

0036

C/041/002 Incoming
#3069



Canyon Fuel
Company, LLC.
Sufco Mine

A Subsidiary of Arch Western Bituminous Group, LLC.

Ken May, General Manager
397 South 800 West
Salina, UT 84654
(435) 286-4400 - Office
(435) 286-4499- Fax

Q

October 7, 2008

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

Re: Tipple Building Modification Amendment, 2nd Submittal, Canyon Fuel Company, LLC,
SUFSCO Mine C/041/002

Dear Permit Supervisor:

The enclosed eight complete clean copies of the Tipple Building Modification Amendment are being resubmitted for approval to replace the existing Tipple Building sump at the Tipple Building with a wider sump to accommodate the use of a larger loader for cleanout. Attached are DOGM forms C-1 and C-2 and appropriate pages.

This Tipple Building Modification will not affect any new disturbance to the permitted area or any change in runoff, vegetation, and topsoil. MRP Table 5-4 "Description of Existing Structures" page 5-45 has been updated for the Tipple Building construction materials and modification date for clarification and is enclosed. This Tipple Building Modification will increase the Tipple Building concrete demolition from 93 CY to 128.5 CY on the Tipple Building demolition bond calculation sheet (Page 50 of 61). The additional bond cost estimate requirements for the Tipple Building is within the present Sufco posted bond. New bond calculation sheets and updated surface facility maps (Plates 5-2A and 5-2B) are enclosed.

This resubmittal has been revised to clarify and address the deficiencies in the Division letter dated September 15, 2008 received on September 26, 2008.

The deficiencies and responses are:

1. **There is no written description of the structure in the MRP.**

Response:

Amendment was modified to clarify the name of the structure being modified which is the Tipple Building. The existing Tipple Building description is listed in Table 5-4 (Description of existing structures). The Tipple Building Sump is part of the existing Tipple Building structure. The existing Tipple Building Sump is being modified to widen the sump to accommodate the use of a larger loader for cleanout. Tipple Building

File in:
C/041/002 2008, Incoming
Refer to:
 Confidential
 Shelf
 Expandable
Date: 10/7/2008 For additional information

RECEIVED

OCT 09 2008

DIV. OF OIL, GAS & MINING

Modification description, design and cross section figures were added to the text of the MRP in Chapter 5, Section 5.2.1.1, Pages 5-9 to 5-11.

2. There are three different names for the structure in the material submitted.

Response:

Amendment was modified to clarify the name of the structure being modified which is the Tipple Building. The Tipple Building Sump is part of the existing Tipple Building structure.

3. The name of the structure is not distinguished from the sediment trap below the truck scale.

Response:

Amendment and maps were modified to clarify the name of the structure being modified which is the Tipple Building. The Tipple Building Sump is part of the existing Tipple Building structure shown on the map. This should distinguish it from the sediment trap structure below the truck scale which is not a part of this amendment. The sediment trap structure is discussed in Chapter 7 of the MRP with the sediment pond.

4. All maps should reflect the same name of the structure.

Response:

Maps were modified to clarify and reflect the same name of the structure being modified which is the Tipple Building.

5. The purpose of the structure is not stated.

Response:

The purpose of the existing Tipple Building Sump is to collect the coal fines when the Tipple Building is being cleaned. This allows a loader to collect the coal fines from the sump and put them on the coal storage pile. The existing Tipple Building Sump is being modified to widen the sump to accommodate the use of a larger loader for cleanout. The Tipple Building Sump is part of the Tipple Building structure. Tipple Building Modification description, design and cross section figures were added to the text of the MRP in Chapter 5, Section 5.2.1.1, Pages 5-9 to 5-11.

6. Information describing all surface facilities should be identified in Chapter 5 (Engineering), Sections 5.1.2.2, 5.1.3.2 and in the Operation Section 5.2.1.1.

Response:

Amendment was modified to clarify the name of the structure being modified which is the Tipple Building. The existing Tipple Building description is listed in Table 5-4 (Description of existing structures). The Tipple Building Sump is part of the existing Tipple Building structure.

Chapter 5, Section 5.1.2.2, Page 5-3 – Information was added to describe the surface facility impoundments and references to the sections in the MRP were all the pertinent information regarding these impoundments is presented.

Chapter 5, Section 5.1.3.2, Page 5-4 – This Tipple Building Modification does not meet the size criteria of 30 CFR 77.216(a). It is already stated in the MRP Section 5.1.3.2 that “No impoundments or sedimentation ponds in the permit area meet the size criteria of 30 CFR 77.216(a)”.

Chapter 5, Section 5.2.1.1, Page 5-9 – Tipple Building Modification description, design and cross section figures were added to the text of MRP.

7. **The structure should be identified in Table 5-4 (Description of Existing Structures) and in the Demolition Costs table. Information should be provided in Section 5.2.1.1 that details any influence on the surface runoff conditions.**

Response:

Amendment was modified to clarify the name of the structure being modified which is the Tipple Building. The existing Tipple Building description is already listed in Table 5-4 (Description of existing structures). Table 5-4, page 5-45 was updated in the original submittal for the Tipple Building. The Tipple Building Sump is part of the existing Tipple Building structure.

The Demolition Costs were provided in the original submittal under Tipple Building (page 50 of 61).

