

Attachment 1

Product Information
PERMALON® Ply X-210

PRODUCT INFORMATION

PERMALON® PLY X-210®

- High density, cross-laminated polyethylene resists punctures and tears.
- UV stabilized to withstand prolonged exposure to sunlight.
- Ply X-210 is not prone to environmental stress-cracking (ESC) so it can endure repeated thermal expansion & contraction cycles.
- Meets ASTM standard D-3083 Soil Burial test performance requirements.

PHYSICAL PROPERTIES AND TYPICAL VALUES			
PROPERTY	ASTM TEST METHOD	US VALUE	METRIC VALUE
THICKNESS	D-4801	20 MIL	.50 MM
WEIGHT	D-3776	68 LB/1000 FT ²	33 KG/100 M ²
		9.9 OZ/YD ²	335 GM/M ²
TENSILE STRENGTH	MD D-882	66 LBF	294 N
		3660 PSI	25.2 MPA
		58 LBF	258 N
		3170 PSI	21.9 MPA
TENSILE ELONGATION	MD D-882	700 %	700 %
		400 %	400 %
TONGUE TEAR	MD D-751B	37.5 LBF	167 N
		31.5 LBF	140 N
PPT RESISTANCE	MD D-2582	48.2 LBF	214 N
		44.3 LBF	197 N
TRAPEZOIDAL TEAR	MD D-4533	62 LBF	276 N
		77.3 LBF	344 N
DART IMPACT STRENGTH	D-1709	3.01 LBS	1.36 KG
PUNCTURE RESISTANCE	D-4833	42.4 LBS	189 N
COLD IMPACT STRENGTH	D-1709MOD	-80°F	-60°C
CARBON BLACK CONTENT	D-1603	>2.0 %	>2.0 %

PERMALON®

Call today for
technical assistance
or to place your order.
800/231-6074



REEF INDUSTRIES, INC.
Since 1957

P.O. Box 750250
Houston,
Texas 77275-0250
713/507-4200
713/507-4295 FAX

The information provided herein is based upon data believed to be reliable. All testing is performed in accordance with ASTM standards and procedures. All values are typical and nominal and do not represent either minimum or maximum performance of the product. Although the information is accurate to the best of our knowledge and belief, no representation of warranty or guarantee is made as to the suitability or completeness of such information. Likewise, no representation of warranty or guarantee, express or implied, or merchantability, fitness or otherwise, is made as to product application for a particular use.
©1996 REEF INDUSTRIES, INC. PERMALON is a registered trademark of Reef Industries, Inc. MP/03 09-96

SOIL BURIAL TEST

PERMALON® X-150®, X-210® AND X-210G®

Permalon X-150, X-210 and X-210G materials were subjected to a 30 day soil burial test following standards and procedures as outlined in ASTM D-3083, Section 9.5. Results of this test are outlined below.

PERMALON X-150				
TEST METHOD		INITIAL VALUE	AFTER BURIAL TEST	% DECREASE
TENSILE @YIELD	MD	39 LBS	39 LBS	-
	TD	52 LBS	52 LB	-
TENSILE @BREAK	MD	67 LBS	64.5 LBS	3.7 %
	TD	83 LBS	83.5 LBS	-
ELONGATION	MD	900 %	900 %	-
	TD	810 %	810 %	6.4 %

PERMALON X-210				
PROPERTY		INITIAL VALUE	AFTER BURIAL TEST	% DECREASE
TENSILE @YIELD	MD	85 LBS	98 LBS	-
	TD	95 LBS	101 LBS	-
TENSILE @BREAK	MD	131 LBS	123 LBS	6 %
	TD	143 LBS	138 LBS	3.5 %
ELONGATION	MD	900 %	900 %	-
	TD	740 %	750 %	-

