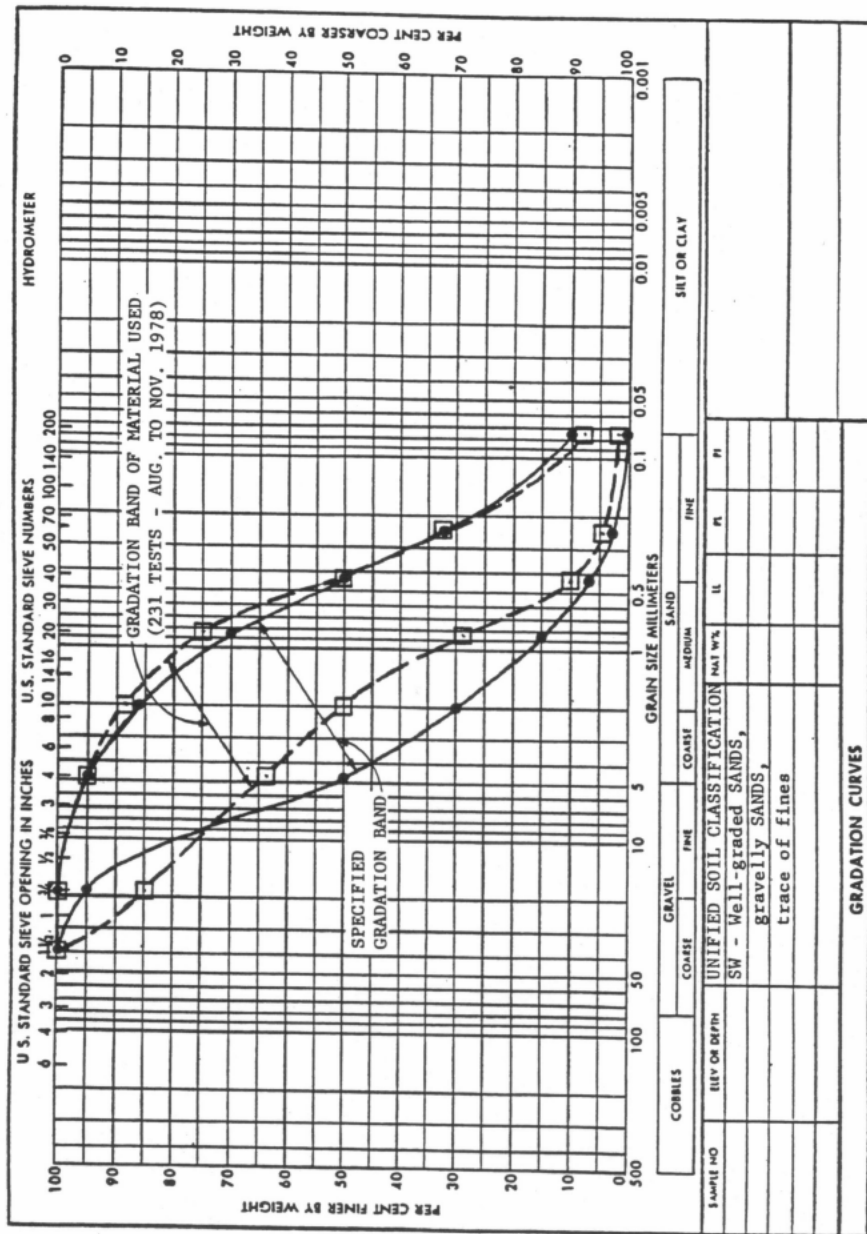


SECURITY-RELATED INFORMATION – WITHHELD
UNDER 5 USC SECTION 552(b)(4) AND 5 USC SECTION
552(b)(7)(F)

