LILA CANYON MINOR REVISION 007/013

REDLINE STRIKEOUT
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chapter 1

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116. Permit Term.

116.100. The anticipated starting and termination dates of the coal mining and reclamation operation are as follows:

Phase	Begin	Complete
Mining Pad, Support Structures, and Portals		June 2005 Dec. 2005
Begin Underground work	June 2005	
Terminate Mining	Dec. 2019	

Reclamation operation dates can be found in Table 3-3.

Approximately 5,992.07 surface acres, which include federal, state and private lands are included within the permit area. These surface acres are described in Table 4-2, and coal acres are shown on Table 4-2A.

The perimeter of the disturbed area contains approximately 42.6 surface acres within the disturbed area but only ~~25~~33.~~3~~9 acres will be disturbed leaving ~~17.3~~8.7 acres of undisturbed islands within the disturbed area.

116.200. The initial permit application is for a five year term with anticipated successive five year permit renewals.

116.210 Since the initial permit application is for a term of five years this section does not apply.

116.220 Since the initial permit application is for a term of five years this section does not apply.

117. Insurance, Proof of Publication and Facilities or Structures Used in Common

117.100. The Certificate of Liability Insurance is included as Appendix 8-2.

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chapter 2

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stockpile, reseeding if erosion or other elements cause a loss of vegetation, and maintenance of the ditches and/or silt fence in the stockpile areas.

232. Topsoil and Subsoil Removal

232.100 Prior to topsoil removal, eight five gallon buckets of screened 1/4" cryptobiotic soil will be recovered and stored in a cool dry place for redistribution on the topsoil pile. Topsoil material will be removed from those areas of the mine yard where material will be excavated in order to achieve final yard configuration and which have been identified as suitable topsoil for reclamation based on the soil survey. This includes the access road to and around the topsoil pile. This material will be used to construct a berm around the topsoil pile.

The following volumes represent soil resources that may be available for salvage, storage and subsequent redistribution during reclamation. The actual amount salvaged will be reported to DOGM following topsoil removal and stockpiling operations.

AVAILABLE SOIL RESOURCES

Map Unit	Potential Salvage Depth In.	Potential Acres	Potential Estimated Volume YD3	Actual Salvage Depth In.	Actual Salvaged Acres	Actual Salvaged Top Soil YD3
SBG	48	11.83	76343	18	11.~~25~~61	~~26073~~28100
VBJ	30	9.62	38801	18	3.4~~.510~~	~~9526~~6227
XBS	12	12.09	19505	12	~~4.7073518~~.81	14207
DSH	40	1.56	8389	18	1.~~40329~~116	2809
RBL	8	9.34	10046	8	2.~~59~~17	~~2709~~2340
RBT	6	3.79	3057	6	0.~~77~~56	4~~86~~50
TOTAL(2)		48.23	156141		~~25.30~~27.95	~~50236~~56133
Bank to Loose Cubic Yards *1.18 (Amount topsoil pile is designed to hold.)						~~59278~~66237 (1)

(1) An additional 800 yd^3 will come from the access road around the topsoil pile. This material will be placed in the berm around the topsoil pile.

(2) The 48.23 acres was taken from a soil survey and does not accurately reflect the operators intention to include 42.6 acres of disturbance within the disturbed area boundary.

The actual topsoil salvage will consist of removing a surface layer up to 18 inches thick over the disturbed area. If shale is encountered within 18 inches only the soil above the shale will be salvaged. (Plate 2-3). This would cover about ~~25~~34 acres where soil would be salvaged and stored in the topsoil stockpile.

Total volumes of soil stored in the topsoil pile would be approximately 5~~0~~6,000 bank cubic yards. Removal of stones and boulders would be considered in volume estimates where they are part of the soil layer removed.

The stockpile has been sized to allow for bulking or swell of the soil as it is removed from the bank state to the loose state. A bulking number of 1.18 has been used. The area allowed for topsoil storage is 5~~0~~6,000 bank cubic yards x 1.18 which equals 6~~0~~6,000 loose cubic yards to be placed on the topsoil pile.

Boulders of approximately three feet in diameter and larger will be separated from the topsoil and piled or placed at appropriate locations such as adjacent to roads, pads etc. No attempt will be made to collect the large boulders into common piles. Boulders above ground level are in addition to topsoil volumes and may account for approximately 10,000 cubic yards.

UEI is not stockpiling large stones "boulders". Boulders will be pushed to the side and left during construction and then upon reclamation the boulders will be pushed back into the approximate location form which they came. Rocks of 36" or less will be stored in the topsoil pile with the soil and will be redistributed with the soil.

The approximate 6~~0~~6,000 loose cubic yards of topsoil will be stored in a topsoil pile as shown on Plate 5-2. This topsoil pile will be approximately ~~246'~~350' long and ~~146'~~250' wide with 2:1 slopes. The height of topsoil pile needed is approximately ~~26~~31 feet. The pile as designed has the capability of storing

Lila Canyon
Topsoil
Calculations

Pile Elevation In Feet	Pile Length In Feet	Pile Width In Feet	Volume L X W CYDS	Volume Ends CYDS	Total Volume Cumulative Cubic Yards
	350	250	3240.74		3240.74
1	346	246	3152.44	22.07	6415.26
2	342	242	3065.33	21.78	9502.37
3	338	238	2979.41	21.48	12503.26
4	334	234	2894.67	21.19	15419.11
5	330	230	2811.11	20.89	18251.11
6	326	226	2728.74	20.59	21000.44
7	322	222	2647.56	20.30	23668.30
8	318	218	2567.56	20.00	26255.85
9	314	214	2488.74	19.70	28764.30
10	310	210	2411.11	19.41	31194.81
11	306	206	2334.67	19.11	33548.59
12	302	202	2259.41	18.81	35826.81
13	298	198	2185.33	18.52	38030.67
14	294	194	2112.44	18.22	40161.33
15	290	190	2040.74	17.93	42220.00
16	286	186	1970.22	17.63	44207.85
17	282	182	1900.89	17.33	46126.07
18	278	178	1832.74	17.04	47975.85
19	274	174	1765.78	16.74	49758.37
20	270	170	1700.00	16.44	51474.81
21	266	166	1635.41	16.15	53126.37
22	262	162	1572.00	15.85	54714.22
23	258	158	1509.78	15.56	56239.56
24	254	154	1448.74	15.26	57703.56
25	250	150	1388.89	14.96	59107.41
26	246	146	1330.22	14.67	60452.30
27	242	142	1272.74	14.37	61739.41
28	238	138	1216.44	14.07	62969.93
29	234	134	1161.33	13.78	64145.04
30	230	130	1107.41	13.48	65265.93
31	226	126	1054.67	13.19	66333.78
32	222	122	1003.11	12.89	67349.78
33	218	118	952.74	12.59	68315.11
34	214	114	903.56	12.30	69230.96
35	210	110	855.56	12.00	70098.52

Figure 1

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Chapter 3

into the annual safety training for all employees.

4. Possible restrictions on firearms on the mine site, and restrictions on off road vehicle usage to lesson disturbance.

5. The Operator will ensure that DWR surveys for cliff nesting raptors within proposed facilities areas at least two years prior and one year following construction. The Operator will conduct annual raptor surveys.

   As part of normal mining operation requirements, the Permittee must submit all results of the raptor ~~fly-over~~ surveys to the Division in Annual Reports and must immediately contact the Division, BLM, and USFWS following any raptor survey that shows that eagles are tending nests or nesting. The agencies will immediately coordinate to determine if the Permittee must implement appropriate measures. If the agencies recommend mitigation, the Permittee must submit all plans to the Division for incorporation into Appendix 3 of the MRP.

6. An active golden eagle nest, with young, was documented during the 1999 spring raptor survey. The nest is located in the left fork of Lila Canyon within the 1-mile buffer zone. (See Plate 3-1). A consultation with USF&W, BLM, and UDWR was held in the fall of 1999. Line of site and potential mitigation was addressed during this meeting. The results of this consultation are addressed in Sec 322.220 and the Lila Canyon EA. This nest was not active in 2000, 2001, 2002, or 2003. A survey was not done in 2004. In 2005 nest 946 contained a possibly dead chick. (See Appendix 3-5 for updated inventories)

7. The Operator will adhere to exclusionary periods when initiating construction and final reclamation projects. The exclusionary periods include: raptors (Feb 1 - July 15), Bighorn sheep lambing

(May 1 - June 15), and Pronghorn (May15 - June 20).

In the event of unforeseen changes in construction or mine plans, or in the case of emergency situations that may force the Permittee to conduct activity near or within the 0.5 mile buffer zone of raptor nest and during raptor exclusionary periods (February 1 to July 15 for golden eagles), the Permittee will immediately contact the Division, BLM, DWR, and USFWS. The agencies will immediately coordinate to determine appropriate measures that may include conducting ground surveys, in coordination with DWR, to determine if birds are tending nests or nesting and possibly determine the life stage of the offspring; developing a mitigation plan, in coordination with the agencies, for possible impacts to nests or birds; or ceasing operations until the end of breeding season to avoid 'take'. If the agencies recommend surveys, the Permittee must submit all survey results to the Division in Annual Reports. If the agencies recommend mitigation, the Permittee must submit all mitigation plans to the Division for incorporation into Appendix 3 of the MRP.

The Applicant does not plan to monitor any wildlife species during the life of the operation with the exception of raptors. ~~Helicopter s~~Spring raptor surveys will be conducted at a minimum of a 1-mile radius around any new or potentially disruptive mining activity, 2-years prior and annually after the proposed activity. The Operator will contact the USFWS and the Division immediately following raptor ~~fly-over s~~urveys if raptors are observed tending nests or nesting.