The existing Tipple Building Sump is only being modified to widen the sump to accommodate the use of a larger loader for cleanout and will not change present surface runoff conditions. As stated in the original submittal cover letter the Tipple Building Modification will not affect any new disturbance to the permitted area or any change in runoff, vegetation, and topsoil and would not require any changes to the MRP on the surface runoff conditions in Section 5.2.1.1.

8. **Any influence should be identified in the Surface Hydrology section in Chapter 7.**

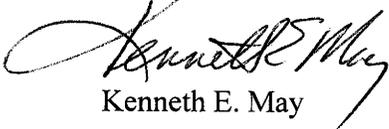
Response:

The existing Tipple Building Sump is only being modified to widen the sump to accommodate the use of a larger loader for cleanout and will not change present surface runoff conditions. As stated in the original submittal cover letter the Tipple Building Modification will not affect any new disturbance to the permitted area or any change in runoff, vegetation, and topsoil and would not require any changes to the MRP in the Surface Hydrology section in Chapter 7.

Permit Supervisor
Utah Coal Regulatory Program
October 7, 2008
Page 4

Sufco needs approval of this Tipple Building Modification as soon as possible to start construction the first part of October. If you have any questions or need additional information, please contact Mike Davis at (435) 286-4421.

Sincerely,
CANYON FUEL COMPANY, LLC
SUFCO Mine



Kenneth E. May
General Manager

Encl.

KEM/MLD:kb

cc: DOGM Price Field Office
DOGM Correspondence File

sufpub\govt2008\dogmmp\MRP Tipple Sump.2nd Submittal.ltr.doc

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/041/002

Title: Second Submittal - Tipple Building Modification

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

Help clean up coal fines washed out of Tipple Building. Sufco would like to construct this in September.

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

- Yes No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ 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?

Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you. (These numbers include a copy for the Price Field Office)

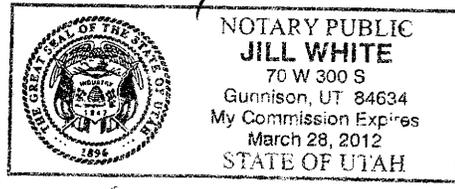
I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

KENNETH E. MAY, MINE MANAGER
Print Name

Kenneth E. May 10/8/08
Sign Name, Position, Date

Subscribed and sworn to before me this 8th day of October, 2008

Jill White
Notary Public
My commission Expires: 3/28, 2012
Attest: State of Utah) ss:
County of Sevier



For Office Use Only:	Assigned Tracking Number:	Received by Oil, Gas & Mining <div style="border: 1px solid black; padding: 5px; text-align: center;"> RECEIVED OCT 09 2008 DIV. OF OIL, GAS & MINING </div>
-----------------------------	----------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

LIST OF TABLES

Table	Page
5-1 List of Major Equipment	5-21
5-2 Subsidence Control Point Survey Data	5-31
5-3 Minimum Support Pillar Requirements	5-41
5-4 Description of Existing Structures	5-44
5-5 Reclamation Channel Design Summary	5-73

LIST OF FIGURES

Figure	Page
5-0C Tipple Building Modification - Location Exhibit	5-10
5-0D Tipple Building Modification - Sump Details	5-11
5-0E Proposed 300,000 Gallon Fire Water Tank Pad Detail	5-15A
5-0A 14L4E Draw Angle Study	5-24
5-0B 6 East Draw Angle Study	5-25
5-1 Coal Flow Diagram	5-52
5-2 Reclamation Timetable	5-66
5-3 Straw-Bale Dike & Silt Fence Installation Procedures	5-70

LIST OF PLATES

Plate
5-1 Previously Mined Areas
5-2A Detail of East Spring Canyon Surface Facilities
5-2B Extended East Spring Canyon Surface Facilities
5-2C Detail of Portal Surface Facilities

File in:

Confidential

Shelf

Expandable

Refer to Record No. 00.36 Date 07/2008
In C10410002, 2008, Successing
For additional information

LIST OF PLATES

- 5-2D Detail of Link Canyon Surface Facilities
- 5-2E Detail of Link Canyon Surface Facilities No. 2
- 5-2F Detail of Link Canyon Portal Facilities
- 5-3A Post-Reclamation Surface Configuration
- 5-3B Extended Post-Reclamation Surface Configuration
- 5-4 Post-Reclamation Cross Sections
- 5-5 Existing Surface and Subsurface Facilities and Features
- 5-6 Land Ownership and Permit Area Map
- 5-7 Upper Hiawatha Mine Plan - 5 Year Projection
- 5-8 Lower Hiawatha Mine Plan
- 5-9 Transportation Facility Cross Sections
- 5-10A Potential Subsidence Limits - Quitchupah Tract
- 5-10B Potential Subsidence Limits - Pines Tract & SITLA Muddy Tract
- 5-11 Overburden Isopach Map

LIST OF APPENDICES

(Appendices appear in Volume 6)

Appendix

- 5-1 Primary Road Certification
- 5-2 Approximate Original Contour Variance Request
- 5-3 Sevier County Landfill Disposal Agreement
- 5-4 USFS Report Regarding Subsidence Tension Cracks

LIST OF APPENDICES
(Appendices appear in Volume 6)

- 5-5 Experimental Coal Mining Program Approval
- 5-6 Leach Field Permit
- 5-7 Slope Stability Analysis
- 5-8 Access Road Stability Evaluation - Dames & Moore, 1981
- 5-9 Reclamation Bond Estimate

Geology. Certified maps and cross sections associated with the geology of the SUFCA Mine area are provided in Chapter 6.