PERMALON X-210G				
PROPERTY		INITIAL VALUE	AFTER BURIAL TEST	% DECREASE
TENSILE @YIELD	MD	290 LBS	290 LBS	-
	TD	259 LBS	260 LBS	-
TENSILE @BREAK	MD	156 LBS	142 LBS	9 %
	TD	155 LBS	140 LBS	9 %
ELONGATION		900 %	900 %	-

PERMALON®

Call today for
technical assistance
or to place your order.
800/231-6074



REEF INDUSTRIES, INC.
Since 1957

P.O. Box 750250
Houston,
Texas 77275-0250
713/507-4200
713/507-4295 FAX

The information provided herein is based upon data believed to be reliable. All testing is performed in accordance with ASTM standards and procedures. All values are typical and nominal and do not represent either minimum or maximum performance of the product. Although the information is accurate to the best of our knowledge and belief, no representation of warranty or guarantee is made as to the suitability or completeness of such information. Likewise, no representation of warranty or guarantee, express or implied, or merchantability, fitness or otherwise, is made as to product application for a particular use.

©1996 REEF INDUSTRIES, INC. PERMALON is a registered trademark of Reef Industries, Inc. MP.03 09-96

Attachment 2

**Stormwater Runoff Calculations for
Processing Pad and Yellowcake Storage Pad**

**ENTZ ENGINEERING AND ASSOCIATES
CONSULTING ENGINEERS – SURVEYORS**


600 EMPORIA STREET – SUITE “C” – P. O. BOX 1385
MUSKOGEE, OKLAHOMA 74402-1385– (918) 682-3832

**STORM WATER RUNOFF
SEQUOYAH FUELS
YELLOW CAKE AREA**

Based on the topography survey performed by Huffman Surveying Company, we have made runoff determinations as follows:

1. The processing pad west of the yellow cake area will be separated from the larger concrete area by a small berm. This area is less than 0.5 acres and produces 15,953 cubic feet of runoff in a storm of 100-year frequency. This area drains directly into the ponds to the west and will raise their level less than 6 inches which added to the 9.5 inches falling directly into the pond during the storm will require 15.5 inches of freeboard. Please refer to the attached SCS runoff hydrograph plot.

2. The larger yellow cake area has 3.47 acres draining into a 48” square grate at the southwest corner. This grate has been modified by providing 1.0 square foot of opening on each side to eliminate the problem of debris stopping the flow. The dike around the south and west sides of this area provides 1889 cubic yards or 51,000 cubic feet of storage at elevation 565.35. This storage in addition to the flow through the modified grate is more than adequate to discharge the 100-year storm frequency which peaks at 43.04 cfs as shown on the attached SCS runoff hydrograph plot.