The mine will emphasize their commitment to legal requirements of firearm and off-road vehicle-use by employees. This type of program has been adopted by the operator and will continue throughout the operation. An education program aimed at minimizing potential negative impacts by employees will be presented

Prior to any new surface disturbance a raptor inventory will be conducted to ensure that no raptors or their nests or young would be adversely impacted through any mining or mine related activity. A copy of historical raptor data as well as current survey results are attached as Appendix 3-5.

A one-half mile buffer zone of no new disturbance during critical nesting periods will be maintained during that portion of the year that the nest sites are active.

As part of normal mining operation requirements, the Permittee must submit all results of the raptor ~~fly-over~~ surveys to the Division in Annual Reports and must immediately contact the Division, BLM, and USFWS following any raptor survey that shows that eagles are tending nests or nesting. The agencies will immediately coordinate to determine if the Permittee must implement appropriate measures. If the agencies recommend mitigation, the Permittee must submit all plans to the Division for incorporation into Appendix 3 of the MRP.

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chapter 4

42.6 acres discussed is Section 116.100, Section 542.200, Appendix 5-8. Includes areas of undisturbed within the disturbed area.

Top Soil removal / Actual Disturbance:

~~25~~33.~~3~~86 Acres discussed in Section 232.100" This is the actual area anticipated to be disturbed for the life of the mine.

The permit area for the Lila Canyon mine is depicted on Plate 4-1. Included in this map are: the boundary of the permit area, the area which will include surface facilities, and the new portals. Existing roads, power lines, and railroads are identified. Private, federal, and state ownership are also identified on this plate. Wildlife habitats have been identified on Plate 3-1 and grazing allotment boundaries are depicted on Plate 4-2.

Table 4-1 lists the various owners of land within and around the permit area. The permit area is approximately 5992.07 acres. Within the permit area, 1446.64 acres comprise private land and 289.06 acres comprise state lands. The remaining 4,256.37 acres is federal land owned and managed by the United States Bureau of Land Management (BLM). Table 4-2 describes the surface ownership and Table 4-2A describes the coal ownership of the permit and surrounding area.

Lila Canyon lies within a region identified by the BLM as the Range Valley Mountain Habitat Management Plan Area (U-6-WHA-T4). This region was designated as such by a technical committee comprising state, federal, local government agencies and private citizens. This Habitat Management Plan area was established in September 1991 to provide management for the wildlife species of the area, including federally protected wildlife and plant species, big game, upland and small game waterfowl, unique and limited high value wildlife habitat, and access management. Big game and raptor habitat within the Lila Canyon Mine permit area, along with the Range Valley Mountain HMA, have been identified on Plate 3-1.

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Chapter 5

Red LINE

14) 48-inch Conveyor from Crusher to Loadout Bin
15) ~~48-inch Conveyor~~Drop from Loadout Bin to Truck Loadout
16) Reclaim Tunnel, Escape Tunnel, Fan and Fan House
17) ROM Storage Pile, Coal Stacking Tube
18) Crusher Screen Plant
19) Truck Scale and Loadout
20) Coal Loadout Storage Bin
21) Guardrails
22) Underground Pipes
23) Chain Link Fence

Support Facilities

24) Non-Coal Waste Area
25) Equipment & Supplies Storage Area
26) Topsoil Pile
27) Refuse Pile
28) Sediment Pond
29) Slope Access Road / Portal Access Road
30) Rock Slopes
31) Mine Facilities Road / Truck Loadout Road
32) Office/Bathhouse/Warehouse Asphalt Parking Area
33) Mine Parking
34) Fuel Tanks
35) Powder and Cap Magazines
36) Culvert locations are shown on Plate 7-2.
~~37) Coal pile Road (Slope between the coal pile road and the portal access road will be evaluated after road construction and be labeled either disturbed or undisturbed, as appropriate, on an As-Built site map.~~

A description of new structures and facilities ~~follows~~:

~~**Office/Bathhouse**~~ Office/Bathouse

The office and bathhouse building is shown on Plate 5-2. This building will jointly house all support personnel such as accounting, administration, engineering, and safety and will provide a comfortable office environment for all employees. Bathhouse and toilet facilities will be found for all employees at this location. The bathhouse will proved for a location for underground miners to change from clean street clothes to clothing suitable for underground use. The area will proved showers for employees for use after their scheduled work shifts so they can cleanup prior to returning home.

Both the bathhouse and office buildings will be of prefab construction and will rest on a concrete pad. The pad dimensions will be approximately 150' by 100' by 12". The facility will be designed to accommodate up to ~~145~~200 employees working rotating shifts.

Shop Warehouse

The shop warehouse building is shown on plate 5-2. Parts and supplies consumed during the mining process will be stored in the warehouse to be issued as needed. The shop area will be used to perform minor equipment repairs and overhauls. The shop warehouse will be a prefab modular type building approximately 100' by 150' and will rest on a 4" concrete pad.

Security Shack

The Security Shack shown of Plate 5-2, when used will provide security to the mine site. The security shack will be used primarily at times when the mine is not in production. Security may be provided to protect the public from hazards associated with a mine site and to protect company property from unauthorized use. The security shack will be approximately 10' by 20' by 8'` and will be of prefab construction and will rest on a 4" concrete slab.

Mine Substation

The mine substation will be located as shown on Plate 5-2 will proved power to surface and underground areas of the mine property. The substation will comprise of approximately four transformers setting on a concrete pad approximately 20' by 20' by 12" and fully fenced. The total area of the substation is approximately 40' by 40'. Power will be fed into the transformers at 46 KVA and will be transformed down to usage voltages for both the surface and underground facilities. It is anticipated that voltages of 110, 220, 440 will be used on the surface and 12,470 volts will be utilized underground. The mine substation will be constructed in a way to fulfill all appropriate MSHA regulations.

Underground Power Lines

Within the disturbed area it is anticipated all power lines will be underground. Underground lines will be run where feasible. As builds will be provided. Underground Power Lines will be left in place upon reclamation.

Water Treatment Plant

The water treatment plant is located on the north-east side of the surface facility area. The plant will rest on a 15' by 15' slab. Process water will flow through the treatment plant at which time it will be treated and made suitable for potable water uses. The potable water will be stored in the potable water tank until it is used. The location of the water treatment plant can be found on Plate 5-2.

Potable Water Tank

Water treated by the water treatment plant and intended to be used as potable water will be stored in this 15' diameter by 20' high tank. The tank will set on a 15' by 15' concrete pad designed for adequate support of the tank. The location of the potable water tank can be found on Plate 5-2.

Process Water Tank

Process water, water to be used for mine use or to be treated for potable use, will be stored in this tank. The 15' diameter by 20' high process water tank will rest on a 15' by 15' concrete pad. Process water tank will be filled by using mine discharge water or may be hauled in from off site. The location of the process water tank can be found on Plate 5-2.

Sewer Tank

The sewer tank has been designed to facilitate ~~145~~200 employees working on rotating shifts. The sewer tank will be located under the south end of the office and bathhouse parking area. The location of the sewer tank can be found on Plate 5-2. The design for the Sewer Tank can be found in Appendix 5-4.

Drain Field

The drain field has been designed to facilitate ~~145~~200 employees working on rotating shifts The drain field will be located at a lower elevation and south of the sewer tank. The location of the drain field can be found on Plate 5-2. The design for the drain field can be found in Appendix 5-4.

Ventilation Fan

The ventilation fan will be accessed and installed from underground. The ventilation portal will be driven from underground and broken from inside out. The location of the portal and fan is shown on Plate 5-2. Fan power will

be run underground. Fan access for maintenance and monitoring will be from the underground works. The need for surface fan access is not anticipated at this time, access will be from underground.

60-inch Conveyor from tunnels to Coal Stockpile(Main Conveyor)

The Run of Mine underground belt will provide for a means for coal to be conveyed from the working faces to the run of mine coal storage pile on the surface. The belt will provide capacity to convey to the surface, all coal mined in the underground workings. Preliminary design suggests that the conveyor that extends from the bottom of the rock slopes to the stacking tube at the coal storage area, shown on Plates 5-2 and 5-8, will have the following specifications: 60" wide, speed approximately 700 fpm with a length of approximately ~~320~~810 feet long. Since the ground beneath the conveyor will not be disturbed due to the steepness and remoteness of the area, this conveyor will be completely contained within a tube type structure.

(ROM) Underground Belt from Stockpile to ~~Crusher~~Crusher/ Screen

The Reclaim conveyor will provide for a means for coal to be conveyed from the coal stockpile to the crusher. The belt will provide capacity to convey to the screen and crusher at a ~~rate~~ suitable rate for crushing and screening. Preliminary design suggests that the reclaim conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: ~~48~~60" wide, speed approximately ~~500~~700 fpm with a length of approximately ~~280~~670 feet long. The portions of the conveyor running on the surface will be covered.

~~48~~60-inch Conveyor from Crusher to Loadout Bin

The Loadout conveyor will provide for a means for coal to be conveyed from the crusher to the loadout bin. The belt will provide capacity to convey to the loadout at the same rate as the Reclaim conveyor. Preliminary design suggests that the Loadout conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: ~~48~~60" wide, speed approximately 500 fpm with a length of approximately 2~~1~~30 feet long. The portions of the conveyor running on the surface will be covered.