5.1.2.2 Plans and Engineering Designs

All plans and engineering designs presented in this M&RP were prepared by or under the direction of and certified by a qualified registered professional engineer.

Excess Spoil. No excess spoil will be generated from the permit area.

Durable Rock Fills. No durable rock fills will exist in the permit area.

Coal Mine Waste. The design of the waste-rock facility has been certified by a qualified registered professional engineer.

Impoundments. The only impoundments constructed for the mining and reclamation operation consist of sedimentation ponds. Each of these ponds was designed by a professional engineer using current, prudent, engineering practices. These designs were certified by a qualified registered professional engineer.

The existing impoundments within the permit area consist of the three structures constructed for sediment control purposes. These structures are:

- The concrete sediment trap located near the southern end of the mine yard.
- The primary sedimentation pond located immediately below the fill on which the existing mine facilities are constructed.
- The sedimentation pond located at the waste rock disposal site.

All pertinent information regarding these sedimentation ponds is presented in Sections 7.3.2.2 and 7.4.2.2.

Primary Roads. The design and construction of the primary road associated with the mine has been certified by a professional engineer as meeting the requirements of R645-301-534.200 and R645-301-742.420. This certification is presented in Appendix 5-1.

Variance From Approximate Original Contour. The design for the proposed variance from the approximate original contour requirements of R645-301-270 has been certified by a professional engineer in conformance with professional standards established to assure the stability, drainage, and configuration necessary for the intended postmining use of the site. This certification is presented in Appendix 5-2.

5.1.3 Compliance with MSHA Regulations and MSHA Approvals

5.1.3.1 Coal Processing Waste Dams and Embankments

No coal processing waste dams or embankments exist within the permit area.

5.1.3.2 Impoundments and Sedimentation Ponds

No impoundments or sedimentation ponds in the permit area meet the size criteria of 30 CFR 77.216(a).

5.1.3.3 Underground Development Waste, Coal Processing Waste, and Excess Spoil

No underground development waste, coal processing waste, or excess spoil is disposed of in underground mine workings in the permit area.

5.1.3.4 Refuse Piles

The waste-rock disposal area has been designed and constructed to meet the requirements of 30 CFR 77.214 and 30 CFR 77.215. Details of this design are presented in the M&RP, Vol. 3.

5.1.3.5 Underground Openings to the Surface

Upon abandonment, each opening to the surface from the underground will be capped, sealed, backfilled, or otherwise properly managed in accordance with 30 CFR 75.1771. Details regarding final abandonment of mine openings are provided in Section 5.4.2.7.

5.1.3.6 Discharges to Underground Mines

No discharges occur from the surface to underground mine workings in the permit area.

5.1.3.7 Surface Coal Mining and Reclamation Activities

No surface coal mining and reclamation activities occur in the permit area.

5.1.3.8 Coal Mine Waste Fires

If any coal mine waste fires occur within the permit area, these will be reported immediately to MSHA and the UDOGM. Immediate remedial action will be taken as deemed necessary by SUFACO Mine to protect public health and safety as well as the environment. Following initial remedial efforts, a long-term plan will be formulated in discussion with MSHA and the UDOGM to extinguish any existing fires and prevent future fires.

5.1.4 Inspections

5.1.4.1 Excess Spoil

Excess spoil is not generated at the SUFACO Mine.

5.1.4.2 Refuse Piles

Regular inspections of the waste-rock area will be made during placement and compaction of the coal mine refuse materials. These inspections will be made by or under the direction of a registered professional engineer experienced in the construction of similar earth and water structures. These

inspections will occur at least quarterly throughout placement of the waste materials and during the following critical periods of the phased construction of the site:

- o Foundation preparation (including removal of organic material and topsoil),
- o Installation of final surface drainage systems, and
- o The final graded and revegetated facility.

The frequency of the inspections will be increased if a danger or harm exists to public health and safety or to the environment. Inspections will continue until the waste-rock area has been finally graded and revegetated.

A certified report will be submitted by a registered professional engineer to the UDOGM within two weeks after each inspection. This report will indicate whether or not the waste-rock pile has been constructed and maintained as designed and in accordance with the approved plan and the R645 rules. The report will also include a discussion of any appearances of instability, structural weakness, and other hazardous conditions noted during the inspection. A copy of the inspection report will be maintained at the mine office.

5.1.4.3 Impoundments

Inspections of all sedimentation ponds associated with the SUFACO Mine will be made at least quarterly. A report of inspection will be prepared by a qualified individual and submitted to the UDOGM within two weeks after each inspection. No other mine-related impoundments exist in the permit area.

New impoundments that may be constructed in the future within the permit area will be inspected regularly during construction and upon completion of construction. These inspections will be made by or under the direction of a registered professional engineer experienced in the construction of similar earth and water structures. Inspections will continue until removal of the structure or release of the performance bond.

