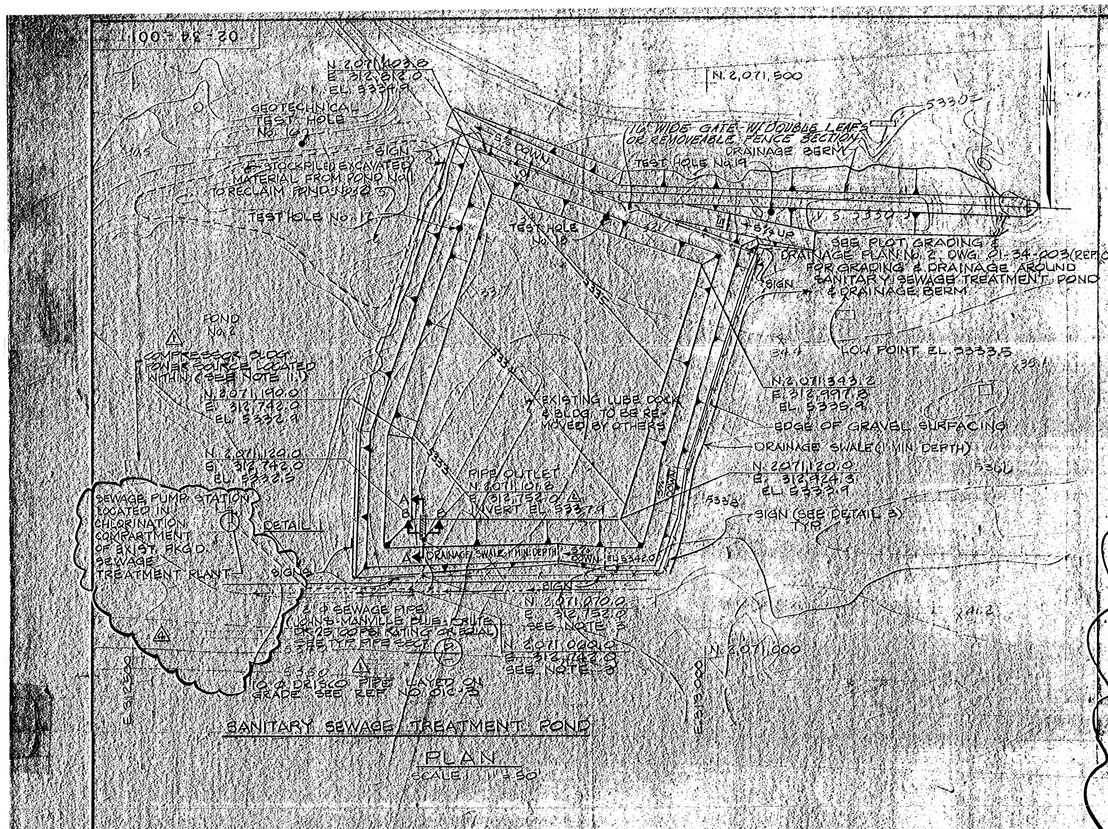
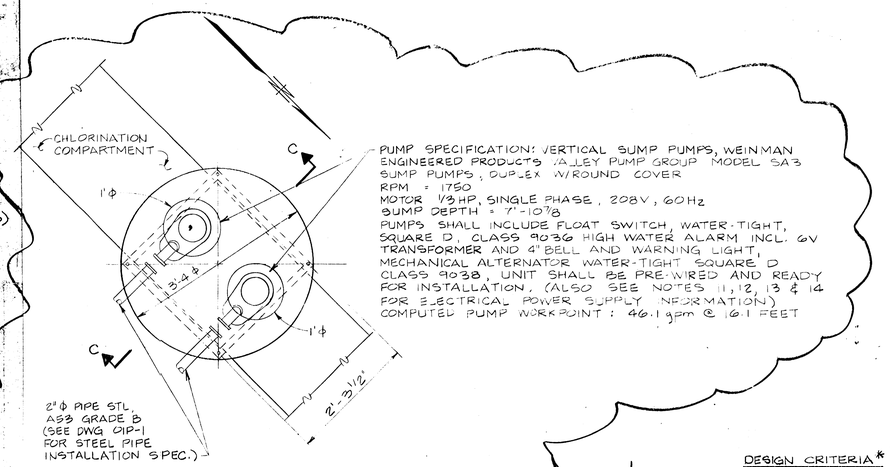
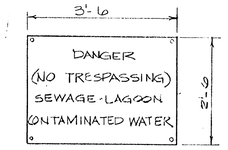