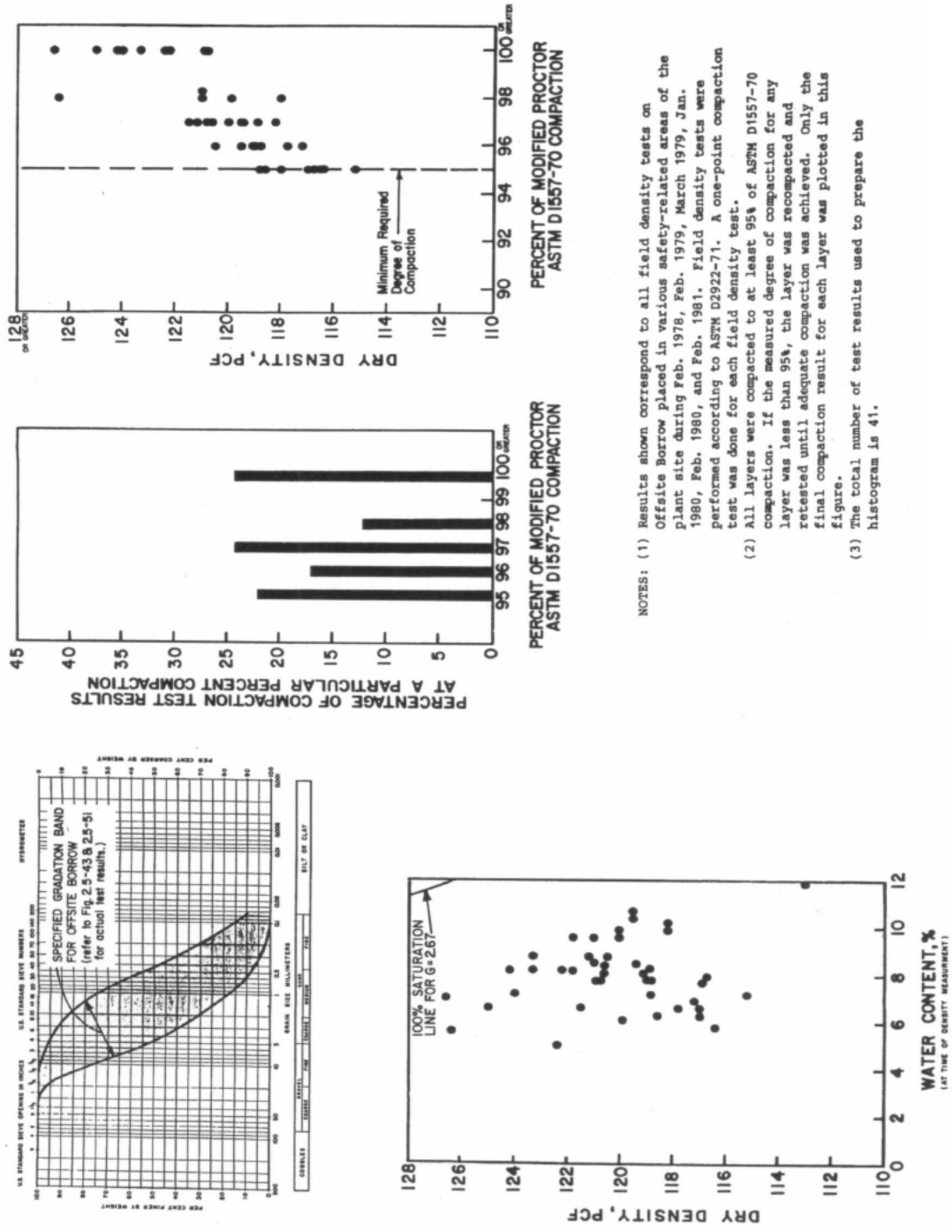
SECURITY-RELATED INFORMATION – WITHHELD UNDER 5
USC SECTION 552(b)(4) AND 5 USC SECTION 552(b)(7)(F)