~~48-inch Conveyor~~Drop from Loadout Bin to Truck Loadout

~~The Truck conveyor~~Coal will ~~provide for a means for coal to~~ be ~~conveyed~~dropped from the loadout bin to the trucks being loaded. The ~~belt~~drop rate will provide capacity ~~to convey t~~o the trucks at a rate suitable for truck loading. ~~Preliminary design suggests that the truck conveyor, shown on Plates 5-2 and 5-8, will have the following specifications: 48" wide, speed will vary with a length of approximately 50 feet long. The portions of the conveyor running on the surface will be covered.~~

Reclaim Tunnel, Escape Tunnel, Fans

Design for the escape and reclaim tunnels is not complete. Standard practice is to construct the tunnels from either concrete or corrugated metal. The reclaim tunnel is approximately ~~275'~~350' long with a 14' diameter. The escape tunnel will be approximately ~~100'~~300' long with a diameter of 4'. Appropriate safety and environmental concerns will be addressed upon detailed design. The preliminary layout is shown on Plates 5-2 and 5-8.

ROM Storage Pile

The run of mine storage pile receives coal directly from the underground works and provides storage for the coal until it is crushed and loaded into trucks for transportation to a unit train loadout. The coal from the underground run of mine belt will be dropped into a stacking tube located in the center of the run of mine storage pile. This tube will help reduce any fugitive dust. The stacking tube will be approximately 80' high and will allow for approximately 2~~7~~00,000 tons of open storage in the run of mine storage pile. The run of mine storage pile is shown on Plates 5-2 and 5-8.

Crusher

The enclosed crusher will crush coal from the 8" minus down to a 2" minus size, at the rate of approximately ~~500~~1000 tons per hour. ~~No screening is anticipated at this time~~The coal will be first screened then the oversized will be crushed. ~~The c~~Crushed coal will ~~leave the crusher and~~ be stored temporarily in a 500 ton storage bin located ~~at~~above the truck loadout. The crusher and screen location~~ is~~s are shown in Plates 5-2 and 5-8.

Truck Scale and Loadout

Coal will be reclaimed from the coal storage bin, weighed and then loaded into coal haul trucks for transportation to the various unit train loadouts. A small loadout shack will be constructed to provide cover and protection for the various equipment and controls need for the coal loading process. The truck scale and loadout are shown on Plates 5-2 and 5-8.

DC-10	55'	18"
DC-11	65'	18"
DC-12	50'	18"
DC-13	30'	24"
DC-14	60'	18"
DC-15	60'	18"
DC-16	60'	18"
DC-17	75'	18"
DC-18	35'	18"
DC-19	40'	18"
UC-1	480'	60"

Guard Rails

Approximately 1,520 feet of Guard rails will be installed on the mine access road according to the detailed engineering plan being prepared. Appropriate MSHA and UDOT requirements will be taken into consideration.

Underground Pipes

Locations of the underground pipes have yet to be determined. Once detailed engineering design is completed the underground pipes will be added to Plate 5-2 or other appropriate Plates. Under ground pipes will be left in place upon reclamation.

Chain Link Fence

Approximately 1,500' of a six foot high chain link fence will be constructed as shown on Plate 5-2. The fence will be constructed to protect the public, and proved security along the section of county road that runs adjacent to the property.

Non-Coal Waste Area

An area for non-coal waste has been identified on Plate 5-2. Non-coal waste such as papers, timbers, cans, and miscellaneous scrap that is brought to the surface will be disposed of in a metal bin or "dumpster" located in the non-coal waste area identified on Plate 5-2. Metal will be separated from other forms of trash for salvage. Material not salvageable will be transported to the East Carbon Development Corporation (ECDC)

dump or other approved disposal site for permanent disposal. Once a dumpster has reached capacity, the full dumpster will be replaced with an empty dumpster, and then the full dumpster will be hauled by a contract hauler to the specified disposal site.

Equipment & Supplies Storage Area

The equipment and supply storage area is approximately 350' by 400'. This storage area will be used to store mine supplies and equipment from the time of delivery until they are needed underground. Supplies such as timbers, bolts, plates, rock-dust, pipes, resin, screens, concrete blocks, steel, cables, and numerous other materials may be stored in this area. Equipment both new and used will be stored in this area. Many various longwall pieces such as shields, pan-lines, shears, chains, head and or tail drives, transformers, belt drives, pumps and numerous other material will be stored in this storage area. This secure area provides for a good storage area for diesel, gasoline, hydraulic, and roadway chemicals. All oil tanks will have appropriately designed berms or retaining walls. The equipment and supplies storage area is shown on Plate 5-2. Any explosives will be stored here according to appropriate MSHA regulations. Rock dust bins will be located in this area.

Topsoil Pile

The topsoil pile has been located on the south west end of the surface facilities. The pile has been designed to contain adequate topsoil for redistribution according to the reclamation plan found in Chapter 5. The proposed location provides for good protection from wind contamination as well as protection from mine related activities. The location of the topsoil pile is shown on Plate 5-2.

Refuse Pile

~~The~~A temporary refuse pile has been designed to provide a location for the storage of underground development waste that is brought to the surface~~ and for any excess slope rock which will be generated and not used as fill. The capacity of the pile is designed for approximately 44,400 yd3 which is in excess of projected needs. The refuse pile design is shown in Appendix 5-7 and shown on Plate 5-2. The areas for the rock slope material and for~~. Any underground development waste~~ are adjacent and conjoining

~~and will be treated as one area or structure~~, other than rock slope material, will be placed in the temporary refuse pile then transported to an approved disposal site. The rock slope material will be used as fill as per Appendix 5-7. The capacity of the temporary pile will only be a few hundred tons. The area for the rock slope material is shown on Plate 5-2.

Sediment Pond

The sediment pond has been design to provide for adequate sediment protection for the project area. All water running off the disturbed area will be routed into the sediment pond for treatment. The sediment pond has been designed according to the appropriate R645 regulations and the designs can be found in Appendix 7-4 and Plate 7-6. Because the sediment pond does not fit into the requirement of 30 CFR 77.216(a) an MSHA number for the proposed pond is not required. The sediment pond is located on the south-west end of the property and shown on Plate 5-2.

Slope Access / Portal Access Road

The slope access road splits off the facility access road near the north-east corner of the equipment and supply storage area, and follows an alignment that takes into consideration grade and direct access. The slope access road will be used to provide access to the rock slopes which in-turn proved access to the underground workings. The slope access road will be used as access for all men, material and equipment need in the mine. Since the slope access road provides for frequent access for men, equipment and materials for a period of six months or longer the slope access road is classified as a primary road and will be paved. The slope access road will be designed, constructed, and maintained according to appropriate R645 regulations. The slope access road is shown on Plate 5-2.

Rock Slopes

Access to the underground workings of the Lila Canyon Mine will be provide by two rock slopes driven from the top of the Mancos shale up-dip to the intersection of the coal seam. One portal will proved for access for men, equipment and material to the mine. The second access slope will contain the run of mine belt line from the underground workings of the mine to the run of mine stock pile. There is a possibility that only one larger slope will be driven and then divided. to provide for two separate entries. The two 1,227 foot long slopes will slope up at approximately 12%, from a starting elevation

of approximately 6150'. The intersection of the coal seam and the rock slope will take place at approximately 6,300 feet elevation. The length of the slopes were minimized by taking advantage of the coal seam dip which is approximately 12% to the east. The rock material removed from the slopes will be used as fill material for the surface facilities. The rock slope material / underground development waste will contain mostly shale, sandstone and mudstone. Traces of coal may be found but the amount will be insignificant. There are no known coal seams or significant rider seams found below the Sunnyside Seam in the Lila Canyon Portal Area. The rock slope locations are shown on Plate 5-2.

Mine Facilities Road / Truck Loadout Road

The mine facility road shown on Plate 5-2 begins at the edge of County Road 164 and allows for access to the various surface facilities. The road has been located in the most practical location taking into consideration grade, stability, and alignment. Employees will use this road to access the office & bathhouse facilities. Coal haul trucks will use this road to access the scales and truck loadout. All supplies will be hauled on a short portion of this road from the supply storage area to the slope access road. The road will be paved during construction of the facilities and before coal ming operations begin in order to to minimize dust and provide good surface for heavy truck traffic as well as facility access. The facility access road will be approximately 24' wide to provide for two lane traffic and will have the appropriate drainage controls to insure long term life and low maintenance. The has been constructed and will be maintained according to the appropriate R645-534 and R645-527 regulations.

~~Coal Pile Road~~

~~The Coal Pile Road is shown on plate 5-2. The Coal Pile Road will be 15' wide and will follow the existing contours approximately 400' from the Portal Access Road to the ROM coal pile. A typical cross section similar to the ancillary road can be found in Appendix 5-4 (Figure 1).~~

~~Office/Bathhouse/Warehouse~~Office/Bathhouse/Visitor Parking Area

Parking will be as shown on Plate 5-2. Parking facilities for office,

mine, and warehouse employees will be provided jointly as shown. This area will also provide parking for all vendors, and visitors. The surface of the ~~150'~~220' by ~~475'~~350' area will ~~initially be graded and graveled but may eventually~~ be paved. The parking area is located and designed to allow for convenient and safe parking of personal vehicles. The sewer tank and drain field will be located on the ~~south~~north end of this parking area.

Mine Parking

A mine parking area will be provided as shown on Plate 5-2. The mine parking area is where all mine and mine related mobile equipment will be parked when on the surface. This is the location where the underground work crews will be loaded into man trips for transportation to the various work areas. The mine parking area will ~~initially be graded and graveled but~~

~~eventually may~~ be paved. The mine parking area will be approximately ~~100'~~70' by 2~~0~~20'.