PUMP SPECIFICATION: VERTICAL SUMP PUMPS, WEINMAN ENGINEERED PRODUCTS VALLEY PUMP GROUP MODEL SA3 SUMP PUMPS, DUPLEX W/ROUND COVER
RPM = 1750
MOTOR 1/3 HP, SINGLE PHASE, 208V, 60Hz
SUMP DEPTH = 7'-10 7/8
PUMPS SHALL INCLUDE FLOAT SWITCH, WATER-TIGHT, SQUARE D, CLASS 9036 HIGH WATER ALARM INCL. 6V TRANSFORMER AND 4" BELL AND WARNING LIGHT, MECHANICAL ALTERNATOR WATER-TIGHT SQUARE D CLASS 9038, UNIT SHALL BE PRE-WIRED AND READY FOR INSTALLATION, (ALSO SEE NOTES 11, 12, 13 & 14 FOR ELECTRICAL POWER SUPPLY INFORMATION)
COMPUTED PUMP WORKPOINT: 46.1 gpm @ 16.1 FEET

SUMP COVER PLATE / PUMPS
DETAIL 1
1" = 1'-0



1/2" EXTERIOR PLYWOOD (SEE NOTE 7)

DETAIL 3
N.T.S.
(SIGNS BY U.I.I.)

DESIGN CRITERIA*

- INFLOW - SEWAGE EFFLUENT — 160,000 GALLONS/MONTH
  - PRECIPITATION — 6.63 INCHES/YEAR; 2.10 STORM IN AUGUST = 8.73 INCHES TOTAL
- OUTFLOW - EVAPORATION — 64.5 INCHES/YEAR

* FURNISHED BY UTAH INTERNATIONAL BASED ON SITE-SPECIFIC DATA

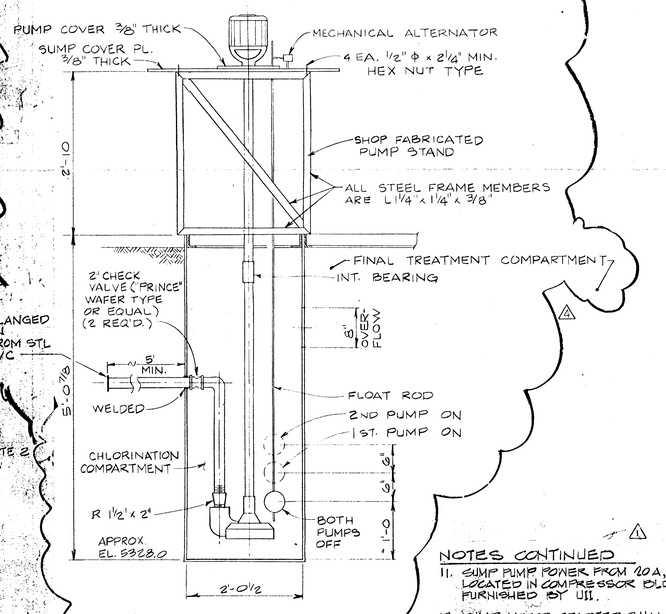
POND CHARACTERISTICS

- AVERAGE SURFACE AREA REQUIRED TO BALANCE INFLOW/OUTFLOW — 57,560 S.F.
- MAXIMUM YEARLY VARIATION IN STORED VOLUME FOR BALANCED INFLOW/OUTFLOW — 80,270 C.F.
- STAGE CHARACTERISTICS

EL. (FT.)	SURFACE AREA (S.F.)	STORAGE VOLUME (C.F.)
5332.5	-0-	-0-
5333.0	8,600	650
5334.0	20,600	12,250
5335.0	46,000	45,530
5336.0	57,500	97,300
5337.5	62,100	192,800
5340.0	69,800	351,900

NOTES:

