0047

PRICE RIVER COAL COMPANY
P.O. BOX 629 HELPER, UTAH 84526 (801) 472-3411

March 7, 1983

Mr. Joe Lyons
Reclamation Hydrologist
Division of Oil, Gas and Mining
4241 State Office Building
Salt Lake City, UT 84114

Dear Mr. Lyons:

As requested in your letter of February 24, 1983, please find enclosed results of soil test for ponds at Castle Gate.

Very truly yours,

PRICE RIVER COAL COMPANY

R. L. Wiley

R. L. Wiley
Environmental Engineer

RLW:jp

Enclosures

RECEIVED
MAR 09 1983
DIVISION OF
OIL GAS & MINING

HORROCKS ENGINEERS

Project Name _____ Date 2-13-83

Project No. _____ Station or Pit Location _____

Sample No 3 (SILTY SAND) Requisted by Lee Wimmer

AS RECEIVED GRADATION

Screen Size	Weight (a)	Percent Retained	Percent Passing	SPECS.
3"				
1½"	601.4	15.5	84.5	
1"	51.2	1.3	83.2	
3/4"	57.1	1.4	81.8	
1/2"	95.7	2.5	79.3	
3/8"	108.7	2.8	76.5	
#4	169.5	4.4	72.1	
Wet Wt. -#4				
Dry Wt. -#4				
Total Wt Dry				

WASHED GRADATION AFTER CRUSHING (2500 GM. DRY SAMPLE)

Screen Size	Weight Retained	Percent Retained	Percent Passing	Total % Passing	SPECS.
#8	219.5	5.7	66.4		
#10					
#16					
#20					
#30	68.7	1.8	64.6		
#40					
#50	134.7	3.5	61.1		
#100	748.0	19.3	41.8		
#200	324.7	8.4	33.4		
-#200	1294.9	33.4	0.0		
Total Wt	3874.1	100.0			

MOISTURE DETERMINATION	
	-#4
Container & Wet Soil Weight (gm.)	
Container & Dry Soil Weight (gm.)	
H_2O Loss	
% Moisture	

A.A.S.H.O Classification

A-4 (8)

Wt. before washing 2872.5

Wt. after washing 2647.4

-#200 from wash: 1225.1

COPIES TO:

Tested: Mark W. Foter

MATERIALS AND TESTS DIVISION

MOISTURE-DENSITY RELATIONS

PROJECT NAME Price River Coal Company DATE 2-14-83

PROJECT NO. _____ SAMPLE NO. 3 (SILTY SAND)

METHOD OF COMPACTION T-99 PROCTOR

TEST NO.	1	2	3	4	5	6	7	8
CYL. & WET EARTH IN GRAMS	8650	8715	8713	8627	8650			
CYLINDER WT. IN GRAMS	5527	5527	5527	5527	5527			
WET EARTH IN GRAMS	3123	3188	3186	3100	3123			
WET DENSITY IN LBS/CU. FT.	91.8	93.7	93.6	91.0	91.8			
DISH NUMBER	3	4-S	4-G	7	5			
DISH & WET SOIL WT. IN GRAMS	350.8	364.0	301.1	366.8	392.1			
DISH & DRY SOIL WT. IN GRAMS	336.5	347.4	286.8	342.8	363.4			
WATER WT. IN GRAMS	14.3	16.6	14.3	24.0	28.7			
DISH & DRY SOIL WT. IN GRAMS	336.5	347.4	286.8	342.8	363.4			
DISH WT. IN GRAMS	138.4	139.9	139.7	141.8	138.9			
DRY SOIL WT. IN GRAMS	198.1	207.5	147.1	201.0	224.5			
MOISTURE IN % OF DRY WT.	7.2	8.0	9.7	11.9	12.8			
DRY DENSITY IN LBS./CU. FT.	85.6	86.8	85.3	81.4	79.4			

$$\text{DRY DENSITY} = \frac{\text{WET DENSITY}}{100 + \%\ \text{MOISTURE}} \times 100$$