Fuel Tanks

Fuel tanks will be located in the Equipment & Supplies Storage Area and be installed as discussed under Equipment & Supplies Storage Area. A 1,500 gallon diesel tank, 500 gallon hydraulic tank and a 500 gallon gasoline tank will be needed.

Powder and Cap Magazines

Powder and cap magazines will be mobile temporary, and supplied by the explosive distributer. Upon reclamation the powder and cap magazines will be returned to the distributer.

As per the approved Air Quality Order ~~haul~~all roads will be paved and ~~unpaved roads and~~the pad areas used by mobile equipment will be treated with water or dust suppressant, open stockpiles will be watered as conditions warrant.

521. Included in this section are maps, cross sections, narratives, descriptions and calculations used to satisfy the relevant requirements. This section describes and identifies the lands subject to coal mining and reclamation operations covering the estimated life of the project.

521.100 This application includes the cross sections, maps and plans needed to present the relevant information required by the Division. This information includes the following:

521.110. Plate 5-1 Shows area previously mined and approximate dates of mining.

521.111 Plate 5-1 of part 'B" and 2-2 of part "A" shows the location and extent of known workings of inactive, or abandoned underground mines. The surface portals or mine openings to the surface are shown. Plates 5-1 and 2-2 of part "A" have been prepared and certified by or under the direction of a registered professional engineer.

Doelling lists several coal mines and mining

~~eventually may~~ be paved. The mine parking area will be approximately ~~100'~~70' by 2~~0~~20'.

Fuel Tanks

Fuel tanks will be located in the Equipment & Supplies Storage Area and be installed as discussed under Equipment & Supplies Storage Area. A 1,500 gallon diesel tank, 500 gallon hydraulic tank and a 500 gallon gasoline tank will be needed.

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Doelling lists several coal mines and mining

physically segregated and stockpiled.

522. Coal Recovery

Additional Details can be found in the R2P2 on file at the BLM Office.

Effective barrier and pillar designs are essential for safe and productive underground mining. Barrier pillars will be sized according to accepted engineering practices. One or more of the following methods may be used to properly size barrier pillars: Dunn's Rule, the Old English Barrier Pillar Law, Pennsylvania Mine Inspector's Formula, Ash and Eaton Impoundment Formula, Pressure Arch Method, British Coal Rule of Thumb, North American Method, Holland Rule of Thumb, or Holland Convergent Method.

Regardless of the methods or care taken to properly size barrier pillars the true effectiveness on any design can only be determined by conducting full-scale in-mine performance evaluations. Mine experience and history in the local area will have as much influence on pillar sizes as does the engineering formulas.

Barrier pillars will be utilized to isolate the abandoned Horse Canyon Mine from the new Lila Canyon Mine. Barrier pillars will also be used to simplify ventilation, to provide independent escape routes and to possibly retain large quantities of mine water. Barrier pillars will be employed along the outcrop in order to maintain ventilation courses.

A barrier pillar where no second mining will be allowed within the barrier will be used to protect the escarpments. The width of the escarpment barrier will be determined by implementing a 21.5° angle of draw project downward from the surface to the coal seam. Development mining or first mining will be allowed within the escarpment barrier.

For longwall mining applications the abutment loading is of prime importance. Initial longwall pillars will be designed using the ALPS method. Again mine experience and history in the local area will have as much influence on pillar sizes as does the engineering formulas.

Mine pillars will be sized taking into consideration the coal strength, depth of cover, width and height of pillars using one or more of the following methodologies: Obert-Duvall, Holand-Graddy, Holland, Salamon-Munro, or Bieniawski. Again mine experience and history in the local area will have as much influence on pillar sizes as does the engineering formulas.

526.100 Mine Structures and Facilities.

526.110 The only existing structures are found in Horse Canyon (Part "A" of this permit) and are the remains of the United States Steel operation. Horse Canyon has received phase II bond release and the remaining structures have been left in place for future use. Only three existing structures, a 60" and a 48" CMP culverts located near the new proposed surface facilities, and the County road on top of Little Park, can be found within the Lila Canyon Permit. The existing culvert is shown on plate 5-1A. The existing road on Little Park can be found on Plate 5-1 as well as most other plates showing the surface area of the Lila Canyon Permit. Several vehicle ways will be used for water and subsidence monitoring. These ways branch off the Little Park Road and generally follow the ephemeral drainages. The ways are shown on Plate 5-1 as well as most other plates showing the surface area of the Lila Canyon Permit. More detail of the existing Little Park Road can be found in ~~App.~~Appendix 5-4.

526.111 The location of the existing culverts is shown on Plate 5-1A.

526.112 Most of the existing 48" culvert is outside the permit boundary and is the Counties responsibility. UEI will grade the site so that during reclamation and operations surface flows will be directed away from the 48" culvert. The 60" culvert is in poor condition and will be replaced by the county. UEI will add on to the culvert during the operation and reclamation phase. The bottom 30' is the responsibility of the County, the upper portion is the responsibility of UEI.

526.113 It is believed that the existing culverts were installed with the road construction around 1940.

526.114 Since the existing culvert is going to be removed upon construction of the sediment pond this section does not apply.

526.115 Since the existing culvert is going to be removed

a six foot chain link fence to be constructed adjacent to the Lila Canyon Road to provide safety to the general public in the proximity to the mine site and mine related structures and activities.

526.116.2. At the current time there are no plans to relocate any public road.

526.200 Utility Installation and Support Facilities.

526.210 All coal mining and reclamation operations will be conducted in a manner which minimizes damage, destruction, or disruption of services provided by oil, gas, and water wells, oil, gas, and coal-slurry pipelines, railroads, electric and telephone lines, and water and sewage lines which may pass over, under, or through the permit area, unless otherwise approved by the owner of those facilities and the Division. Since no existing services are found within the projected disturbed area, no negative impact to any service is anticipated.

~~This area Intentionally left Blank.~~

526.220 The new support facilities are described in section 520 and in Appendix 5-4 and shown on plate 5-2 and will be operated in accordance with the mine reclamation plan. Plans and drawings for each support facility to be constructed, used or maintained within the permit area are found in Appendix 5-4, Plates 5-7A, 5-7B, and 5-8.

526.221 The new facilities designs shown in Appendix 5-4 prevents or controls erosion and siltation, water pollution, and damage to public or private property, and:

526.222 The new facilities designs shown in Appendix 5-4 minimizes damage to fish, wildlife, and related environmental values; and minimizes additional

contributions of suspended solids to stream flow or runoff outside the permit area to the extent possible by using the best technology currently available.

Islands of undisturbed areas within the permit area will be visually monitored for coal fines deposition. If monitoring reveals coal fine deposition, then water sprays on the area from which the fines are originating will be warranted as per August 27, 1999 Approval Order.

526.300 Water pollution control facilities consist of sedimentation control and properly designed sewage systems.

The sedimentation control is accomplished by containing all disturbed area runoff in a properly sized sedimentation pond. Complete designs are presented in Appendix 7-4 and on Plate 7-6.

The sewage system will consist of a septic tank and drainfield. The system is shown on Plate 5-2. Complete designs are presented in Appendix 5-4.

The drain field design and layout is shown on plate 5-2~~b~~ and details are shown in Appendix 5-4.

526.400 Since Lila Canyon Mine is an underground operation this section does not apply.

527. Transportation Facilities.

527.100 All new roads within the disturbed area have been classified as primary ~~except for the coal pile road which is used infrequently~~.

527.110 See Sections 527.120 and 527.130.

527.120 The Slope Access Road / Portal Access Road and the Mine Facilities Road / Truck Loadout Road will be used frequently for access for a period in excess of six months, and or will transport coal, they are classified as primary roads.

527.121 See 527.120 above.

527.122 See 527.120 above.

527.123 Since none of the new roads planned within the disturbed area will be retained for an approved postmining land use this section does not apply.

527.130 ~~The Coal Pile Road is used infrequency and will be classified as~~There are no ancillary roads within the disturbed area. .

527.200 A detailed design and description for each road, and conveyor to be constructed used, and maintained within the proposed permit area is included in Appendix 5-4. The roads are show on Plate 5-2.

527.210 The specifications for each road width, road gradient, road surface, road cut, fills, embankments culverts, drainage ditches and drainage structures are shown on Plate 5-2 and in Appendixes 5-4 and 7-4.

527.220 Since no alteration or relocation of natural drainage ways is anticipated this section is not applicable.

527.230 Roads shall be maintained in manner that allows them to meet their design standards throughout their use.

527.240 If any of the roads on the disturbed area is damaged by a catastrophic event, the road will be repaired as soon as practical after the damage has occurred.

527.250 Steep cut slopes or requests for alternative specifications are not anticipated at this time therefore this section does not apply.

528. Handling and Disposal of Coal, Overburden, etc:

A narrative explaining the construction modifications, use, maintenance and removal of coal, overburden, excess spoil and coal mine waste.

528.100 Coal will be mined using continuous miners and longwall equipment. The coal will be transported from the face and deposited on the underground mine belts using shuttle cars or continuous haulage equipment. The coal will be transported by a series of conveyor belts from the section to the run of mine

stockpile. The coal will be removed from the run of mine stockpile by a reclaim belt to an enclosed ~~crusher~~crusher/screen. Once crushed the coal will be conveyed to a storage bin from which it will loaded in to coal haul trucks for transportation to a unit train loadout.

528.200 Overburden: Lila Canyon is an underground operation and it is not anticipated that any material that overlays the coal seam, consolidated, or unconsolidated, other than topsoil, will be disturbed. Therefore, this section does not apply.