1. LINER SHALL BE 36-MIL HYPALON L.W.A. REINFORCED W/ 10x10 1000D POLYESTER SKRIM. INSTALLATION DETAILS INCLUDING ANCHORING OF EDGES AND SEALS AROUND PENETRATIONS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS & APPROVED BY THE ENGINEER.
2. THE TOP 4" OF SUBGRADE UNDER LINER SHALL BE 1"-INCH MINUS MATERIAL COMPACTED IN CONFORMANCE WITH "SITE PREPARATION AND GRADING" SPECIFICATIONS.
3. INSTALL THRUST BLOCKS AT ANGLE POINTS PER TYPICAL SECTION "D"
4.
5.
6.
7. LETTERING TO BE RED (EXTERIOR) PAINTED ON OFF-WHITE BACKGROUND. LETTERS TO BE 3" HIGH AND LINES TO BE 1/2" WIDE, NEATLY LETTERED. SIGNS TO BE ANCHORED TO THE FENCE. (BY U.I.I.)
8. A COPY OF A SOILS ENGINEERS REPORT IS AVAILABLE FOR THE CONTRACTORS REVIEW AT THE OWNERS OR ENGINEERS OFFICE.
9. UNLESS OTHERWISE INDICATED, ALL WOOD SURFACES SHALL BE PAINTED WITH AN APPROVED PAINT (BY U.I.I.) SYSTEM CONSISTING OF 1 COAT OF EXTERIOR PRIMER AND 2 COATS OF FLAT-OFF-WHITE FINISH.
10. ALL DISTURBED AREAS SHALL BE RECLAIMED IN ACCORDANCE WITH OSM-APPROVED STD. NAVAJO MINE PROCEDURES.



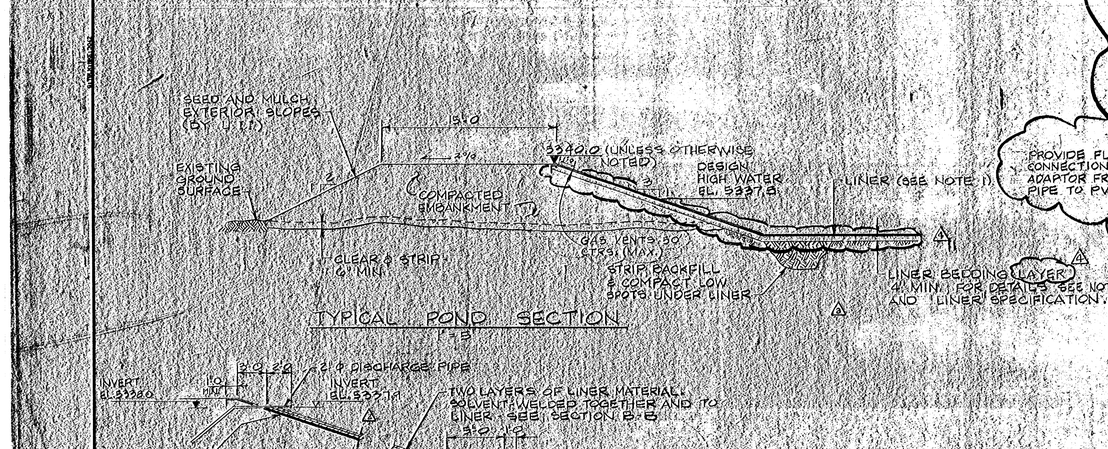
SECTION C-C
1" = 1'-0

NOTES CONTINUED

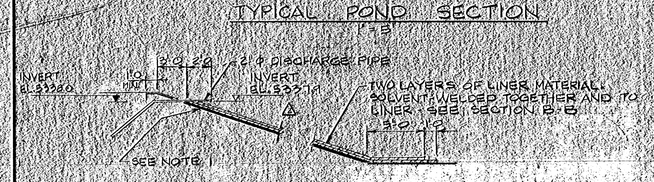
11. SUMP PUMP POWER FROM 20A, 208V, 1Φ PANEL LOCATED IN COMPRESSOR BLDG. PANEL & BREAKERS FURNISHED BY UII.
12. PUMP MOTOR STARTER SHALL BE SQUARED, CLASS 2510 CAT. NO. FG-G WITH THERMAL UNITS SQUARED CAT. NO. AB-30. TWO EACH REQUIRED. LOCATE INSIDE COMPRESSOR BUILDING.
13. POWER CABLES FROM STARTERS TO PUMPS SHALL BE DIRECT-BURIAL USE 3/C #10 OR EQUAL.
14. IF LOCAL DISCONNECT IS REQUIRED, CONTROL WILL BE FURNISHED & INSTALLED BY U.I.I.