TESTED BY: Mark W. Foster

_____
MATERIALS ENGINEER

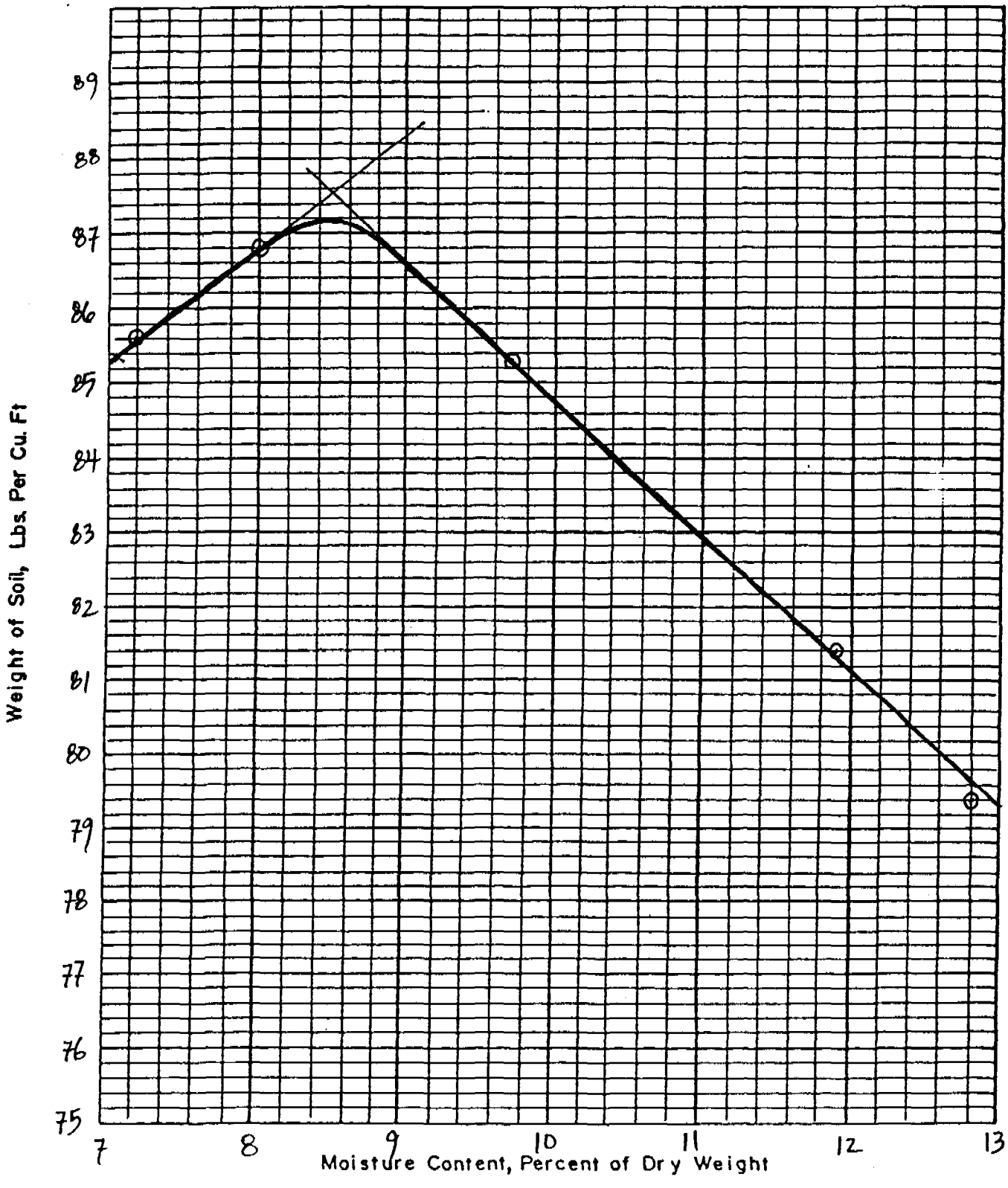
HORROCKS ENGINEERS

MOISTURE-DENSITY GRAPH

Project Name _____ Date 2-13-83

Project No. _____ Sample No 3 (SILTY SAND)