All sediment ponds associated with the SUFCA Mine will be inspected annually by a registered professional engineer. A certified report will be prepared by a registered professional engineer and submitted to the UDOGM within two weeks after each inspection. This report will indicate whether or not the impoundment has been constructed and maintained as designed and in accordance with the approved plan and the R645 rules. The report will also include a discussion of any appearances of instability, structural weakness or other hazardous conditions, depth and elevation of any impounded waters, existing storage capacity, and existing or required monitoring procedures and instrumentation, and any other aspects of the structure affecting stability, as noted during the inspection. A copy of the inspection report will be maintained at the mine office.

No impoundments currently exist within the permit area that are subject to 30 CFR 77.216. If impoundments subject to 30 CFR 77.216 are constructed in the future, these impoundments will be inspected on a weekly basis. These inspections will be performed in accordance with 30 CFR 77.216-3.

5.1.5 Reporting and Emergency Procedures

5.1.5.1 Slides

If a slide occurs within the permit area that may have a potential adverse effect on the public, property, health, safety, or the environment, SUFCA Mine will notify the UDOGM by the fastest available means following discovery of the slide and will comply with any remedial measures required by the UDOGM.

5.1.5.2 Impoundment Hazards

If any examination or inspection of an impoundment discloses that a potential hazard is associated with that impoundment that may have an adverse effect on the public, property, health, safety, or the environment, the person who examined the impoundment will promptly inform the UDOGM of the finding and of the emergency procedures formulated for public protection and remedial action.

If adequate procedures cannot be formulated or implemented, the UDOGM will be notified immediately.

5.1.5.3 Temporary Cessation of Operations

Prior to a temporary cessation of operations within the permit area that will last for a period of 30 days or more or as soon as it is known that a temporary cessation will extend beyond 30 days, SUFCO Mine will submit to the UDOGM a notice of intention to cease or abandon operations. This notice will include the following:

- o A statement of the exact number of surface acres and the horizontal and vertical extent of subsurface strata which have been affected by mining operations in the permit area prior to cessation of operations,
- o A discussion of the extent and kind of reclamation activities which will have been accomplished prior to cessation of operations, and
- o An identification of the backfilling, regrading, revegetation, environmental monitoring, underground opening closures, and water treatment activities that will continue during the temporary cessation.

During the temporary cessation, SUFCO Mine will support and maintain all surface access openings to underground operations. SUFCO Mine will also secure surface facilities in areas in which there are no current operations but where future operations are to be resumed under an approved permit.

5.20 Operation Plan

5.2.1 General

5.2.1.1 Cross Sections and Maps

Previously Mined Areas. Plate 5-1 shows the location and extent of known workings of active, inactive, or abandoned underground workings, including openings to the surface, within the permit and adjacent areas. No previously surface-mined areas exist within the permit area.

Existing Surface and Subsurface Facilities and Features. Plates 5-2A,2B,2C,2D,2E,2F and 5-5 depicts the following information:

- o All buildings in and within 1000 feet of the permit area, including an identification of the current use of the buildings,
- o The location of surface and subsurface features within, passing through, or passing over the permit area, including major electric transmission lines and pipelines (no agricultural drainage tile fields exist within the permit area),
- o Each public road located in or within 100 feet of the permit area,
- o The location of the waste-rock disposal area, and
- o The location of each sedimentation pond within the permit area (there are no permanent water impoundments within the permit area).

Tipple Building was modified in 2008 to widen the tipple building sump to accommodate the use of a larger loader to collect coal fines when the Tipple Building is being cleaned. This allows a loader to collect the coal fines from the Tipple Building cleanup and put them on the coal storage pile preventing them from being washed through the mine yard. Design and cross sections of the Tipple Building Modification are provided on Figures 5-0C and 5-0D.

Landowner, Right-of-Entry, and Public Interest. Plate 5-6 shows the boundaries of lands and the names of present owners of record of those lands, both surface and subsurface, included in or

LUMP
COAL
STORAGE

NOTES:

1. EXISTING DRAIN PIPE MUST BE REROUTED UNDER TROUGH OF NEW SUMP SO DRAIN PIPE CAN BE CONNECTED.

NEW MODIFICATION

STOKER BELT

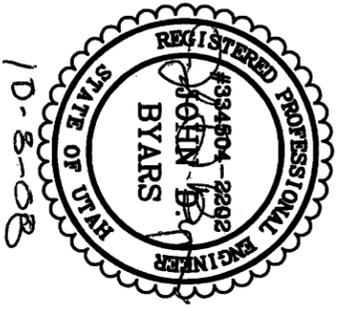
TRANSFER
BUILDING

TIPPLE
BUILDING

LOADOUT BELT

SAMPLER
BUILDING

LOWER STACKER
COAL STORAGE



RECEIVED
OCT 09 2008
DIV. OF OIL, GAS & MINING



Canyon Fuel Company, LLC
SUFECO Mine
397 South 800 West - Salina, UT 84654
(435) 286-4480 Phone
(435) 286-4499 Fax

Figure 5-0C - Tipple Building Modification

Location Exhibit

SCALE: NONE	DATE: July 2008	DRAWN BY: J.G.C.	ENGINEER: J.D.B.	CHECKED BY: A.R.
FILE NAME: H:\DRAWINGS\TIPPLE\Sump\Tipple Sump.dwg				

NO.	DATE	REQ. BY	DWG. BY	REVISIONS	REMARKS

SHEET NO.