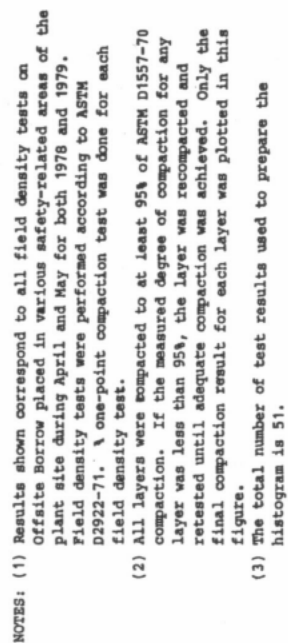
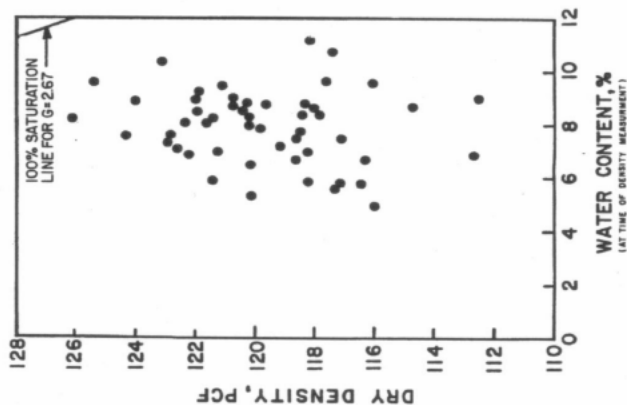


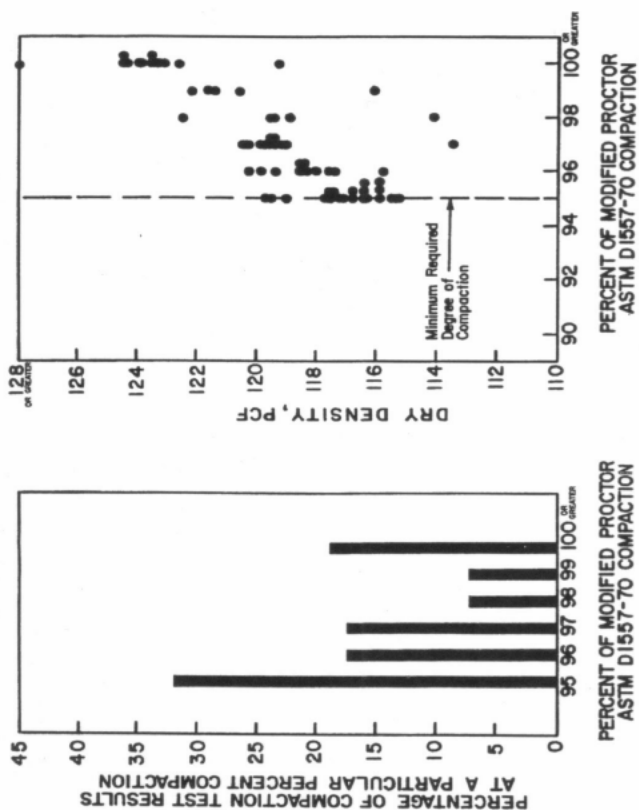
SEABROOK STATION
UPDATED FINAL SAFETY
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Offsite Borrow

Figure 2.5-51



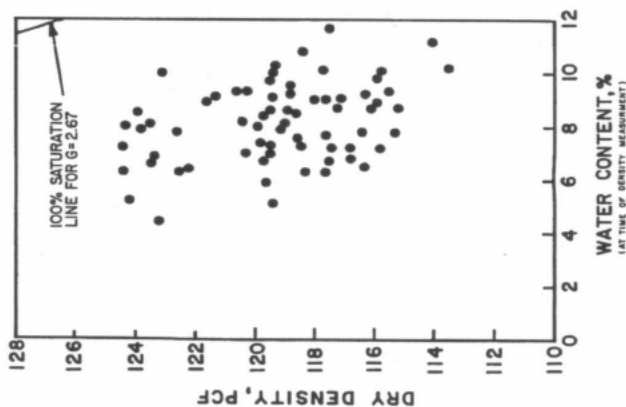
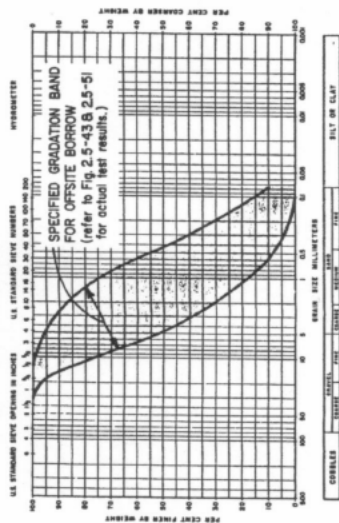




NOTES: (1) Results shown correspond to all field density tests on Offsite Borrow placed in various safety-related areas of the plant site during August 1 through 15 of 1979. Field density tests were performed according to ASTM D2922-71. A one-point compaction test was done for each field density test.