SITE PREPARATION / GRADING QUANTITIES

- CLEAR, GRUB + STRIP 6 INCHES — 26 ACRES
- EXCAVATION — 8,292 BANK CY
- EMBANKMENT — 5,823 IN-PLACE CY
- LINER — 70,510 S.F.
- FENCING — 1232 L.F. PLUS GATE AS PER UII SPECS.
  5' HEIGHT W/ 4' WOVEN WIRE W/ 2 STRANDS OF BARBED WIRE AT TOP 12" O/C METAL FENCE POSTS SET IN CONCRETE DRIVEN 2'-3' DEPTH AS PER U.I.I. SPECIFICATIONS.

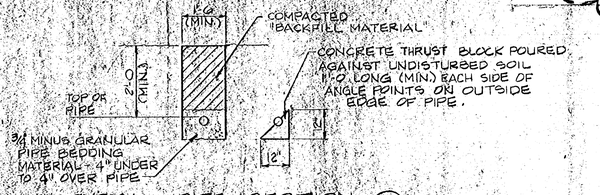


TYPICAL POND SECTION
1" = 8'



SECTION A-A
SCALE: 1" = 3'

SPLASH APRON
SECTION B-B
SCALE: 1" = 2'



TYPICAL PIPE SECTION D
SCALE: 1" = 2'

REFERENCE DWGS			
01-34-002	LAYOUT		
01-34-003	WASTEWATER COLLECTION TREATMENT PLOT GRADING & DRAINAGE SHEET NO. 2		
01-34-004	MISC. CIVIL DETAILS		
01C-3-001	PHASE 2 WASTEWATER COLLECTION TREATMENT GAS & MECHANICAL FOR LIFT STATIONS NO. 1, 2, 3 & 4		
DRAWING NO.	TITLE		

REVISIONS					
5	JD	8/24/92		CHANGE EXHIBIT NO. 10 TO 22 AND CHANGE OF NAME	
4	KFD	4-4-89	PSB	AS-BUILT BUL#D-007	
3	JM	4-10-88	PSB	REM. GEOTEXTILE UNDER POND CONST. BUL#D-002	
2	DL	4-20-86	MLT	REISSUED FOR CONSTRUCTION BUL#D-001	
1	DL	2/13/86	MLT	REVISE SUMP PUMP PER TL-022-FOR BID	
0	RU	3/2/85	PSB	ADDENDUM NO. 2 DATA & SITE PLAN BUL#D-002	
0	KFD	2/13/85	PSB	ISSUE FOR CONSTRUCTION	
A	KFD	6-4-83	MLT	FOR OWNERS APPROVAL-BUL#D-002	
NO.	BY	DATE	CKD	DESCRIPTION	

APPROVALS							
DEPT REV	A	0	1	2	3	4	
ARCH							
CIV/STRL	MM	MM	PSB	MM	PSB	PSB	
MECH							
ELECT		HEM	HEM	UMC			
INSTM							
PIPING		DW	JVM	JVM			
SAFETY							
MINING							
DEPT MGR							
PROJECT							

SCALE AS NOTED		DATE
DRAWN BY K.F. DAIR		5-20-85
DESIGNED BY P. DAIR		5-17-85
CHECKED BY M. THORNE		5-21-85
CLIENT APPROVALS		
REV	BY	DATE
3		4/11/86
4		10/17/86
1		2/18/86
2		4/7/86

MORRISON-KNUDSEN ENGINEERS, INC.
A MORRISON-KNUDSEN COMPANY

NAVAJO MINE PROJECT – AREA
FRUITLAND, NEW MEXICO
BHP MINERALS INTERNATIONAL

DRAWING TITLE
SANITARY SEWAGE TREATMENT POND AND PUMPING FACILITIES

EXHIBIT II-22

CONTRACT NO. 1724-10 — 30 x 42
DRAWING NO. 02-34-001
REFERENCE NO. 02C-1 — REV 4

I, Ron Van Valkenburg, certify changes to drawing since the previous revision of this drawing to the best of my knowledge.

4/11/86

AS-BUILT