1 of 2

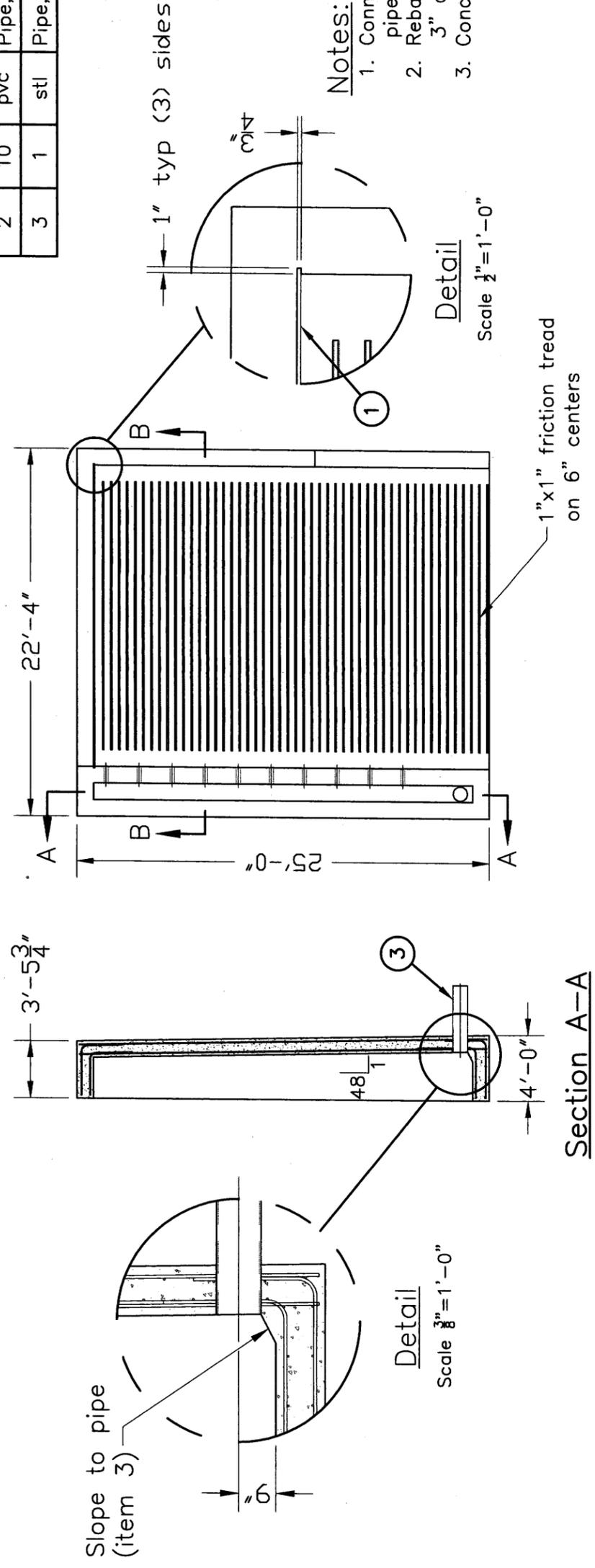
Bill of Materials

Item	Qty.	Mat'l	Description	Weight
1	1	stl	Pl., 3/4" x 6'-0" x 18'-6"	3,393
2	10	pvc	Pipe, 4"sch 40 x 1'-0"	20
3	1	stl	Pipe, 10"sch 40 x 4'-0" (trim to length)	162



Notes:

1. Connect 10" drain pipe to rerouted existing drain pipe by welding.
2. Rebar to be 2" below surface of concrete and 3" above granular borrow unless noted.
3. Concrete to be 1'-0" thick unless noted.



Slope to pipe (item 3)

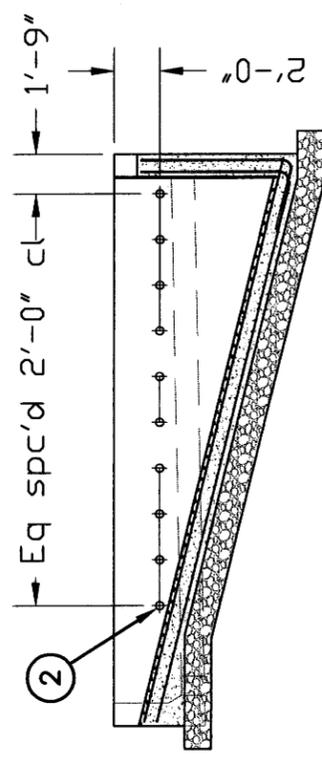
Detail

Scale 3/8"=1'-0"

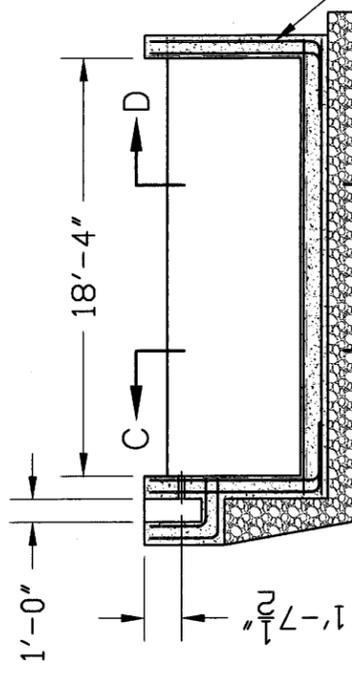
Detail

Scale 1/2"=1'-0"