(2) All layers were compacted to at least 95% of ASTM D1557-70 compaction. If the measured degree of compaction for any layer was less than 95%, the layer was recompact and retested until adequate compaction was achieved. Only the final compaction result for each layer was plotted in this figure.

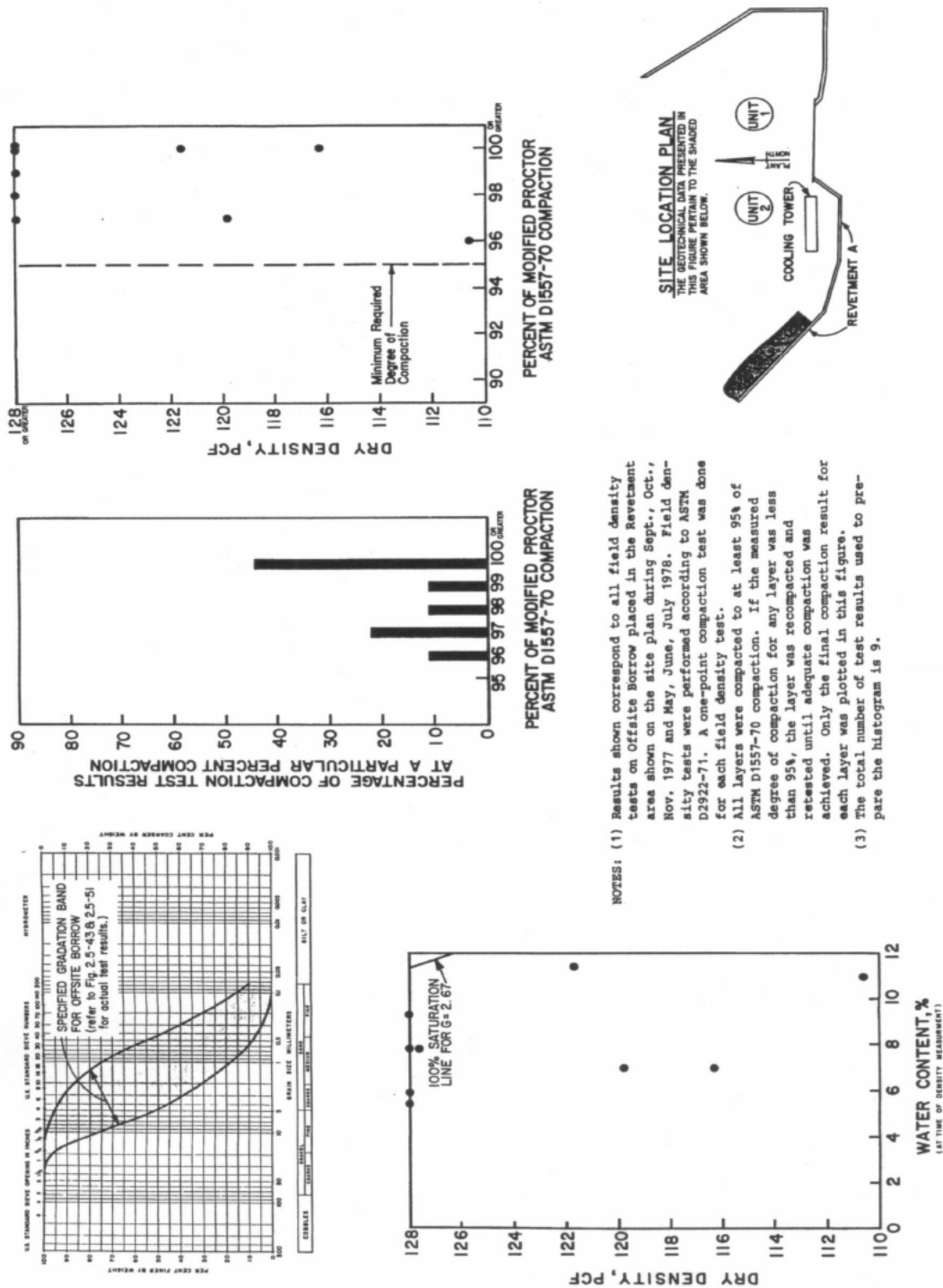
(3) The total number of test results used to prepare the histogram is 69.



