



Canyon Fuel  
Company, LLC.  
Sufco Mine

A Subsidiary of Arch Western Bituminous Group, LLC

Ken May, General Manager  
597 South SR 24  
Salina, UT 84654  
(435) 286-4400 - Office  
(435) 286-4499- Fax

June 3, 2013

Permit Supervisor  
Utah Coal Regulatory Program  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

RECEIVED

JUN 05 2013

DIV. OF OIL, GAS & MINING

Re: Waste Rock Disposal Site Subsoil Pile As-Built Drawings - 2<sup>nd</sup> Submittal, Canyon Fuel Company, LLC, Sufco Mine, Permit Number C/041/0002

Dear Permit Supervisor:

Please find enclosed with this letter a Sufco Mine permit revision amendment to update the existing Waste Rock Disposal site subsoil pile expansion as-built drawings. This was originally approved for construction on March 30, 2011 as part of the West Lease Portals Amendment to place the excess fill material generated from the portal tunnel excavations. The soils were removed and stored at the subsoil stock pile at the waste rock site for use in final reclamation at the minesite. We have included three copies of the as-built modified text and plates in redline/strike-out format along with completed C1 and C2 forms.

Two clean copies of the pages with modifications have also been included with this submittal for inclusion in the permit once the modification is approved.

This resubmittal has been revised to address the deficiencies itemized in the Division letter dated May 22, 2013 and received by Sufco on May 30, 2013.

The deficiencies and responses are:

- 1. R645-301-231.400:** The narrative states that one topsoil stockpile at the waste rock site is dedicated to the mine site. It formerly held 56 yd<sup>3</sup> and now holds only 8.2 yd<sup>3</sup> of topsoil material. This statement should be verified, as the Division believes that the 56 yd<sup>3</sup> topsoil refers to the sedimentation pond stockpile. In addition the total volume provided for three topsoil stockpiles: 1B, 2 & 3, should be re-evaluated, as the total volume stated is less than what was formerly described in topsoil stockpile 1B alone. Topsoil pile 1A location should be outlined on Map 4 and the volume of topsoil stockpile 1A should be stated in the narrative. (PB)

**Response:**

Item #1 was addressed by clarifying and modifying text from the estimated quantities to the actual as-built survey quantities of the stockpiles on pages WRDS 3-4 and 3-5 in Volume 3 in the MRP. The topsoil pile 1A location is outlined on Map 4; to help

clarify the location better "Pile Boundary" labels were included on the revised waste rock expansion Map 4 drawing submitted to your office in another amendment.

2. **R645-301-233.100:** Please update Volume 1, Chapter 2, page 2-20, last paragraph, to include the 11,364 yd<sup>3</sup> of subsoil available at the waste rock site for final reclamation of the 17.4 acre East Spring Canyon facilities pad site. (PB)

**Response:**

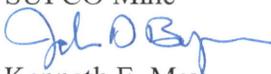
Item #2 was addressed by modifying text on pages 2-20 and 2-21, in Chapter 2, Volume 1 in the MRP.

3. **R645-301-233.300:** Please provide suitability analysis for the excess spoil which supported its placement in either the subsoil stockpile or the waste rock pile at the waste rock site. Testing of the fill as it is excavated was anticipated and described in Section 2.2.4 and Section 2.3.3.2 and was referred to in the cover letter with the approved West Lease portal tunnel development, Task 3780. (PB)

**Response:**

Item #3 was addressed by adding the composite analyses results for soil samples sent to Inter-Mountain Labs in Appendix 2-3 in the MRP.

If you have any questions regarding the information contained in this letter or within the permit modification, please give Mike Davis a call at (435) 286-4421.

Sincerely,  
CANYON FUEL COMPANY, LLC  
SUFCA Mine  
  
Kenneth E. May  
General Manager

Encl.

cc: DOGM Correspondence File

## APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

Permittee: CANYON FUEL COMPANY, LLC  
 Mine: SUF CO MINE Permit Number: C/041/0002  
 Title: WRDS Subsoil File As-Built Drawings - 2nd Submittal

**Description**, Include reason for application and timing required to implement:

WRDS Subsoil File As-Built Drawings.

**Instructions:** If you answer yes to any of the first eight questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: 0.70  increase  decrease.  
 Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_  
 Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?  
 Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?  
 Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?  
 Yes  No 6. Does the application require or include public notice publication?  
 Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?  
 Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?  
 Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_  
 Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?

*Explain:* \_\_\_\_\_

- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?  
 Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)  
 Yes  No 13. Does the application require or include collection and reporting of any baseline information?  
 Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?  
 Yes  No 15. Does the application require or include soil removal, storage or placement?  
 Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?  
 Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?  
 Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?  
 Yes  No 19. Does the application require or include certified designs, maps or calculation?  
 Yes  No 20. Does the application require or include subsidence control or monitoring?  
 Yes  No 21. Have reclamation costs for bonding been provided?  
 Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?  
 Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?  
 Yes  No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

**Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you.** (These numbers include a copy for the Price Field Office)

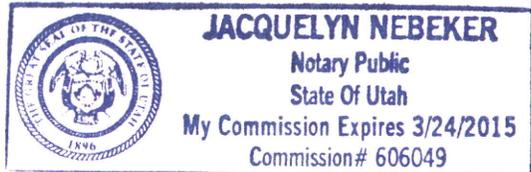
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

JOHN BYARS                      TECH SERVICES MGR.      6/4/13      [Signature]  
 Print Name                      Position                      Date                      Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 4 day of June, 2013

Notary Public: [Signature], state of Utah.