Roy Entz, P. E.
4-21-04



Hydrograph Plot

English

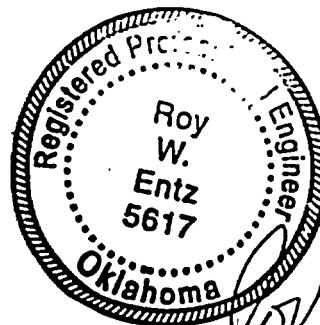
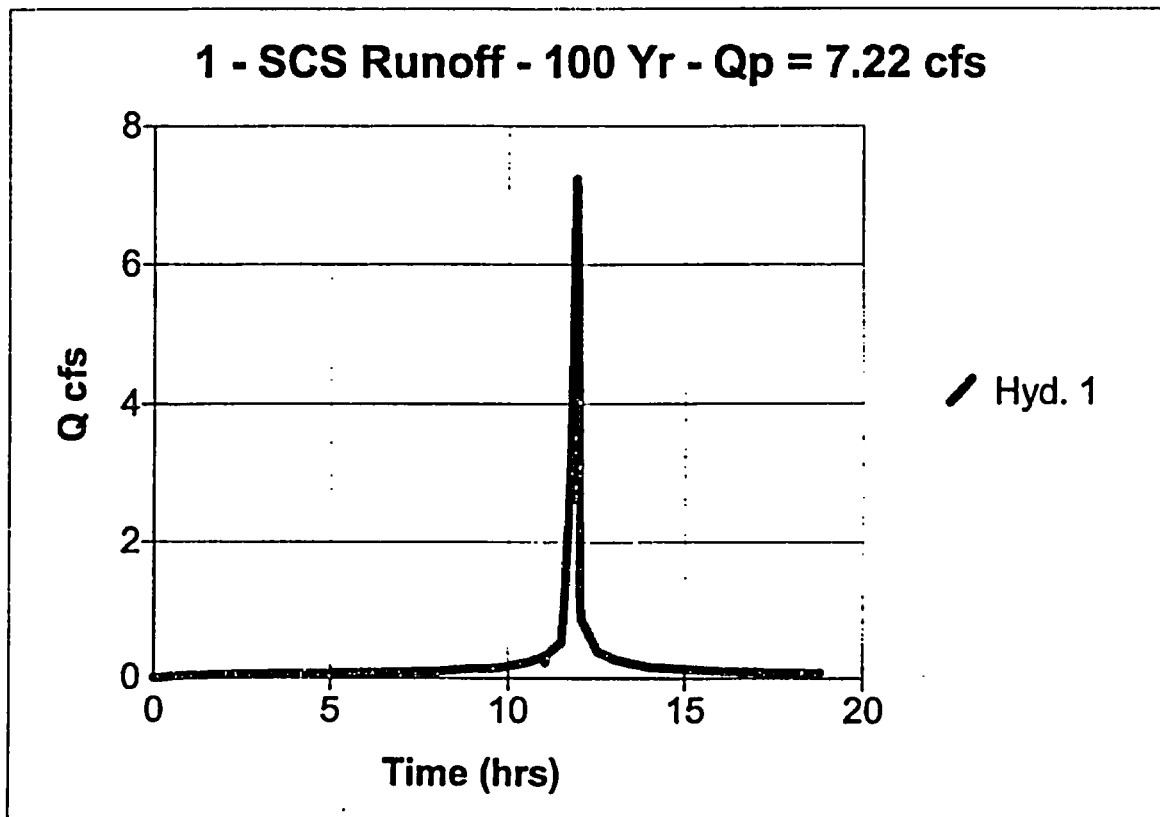
Hyd. No. 1

Seq Fuels W. of Yellow Cake Area

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 0.50 ac
Basin Slope = 4.8 %
Tc method = LAG
Total precip. = 9.50 in
Storm duration = 24 hrs

Peak discharge = 7.22 cfs
Time interval = 1 min
Curve number = 99
Hydraulic length = 230 ft
Time of conc. (Tc) = 1.9 min
Distribution = Type II
Shape factor = 484

