped as disturbed land has surface contamination with coal.

Map unit KmB can be stripped to 9 inches, and as indicated above, up to 12" for topsoil and 12" for subsoil in the area of the settling ponds. See Table 8-6 for available volume of that soil unit. This is based on the soils report in Appendix 8-2.

Barren areas and salty spots should be avoided in stripping. This includes the Saltair Unit, for which a variance in topsoil stripping is requested due to poor quality. (See Plate 8-1 for locations.)

Prior to the Reclamation Act of 1977 and Utah Interim Program, 77.2 acres of C.V. Spur were disturbed and topsoil not salvaged.

#### 8.7 Removal, Storage and Protection of Soils (continued)

Of the remaining 76.8 acres, 48.7 acres have had topsoil stripped as of April 2002, leaving approximately 28.1 acres within the permit area that will need to have available topsoil removed, if disturbed. An additional 4.20 acres were stripped in 2006. Although 6.61 acres were disturbed, only 4.20 acres were stripped to a total depth of 24" due to poor quality of the remaining acreage.

The topsoil and subsoil stripped from the settling pond was placed in separate storage piles. Organic debris existing on the surface of the newly stripped area was left in the soil when stockpiled to maintain the organic content.

Once the newly stripped soil was placed in new stockpiles, 2000 pounds per acre of weed free hay mulch was added to the surface. The surface was then roughened using a trackhoe. Once the site was prepared, the piles were hydroseeded using the Temporary Seed Mix described on Table 3-1. In addition to the seeding, a potassium fertilizer (manufactured by 3 Tier Tech) and 2 bio-stimulants (manufactured by P.B.I. Gordon) were applied to the topsoil & subsoil piles. The fertilizer was a liquid concentrate called "Establish" (5: 16: 12), applied at a rate of 48 ounces per acre. One of the bio-stimulants was called "Launch ® CF", consisting of 1 % K, 0.36% Fe, 74.3% Manure extract, 9% Humic and Folic Acid and 1.2% Kelp. The other bio-stimulant was "Huma-Cal Plus", consisting of 8% Ca, 4% Humic Acid and 27.5 billion microbes/gallon. Each bio-stimulant was applied at a rate of 4 gallons/acre. 2000 pounds per acre of wood fiber mulch and 60 pounds per acre of tacifier were then applied to the surface. Seeding took place during the week of October 23, 2006. It should be noted that the berm constructed with other excavated material from the ponds was also seeded at this time.

The topsoil piles are protected by a combination of efforts, including existing berms and revegetation as described above.

Plate 3-1 indicates disturbance created before and after May 1978. Topsoil material that has been stockpiled and in-place soil to be disturbed contain insufficient volumes of material to cover all of the projected disturbed area to a minimum of six (6) inches. Thus, as discussed in Sections 8.5 and 8.6, the Disturbed Land Map Unit will be revegetated in-place since no better topsoil material exists for reclamation.

All post-law disturbance and the entire refuse area (a total of 55.31 acres after the 2006 stripping) will receive a minimum cover of six inches of topsoil/subsoil. Table 8-6 provides the volumes of soil currently in storage.

Even distribution of six inches over 55.31 acres would require 44,617 cubic yards of material. Therefore, the 62,314 cubic yards of topsoil/subsoil currently in storage is enough to accommodate the proposed reclamation plan.

#### 8.8 Nutrients and Soil Amendments

Soil tests will be taken in materials to be used for final reclamation in order to evaluate the need for soil amendments and nutrients. Soil testing will be performed by a qualified laboratory which uses accepted analytical procedures.

Table 8-8  
DEPTHS OF SUITABLE TOPSOIL AVAILABLE FOR SEEDBED MATERIAL  
 (by map unit)

Mapping Unit	Component	Depth (in.)	Rating	Percent of Map Unit	Available Depth <u>Suitable Material</u> (restrictive feature of recommended material)
Chc	Chipeta	0-3	Fair	80	6 inches (sodic and clayey)
		3-19	Fair/ Poor		
	Killpack	0-8	Fair	10	6 to 9 inches
	Other Soils	var	var	10	6 inches
DL	Disturbed Land	0-12	Poor	N/A	0 inches (various restrictive features)
		12-60	Poor		
KmB	Killpack - high water table	0-10	Fair	80	6 inches (clayey and sodic)
	Other	var	var	20	0 inches
Blb	Billings	0-7	Fair	100	7 inches

N/A - data not available var = variable

Table 8-9  
TOPSOIL MASS BALANCE TABLE  
(after 2006 stripping)

Topsoil Available	62,314 cu. yds.
Disturbed Area	132.5 ac.
Pre-Law Disturbance	77.2 ac.
Post-Law Disturbance	55.3 ac.
Topsoil Required (Post-Law)	44,617 cu. yds.
*Topsoil Required (All Disturbance)	106,883 cu. yds.
Max. Area for 6" Redistribution	77.25 ac.

\* As discussed in Sections 8.5 and 8.6, pre-law disturbed areas will utilize in-place soils, since no better topsoil exists for reclamation.

Location and number of soil tests will be determined in consultation with the Division at least 60 days prior to final reclamation.

All soils will be properly fertilized to bring them up to the level necessary for vegetation establishment. Fertilizer application will be based on soil test analysis as discussed in Section 8.8.

#### 8.10 Mitigation and Control Plans

All suitable seedbed quality material (topsoil) will be stripped and stockpiled prior to disturbance. Topsoil stockpiles will be placed on a stable surface in an attempt to limit wind and water erosion and other factors which would lessen the capability of the material to support vegetation. Every effort will be made to minimize the area of disturbance to only that area needed immediately. A quick-growing cover of annual and perennial plants will be seeded or planted during the first desirable planting period after disturbance. Topsoil stockpiles will remain in-place and undisturbed until the material is to be redistributed on disturbed areas.

#### Stipulation UMC 817.23-(HS)-(1)

An as-built survey was performed on the soil stockpiles, as required. Results of the survey show a total of 49,475 cubic yards of material presently in storage, as indicated on Table 8-9. The survey is summarized in Appendix 8-1, and the as-built map of the piles is shown on Plate 8-2.

In April 2002, an additional 12,140 cubic yards of topsoil were stripped and added to the Topsoil Stockpile. The topsoil and subsoil piles were blended together into one pile, roughened, mulched and seeded. This increased the volume of the Topsoil Stockpile to 49,286 cubic yards. In 2006, an additional 13,028 cubic yards of topsoil/sub-soil were stripped and placed in separate storage piles located north of the office building, bringing the total storage volume to approximately 62,314 cubic yards.