My commission Expires: \_\_\_\_\_ }  
 Commission Number: \_\_\_\_\_ } SS:  
 Address: \_\_\_\_\_ }  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ }



**For Office Use Only:**

Assigned Tracking Number:

Received by Oil, Gas & Mining

RECEIVED  
 JUN 05 2013  
 DIV. OF OIL, GAS & MINING



**CHAPTER 1**  
**GENERAL CONTENTS**



## **CHAPTER 2**

### **SOILS**

barbwire fence, and revegetated with a quick growing vegetative cover (standard seed mix in section 3.4.1.2 minus the shrubs and trees) to control erosion. The surface of the topsoil pile will be pitted to reduce runoff and erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Topsoil from the Link Canyon Substation No. 1 will be placed and stored on the outslope of the pad. This storage area will be protected with berms and/or silt fences, a three-strand barbwire fence, and revegetated to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Soil from the Link Canyon Substation No. 2 will be placed in a soil stock pile located at the south end of the pad area. The storage area will be protected with berms and/or silt fences, a three strand barbwire fence, and revegetated to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Soil from the Link Canyon Mine Portal area will be placed in a topsoil pile located south of the disturbed portal pad area out of the floodplain (Plate 5-2F). The storage area will be protected by installing a topsoil storage sign at the base of the pile, berms and/or silt fences, a three strand barbwire fence, and protected from wind and water erosion by surface pitting the stockpile to retain moisture and reduce erosion and by being revegetated with a quick growing vegetative cover (standard seed mix in section 3.4.1.2 minus the shrubs and trees) to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation. The surface of the topsoil pile will be pitted to reduce runoff and erosion. Vegetation removed during site construction, such as sage brush and other woody plants, will be placed on top of the pile.

Excess subsoil associated with construction of a run of mine coal stockpile **and the West Lease portal tunnel development** is stored at SUFCO Mine's 40-acre waste rock disposal site (see Section 3.1.6 of Volume 3 of this M&RP). This material is segregated and will be available for fill during the reclamation phase of the mine site if needed. ~~About 1,100~~ **A total of 756.4** cubic yards of topsoil are stored immediately west **and to the east** of the subsoil pile. This material represents

the upper 24<sup>12</sup> inches of topsoil removed prior to placing the subsoil. This material is stored and protected as described in Section 3.1.6 of Volume 3 of this M&RP. This topsoil is reserved to reclaim the subsoil storage area. The substation binwall has 2,160 cubic yards of subsoil material and 5,300 cubic yards of road base and there is 11,364 cubic yards subsoil material stored at the waste rock site for a total of 18,824 cubic yards that will be available for use as subsoil material during final reclamation of the minesite facilities pad site.

## **2.3.2 Topsoil and Subsoil Removal**

### **2.3.2.1 Topsoil Removal and Segregation**

All topsoil thicker than 6 inches will be removed as a separate layer from the subsoil, segregated, and stockpiled separately. Topsoil less than 6 inches thick will be removed according to Section 2.3.2.3. However, in the areas of the Link Canyon Substation Nos. 1 and 2 pads, all soil will be removed and stored in one area as a single soil resource. At substation pad No. 1, the maximum projected volume of topsoil salvage based on the soil survey depth of 20 inches and the projected topsoil salvage area of 0.08 acres is 224 cubic yards. The salvaged topsoil will be removed as a separate layer, segregated and placed on the south end of the pad outslope. The remaining excavated material in the deeper cuts will be used as fill material for the access road and the north end of the substation pad. At substation No. 2, the volume of soil projected to be removed is 118 CY.

### **2.3.2.2 Poor Topsoil**

Topsoil that is of an insufficient quantity, or of poor quality (for sustaining vegetation) will be removed as a separate layer and segregated. Such operations will be done with approval of the UDOGM, and in compliance with R645-301-233.100 (Section 2.3.3.1).

### **2.3.2.3 Thin Topsoil**

Topsoil to be removed that is less than 6 inches thick will be removed with the immediately underlying unconsolidated materials (up to a total of 6 inches). This material mixture will be treated as topsoil and stockpiled together without any horizon segregation.

**APPENDIX 2-3**

**Water and Soil Data Report**



July 16, 2010

Mr. Leland Roberts  
Canyon Fuel Company  
Sufco Mine  
597 South SR 24  
Salina, Utah 85654

Dear Leland:

Enclosed are the results for samples our laboratory received on June 15, 2010. The analyses were completed according to Utah "Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining."

Feel free to contact me at your convenience if you have any questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads 'Karen Secor'. The signature is written in black ink and is positioned above the printed name.

Karen Secor  
Mining Soils

xc: File  
Encl



**Soil Analysis Report**  
**Canyon Fuel Company, LLC.**

397 South 800 West  
Salina, UT 84654

Report ID: S1006246001

Project: Sufco Topsoil

Date Received: 6/15/2010

Date Reported: 7/8/2010

Work Order: S1006246

Lab ID	Sample ID	pH s.u.	Saturation %	Electrical Conductivity dS/m	Organic Matter %	PE		PE		
						Calcium meq/L	Magnesium meq/L	Potassium meq/L	Sodium meq/L	
S1006246-001	Gob Pile Composite	7.3	30.1	2.82	3.9	22.2	12.2	0.31	2.02	0.49

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor  
Karen Secor, Soil Lab Supervisor



**Soil Analysis Report**  
**Canyon Fuel Company, LLC.**

397 South 800 West  
Salina, UT 84654

Report ID: S1006246001

Project: Sufco Topsoil

Date Received: 6/15/2010

Date Reported: 7/8/2010

Work Order: S1006246

Lab ID	Sample ID	Sand		Silt	Clay	Texture	Very Fine		Nitrogen		Selenium	Boron	Available Phosphorus
		%	%				%	%	Nitrate	CO3			
S1006246-001	Gob Pile Composite	76.0	15.0	9.0	Sandy Loam	11.2	16.6	1.9	<0.02	1.07	2.50		

These results apply only to the samples tested.