Method of Compaction _____ P.C.F. 87.2 Optimum Moisture 8.5%



One West Main
P.O. Box 377
American Fork, Utah 84003
Telephone (801) 756-7628

LIQUID LIMIT AND PLASTICITY INDEX

PROJECT NAME Price River Coal Company DATE 2-13-83
PROJECT No. _____

LIQUID LIMIT SAMPLE No. 1 (COAL)

CAN 5	WET 43.85	DRY 39.00				
TAPS 13	DRY 39.00	CAN 22.72				
	H_2O 4.85	DRY WT. 16.28	% H_2O 29.79 A			
CAN	WET	DRY		LL A 27.5		
TAPS	DRY	CAN		LL B		
	H_2O	DRY WT.	% H_2O B	LL C		
CAN	WET	DRY		3)	(27.5 L.L.	
TAPS	DRY	CAN			17.3 P.L.	
	H_2O	DRY WT.	% H_2O C		44.8 P.I.	

PLASTIC LIMIT

CAN 10	WET 36.77	DRY 34.64	
	DRY 34.64	CAN 22.34	
	H_2O 2.13	DRY WT. 12.3	PL 17.32 (% H_2O)

LIQUID LIMIT SAMPLE No. 2 (COAL)

CAN 12	WET 51.84	DRY 46.53				
TAPS 26	DRY 46.53	CAN 22.63				
	H_2O 5.31	DRY WT. 23.90	% H_2O 22.20 A			
CAN XX	WET 45.12	DRY 40.90		LL A 20.37		
TAPS 24	DRY 40.90	CAN 22.33		LL B 22.61		
	H_2O 4.22	DRY WT. 18.57	% H_2O 22.72 B	LL C 22.76		
CAN C	WET 31.77	DRY 28.42		3)	(21.9 L.L.	
TAPS 14	DRY 28.42	CAN 14.72			14.9 P.L.	
	H_2O 3.35	DRY WT. 13.70	% H_2O 24.45 C		36.8 P.I.	

PLASTIC LIMIT

CAN B	WET 23.96	DRY 22.77	
	DRY 22.77	CAN 14.77	
	H_2O 1.19	DRY WT. 8.00	PL 14.88 (% H_2O)

LIQUID LIMIT SAMPLE No. 3 (SILTY SAND)

CAN 2	WET 51.71	DRY 48.42				
TAPS 13	DRY 48.42	CAN 22.17				
	H_2O 3.29	DRY WT. 26.25	% H_2O 12.53 A			
CAN	WET	DRY		LL A 11.6		
TAPS	DRY	CAN		LL B		
	H_2O	DRY WT.	% H_2O B	LL C		
CAN	WET	DRY		3)	(11.6 L.L.	
TAPS	DRY	CAN			18.4 P.L.	
	H_2O	DRY WT.	% H_2O C		30.0 P.I.	

PLASTIC LIMIT

CAN X	WET 41.15	DRY 39.54	
	DRY 39.54	CAN 30.80	
	H_2O 1.61	DRY WT. 8.74	PL 18.42 (% H_2O)

NO. OF TAPS	CORRECTI FACTOR
16	0.947
17	0.954
18	0.961
19	0.967
20	0.973
21	0.979
22	0.985
23	0.990
24	0.995
25	1.00
26	1.00
27	1.00
28	1.01
29	1.01
30	1.02
31	1.02
32	1.03
33	1.03
34	1.03
35	1.04
36	1.04

TESTED BY: Mark W. Foster