528.300 Spoil, coal processing waste, mine development waste, and noncoal waste removal, handling, storage, transportation, and disposal areas and structures are discussed below.

528.310 Excess Spoil: Since Lila Canyon is an underground operation it is not anticipated than any spoil will be generated. Therefore this section does not apply.

528.320 Coal Mine Waste: Coal processing waste and underground development waste brought to the surface, will be placed in disposal areas within the permit area which are approved by the Division for this purpose. Rock removed from the access slopes will be placed in the ~~refuse pile~~rock slope material disposal area. Portions of this material, not containing coal, will be used as structural fill for the shop/warehouse. ~~The areas for the rock slope material and for underground development waste are adjacent and conjoining and will be treated as one area or structure. The refuse pile is~~The temporary refuse pile and slope rock disposal area are shown on Plate 5-2 and in Appendix 5-7.

528.321 Coal processing waste produced from the crusher will not be returned to any abandoned underground workings. Any and all of the coal processing waste from the crusher will be deposited in the temporary refuse pile shown on plate 5-2 and in Appendix 5-7 and then transported to UEI's Wildcat loadout for permanent disposal.

528.322 Refuse Piles. Each pile will meet the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215,

meet the design criteria of R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-536.900, R645-301-542.730, R645-301-553.250, R645-301-746.100, R645-301-746.200, and any other applicable requirements.

528.323 Burning and Burned Waste Utilization.

528.323.1. Coal mine waste fires will be extinguished by the person who conducts coal mining and reclamation operations, in accordance with a plan approved by the Division and MSHA. The plan will contain, at a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedures to be used, will be involved in the extinguishing operations. The coal mine waste fire plan can be found in Appendix 5-3. MSHA approval is not required unless you have an actively burning fire. (Phone conversation with Billy Owens MSHA Denver 5/31/05)

528.323.2. No burning or burned coal mine waste will be removed from the permitted disposal area.

528.330 Noncoal Mine Waste.

528.331 Noncoal mine wastes including, but not limited to, grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustible materials generated during mining activities will be placed and stored in a controlled manner in a designated portion of the permit area. The noncoal mine waste will be placed in dumpsters and emptied on a as needed basis. The designated noncoal waste area is shown on Plate 5-2.

R645-301-358, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645-301-542.600, R645-301-542.600, and R645-301-762, any necessary design criteria established by the Division, and the following requirements. Primary roads will:

534.310 The roads will be located insofar as practical, on the most stable available surfaces.

534.320 The roads will be surfaced with rock, crushed gravel, asphalt, or other material approved by the Division as being sufficiently durable for the anticipated volume of traffic and the weight and speed of vehicles using the road;

534.330 The roads will be routinely maintained to include repairs to the road surface, blading, filling potholes and adding replacement gravel or asphalt. It will also include revegtating, brush removal, and minor reconstruction of road segments as necessary.

534.340 Culverts if required will be designed, installed, and maintained to sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles using the road.

535. Spoil: It is anticipated that no spoil will be produced at the Lila Canyon Mine therefore this section is not applicable.

536. Coal Mine Waste: The proposed Lila Canyon Mine will produce 2 separate types of coal mine waste:

1. Normal coal processing waste or refuse and;
2. Underground development waste~~.~~

~~Disposal of each of the 2 types of coal mine waste will be the same and both type will be deposited in the refuse storage area shown on plate 5-2.~~

(rock slope material).

The rock slope material / underground development waste will be examined and tested as necessary to determine acid- or

toxic-forming potential.

Coal Processing waste and any underground development waste containing too much coal to leave underground, will be disposed of in the refuse storage area as described further in this chapter and in Appendix 5-7.

It is not anticipated that any underground waste other than the rock slope material / underground development waste will be brought to the surface. Coal processing waste and underground development waste brought to the surface will be placed in a controlled manner and have a design certifications describe under R645-301-512 if appropriate.

536.100 The refuse pile at Wildcat has been designed using current prudent engineering practices and will meet design criteria established by the Division. ~~See Appendix 5-7.~~

536.110 The refuse pile will be designed to attain a minimum long-term slope stability safety factor of 1.5. See Appendix 5-7.

536.120 The refuse pile will be constructed on natural ground once the topsoil has been removed according to section 230.232. There are no underground mine workings in the immediate area of the refuse pile. All mine workings are found at a higher elevation than the refuse pile.

536.200 Underground development waste brought to the surface and coal processing waste deposited in the refuse pile will be deposited according to the plan described in Appendix 5-7.

536.210 Refuse Pile construction described in Appendix 5-7, will ensure mass stability and prevent mass movement during and after construction;

536.220 Refuse Pile construction per the plan in Appendix 5-7 will not create a public hazard; and

536.230 Will prevent combustion.

536.300 Since no spoil fills will be generated this section does not apply.

536.400 Since there will not be any impounding structures constructed of coal mine waste this section does not apply.

536.500 As discussed in Section 536 and 536.300, it is proposed to dispose of the rock slope material / underground development waste within the ~~refuse~~rock disposal area and be used as structural fill as shown on Plate 5-2.

536.510 It is not anticipated that coal mine waste ~~will~~materials from activities located outside the permit area be disposed of in ~~any area off~~ the permit area.~~-~~ Therefore this section does not apply.

536.520 It is not anticipated that coal mine waste will be ~~disposed of in any area off the permit area. Therefore~~brought to the surface then taken back underground for disposal therefore this section does not apply.

536.600 In areas where slope rock or coal processing waste is deposited, the topsoil will be removed and stored in the topsoil stockpile area until reclamation.

536.700 It is not anticipated that coal processing waste will be returned to abandoned underground workings therefore this section does not apply

536.800 Since no coal processing waste banks, dams, or embankments are planned for the Lila Canyon Mine therefore, this section does not apply.

536.900 Refuse Piles. (See Appendix 5-7) The refuse pile is designed to meet the requirements of R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.322, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-536.900, R645-301-542.730, R645-301-553.250, R645-301-746.100 through R645-301-746.200, and the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215.

537. Regraded Slopes.

537.100 Each application will contain a report of appropriate geotechnical analysis, where approval of the Division is required for

alternative specifications or for steep cut slopes under R645-301-358, R645-301-512.250, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645-301-534.300, R645-301-542.600, R645-301-742.410, R645-301-742.420, R645-301-752.200, and R645-301-762.

540. Reclamation Plan. (See Appendix 5-8 for reclamation plan.)

541. General.

541.100. The operator is committed to performing all reclamation as in accordance with R645 rules.

541.200. N/A. The operator is not involved in surface mining activities.

541.300. The operator is committed to the removal of all equipment facilities and structures upon cessation of mining activities.

541.400. The operator will address all reclamation activities as referenced in Chapter 5 of this document.

542 Narratives, Maps and Plans.

542.100. See Table 3-3 time table based on project reserves markets and life of mine.

542.200. The perimeter of the disturbed area contains approximately 42.6 surface acres within the disturbed area but only ~~25~~33.~~3~~86 acres will be disturbed leaving ~~17.3~~8.74 acres of undisturbed islands within the disturbed area.
The following R645 regulations will give detailed description and reclamation procedures to address these areas of disturbance. The reclamation plan for the sediment pond and drainage control structures can be found in Appendix 7-4.

Topsoil amounts can be found in Section 232.100 and

542.700. Final Abandonment of Mine Openings and Disposal Areas.

542.710. Appendix 5-6 depicts a typical seal that will be constructed at all mine openings.

542.720. No excess spoil is anticipated at this time.

542.730. All coal mine waste will be placed in the waste disposal area as shown on Plate 5-2 or sent to the Wildcat loadout, and reclaimed in accordance with R645 regulations.

542.740. Disposal of Noncoal Mine Wastes.

542.741. All non coal waste will be temporarily stored on site in approved waste bins and commercially picked up and transported to an approved disposal site. Non Coal waste generated during reclamation (such as concrete structure, buried culverts, utility lines, septic systems etc.) will be buried in the refuse disposal area and covered with a minimum of four feet of fill.

542.742. No noncoal waste will be stored on site or disposed of on site during the life of the mine.

542.800. A detailed cost break down is included in Chapter 8. Appendix 8-1 relative to bonding.

550 Reclamation Design Criteria and Plans. Each permit application will include site specific plans that incorporate the following design criteria for reclamation activities.

551. All underground openings will be sealed as detailed in Appendix 5-6.

552. Permanent Features.

552.100. In course of reclamation, areas that have been

553.140 Erosion and water pollution will be minimized on site by the use of drainage control structures (burms, channels and silt fence) and the use of small depression, soil tackifiers, mulch and sediment pond design. No water is anticipated leaving the reclaimed site prior to adequate treatment in the form of retention and/or filtration that does not meet and/or exceed UPDES standards.

553.150 The post mining land use of wildlife and domestic grazing should be enhanced to some degree with the revegetation of a more desirable seed mix and a vegetative cover in excess of what was present premining.

553.200 Spoil and Waste.

553.210 All underground development waste brought to the surface and coal processing waste generated on the surface as a result of coal processing will be placed in the coal mine waste (~~refuse~~rock slope material) disposal area or shipped to Wildcat loadout, and reclaimed in accordance with R645 regulations.

553.220 Since no spoil will be produced this section does not apply.

553.221 All vegetation and /or organic material will be removed prior to any coal mine waste being stored.

553.222 All useable topsoil or topsoil substitute will be removed from the structural fill and refuse areas prior to use. Table 2-1 shows estimates of salvageable soil by soil type based on current NRCS soil inventories. The location of the soil storage are shown on Plate 5-2. This material will be spread over the recontoured structural fill and refuse areas prior to seeding and mulching.