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Karen Secor, Soil Lab Supervisor



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**Canyon Fuel Company, LLC.**  
397 South 800 West  
Salina, UT 84654

Report ID: S1006246001

Project: Sufco Topsoil  
Date Received: 6/15/2010

Date Reported: 7/8/2010  
Work Order: S1006246

Lab ID	Sample ID	Available		Total		Neutral	
		Potassium meq/100g	Carbon %	Carbon %	TOC %	Potential U/1000t	Potential
S1006246-001	Gob Pile Composite	0.14	12.6	12.6	10.6		167

These results apply only to the samples tested.

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Reviewed by: Karen A Secor  
Karen Secor, Soil Lab Supervisor

**CHAPTER 7**  
**HYDROLOGY**

3 East portals, and Quitchupah portals have sediment control consisting of routing runoff from disturbed areas into the mine with berms and insloping. The runoff is then treated using in mine settling ponds prior to discharge through approved UPDES points. The disturbed area associated with the South portals is 0.017 acre. The disturbed area associated with the 3 East portals is 0.017 acre. The disturbed area associated with the Quitchupah portals is 0.017 acre. A calculation demonstrating the insignificance of the inflow of surface water into the mine is included in Appendix 7-16.

During construction of the new overflow pond sediment from the disturbed area will be controlled by the use of containment berms and silt fencing.

Several alternate sediment control areas are defined within the mine site and are listed below (see Plates 5-2B,C,D,E,&F):

- The original substation pad area and fire water tank above the office building. The sediment controls include a graveled pad area and silt fences. The disturbed area is 0.324 acre.
- The topsoil stockpile near the mine site primary sedimentation pond. The sediment control consists of containment berms and silt fencing. The disturbed area is 0.105 acre.
- The topsoil stockpile near the mine site overflow pond. The sediment control consists of containment berms and silt fencing. The disturbed area of the overflow pond topsoil stockpile is 0.141 acres.
- The subsoil, topsoil and sedimentation pond topsoil stockpiles at the waste rock disposal site. The sediment controls include containment berms and silt fencing. The disturbed area of the subsoil and topsoil stockpiles is 0.511.24 acre. The disturbed area of the pond topsoil pile is 0.293 acre.
- The area above the mine fan in East Spring Canyon. The sediment control consists of silt fencing. The disturbed area is 0.122 acre.
- The pump house in Convulsion Canyon. The sediment control consists of containment berms and silt fencing. The disturbed area is 0.075 acre.
- The leach field in Convulsion Canyon. The sediment control consists of containment berms and silt fencing. The area is fenced to prevent grazing. The disturbed area is 0.40 acre.
- The new substation pad disturbed area is 0.287 acre. The sediment controls include gravel and silt fences.
- The 4 East portal site consists of a pad area where a mine fan has been built. The disturbed area associated with the two portal openings at this site is 0.70 acre.

Alternate sediment control at this pad consists of a containment berm, gravel and silt fencing.

- The Link Canyon Substation No. 1 facility disturbed area is 0.18 acre. This substation pad area was reclaimed in 2000. The sediment control consists of containment berms, silt fencing, and vegetation.
- The Link Canyon Substation No. 2 facility disturbed area is 0.12 acre. The sediment control consists of containment berms, gravel and silt fencing.
- The Link Canyon Portal facility disturbed area is 0.18 acre. The sediment control consists of containment berms, gravel and silt fencing.

The total area for Alternate Sediment Control Areas (ASCA) is ~~3.437~~4.167 acres. This is approximately ~~12.4~~13.9 percent of ~~28.427~~29.924 acres of total disturbed area at the mine site, Link Canyon Portal and Substation No. 1 and No. 2 facility sites, and waste rock disposal site (including ASCA's and SAE's).

#### 7.4.2.2 Siltation Structures

**General Requirements.** Additional contributions of suspended solids and sediment to stream flow or runoff outside the permit area are being prevented to the extent possible using various siltation structures.

The existing siltation structures for the main facilities area, the concrete sediment trap and primary sedimentation pond, were not constructed before beginning coal mining operations. The structures were constructed upon implementation of applicable State and Federal Regulations. The overflow pond was constructed to allow for continued compliance with State and Federal Regulations. The sedimentation pond for the waste rock disposal site was constructed before the site was used. Each structure has been certified by a qualified registered professional engineer.

All siltation structures which impound water have been designed, constructed and maintained as described in Chapter 5 and Sections 7.3.3 and 7.4.3.

Siltation structures are also provided at the mine-water discharges points. Water is presently being discharged from the mine at UPDES discharge point 003 from the Quitchupah Canyon breakouts.

- The water tank area northeast of the mine site. This area is classified as an "Exempt Area". The demonstration for this area is a SEDCAD computer program and is located in Appendix 7-16. The disturbed area is 0.193 acre.