Section A-A

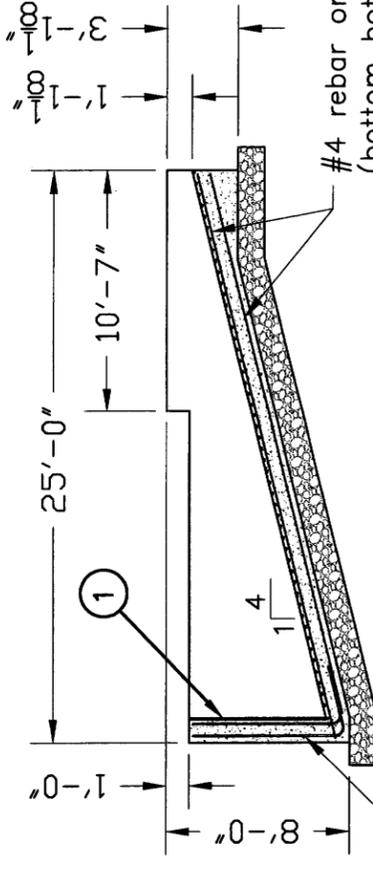


Section C-C



Section B-B

1'-2" compacted granular borrow



Section D-D

#6 rebar on 6" centers (vertical)
#4 rebar on 12" centers (horizontal)

#4 rebar on 6" centers (bottom both ways)
#4 rebar on 12" centers (top both ways)

RECEIVED
OCT 09 2008

DIV. OF OIL, GAS & MINING

Canyon Fuel Company, LLC
SUFCO Mine
 397 South 800 West - Salina, UT 84654
 (435) 286-4480 Phone
 (435) 286-4499 Fax

Figure 5-0D - Tipple Building Modification

Sump Details

SCALE: 1/8" = 1'-0"	DATE: July 2008	DRAWN BY: J.G.C.	ENGINEER: J.D.B.	CHECKED BY: A.R.
FILE NAME: H:\DRAWINGS\TIPPLE\Sump\Tipple Sump.dwg				

NO.	DATE	REQ. BY	DWG. BY	REMARKS

SHEET NO.

20f2

contiguous to the permit area. SUFCA Mine has a legal right to enter and begin coal mining operations on all of the lands within the permit area.

Coal mining and reclamation operations are conducted within 100 feet of the right-of-way line of a public road (except where mine access roads join that right-of-way) at the waste-rock disposal area. The measures to be used to ensure that the interests of the public and the affected landowners are protected by operations at the waste-rock disposal facility are outlined in the M&RP, Volume 3.

Coal mining and reclamation operations are conducted within 100 feet of the right-of-way line of the Link Canyon Road, a public-access dirt road. SUFCA Mine uses a portion of this road to access the mining operation's electrical system from the Link Canyon Portal. Mining activities are conducted within 100 feet of this road during maintenance and operation of the electrical substation. The interests of the public and the affected landowners will be protected with respect to this road by the following measures:

- o Surface activities will be conducted in a manner that will not block the road,
- o The portal area access road will be gated and the mine portal intake will be protected from unauthorized entry by the installation of steel sets and a locked chain-link gate. The key for the gate will be kept approximately 25 feet from the gate inside the mine. This permits emergency exit from the mine but prevents entrance from the outside,
- o During initial construction of the facilities the public will be protected by posting warning signs on the road, talking to contractors, and by a temporary chain-link fence with warning sign during portal entrance construction when the contractor is not on site to prevent entrance to the portal, and
- o Regular inspections of that portion of the road are conducted by mine personnel to ensure that erosion does not become a problem. In the event that material damage due to erosion as a result of mining activities is discovered on or along the side of this road, SUFCA Mine will repair this damage and implement additional runoff-control measures as needed.

The mine portals enter the ground beneath the East Side USFS Public Stock Trail, a public-access dirt road that is constructed on the east side of East Spring Canyon from the bottom of SUFCA Mine to the upper plateau. This road has historically been used to herd livestock between grazing

allotments during seasonal changes. SUFCA Mine also uses portions of this road to access the mining operation's electrical and water supply systems. Mining activities are conducted within 100 feet of this road during maintenance and operation of the electrical substation and water supply system (adjacent to the road) and where the portals enter the ground (beneath the road). The interests of the public and the affected landowners will be protected with respect to this road by the following measures:

- o No subsidence or caving operations will be conducted to affect any portion of the right-of-way of this road within 100 feet of the underground entry system,
- o Surface activities will be conducted in a manner that will not block the road, and
- o Water bars have been constructed on that portion of the road bordering the disturbed area adjacent to the mine surface facilities. Regular inspections of that portion of the road are conducted by mine personnel to ensure that erosion does not become a problem. In the event that material damage due to erosion as a result of mining activities is discovered on or along the side of this road, SUFCA Mine will repair this damage and implement additional runoff-control measures as needed.