Total Volume = 15,953 cuft



Roy W. Entz
4-17-04

Hydrograph Plot

English

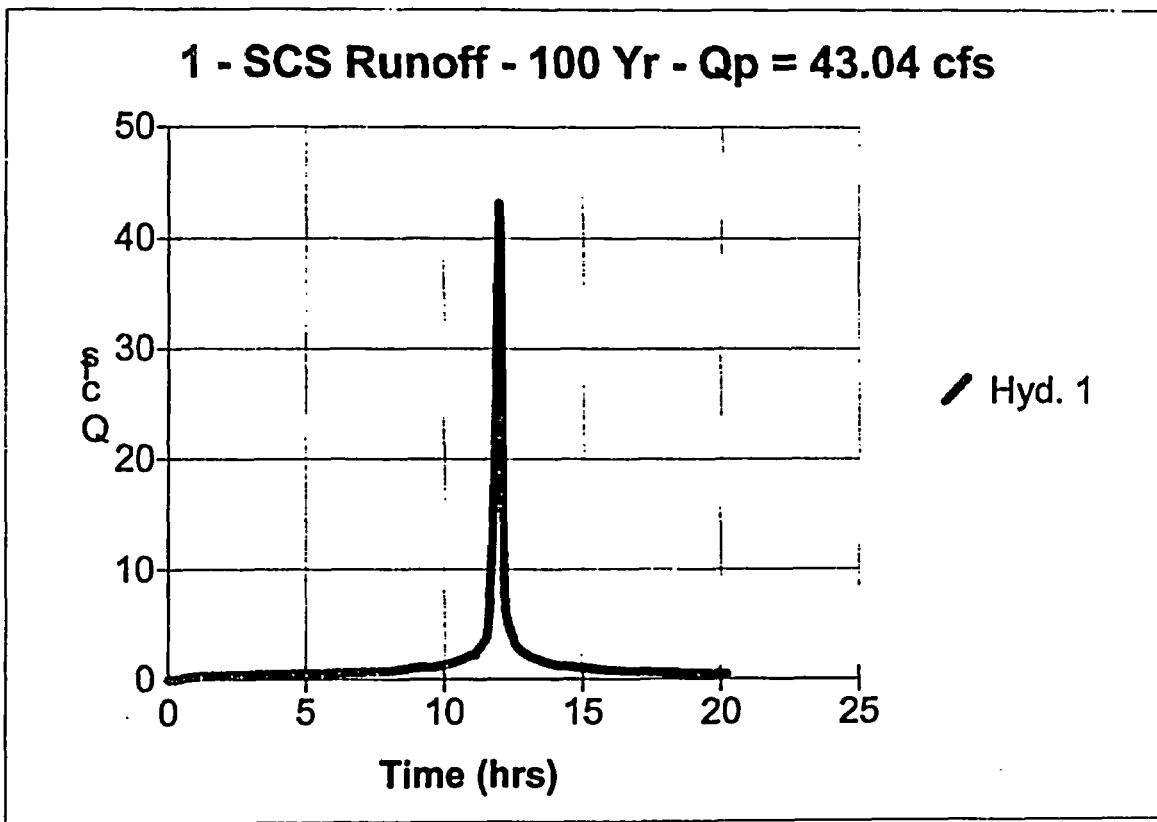
Hyd. No. 1

Seq. Fuels Yellow Cake Area

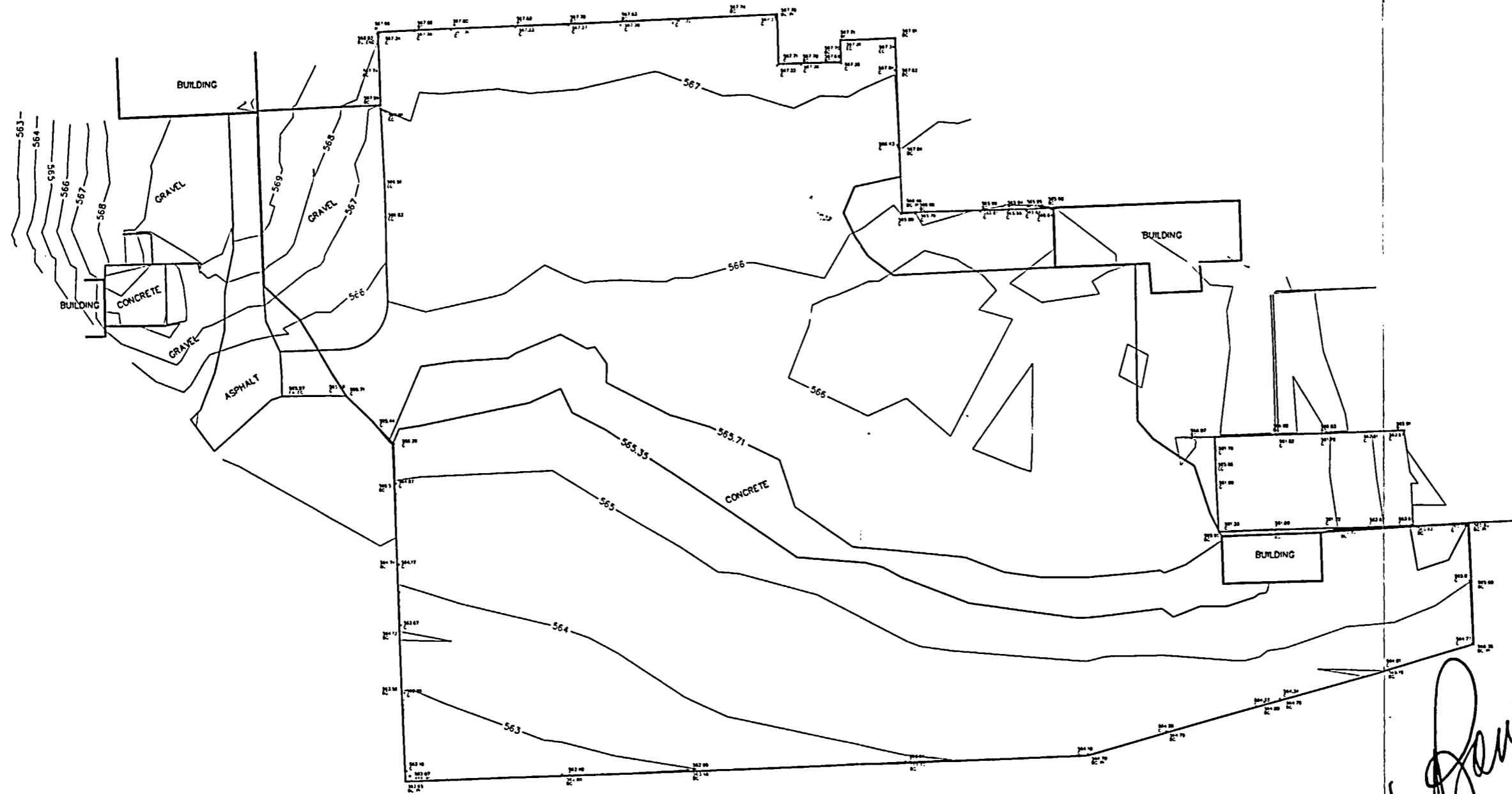
Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Drainage area = 3.47 ac
Basin Slope = 0.9 %
Tc method = LAG
Total precip. = 9.50 in
Storm duration = 24 hrs

Peak discharge = 43.04 cfs
Time interval = 2 min
Curve number = 99
Hydraulic length = 450 ft
Time of conc. (Tc) = 7.8 min
Distribution = Type II
Shape factor = 484