The total disturbed area contributing to the primary sedimentation pond is 15.88 acres. The total disturbed area contributing to the overflow pond is 16.49 acres. The total disturbed area contributing to the waste rock disposal site sedimentation pond is 7.93 acres. The total area for Small Area Exemption (SAE) is 0.623 acres. This is ~~2.22~~ 2.1 percent of ~~28.427~~ 29.924 acres of total disturbed area at the mine site, Link Canyon Portal and Substation No. 1 and No. 2 facility sites, and waste rock disposal site (including ASCA's and SAE's).

#### 7.4.2.3 Diversions

**General Requirements.** The diversions within the permit area consist of drainage ditches and culverts. All diversions within the permit area have been designed to minimize adverse impacts to the hydrologic balance, to prevent material damage outside the permit area and to assure the safety of the public.

All diversions and diversion structures have been designed, located, constructed, maintained and used to:

- Be stable
- Provide protection against flooding and resultant damage to life and property
- Prevent, to the extent possible, additional contributions of suspended solids to stream flow outside the permit area
- Comply with all applicable local, state, and federal laws and regulations

All diversions within the permit area are temporary and will be removed when no longer needed. The diversions will be reclaimed in accordance with the reclamation plan defined in Chapter 5.

Peak discharge rates from the undisturbed and disturbed area drainages within the permit area were calculated for use in determining the adequacy of the existing diversion ditches and culverts. The storm runoff calculations for the temporary diversion structures were based on the 10-year, 6-hour precipitation event of 1.3 inches. Curve numbers were based on those defined in Appendix 7-9 and professional judgement. A description of the methods used to determine the peak discharge rates

**VOLUME 3**  
**WASTE ROCK DISPOSAL SITE**

### 3.1.5 Acid and Toxic Forming Materials

Based on analyses of material that has been placed in the waste rock disposal site to date, no acid forming problems are anticipated. There is a potential for borderline toxicity problems from boron. Samples of the waste material will be collected quarterly when the site is receiving material and will be analyzed for acid or toxic forming potential. ~~Should a problem be identified, a mitigation plan will be prepared and submitted to the Division for approval within 30 days of receipt of the analysis.~~ All identified potential acid or toxic forming materials will be buried or otherwise treated. ~~within 30 days after the mitigation plan is approved by the Division.~~

Copies of laboratory reports on toxicity/acid-base accountability from representative waste samples are included in Volume 8 of the M&RP **prior to 2005** and starting in 2005 will be included in the annual report.

### 3.1.6 Subsoil Stockpile

Excess subsoil material and a small amount of topsoil from the minesite is stockpiled at the Waste Rock Disposal Site for possible use during final reclamation of SUFCA minesite facilities. The location of the subsoil and topsoil material is shown on Map 2. Total acreage of the subsoil stockpile and associated topsoil piles **1A and 1B** is ~~0.54~~**1.19** acres. **From the as-built survey of the subsoil stockpile area** ~~Approximately 2,224~~**11,364** cubic yards of subsoil material and ~~approximately 568.2~~ cubic yards of **minesite** topsoil material are stockpiled at the site. The associated **original topsoil pile #1B (457 cubic yards) and new topsoil piles #2 (161.4 cubic yards) and #3 (138 cubic yards)** removed from the subsoil stockpile area contains **a total of about 1,100**~~756.4~~ cubic yards. The top ~~24~~**12** inches of soil material was removed from the subsoil stockpile area as described in Section 3.1.2, Site Preparation. This topsoil was stored along the westerly boundary **and east** of the subsoil stockpile as shown on Map 2. Topsoil handling procedures complied with those described in Section 3.2.3, Topsoil Handling. ~~This~~**ese** topsoil stockpiles will be stored and seeded using the grasses and forbes of the standard seed mix, Table 4.6.1-1. When the subsoil and minesite topsoil are removed the topsoil will be redistributed and the area reclaimed and seeded in accordance with sections 4.5 and 4.6.

Subsoil material was placed in 2-3 ft. lifts using dump trucks and a D-7-Cat dozer. Exterior slopes of the subsoil stockpile are **approximately** 1v:1.25h. At this slope the material will be stable as placed. The subsoil stockpile was seeded using the grasses and forbes of the standard seed mix, Table 4.6.1-1. This subsoil may be taken to the minesite and used for fill material during final reclamation of the minesite.

Run off from the subsoil and associated topsoil stockpiles is collected and routed through a silt fence treatment located ~~on the southeast corner~~ as shown on Map 2. The total acreage of the ~~three~~**five** stockpiles is ~~0.54~~**1.24** acres. Alternate sediment control measures are in place as described above. This area is classified as an approved Alternate Sediment Control Area (ASCA).

## **3.2 Components of Operation**

### **3.2.1 Sedimentation Pond**

A sedimentation pond was constructed down gradient from the rock fill area to control sediment removed from the disturbed areas by surface runoff. The pond was constructed prior to disturbing any other areas of the site. It will remain in place until the waste rock disposal area has been completely ~~restored~~ **reclaimed**.

The pond consists of an excavated storage basin. Suitable material removed from the excavation was used to construct an embankment on the downstream perimeter of the excavation to yield a maximum storage depth in the pond of 5.70 feet.

The embankment has a top width of 10 feet, a minimum height of 6.8 feet with exterior side slopes of 2.5h:1v. The bottom of the pond was constructed at an elevation of 7885.00 feet.

In accordance with Section 73-5-12 of the Utah Code Annotated 1953, before commencing construction of the sediment pond for the project, written notice was given to the State Engineer, Division of Water Rights.