553.223 Since no spoil will be produced this section does not apply.

553.230 All recontoured areas will be compacted to minimize slippage. The area will then be over laid with topsoil and ripped. In addition the area will be "pock-marked" to minimize the potential for erosion as well as enhance revegetation establishment. It is not anticipated that soil will be disturbed in areas to steep for equipment to operate.

553.240 The ~~refuse and s~~tructural fill area~~s~~ will have slopes of less than 8% upon final recontouring and revegetated to enhance the post mining land use of grazing and wildlife habitat.

553.250 The refuse pile (rock slope disposal area) design is shown in appendix 5-7.

553.260 The operator will commit to all applicable R645 regulations relative to disposal of coal processing waste.

553.300 Any combustible materials or acid and toxic forming materials exposed used or produced during mining will be disposed of in the refuse disposal area at Wildcat and treated as refuse. This material will be covered by four feet of fill. Noncoal waste will be disposed of as described in Section 528.331.

553.400 Cut-and-fill terraces may be allowed by the Division

553.410 No cut and fill terraces will be required.

553.420 No terraces will be required for post mining land use.

553.500-540 and 553.600-553.650.500

The only area that falls under these provisions are the reclaimed Horse Canyon mine which lies in the north west portion of the lease area and is addressed under approved MRP Act #0013 (Part "A").

553.223 Since no spoil will be produced this section does not apply.

553.230 All recontoured areas will be compacted to minimize slippage. The area will then be over laid with topsoil and ripped. In addition the area will be "pock-marked" to minimize the potential for erosion as well as enhance revegetation establishment. It is not anticipated that soil will be disturbed in areas to steep for equipment to operate.

553.240 The ~~refuse and~~ structural fill area~~s~~ will have slopes of less than 8% upon final recontouring and revegetated to enhance the post mining land use of grazing and wildlife habitat.

553.250 The refuse pile (rock slope disposal area) design is shown in appendix 5-7.

553.260 The operator will commit to all applicable R645 regulations relative to disposal of coal processing waste.

553.300 Any combustible materials or acid and toxic forming materials exposed used or produced during mining will be disposed of in the refuse disposal area at Wildcat and treated as refuse. This material will be covered by four feet of fill. Noncoal waste will be disposed of as described in Section 528.331.

553.400 Cut-and-fill terraces may be allowed by the Division

553.410 No cut and fill terraces will be required.

553.420 No terraces will be required for post mining land use.

553.500-540 and 553.600-553.650.500

The only area that falls under these provisions are the reclaimed Horse Canyon mine which lies in the north west portion of the lease area and is addressed under approved MRP Act #0013 (Part "A").

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Appendix 5-4

long term to minimize dust and provide good surface for heavy truck traffic as well as facility access. The facility access road will be approximately 24' wide to provide for two lane traffic and will have the appropriate drainage controls to insure long term life and low maintenance. The has been constructed and will be maintained according to the appropriate R645-534 and R645-527 regulations.

New Slope Access / Portal Access Road

The slope access road splits off the facility access road near the north-east corner of the equipment and supply storage area, and follows an alignment that takes into consideration grade and direct access. The slope access road will be used to provide access to the rock slopes which in-turn proved access to the underground workings. The slope access road will be used as access for all men, material and equipment need in the mine. Since the slope access road provides for frequent access for men, equipment and materials for a period of six months or longer the slope access road is classified as a primary road. The slope access road will be designed, constructed, and maintained according to appropriate R645 regulations. The slope access road is shown on Plate 5-2.

~~Coal Pile Road~~

~~The Coal Pile Road Is shown on plate 5-2. The Coal Pile Road will be 15' wide and will follow the existing contours approximately 400' from the Portal Access Road to the ROM coal pile. The Coal Pile Road is an ancillary road due to its infrequently used by a front end loader or pickup truck.~~

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APPENDIX 5-7

LILA CANYON MINE

ROCK SLOPE MATERIAL
(Refuse Pile)

~~Some of the Information for Appendix 5-7 is hard copies. Electronic copies do not exist for all information contained within the Appendix.~~

Appendix 5-7
Rock Slope Material
(Refuse~~ Pile~~)

General

The proposed Lila Canyon Mine includes a site and plan for permanent disposal of coal refuse~~, as shown on Plate 5-2.~~ and rock slope materials. Permanent disposal of refuse, other than rock slope material, will be at UtahAmerican Energy's Wild Cat Loadout. Wild Cat has a designed, approved, permanent refuse pile which serves all of UtahAmerican's Mines. Plate 5-2 shows the location of both a temporary refuse pile (rock pile) and the location where the rock slope material will be buried. Although washing of coal is not proposed, it is likely that some coal processing waste will be generated by the operation of the screening plant and from the mine itself. ~~Additional~~The rock slope material (refuse) will be generated by the construction of the rock slopes.

~~Since coal washing is not proposed, the refuse will not contain consolidated reject, which is higher in sulfur. The refuse pile is completely incised and will be compacted and covered with 4' of material. Thus eliminating the potential of water percolation causing problems. Drainage over the compacted pile with 4' of cover will be diverted into the sediment pond.~~ Under ground coal mine waste (refuse), other than the rock slope material, will be temporarily stored in the location shown on Plate 5-2. Once enough material has been collected in the temporary refuse pile, the material will be transported by truck to UEI's Wild Cat Loadout or other approved location, for permanent disposal.

The rock slope work will generate approximately 168,6560 bank cubic yards of underground development waste (rock slope material). Using a 1.5 bulking or swell factor, the total amount of loose yard of rock slope material to be disposed of in the refuse area is estimated to be 258,000 yd^3. ~~See Figure 1, Appendix 5-7 for cross sections of the refuse area and Table 1 for potential refuse storage volumes.~~

The amount of coal processing waste that will be generated by the operation of the screening plant and from the mine itself~~. The amount of coal processing waste or refuse expected to be generated by this operation~~ is difficult to predict but expected to be very insignificant.

The shop/warehouse will be constructed on the material removed from the rock slopes which will contain a very insignificant amount of coal, if any. Under no circumstances will the material removed from the rock slopes contain enough combustibles to induce or continue combustion. In addition the material will be covered with four feet of

compacted incombustible material making the fire hazzard to the shop/warehouse non existing.

~~Table 1~~
~~Lila Canyon Mine~~
~~Rock Slope - Refuse Storage Area~~

~~X-Section Topsoil Ft2Cover Material Ft2SlopeRock or Refuse Ft2Topsoil VolumeYd3 to PileCover Material Volume Yd3SlopeRock or Refuse Yd3Total Top Soil to Pile Yd3Total Cover MaterialTotal Refuse4+000005+00180300776333.33555.5561437.04333.3555.614376+00315475148291 6.671435.194181.4812501991561 97+0031254514051161.11888.895346.324113880109658+0048770025121479.62305.567253.7389161851821 99+0046978730571770.42753.7103135661893928531 10+0043978727661681.482914.8110783.37343118543931511+00000812.9631457.415122.2281561331144437~~

~~**NOTE:**~~

~~**Gray area depicts the area of rock slope material. The remainder has been designated for coal processing waste.**~~

~~As can be seen by Table 1 the area identified for refuse disposal is large enough to dispose of approximately 44,437 yd³ of material. The rock slope material is expected to take up approximately 25,000 leaving approximately 19,500 yd³ capacity for future underground mine waste and coal processing waste production.~~

~~The~~ The rock slope disposal site will ~~be comprised of two separate sections. The first section (Structural Fill) will be comprised of~~contain the rock from the rock slopes and will not contain any coal. The ~~Structural Fill~~rock slope disposal site will not require an MSHA number. ~~The second section (Refuse Site) will be for the disposal of coal mine waste.~~

The following sections will describe the ground preparation, ~~refuse~~ placement, and reclamation procedures for the ~~refuse area~~rock slope material. All the ~~refuse~~rock slope material will be placed in an incised area.

Ground Preparation

Vegetation and topsoil will be removed from the proposed ~~refuse site~~rock slope storage area and stored in the topsoil pile as shown on Plate 5-2~~ and Figure 1, Appendix 5-7. Subsoil will then be removed from the area as shown on Figure1~~. The subsoil will be pushed to the side using the blade of a caterpillar. The hole that is made by pushing the

subsoil to the side will be filled by refuse material~~, either~~ from the rock slope development~~ and or coal processing waste or underground development waste as per Figure 1~~.

Placement of Rock Slope Material (Refuse)

~~Refuse~~Rock slope material (refuse) will be dumped into the hole created from the removal of the subsoil. The refuse will be placed in the hole ~~as per Figure 1. The refuse will be placed~~ in 12" lifts and compacted using a front end loader. Once the hole is filled to the planned level ~~shown in Figure 1~~ the subsoil will ~~then~~ be placed over the top of the refuse in 12" lifts and compacted with a front end loader, then another hole will be constructed by removing subsoil adjacent to the previous hole. The topsoil removal and storage, subsoil removal, hole being filled with refuse, and subsoil replacement, procedure will be repeated as additional refuse disposal area is needed.

The dumping (placing) of refuse into a prepared hole is NOT the same as "end dumping". End Dumping is defined by the Bureau of Mines as "Process in which earth is pushed over the edge of a deep fill and allowed to roll down the slope."

Refuse Testing

Material from the rock slope portals will be tested ~~five~~three times during their development. The first test will be during the initial startup of the rock slopes~~. T~~, the second~~, third and fourth tests will be when the development reaches 1/4, ½, and 3/4 of the construction phase. The~~ approximately midpoint of the slopes, and the last test will be taken near the completion of the slope project.