Subsidence from underground mining operations may affect public-access dirt roads throughout the permit area. As part of the subsidence monitoring program, these roads will be regularly inspected. If material damage occurs to these roads as a result of mine subsidence, the roads will be repaired by SUFCA Mine.

Mining Sequence and Planned Subsidence. The mine plan for the SUFCA Mine is presented in Plate 5-7 (Upper Hiawatha seam) and Plate 5-8 (Lower Hiawatha seam). These maps show the boundaries of all areas proposed to be affected over the estimated total life of the coal mining and reclamation operations, including the size, sequence, and timing of mining of subareas to be affected beyond the present permit term. No surface disturbances are currently anticipated within the permit area beyond that presented in this M&RP.

Plates 5-7 and 5-8 also shows the location and extent of underground workings in which planned-subsidence mining methods will be used as well as areas where measures will be taken to prevent,

control, or minimize subsidence and subsidence-related damage. The location of the waste-rock disposal area in relation to the underground mine workings, is discussed in Volume 3 of this M&RP.

Land Surface Configuration. Slope measurements for undisturbed areas adjacent to disturbed areas associated with the mine are shown on Plate 5-2A&B. Surface facilities at the site have been in existence since 1941. Pre-mining topographic maps do not exist. Therefore, the slope measurements shown on Plate 5-2A&B are considered generally indicative of original land slopes in the vicinity of the mine.

Surface Facilities. Plates 5-2A,B,C,D,E,&F and Figure 5-0E shows the locations of the following surface facilities:

- o Buildings, utility corridors, and facilities to be used,
- o The area of disturbance at the mine mouth,
- o Coal storage and loading facilities,
- o Non-coal (non-waste rock) storage areas, and
- o Explosive storage and handling facilities.
- o Portal sites.

The remaining area of land to be affected by mining and reclamation operations is at the waste-rock site. The area of land to be affected at the waste-rock site is shown on maps provided in Volume 3 of this M&RP. The disturbed areas shown on Plates 5-2A,B,C,D,&E and the waste-rock area surface facility maps are the same as the land areas for which a performance bond or other guarantee has been posted.

Locations of topsoil stockpiles are shown on Plate 5-2A and in Volume 3 (Map 2). No coal processing waste banks, dams, or embankments exist in the permit area. Similarly, no spoil or coal preparation waste sites exist in the permit area. Sediment that is periodically removed from the sedimentation ponds will be disposed of at the waste-rock disposal site.

General refuse that is generated on site is stored at the location indicated on Plate 5-2A. This waste consists predominantly of old brattice cloth, ventilation tubing, broken timbers, wire, broken machinery parts, paper, cardboard, and miscellaneous garbage. This non-hazardous, non-toxic, non-coal, non-waste rock refuse is disposed of periodically at the Sevier County Landfill. The agreement with the Sevier County Landfill for disposal of this refuse is provided in Appendix 5-3.

Transportation Facilities. Roads that have been constructed, used, or maintained by SUFCO Mine in the permit area for the mining and reclamation operations are shown on Plate 5-2A&B. No rail systems or overland conveyor systems (other than the material-handling conveyors in the mine yard) are associated with the permit area. Drainage structures associated with the roads are presented in Section 7.5.2.2. Cross sections of the roads are provided on Plate 5-9.

TABLE 5-4 (Continued)
 Description of Existing Structures

Structure	Construction Date	Construction Materials
ROM MCC Building	Winter 1988	Concrete Block
Sampler Building	Fall 2003	Structural Steel
Sand & Salt Storage	Fall 1982	Concrete
Seal Portals		Concrete
Sediment Trap	Summer 1979	Concrete
Septic Tanks	Summer 1976 / Summer 2006	Steel / Concrete
Shelves	Summer 1990	Steel
Shop Garage	Summer 1989	Pre-Engineered Steel
Shop Office	Summer 1977	Wood
Side Release Tank	Fall 1997	Steel
Steam Cleaner Building	Fall 1981	Concrete
Stoker Belt	Fall 1977	Structural Steel
Stoker Bin	Fall 1977	Structural Steel
Stoker Coal Storage	Fall 1982	Concrete
Stoker Oil Tanks	Fall 1977 / Fall 2004	Steel & Concrete
Storage Trailers	1975	Wood & Aluminum
Substation - Lower	Fall 1991 / Fall 2006 -2007	Steel /Concrete / Binwall
Ticket Printers	Summer 1996	Steel
Tipple Building	Fall 1977 / Mod. Fall 2008	Structural Steel & Concrete
Tipple MCC Building	Summer 2005	Concrete Block
Tipple Office Building	Fall 1977	Concrete Block

Bonding Calculations

Direct Costs

Subtotal Demolition and Removal	\$1,049,516.00
Subtotal Backfilling and Grading	\$527,469.00
Subtotal Revegetation	\$167,934.00
Direct Costs	\$1,744,919.00

Indirect Costs

Mob/Demob	\$174,492.00	10.0%
Contingency	\$87,246.00	5.0%
Engineering Redesign	\$43,623.00	2.5%
Main Office Expense	\$118,654.00	6.8%
Project Mainagement Fee	\$43,623.00	2.5%
Subtotal Indirect Costs	\$467,638.00	26.8%