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A Subsidiary of Arch Western Bituminous Group, LLC

Ken May, General Manager  
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June 3, 2013

Permit Supervisor  
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Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
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**Response:**

Item #1 was addressed by clarifying and modifying text from the estimated quantities to the actual as-built survey quantities of the stockpiles on pages WRDS 3-4 and 3-5 in Volume 3 in the MRP. The topsoil pile 1A location is outlined on Map 4; to help

clarify the location better "Pile Boundary" labels were included on the revised waste rock expansion Map 4 drawing submitted to your office in another amendment.

2. **R645-301-233.100:** Please update Volume 1, Chapter 2, page 2-20, last paragraph, to include the 11,364 yd<sup>3</sup> of subsoil available at the waste rock site for final reclamation of the 17.4 acre East Spring Canyon facilities pad site. (PB)

**Response:**

Item #2 was addressed by modifying text on pages 2-20 and 2-21, in Chapter 2, Volume 1 in the MRP.

3. **R645-301-233.300:** Please provide suitability analysis for the excess spoil which supported its placement in either the subsoil stockpile or the waste rock pile at the waste rock site. Testing of the fill as it is excavated was anticipated and described in Section 2.2.4 and Section 2.3.3.2 and was referred to in the cover letter with the approved West Lease portal tunnel development, Task 3780. (PB)

**Response:**

Item #3 was addressed by adding the composite analyses results for soil samples sent to Inter-Mountain Labs in Appendix 2-3 in the MRP.

If you have any questions regarding the information contained in this letter or within the permit modification, please give Mike Davis a call at (435) 286-4421.

Sincerely,  
CANYON FUEL COMPANY, LLC  
SUFCO Mine  
  
Kenneth E. May  
General Manager

Encl.

cc: DOGM Correspondence File

## APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** CANYON FUEL COMPANY, LLC  
**Mine:** SUFCO MINE **Permit Number:** C/041/0002  
**Title:** WRDS Subsoil Pile As-Built Drawings - 2nd Submittal

**Description,** Include reason for application and timing required to implement:  
WRDS Subsoil Pile As-Built Drawings.

**Instructions:** If you answer yes to any of the first eight questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: 0.70  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?

*Explain:* \_\_\_\_\_

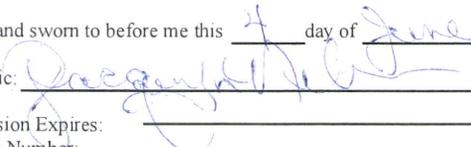
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?
- Yes  No 24. Does the application include confidential information and is it clearly marked and separated in the plan?

**Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you.** (These numbers include a copy for the Price Field Office)

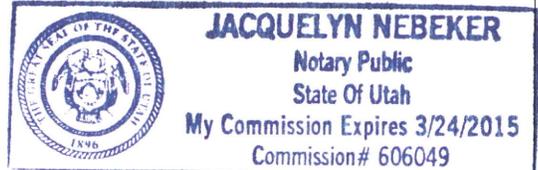
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

JOHN BYARS TECH SERVICES MGR. 6-4-13   
 Print Name Position Date Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 4 day of June, 2013

Notary Public: , state of Utah.

My commission Expires: \_\_\_\_\_ }  
 Commission Number: \_\_\_\_\_ } SS:  
 Address: \_\_\_\_\_ }  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ }



<b>For Office Use Only:</b>   	<b>Assigned Tracking Number:</b>  	<b>Received by Oil, Gas &amp; Mining</b>  <span style="font-size: 2em; color: red; font-weight: bold;">RECEIVED</span>  <span style="font-size: 1.5em; color: green; font-weight: bold;">JUN 05 2013</span>  <span style="color: red; font-weight: bold;">DIV. OF OIL, GAS &amp; MINING</span>
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**CHAPTER 1**  
**GENERAL CONTENTS**

mining methods. Although the Mining and Reclamation Permit Application covers the next five-year period of mining, information is presented below for the life of the mining operation.

- |    |                                    |  |
|----|------------------------------------|--|
| 1. | First coal produced                | 1941   |
| 2. | Termination of mining activity     | August, 2025                                 |
| 3. | Horizontal extent of mine workings | 23,820.58 acres<br>(Life of mine)            |
| 4. | Vertical extent of mine workings   | Surface to 2,000 feet deep<br>(Life of mine) |

The anticipated total acreage to be affected during the five years of operation by underground mining activities is 1,500 acres. The estimated number of total surface acres to be affected over the entire mining operation is 49.136 acres.

<u>PERMITTED DISTURBED AREA BOUNDARY</u>	<u>ACTUAL AREA CURRENTLY DISTURBED TO BE RECLAIMED</u>	<u>SITE DESCRIPTION</u>
30.210	17.405	Mine Site, East Spring Canyon
0.967	0.39	Spring Collection Field, Convulsion Canyon
0.220	0.075	Pump House, Convulsion Canyon
0.784	0.40	Leach Field, Convulsion Canyon
1.595	0.193	Water Tank, East Spring Canyon
0.286	0.017	3 East Portals
1.774	0.70	4 East Portals
0.302	0.017	South Portals
0.396	0.017	Quitcupah Portals
0.287	0.18	Link Canyon Substation No. 1
0.245	0.12	Link Canyon Substation No. 2
0.380	0.18	Link Canyon Portal
11.690	10.23	Waste Rock Disposal Site
0.000	0.00	North Water Mitigation Area
<u>0.000</u>	<u>0.00</u>	Quitcupah Fan and Shaft Site
49.136	29.924	Totals

The legal description of the SUFCO permit area:

Mine Site Facility, Water Tank, South Portals, Spring Collection Field, Pump House, Pipeline, Leachfield (Approximately 64.403 acres)