~~Material placed in the refuse pile from normal mining operations will be tested approximately every 6,000 tons.~~ Testing parameters for the rock slope material ~~and normal mining refuse~~ will be as per Table ~~2~~1.

Spreading and Compaction

Compaction will take place using a wheeled loader during the filling operation. Upon final reclamation the topsoil will be redistributed over the ~~refuse~~rock slope storage area (refuse) and reclaimed as per chapter 3. The total cover over the ~~refuse~~rock slope material area, when considering the subsoil and topsoil, will be a minimum of 4'.

Pile Configuration and Drainage

The hole created for the ~~refuse~~rock slope material will be filled with ~~refuse~~the slope rock. The subsoil will be redistributed and graded to allow drainage and prevent impoundment of water on the pile. Runoff from the rock slope storage area (refuse~~ pile~~) will ~~drain to~~be directed into the ~~s~~Sediment ~~p~~Pond as shown on Plate 7-5. ~~A berm will be placed along the perimeter of the pile to direct runoff into the Sediment Pond.~~

~~A projected plan and section view of the refuse disposal area is shown on Figure 1 of this Appendix.~~

Site Inspection

The rock slope material storage area (refuse~~ disposal area~~) will be inspected under the supervision of a qualified registered professional engineer during construction; this will continue until the area has been graded, covered, and reseeded. Inspections will include observations of any potential safety hazards, to assure that organic material and topsoil is removed before deposition and that construction and maintenance are being performed in accordance with the design plan.

If such inspection discloses a potential hazard, the inspector will immediately notify the regulatory authority of the hazard and the emergency procedures to be implemented.

~~Copies of the inspection reports will be maintained and available for review.~~

Reclamation

Upon completion of the active mining operation, the topsoil will be redistributed over the previously placed subsoil. Finally, the rock slope material disposal area (refuse) area will be covered with topsoil and seeded according to the approved plan. Runoff from the reclaimed ~~refuse pile~~disposal area will continue to flow to the sediment pond until Phase II Bond Release requirements for the reclaimed site are met.

Factor of Safety

Using Geosystems Software SB-Slope Version 3.0 stability analysis for the refuse pile ~~were run. Calculations were made at cross section 8+00. At this location the refuse depth would be at a maximum. To minimize Factor of Safety,~~was run. To minimize the factor of safety, the minimum strength materials with maximum densities were used in these calculations. Under these conditions the minimum Factor of Safety was 16.19.

TABLE ~~2~~1

Rock Slope Material

List of
Test Parameters for Acid & Toxic Material
(As per personal conversation with Priscilla 12/29/04)

Ph
EC
SAR
Available Boron
Soluble Selenium
Acid Base Potential
Texture
Water Holding Capacity
Total Nitrogen
Nitrate as Nitrogen
% Organic Carbon

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Chapter 5
Appendix 5.8

Reclamation and Enhancement Plan Associated with the Lila Canyon Mine Site

I. Description of Existing Area

The Lila Canyon Mine constitutes approximately 42.6 acres within the disturbed area boundary. For the purpose of reclamation, the total area is divided into two units. The upper unit consists of the water treatment area and the portal pad. The lower unit consists of the majority of the facilities; bath house, parking, shop, and coal handling structures, (See Plate 5-2 Surface Facilities). In addition to the above, there is a spoil/refuse disposal area and a sediment pond. The actual disturbance, pads, silos, coal processing structures, parking constitute a total of ~~25~~33.~~3~~86 acres. The pond is the only structure that will remain through phase 2 bond liability.

This new disturbance constitutes a loss of approximately 40 acres of critical high value big game winter range. In addition, it distracts from the general aesthetics of the upper reaches of Lila Canyon.

The following reclamation plan is designed to rehabilitate this area to such a degree that the appearance would be aesthetically compatible with the adjacent undisturbed area and reestablish a desirable and diverse vegetative cover that will enhance wildlife habitat and domestic grazing.

II. Demolition and Clean Up

After abandonment the area will be cleared of all mine related material and structures. The majority of the coal handling equipment; belt lines, conveyors, and some of the metal fab buildings, will be sold as used equipment and removed prior to demolition. The balance of the structures will be demolished utilizing heavy equipment such as; dozers, loaders, trackhoes, various shears for steel dismantling etc. The trash (non metal, non concrete material) will be removed from the site and hauled to an approved land fill. Any contaminated soil or debris, such as coal refuse, that has petroleum additives would be hauled to an approved disposal site. The balance of the non-combustible, non-ferrous debris such as concrete would be buried on site.

All material with salvage value would be removed by a licensed salvage company.

III. Reclamation Plan

Following the cessation of mining, the portal cuts can be brought back to approximate original contours.

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chapter 7

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contact between the rock slopes and the coal seam will be 1227' from the surface at an elevation of 6300'. Ground water levels in the mining area, based on the 3 water monitoring

holes and other geologic data, appear to be nearly static at elevation 5990 in this area (see Figure 7-1).

Water level in the mine would have to raise approximately 310' to reach the rock slope/coal seam contact and result in a gravity discharge. Water monitoring results and other historical data in the area do not indicate this is likely to occur.

731.522 Surface Entries after January 21, 1981 This is not known to be an acid-producing or iron-producing coal seam; however, proposed portals are located to prevent gravity discharge from the mine (see Section 731.521).

731.600 Buffer Zones All streams within the permit area are either ephemeral or intermittent by rule with ephemeral flow. In the area of the surface facilities along the intermittent by definition Lila Wash, the Operator will install stream buffer zone signs in locations shown on Plate 5-2 and maintain the buffer zones during the operation.

731.700 Cross Sections and Maps The following is a list of cross-sections and maps provided in this section of the P.A.P.

Plate 7-1	Permit Area Hydrology Map
Plate 7-2	Disturbed Area Hydrology/Watershed
Plate 7-3	Water Rights Locations
Plate 7-4	Water Monitoring Location Map
Plate 7-5	Proposed Sediment Control Map
Plate 7-6a	Proposed Sediment Pond #1
Plate 7-6b	Proposed Sediment Pond #2
Plate 7-7	Post-Mining Hydrology

All required maps and cross-sections have been prepared by, or under the supervision of, and certified by a Registered Professional Engineer, State of Utah.

731.710 General Area Hydrology Plate 7-1.

731.720 Plate 7-2.

731.730 Water Monitoring Map Plate 7-4.

731.740 Sediment Pond Map Plate ~~7-6~~s 7-6a and 7-6b.

731.750 Plate ~~7-6~~7-6a & b.

731.760 Other Maps (See Section 731.700 for a complete list of maps provided in this section).

731.800 Water Rights and Replacement (See Section 727)

732. Sediment Control Measures

732.100 Siltation Structures The only proposed siltation structure for this site is the sediment pond. All disturbed area runoff is proposed to be directed to this pond for final treatment prior to discharge.

The sediment pond will be constructed and maintained in compliance with applicable regulations. Details of the proposed pond are discussed in the following section and in Appendix 7-4.

732.200 Sedimentation Ponds As discussed above, all disturbed area runoff is proposed to be directed to a sediment pond for final treatment prior to any discharge. The proposed sediment pond will be located at the low point of the disturbed area, as shown on Plate 7-5.

732.210 Sediment Pond Details The proposed sediment pond is considered temporary, and will be removed during final reclamation. The pond is designed in compliance with the requirements of the following sections, as required:

culverted crossings over ephemeral drainages. There are no plans to alter or relocate any intermittent or perennial drainages in conjunction with road construction.

Road construction and design details are provided in Chapter 5 of this P.A.P. Road drainage and culvert design details are provided in Appendix 7-4.

732.420 Culverts Culvert details are provided in Appendix 7-4. All undisturbed culvert inlets will be provided with headwall protection, consisting of inlet sections, rock or concrete.

733. Impoundments The only water impoundment proposed for this site is the sediment pond. Design details for the pond are provided in Appendix 7-4 and on Plate~~7-6s~~ 7-6a &b.

733.100 General Plans The general plan for this site is to drain runoff from the disturbed area into a single sedimentation pond for treatment prior to discharge. Site drainage and design details are described in Appendix 7-4. The general plan includes the following, at a minimum:

733.110 Certification The sediment control plan and proposed sediment pond designs have been prepared and certified by a Registered Professional Engineer, State of Utah.

733.120 Maps and Cross Sections Sediment pond locations, design plans and cross sections are provided on Plates 7-5 and ~~7-6~~7-6a & b, respectively.

733.130 Narrative A complete description of the proposed sediment pond along with volumes and design/construction details in provided in Appendix 7-4.

733.140 Survey The proposed sediment pond is not located within a potential subsidence area from past underground mining operations.

733.150 Hydrologic and Geologic Information Relevant hydrologic and geologic information for the sediment pond is provided in Appendix 7-4.

742.110 Designed/Constructed/Maintained Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to:

742.111 "Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area;"

This will be accomplished by the construction of undisturbed diversions to allow most undisturbed runoff to by-pass the site and by routing all disturbed runoff to ~~a~~ sediment ponds for treatment prior to discharge.

742.112 "Meet the effluent limitations under R645-301-751;"

Any discharge from the sediment ponds will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.

742.113 "Minimize erosion to the extent possible:" This will be accomplished by proper routing of drainage, and by the use of energy dissipators and/or erosion protection at all sediment pond, ditch and culvert outlets and in ditches where erosive velocities are expected.

