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**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
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Sunnyside, Utah 84539
Telephone (801) 888-4421

file ACT/007/007
#2
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**DIVISION OF OIL
GAS & MINING**

December 11, 1985

John Whitehead
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Permanent Road Culvert Changes
in the MRP, ACT/007/007

Dear Mr. Whitehead

Please find the enclosed changes (14 copies) to the Sunnyside Permit. The changes are to be handled as follows:

- | | | |
|----|-------------|---|
| 1) | Chapter III | Replace pages 6 and 7 |
| 2) | Chapter III | Replace the last page of the List of Exhibits |
| 3) | Chapter III | Replace Table III-22 |
| 4) | Chapter III | Replace the Permanent Road Culvert page in the Culvert Size and Outlet Protection Summary of Appendix III-1 |
| 5) | Chapter III | Replace Plate III-28 |

Thanks for your help in this matter. If you have any questions, please call me at the mine site.

Sincerely,
Kaiser Coal Corporation



Douglas C Pearce
Mine Engineer

attachments

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CHAPTER III

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Coal slurry, a mixture of coal fines from the plant and water, is treated in three settling ponds. Two of the settling ponds use a dike of coke breeze and a dike of coarse refuse to filter the effluent before discharging into the third pond for storage and further settling.

Water from the third or clear water pond is used to irrigate an alfalfa field adjacent to the ponds or is released into the Icelander drainage at NPDES discharge point 004.

The east slurry cell is used as an alternate evaporation pond for slurry when the primary settling ponds are both full. Use of the east slurry cell will be limited.

3.2.10 Transportation, Roads, Parking Areas, Railroad Spurs

All culverts under roads are listed in Table III-22 along with specifications and are plotted on Plate III-1 as RC-1 through RC-10-4. Permanent road culverts are found on Plate III-28 and listed in the culvert design summary of Appendix III-1. All other culverts designs are found in the appropriate disturbed area calculations of Appendix III-1.

Typical cross sections of each road and side ditch are located on Plate III-7.

Table III-2 is a list of roads in the permit area. All of these roads existed prior to enactment of PL-95-87. Plans for a Class I Haul Road to be constructed in 1985 will be placed in Appendix III-11 within 30 days of permit approval.

Table III-3 lists the specifications for these roads.

No plans exist, during the permit period, to alter a natural drainage way, or make alterations involving a steep cut slope.

A county owned road (extension of State Highway 123) traverses a portion of the permit area (see Plate III-1). Previous mining, which included full extraction of the coal seam, has not affected the road or its use by the public. Future mining is planned under other portions of the road. This will take place at greater depths below the surface than in the past and is expected to have no effect on the road or its continued use by the public. There are no plans to relocate this or any other public road.

The roads in Fan Canyon, lower Water Canyon, and Slaughter Canyon, and short access roads to the raise holes, manshaft, fans and ponds will be removed after the mine life. The remainder

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of roads are necessary for land access appropriate to the uses of fish and wildlife habitat, livestock grazing and recreation. These roads are typically pre-law and occur on land owned by Kaiser Coal Corporation and/or also provide access to facilities owned by others i.e., the rodeo grounds, Grassy Trail Reservoir, tar sands deposits, etc.

Roads will be maintained according to UMC 817 road performance standards throughout the life of the facility and during the 10-year responsibility period. Maintenance will consist of basic custodial care to control erosion, repair of structures and drainage systems, removal of debris from culverts and ditches, and replacement of road surface material as needed.

The transportation facilities area will be maintained and restored at the end of the mine life to prevent damage to fish, wildlife, and related environmental values, as well as to prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.