T. 22 S., R. 4 E., SLBM, Utah

Section 12: A Portion of the following:

E1/2NW1/4, SW1/4NW1/4NE1/4, S1/2

## **CHAPTER 2**

### **SOILS**

barbwire fence, and revegetated with a quick growing vegetative cover (standard seed mix in section 3.4.1.2 minus the shrubs and trees) to control erosion. The surface of the topsoil pile will be pitted to reduce runoff and erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Topsoil from the Link Canyon Substation No. 1 will be placed and stored on the outslope of the pad. This storage area will be protected with berms and/or silt fences, a three-strand barbwire fence, and revegetated to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Soil from the Link Canyon Substation No. 2 will be placed in a soil stock pile located at the south end of the pad area. The storage area will be protected with berms and/or silt fences, a three strand barbwire fence, and revegetated to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation.

Soil from the Link Canyon Mine Portal area will be placed in a topsoil pile located south of the disturbed portal pad area out of the floodplain (Plate 5-2F). The storage area will be protected by installing a topsoil storage sign at the base of the pile, berms and/or silt fences, a three strand barbwire fence, and protected from wind and water erosion by surface pitting the stockpile to retain moisture and reduce erosion and by being revegetated with a quick growing vegetative cover (standard seed mix in section 3.4.1.2 minus the shrubs and trees) to control erosion. This soil will not be moved or disturbed until it is required for redistribution during final reclamation. The surface of the topsoil pile will be pitted to reduce runoff and erosion. Vegetation removed during site construction, such as sage brush and other woody plants, will be placed on top of the pile.

Excess subsoil associated with construction of a run of mine coal stockpile and the West Lease portal tunnel development is stored at SUFCO Mine's 40-acre waste rock disposal site (see Section 3.1.6 of Volume 3 of this M&RP). This material is segregated and will be available for fill during the reclamation phase of the mine site if needed. A total of 756.4 cubic yards of topsoil are stored immediately west and to the east of the subsoil pile. This material represents the upper 12 inches of topsoil removed prior to placing the subsoil. This material is stored and protected as

described in Section 3.1.6 of Volume 3 of this M&RP. This topsoil is reserved to reclaim the subsoil storage area. The substation binwall has 2,160 cubic yards of subsoil material and 5,300 cubic yards of road base and there is 11,364 cubic yards subsoil material stored at the waste rock site for a total of 18,824 cubic yards that will be available for use as subsoil material during final reclamation of the minesite facilities pad site.

### **2.3.2 Topsoil and Subsoil Removal**

#### **2.3.2.1 Topsoil Removal and Segregation**

All topsoil thicker than 6 inches will be removed as a separate layer from the subsoil, segregated, and stockpiled separately. Topsoil less than 6 inches thick will be removed according to Section 2.3.2.3. However, in the areas of the Link Canyon Substation Nos. 1 and 2 pads, all soil will be removed and stored in one area as a single soil resource. At substation pad No. 1, the maximum projected volume of topsoil salvage based on the soil survey depth of 20 inches and the projected topsoil salvage area of 0.08 acres is 224 cubic yards. The salvaged topsoil will be removed as a separate layer, segregated and placed on the south end of the pad outslope. The remaining excavated material in the deeper cuts will be used as fill material for the access road and the north end of the substation pad. At substation No. 2, the volume of soil projected to be removed is 118 CY.

#### **2.3.2.2 Poor Topsoil**

Topsoil that is of an insufficient quantity, or of poor quality (for sustaining vegetation) will be removed as a separate layer and segregated. Such operations will be done with approval of the UDOGM, and in compliance with R645-301-233.100 (Section 2.3.3.1).

#### **2.3.2.3 Thin Topsoil**

Topsoil to be removed that is less than 6 inches thick will be removed with the immediately underlying unconsolidated materials (up to a total of 6 inches). This material mixture will be treated as topsoil and stockpiled together without any horizon segregation.

#### **2.3.2.4 Minor Disturbances Not Requiring Topsoil Removal**

**APPENDIX 2-3**

**Water and Soil Data Report**



July 16, 2010

Mr. Leland Roberts  
Canyon Fuel Company  
Sufco Mine  
597 South SR 24  
Salina, Utah 85654

Dear Leland:

Enclosed are the results for samples our laboratory received on June 15, 2010. The analyses were completed according to Utah "Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining."

Feel free to contact me at your convenience if you have any questions or concerns.

Sincerely,

Karen Secor  
Mining Soils

xc: File  
Encl



Inter-Mountain Laboratories, Inc.  
1673 Terra Avenue, Sheridan, Wyoming 82801  
(307) 672-8945

**Soil Analysis Report**  
**Canyon Fuel Company, LLC.**

397 South 800 West  
Salina, UT 84654

Report ID: S1006246001  
Date Reported: 7/8/2010  
Work Order: S1006246

Project: Sufco Topsoil  
Date Received: 6/15/2010

Lab ID	Sample ID	pH s.u.	Saturation %	Electrical Conductivity dS/m	Organic Matter %	Calcium meq/L	Magnesium meq/L	Potassium meq/L	Sodium meq/L	SAR	PE	PE
S1006246-001	Gob Pile Composite	7.3	30.1	2.82	3.9	22.2	12.2	0.31	2.02			0.49