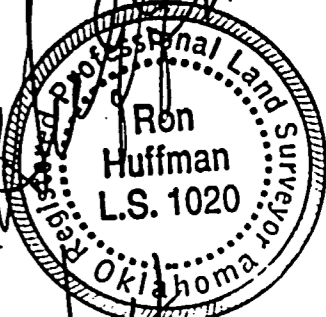
Total Volume = 118,150 cuft



Roy W. Entz
4-21-04

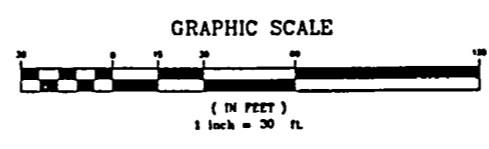


[Handwritten signature]
 4/21/04

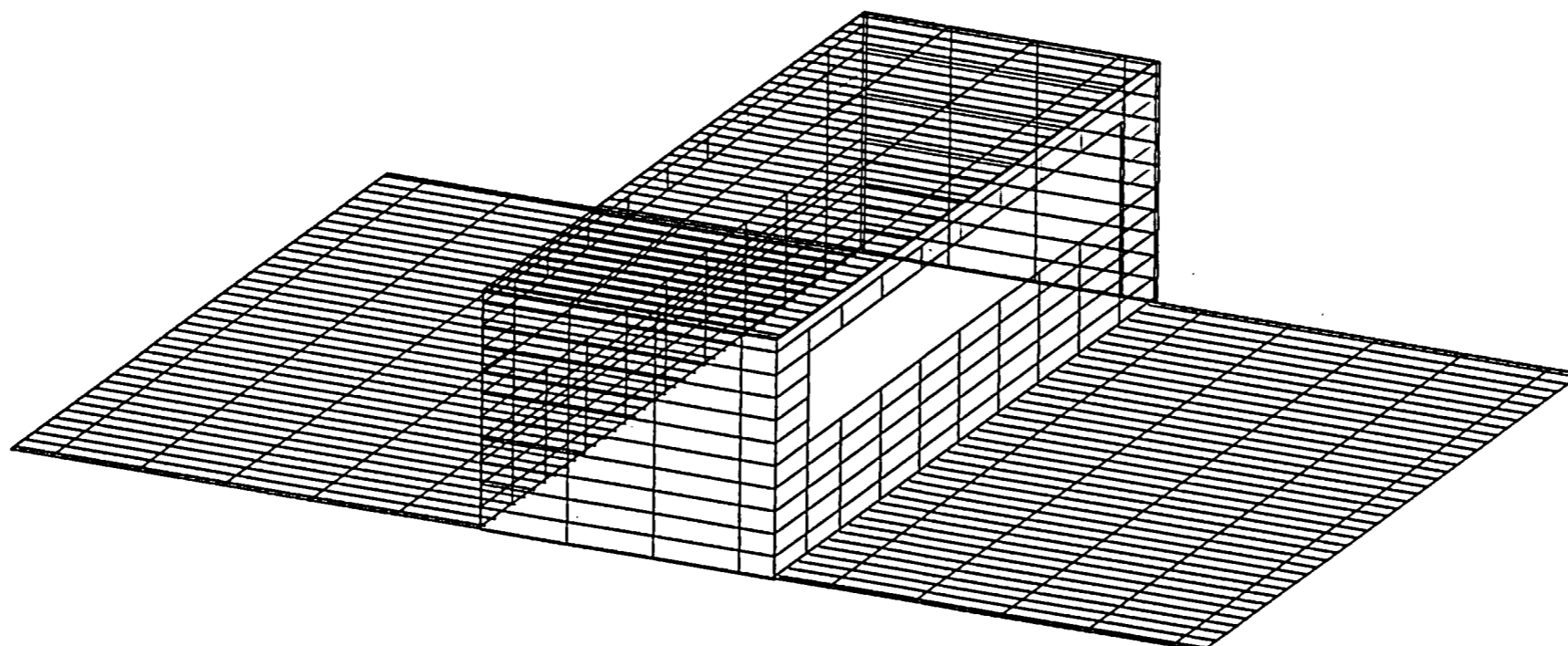
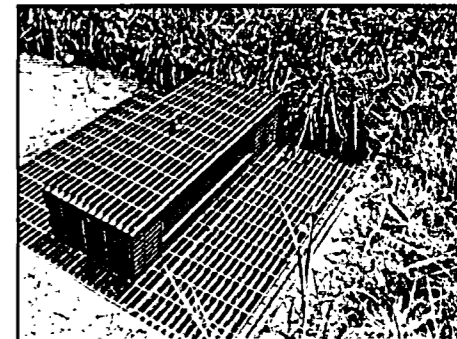
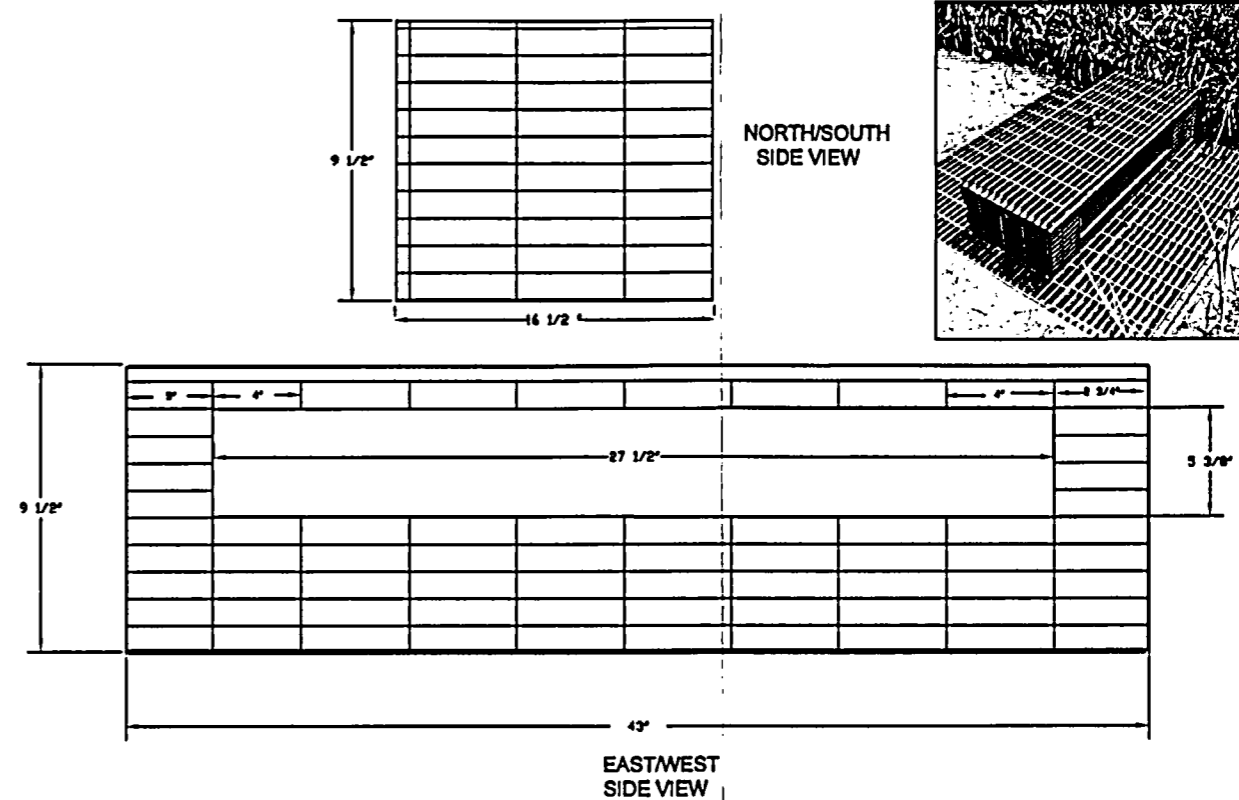
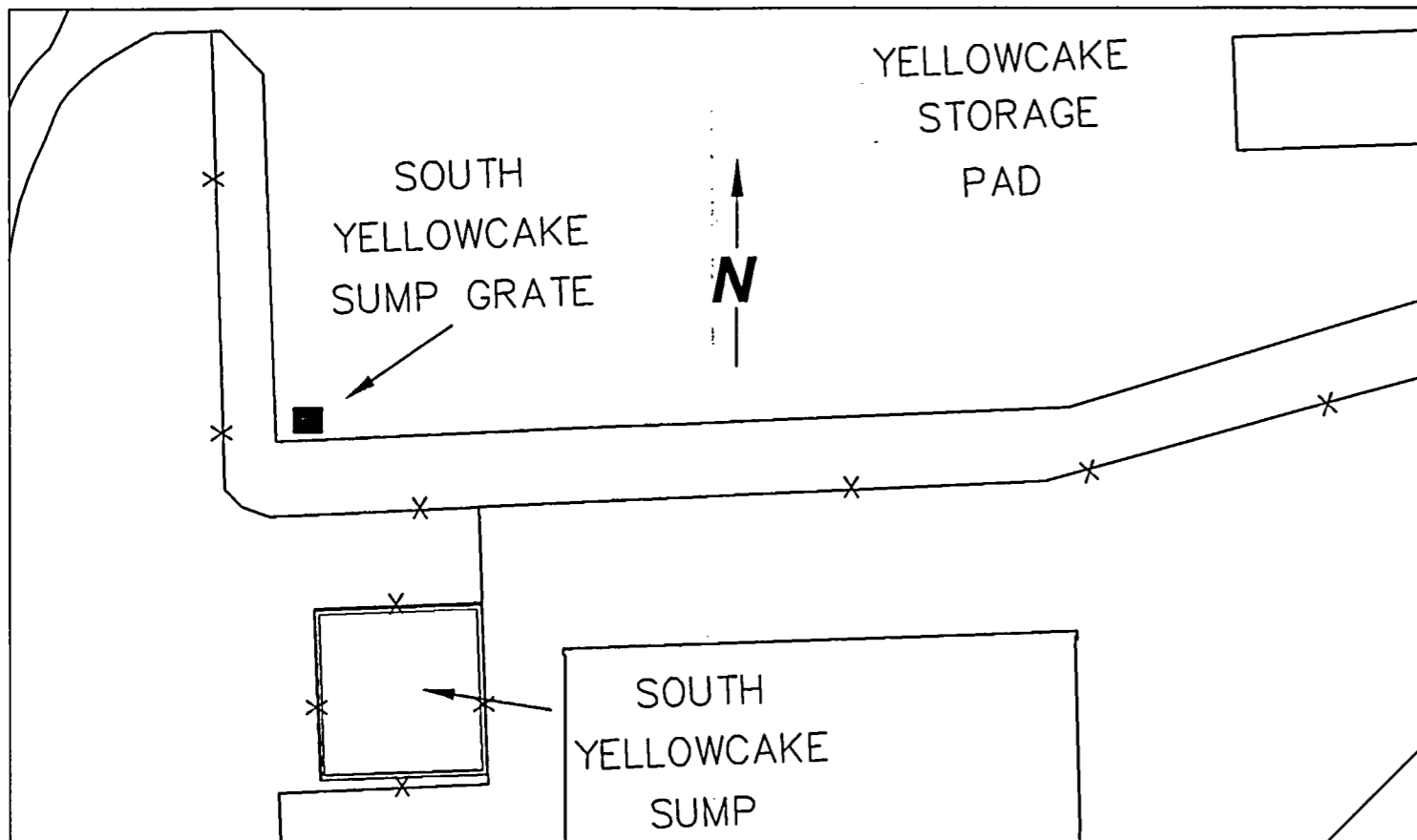


Site Volume Table: Unadjusted

Site	Stratum	Surf1	Surf2	Cut cu.yds	Fill cu.yds	Net cu.yds	Method
wo2305h	quan	eg-565	prop-565-71	0	2765	2765 (F)	End area
	quan	-565.35	eg-565	prop-565.35	0	1889	1889 (F) End area



TOPOGRAPHY MAP		DATE: 3/30/04
SEQUOYAH FUELS		DATE SHOWN: 4/21/04
Huffman Surveying		DATE: 4/21/04
Company, Inc. 21100 E. (Highway 412) S.W. 2008		DATE: 4/21/04
Map No. 2305h		DATE: 4/21/04
Sheet 1 of 1		



Title: South Yellow Cake Pad Sump Grating	
PREPARED BY: SFC	Filename: SFC0109A
Reviewed by: br	Figure No. 3
Date: 05/17/2004	

SEQUOYAH FUELS
A GENERAL ATOMICS COMPANY

Yellow Cake Pad Sump Grating