3.2.10.1 Belt Conveyors and Rail Tracks

Plate III-2 shows the surface location of the following conveyor belts and tracks:

<u>I.D. Number</u>	<u>Description</u>
1	48" slope belt. Conveys coal from mine to the surface
2	60" belt from rotary dumper to rotary breaker
3	42" belt from rotary breaker to raw coal bins
4	42" tripper belt over the raw coal bins
5	42" raw coal reclaim belt
6	42" raw coal feed belt (to Baum jigs)
7	36" clean coal staking belt
8	24" coarse refuse belt
9	Old loadout belt (not in use)
10	Old loadout belt (not in use)
11	Denver & Rio Grande Western Railroad tracks
12	40" gage mine tracks (the mine haulage system provides a transportation link between the surface and underground workings for coal as well as for men and materials)

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Plate	III-27	Slurry ditch and surrounding areas drainage patterns as designed
Plate	III-28	Permanent bridges and culverts
Plate	III-29	Alluvial valley floor
Plate	III-30	Typical stream channel section
Plate	III-31	Cross sections alluvial valley floor
Plate	III-32	Highwall reductions alluvial valley floor (1-2)
Plate	III-33	Small area exemptions
Plate	III-34	Silt fence installation (typical)
Plate	III-35	Culvert and ditch protection measures
Plate	III-36	Culvert Inlet protective measures
Plate	III-37	East and West Slurry Cells
Plate	III-38	Castle Gate Sandstone Cross-Section
Plate	III-39	Facilities area, post mine contours
Plate	III-40	Post Mine Contour Cross Sections
Plate	III-41	Typical Coarse Refuse Pile Terrace Drain and Discharge Apron
Pictures		Aerial infrared
Pictures		Aerial color

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CULVERT SIZE AND OUTLET PROTECTION

Q = Quantity in CFS O = Outlet V = Velocity in FPS
 S₁ = Slope P = Pipefull I_n = $\frac{L}{100 S}$ = Index Number
 S₂ = Alternate Slope Dia. = Diameter, Culvert W = Ditch Width
 I = Inlet H_w = Height of Water Z = Side Slope

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CULVERT	Q	S ₁	S ₂	I	I,O,P	Dia.	H _w	V
<u>Permanent Road Culverts</u>								
RC1-2	2.75	0.03		26.66	O	16"	1.0'	4.79
RC1-3	8.54	0.05		16.00	I	36"	1.2'	7.40 (8)
RC1-4	.26	0.05		8.00	O	12"	1.0'	3.14
RC3-1	23.06	0.05		5.00	I	36"	2.4'	9.85 (8)
RC3-2	7.64	0.05		.00	I	36"	1.3'	7.19 (8)
RC3-3	7.17	0.05		5.00	I	36"	1.2'	7.06 (8)
RC3-4	6.94	0.05		5.00	I	36"	1.0'	6.99 (8)
RC3-5	6.24	0.05		6.00	I	36"	1.0'	6.78 (8)
RC3-6	5.14	0.05		8.00	I	36"	1.0'	6.41 (8)
RC7-3	100.00	0.05		6.00	I	7.5"	4.0'	13.75 (8)
RC10-4	30.19	0.10		15.00	I	144"	4.0'	11.50 (8)
M-CV	111.45	0.03		13.3		90"	4.0'	11.83 (8)

CHAPTER III

ROAD CULVERT SPECIFICATIONS

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Table III-22

<u>Number</u>	<u>Diameter</u>	<u>Length</u>	<u>Slope</u>	<u>Amount</u>
RC 1-1	24"	60'	3%	1
RC 1-2	16"	80'	3%	1
RC 1-3	36"	80'	5%	1
RC 1-4	12"	40'	5%	1
RC 2-1	24"	40'	5%	1
RC 2-2	18"	40'	5%	1
RC 2-3	24"	40'	3%	1
RC 2-4	36"	20'	3%	1
RC 2-5	48"	40'	2%	1
RC 3-1	36"	25'	5%	1
RC 3-2	36"	25'	5%	1
RC 3-3	36"	25'	5%	1
RC 3-4	36"	25'	5%	1
RC 3-5	36"	30'	5%	1
RC 3-6	36"	40'	5%	1
RC 7-1	84"	60'	5%	1
RC 7-3-	90"	31'	5%	1
RC 7-4	18"	40'	5%	1
RC 10-1	36"	50'	1%	1
RC 10-2	24"	100'	15%	1
RC 10-3	24"	80'	3%	1
RC 10-4	144"	150'	10%	1