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A. Secor

Karen Secor, Soil Lab Supervisor



**Soil Analysis Report**  
**Canyon Fuel Company, LLC.**

397 South 800 West  
Salina, UT 84654

Report ID: S1006246001

Date Reported: 7/8/2010

Work Order: S1006246

Project: Sufco Topsoil

Date Received: 6/15/2010

Lab ID	Sample ID	Very Fine				Nitrogen		Available			
		Sand %	Silt %	Clay %	Texture	Nitrate ppm	Selenium ppm	Boron ppm	Phosphorus ppm		
S1006246-001	Gob Pile Composite	76.0	15.0	9.0	Sandy Loam	11.2	16.6	1.9	<0.02	1.07	2.50

These results apply only to the samples tested.  
Abbreviations for extractants: PE= Saturated Paste Extract, H2Oso= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A. Secor  
Karen Secor, Soil Lab Supervisor



**Soil Analysis Report**  
**Canyon Fuel Company, LLC.**  
397 South 800 West  
Salina, UT 84654

Report ID: S1006246001  
Date Reported: 7/8/2010  
Work Order: S1006246

Project: Sufco Topsoil  
Date Received: 6/15/2010

Lab ID	Sample ID	Available Potassium meq/100g	Total Carbon %	TOC %	Neutral Potential t/1000t
S1006246-001	Gob Pile Composite	0.14	12.6	10.6	167

These results apply only to the samples tested.  
Abbreviations for extractants: PE= Saturated Paste Extract, H2Oso= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate  
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential  
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A. Secor  
Karen Secor, Soil Lab Supervisor

**CHAPTER 7**  
**HYDROLOGY**

is 0.017 acre. The disturbed area associated with the 3 East portals is 0.017 acre. The disturbed area associated with the Quitchupah portals is 0.017 acre. A calculation demonstrating the insignificance of the inflow of surface water into the mine is included in Appendix 7-16.

During construction of the new overflow pond sediment from the disturbed area will be controlled by the use of containment berms and silt fencing.

Several alternate sediment control areas are defined within the mine site and are listed below (see Plates 5-2B,C,D,E,&F):

- The original substation pad area and fire water tank above the office building. The sediment controls include a graveled pad area and silt fences. The disturbed area is 0.324 acre.
- The topsoil stockpile near the mine site primary sedimentation pond. The sediment control consists of containment berms and silt fencing. The disturbed area is 0.105 acre.
- The topsoil stockpile near the mine site overflow pond. The sediment control consists of containment berms and silt fencing. The disturbed area of the overflow pond topsoil stockpile is 0.141 acres.
- The subsoil, topsoil and sedimentation pond topsoil stockpiles at the waste rock disposal site. The sediment controls include containment berms and silt fencing. The disturbed area of the subsoil and topsoil stockpiles is 1.24 acre. The disturbed area of the pond topsoil pile is 0.293 acre.
- The area above the mine fan in East Spring Canyon. The sediment control consists of silt fencing. The disturbed area is 0.122 acre.
- The pump house in Convulsion Canyon. The sediment control consists of containment berms and silt fencing. The disturbed area is 0.075 acre.
- The leach field in Convulsion Canyon. The sediment control consists of containment berms and silt fencing. The area is fenced to prevent grazing. The disturbed area is 0.40 acre.
- The new substation pad disturbed area is 0.287 acre. The sediment controls include gravel and silt fences.
- The 4 East portal site consists of a pad area where a mine fan has been built. The disturbed area associated with the two portal openings at this site is 0.70 acre. Alternate sediment control at this pad consists of a containment berm, gravel and silt fencing.
- The Link Canyon Substation No. 1 facility disturbed area is 0.18 acre. This substation pad area was reclaimed in 2000. The sediment control consists of containment berms, silt fencing, and vegetation.

- The Link Canyon Substation No. 2 facility disturbed area is 0.12 acre. The sediment control consists of containment berms, gravel and silt fencing.
- The Link Canyon Portal facility disturbed area is 0.18 acre. The sediment control consists of containment berms, gravel and silt fencing.

The total area for Alternate Sediment Control Areas (ASCA) is 4.167 acres. This is approximately 13.9 percent of 29.924 acres of total disturbed area at the mine site, Link Canyon Portal and Substation No. 1 and No. 2 facility sites, and waste rock disposal site (including ASCA's and SAE's).

#### 7.4.2.2 Siltation Structures

**General Requirements.** Additional contributions of suspended solids and sediment to stream flow or runoff outside the permit area are being prevented to the extent possible using various siltation structures.

The existing siltation structures for the main facilities area, the concrete sediment trap and primary sedimentation pond, were not constructed before beginning coal mining operations. The structures were constructed upon implementation of applicable State and Federal Regulations. The overflow pond was constructed to allow for continued compliance with State and Federal Regulations. The sedimentation pond for the waste rock disposal site was constructed before the site was used. Each structure has been certified by a qualified registered professional engineer.

All siltation structures which impound water have been designed, constructed and maintained as described in Chapter 5 and Sections 7.3.3 and 7.4.3.

Siltation structures are also provided at the mine-water discharge points. Water is presently being discharged from the mine at UPDES discharge point 003 from the Quitchupah Canyon breakouts. UPDES discharge point 001 is approved as an alternative mine water discharge point. Design of the siltation structures for these discharge points is presented in Section 7.3.1.5.

**Sedimentation Ponds.** There are four sedimentation ponds operating within the permit area. These ponds are described as follows:

- Concrete sediment trap located at the south end of the main facilities area.

- The water tank area northeast of the mine site. This area is classified as an "Exempt Area". The demonstration for this area is a SEDCAD computer program and is located in Appendix 7-16. The disturbed area is 0.193 acre.