742.120 Sediment Control Measure Sediment control measures within and adjacent to the disturbed areas are detailed in Appendix 7-4. These measures include, but are not limited to:

742.121 As discussed in Appendix 7-4, runoff from the disturbed area will be captured in ~~a~~ sediment ponds and/or treated as necessary to meet effluent limitations prior to discharge.

742.122 As discussed in Appendix 7-4, the majority of undisturbed drainage from above the mine site will be diverted via designed undisturbed diversions.

742.123 Undisturbed diversions will consist of properly designed and protected channels and/or culverts as described in Appendix 7-4.

742.124 The primary means of velocity reduction is planned to be the use of rip-rap; however, other methods such as straw dikes, check dams and/or vegetative filters may be employed during the operational or reclamation phases as determined necessary, and with Diversion approval.

742.125 There are no plans to treat runoff with chemicals. Based on extensive experience with runoff in this area, effluent requirements for discharge can normally be met by containment and settling in a sediment pond.

742.126 It is expected that water will be encountered in the underground mining; however, this water will be used for mining needs and only discharged when no further storage is available underground. Any discharge of mine water will meet applicable effluent limitations. Such water will be sampled (and treated if necessary) prior to discharge.

742.200 Siltation Structures As described in Appendix 7-4 the sediment ponds will provide for sediment removal for most of the surface facility disturbance. An alternate sediment control method of berms and silt fences will be used at the fan site. The description of this alternate sediment control method is also described in Appendix 7-4. This is necessary due to its remote location and rough terrain. Other sediment structures that might be used around the surface facilities are temporary sediment traps such as straw dikes and/or catch basins.

742.210 General Requirements Siltation structures will be designed, constructed and maintained in accordance with the following regulations.

742.211 Siltation structures will be constructed using the best technology currently available to prevent additional contributions of suspended solids and sediment to streamflow outside the permit area to the extent possible. Sediment control structures and details are discussed in Appendix 7-4.

742.212 The siltation structures (i.e. sediment ponds) will be constructed prior to any coal mining and reclamation operations. Upon construction, the ponds and any other siltation structures will be certified by a qualified registered professional engineer to be constructed as designed and approved in the reclamation plan.

742.213 The sediment ponds will be designed, constructed and maintained in accordance with all applicable regulations. See 732.200, 733.200 and Appendix 7-4 for details.

742.214 Any discharge of water from underground workings to surface waters will meet applicable effluent limitations of 751. If such water is found not to meet those requirements, the water will be treated underground prior to discharge, or passed through a siltation structure prior to leaving the permit area.

742.220 Sedimentation Ponds The sedimentation ponds will meet the following criteria:

742.221.1 The ponds will be used individually;

742.221.2 The pond~~is~~s are located at the lower end of the disturbed area and out of any perennial stream (See Plate 7-5);

742.221.3 The sediment ponds will be designed, constructed and maintained to:

742.221.31 The pond~~is~~s are designed to contain the runoff from a 10 year - 24 hour precipitation event for the area in addition to a minimum of 2 years of sediment storage.

742.221.32 The pond~~is~~s are designed to provide a minimum of 24 hour retention of the runoff from a 10 year - 24 hour precipitation event.

742.221.33 The pond~~ iss~~ are designed to contain the runoff from a 10 year - 24 hour precipitation event plus a minimum of 2 years of sediment storage.

742.221.34 A nonclogging dewatering device~~ iss~~ are proved as described in Appendix 7-4.

742.221.35 This will be accomplished by proper design, construction and maintenance of the ponds as described in Appendix 7-4.

742.221.36 As discussed in Appendix 7-4, sediment will be removed when the level reaches the 2 year storage level. Since the pond is oversized, this leaves adequate room for storage of the design event.

742.221.37 The sediment ponds construction ensures against excessive settlement. See "Sediment Pond Construction Requirements" in Appendix 7-4.

742.221.38 Sediment ponds will be free of sod, large roots, frozen soil, and acid- or toxic~~-~~forming coal processing waste. See "Sediment Pond Construction Requirements" in Appendix 7-4.

742.221.39 The sediment ponds will be compacted properly. See "Sediment Pond Construction Requirements" in Appendix 7-4.

742.222 Sediment Ponds Meeting MSHA Criteria The proposed ponds do~~es~~ not meet the size or other qualifying criteria of MSHA, 30 CFR 77.216(a). Therefore, this section is not applicable.

742.223 Sediment Ponds Not Meeting MSHA Criteria As discussed in Appendix 7-4, the ponds will be equipped with ~~a~~ principle spillway ~~culvert~~ and ~~an open channel~~emergency spillway culverts each sized to safely discharge runoff from a 25 year - 6 hour precipitation event.

742.223.1 The Principle Spillway ~~culvert is~~ culverts and the Emergency ~~Overflow C~~Spillway culverts will be corrugated, metal pipe. Each one designed to carry sustained flows.

742.223.2 N/A - See 742.223.1

742.224 N/A - See 742.223.1

742.225 N/A - No exception requested.

742.225.1 N/A

742.225.2 N/A

742.230 Other Treatment Facilities No other treatment facilities are planned for this operation. Therefore, Section 742.230 is not applicable.

742.240 Exemptions No exemptions are requested at this time; however, since this is a new proposed operation, the need for Small Area Exemptions and/or Alternate Sediment Control Areas may arise in the future.

742.300 Diversions

742.310 General Requirements

742.311 All diversions are considered temporary, and will be removed upon final reclamation.

Diversions are designed to minimize adverse impacts to the hydrologic balance within the permit and adjacent areas, to prevent material damage outside the permit area and to assure the safety of the public detailed diversion designs are presented in Appendix 7-4 of this P.A.P.

742.312 See Appendix 7-4 for diversion designs.

742.313 As indicated, all diversions for the Lila Canyon Mine are temporary, and will be removed when no longer needed. Land disturbed by removal will be reclaimed in

accordance with R645-301 and R645-302. Prior to diversion removal, downstream water treatment facilities will be modified or removed. See Reclamation Hydrology Section of Appendix 7-4.

742.320 Diversion of Perennial and Intermittent Steams Section 742.320 is not applicable since there are no diversions planned for perennial or intermittent streams within the permit area.

742.330 Diversion of Miscellaneous Flows All diversions within the permit area are of miscellaneous flows.

742.331 Certain miscellaneous undisturbed flows are proposed to be diverted around the disturbed area. Other flows are diverted within the disturbed area and to the sediment ponds, as described in Appendix 7-4.

742.332 See Appendix 7-4.

742.333 All temporary diversions are designed to safely pass the peak runoff of a 10-year 6-hour event resulting in a more robust design that the required 2-year 6-hour precipitation event. See Appendix 7-4 for details.

742.400 Road Drainage

742.410 All Roads All roads are designed in accordance with requirements of 534. Drainage control for all roads is discussed in detail in Appendix 7-4. No part of any road is planned to be located in the channel of an intermittent or perennial stream. As shown on Plate 7-2, roads are located to minimize downstream sedimentation and flooding.

742.420 Primary Roads Primary road design is discussed under 534.

742.421 As described in Section 534, all primary roads are to be located, insofar as practical, on the most stable available surfaces.

742.422 There are no stream fords planned for this operation.

742.423 Drainage Control Road drainage control is discussed in Appendix 7-4.

742.423.1 Primary roads will be equipped with adequate drainage control, including ditches, culverts and relief drains. The drainage control system is designed, and will be constructed and maintained, to pass the peak runoff safely from a 10 year - 6 hour precipitation event, as described in Appendix 7-4.

742.423.2 Culvert design and installation details are described in Appendix 7-4. Inlets and outlets are protected from erosion. Undisturbed culvert inlets are to be equipped with trash racks.

742.423.3 Drainage ditch design details are provided in Appendix 7-4.

742.423.4 There are plans to alter the drainage channel on the south boundary of the disturbed area. This drainage is an ephemeral channel with no raiparian habitat. A stream alteration permit will not be required for this channel. A 60 inch culvert and a sedimentation pond will be placed in this channel. Installation of this culvert and sedimentation control plans are described in Appendix 7-4. To ensure that state of the art technology is incorporated, the final reclamation plans for the sedimentation pond area will be submitted prior to commencement of final reclamation of this area.

742.423.5 Stream channel crossings will be provided by culverts designed, constructed and maintained using current, prudent engineering practice, as described in Appendix 7-4.

743. Impoundments

743.100 General Requirements All impoundments associated with this operation are considered temporary.

743.110 Not applicable there are no impoundments planned that meet the criteria of MSHA, 30 CFR 77.216 (a).

743.120 The design of impoundments have been prepared and certified by a qualified, registered professional engineer. As described in Appendix 7-4, the proposed sediment ponds will have at least 2' of freeboard above the highest flow level in the emergency spillway, which is adequate to resist overtopping by waves and by sudden increases in storage volumes.

743.130 As described in Appendix 7-4, the sediment ponds will be equipped with a culvert riser principal spillway and a culvert riser emergency overflow sized to safely pass the runoff from a 25 year - 6 hour precipitation event.

743.131 The principal spillway design is discussed below.

743.131.1 The principle spillway will be constructed of corrugated metal pipe. The emergency spillway will also be constructed of corrugated metal pipe.

744. Discharge Structures

744.100 The sediment pond emergency spillway will be a vertical corrugated metal pipe. It will flow into a 60" diameter C.M.P. beneath the pond and discharge onto an engineered rip-rap apron to prevent scouring or erosion. (See Appendix 7-4).

Diversions and culvert outlets that are expected to have flow velocities in excess of 5 fps will also be equipped with erosion and velocity controls as described in Appendix 7-4.

744.200 Discharge structures have been designed and certified according to standard engineering design procedures. (See Appendix 7-4).