Total Cost \$2,212,557.00

Escalation factor 0.0444
 Number of years 4
 Escalation \$419,904.00

Reclamation Cost Escalated \$2,632,461.00

Bond Amount (rounded to nearest \$1,000) \$2,632,000.00
 2009 Dollars

Posted Bond \$4,439,000.00

Difference Between Cost Estimate and Bond \$1,807,000.00
 Percent Difference 40.71%

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Ambulance Garage																			\$2,504.00
	Belt Deicer Tank																			\$13.00
	Blast Channels A																			\$143,211.00
	Blast Channels B																			\$53,488.00
	Bulk and Used Oil Storage																			\$1,518.00
	Cap Magazine																			\$22.00
	Chromator Bld																			\$18.00
	Covered Storage																			\$17,169.00
	Diesel Tank																			\$995.00
	Drainage Culverts																			\$13,043.00
	Electrical Bld																			\$602.00
	Fan																			\$7,781.00
	Fire Water Tank 300000 Gal																			\$11,126.00
	Fuel Dock																			\$928.00
	Guard House																			\$349.00
	Loadout Belt																			\$2,595.00
	Lower Stacker Coal Storage																			\$2,149.00
	Lump Coal Storage																			\$711.00
	No 1 Belt																			\$67,377.00
	Office Building																			\$29,155.00
	Pavement Removal																			\$22.00
	Powder Magazine																			\$972.00
	Pulley Racks																			\$3,040.00
	Pump Houses																			\$299,966.00
	Repair Filler Fabric																			\$3,357.00
	Rock Dust Bin																			\$1,022.00
	ROM Coal Storage																			\$2,139.00
	ROM MCC Bld																			\$991.00
	Sampler Building																			\$1,916.00
	Sand and Salt Storage																			\$9,600.00
	Seal Ponds																			\$1,533.00
	Settlement Trap																			\$60.00
	Septic Tanks																			\$80,022.00
	Shed																			\$11,941.00
	Shed Warehouse																			\$2,322.00
	Shop Office																			\$3,763.00
	Shop Office																			\$161.00
	Side Release Tank																			\$7,713.00
	Steam Cleaner Building																			\$6,626.00
	Stoker Belt																			\$1,104.00
	Stoker Bin																			\$6,755.00
	Stoker Coal Storage																			\$1,539.00
	Stoker Oil Tanks																			\$1,265.00
	Storage Trailers																			\$72,922.00
	Substation Lower*																			\$60.00
	Substation Upper*																			\$69.00
	Trailer Primers																			\$69.00
	Trickle Building																			\$36,194.00
	Triple MCC Building																			\$3,161.00
	Triple Office Building																			\$2,759.00
	Transfer Building																			\$10,303.00
	Truck Loader Bin																			\$1,895.00
	Truck Scale																			\$36,352.00
	Water Tank Upper																			\$0.00
	Water Tank Lower																			\$0.00
	Link Canyon Facilities																			\$8,042.00
	Link Canyon Portals																			\$39,150.00
	Link Canyon Substation																			\$2,591.00
	Fourth East Facilities																			\$18,066.00
	Fan Generator Building																			\$2,591.00
	Four East Fan																			\$18,066.00
	Total																			\$1,049,616.00

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost	
	Tipple Building																				
	Structure's Demolition Cost	Steel Bld. Langle	02220 110 0012	0.2 /CF	CF						105056						0.2	105056	CF	21011	
	Rubble's Vol. Demolished																	778	CY		
	Rubble's Weight (exclude steel)																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Non Steel Truck																				
	Transportation Cost Non Steel Drive																				
	Disposal Cost Non Steel																				
	Steel's Weight																				
	Truck's Capacity																				
	Haulage																				
	Transportation Cost Steel Truck	Truck dump 16 ton payload	01590 200 5300	435.96 /day	day										3	CY			49	Trips	
	Transportation Cost Steel Truck Drive	Truck Driver, Heavy	TRW	\$42.00 /HR	HR																
	Disposal Cost Steel																				
	Subtotal																				35594
	Equipment's Disposal Cost																				
	Dismantling Cost																				
	Equipment's Vol. Demolished																				
	Loading Costs																				
	Transport Costs																				
	Disposal Costs																				
	Subtotal																				
	Concrete Demolition																				
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97 /CY	CY						93										369
	Concrete's Vol. Demolished																				
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39 /CY	CY																188
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd.	02315 490 0320	3.44 /CY	CY																418
	Disposal Costs	On site disposal	02220 240 5550	7.6 /CY	CY																820
	Subtotal																				1873
	Concrete Demolition - Sump																				
	Demolition Cost	Concrete demolition	ConcreteDemo1	3.97 /CY	CY						35.5										143
	Concrete's Vol. Demolished																				
	Loading Cost	Front end loader 3 CY	02315 424 1300	1.39 /CY	CY																65
	Transportation Cost	12 CY (16 Ton) Dump Truck 1/2 mi. rd.	02315 490 0320	3.44 /CY	CY																162
	Disposal Costs	On site disposal	02220 240 5550	7.6 /CY	CY																357
	Subtotal																				727
	Concrete Demolition																				
	Demolition Cost																				
	Concrete's Vol. Demolished																				
	Loading Cost																				
	Transportation Cost																				
	Disposal Costs																				
	Subtotal																				
	Total																				36194