The total disturbed area contributing to the primary sedimentation pond is 15.88 acres. The total disturbed area contributing to the overflow pond is 16.49 acres. The total disturbed area contributing to the waste rock disposal site sedimentation pond is 7.93 acres. The total area for Small Area Exemption (SAE) is 0.623 acres. This is 2.1 percent of 29.924 acres of total disturbed area at the mine site, Link Canyon Portal and Substation No. 1 and No. 2 facility sites, and waste rock disposal site (including ASCA's and SAE's).

#### 7.4.2.3 Diversions

**General Requirements.** The diversions within the permit area consist of drainage ditches and culverts. All diversions within the permit area have been designed to minimize adverse impacts to the hydrologic balance, to prevent material damage outside the permit area and to assure the safety of the public.

All diversions and diversion structures have been designed, located, constructed, maintained and used to:

- Be stable
- Provide protection against flooding and resultant damage to life and property
- Prevent, to the extent possible, additional contributions of suspended solids to stream flow outside the permit area
- Comply with all applicable local, state, and federal laws and regulations

All diversions within the permit area are temporary and will be removed when no longer needed. The diversions will be reclaimed in accordance with the reclamation plan defined in Chapter 5.

Peak discharge rates from the undisturbed and disturbed area drainages within the permit area were calculated for use in determining the adequacy of the existing diversion ditches and culverts. The storm runoff calculations for the temporary diversion structures were based on the 10-year, 6-hour precipitation event of 1.3 inches. Curve numbers were based on those defined in Appendix 7-9 and professional judgement. A description of the methods used to determine the peak discharge rates is presented in Appendix 7-10. The overflow pond bypass culvert was designed to safely convey the 100-year, 6-hour precipitation event of 2.06 inches. For more information of designs and calculations see Plates 7-5A, 7-5B, and 7-5C and Appendix 7-23. The

**VOLUME 3**  
**WASTE ROCK DISPOSAL SITE**

materials such as cinder block, however, will be deposited at the disposal site.

Any slide or other damage at the disposal site which may have a potential adverse affect on public property, health, safety, or the environment will be reported to the Division by the fastest available means and will be remediated in compliance with Division instructions.

### **3.1.5 Acid and Toxic Forming Materials**

Based on analyses of material that has been placed in the waste rock disposal site to date, no acid forming problems are anticipated. There is a potential for borderline toxicity problems from boron. Samples of the waste material will be collected quarterly when the site is receiving material and will be analyzed for acid or toxic forming potential. Should a problem be identified, a mitigation plan will be prepared and submitted to the Division for approval within 30 days of receipt of the analysis. All identified potential acid or toxic forming materials will be buried or otherwise treated within 30 days after the mitigation plan is approved by the Division.

Copies of laboratory reports on toxicity/acid-base accountability from representative waste samples are included in Volume 8 of the M&RP prior to 2005 and starting in 2005 will be included in the annual report.

### **3.1.6 Subsoil Stockpile**

Excess subsoil material and a small amount of topsoil from the minesite is stockpiled at the Waste Rock Disposal Site for possible use during final reclamation of SUFCO minesite facilities. The location of the subsoil and topsoil material is shown on Map 2. Total acreage of the subsoil stockpile and associated topsoil piles 1A and 1B is 1.19 acres. From the as-built survey of the subsoil stockpile area 11,364 cubic yards of subsoil material and 8.2 cubic yards of minesite topsoil material are stockpiled at the site. The associated original topsoil pile #1B (457 cubic yards) and new topsoil piles #2 (161.4 cubic yards) and #3 (138 cubic yards) removed from the subsoil stockpile area contains a total of 756.4 cubic yards. The top 12 inches of soil material was removed from the subsoil stockpile area as described in Section 3.1.2, Site Preparation. This topsoil was stored along the westerly boundary and east of the subsoil stockpile as shown on Map

2. Topsoil handling procedures complied with those described in Section 3.2.3, Topsoil Handling. These topsoil stockpiles will be stored and seeded using the grasses and forbes of the standard seed mix, Table 4.6.1-1. When the subsoil and minesite topsoil are removed the topsoil will be redistributed and the area reclaimed and seeded in accordance with sections 4.5 and 4.6.

Subsoil material was placed in 2-3 ft. lifts using dump trucks and a Cat dozer. Exterior slopes of the subsoil stockpile are approximately 1v:1.25h. At this slope the material will be stable as placed. The subsoil stockpile was seeded using the grasses and forbes of the standard seed mix, Table 4.6.1-1. This subsoil may be taken to the minesite and used for fill material during final reclamation of the minesite.

Run off from the subsoil and associated topsoil stockpiles is collected and routed through a silt fence treatment located as shown on Map 2. The total acreage of the five stockpiles is 1.24 acres. Alternate sediment control measures are in place as described above. This area is classified as an approved Alternate Sediment Control Area (ASCA).

## **3.2 Components of Operation**

### **3.2.1 Sedimentation Pond**

A sedimentation pond was constructed down gradient from the rock fill area to control sediment removed from the disturbed areas by surface runoff. The pond was constructed prior to disturbing any other areas of the site. It will remain in place until the waste rock disposal area has been completely reclaimed.

The pond consists of an excavated storage basin. Suitable material removed from the excavation was used to construct an embankment on the downstream perimeter of the excavation to yield a maximum storage depth in the pond of 5.70 feet.

The embankment has a top width of 10 feet, a minimum height of 6.8 feet with exterior side slopes of 2.5h:1v. The bottom of the pond was constructed at an elevation of 7885.00 feet.