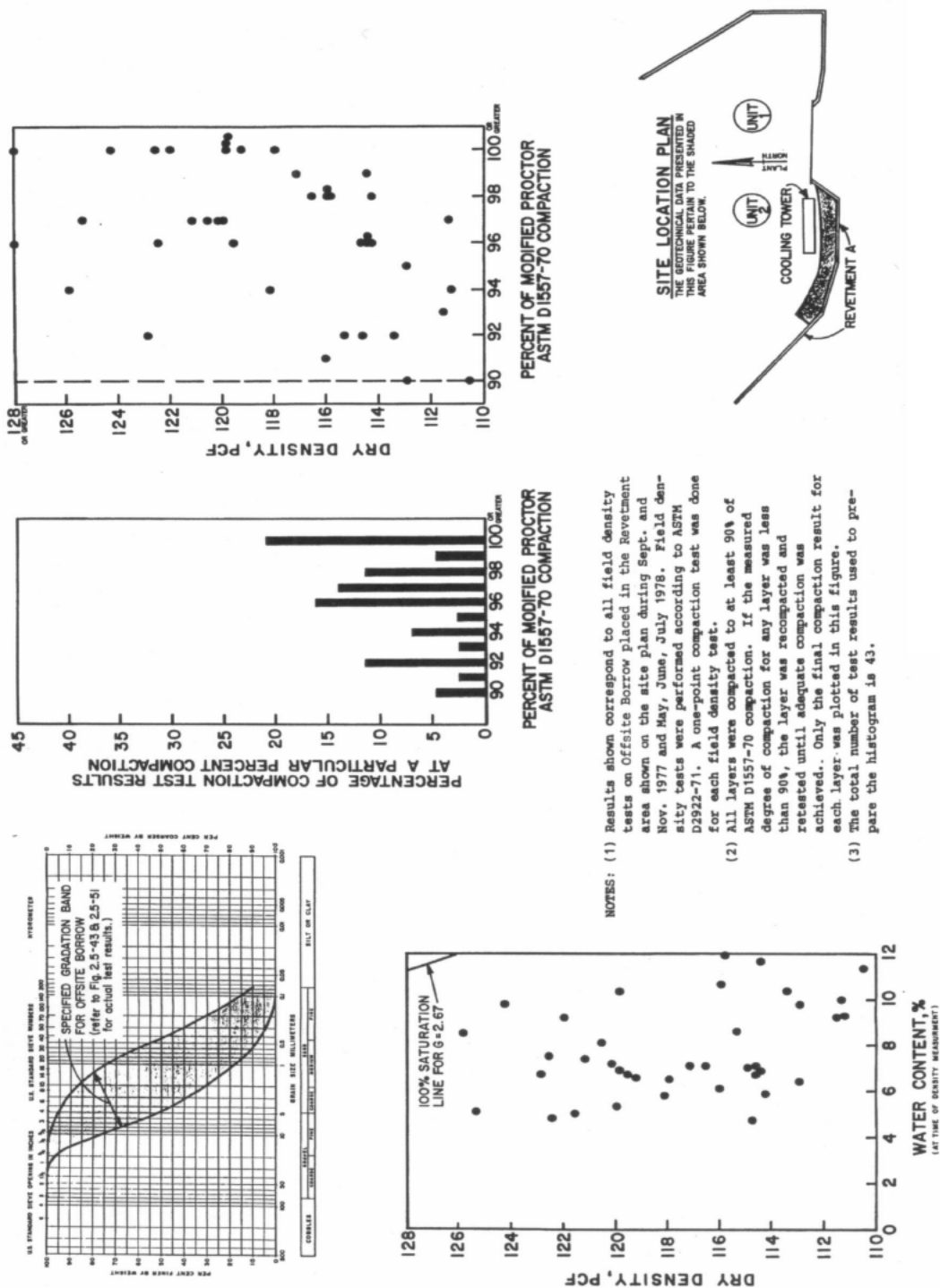
SEABROOK STATION
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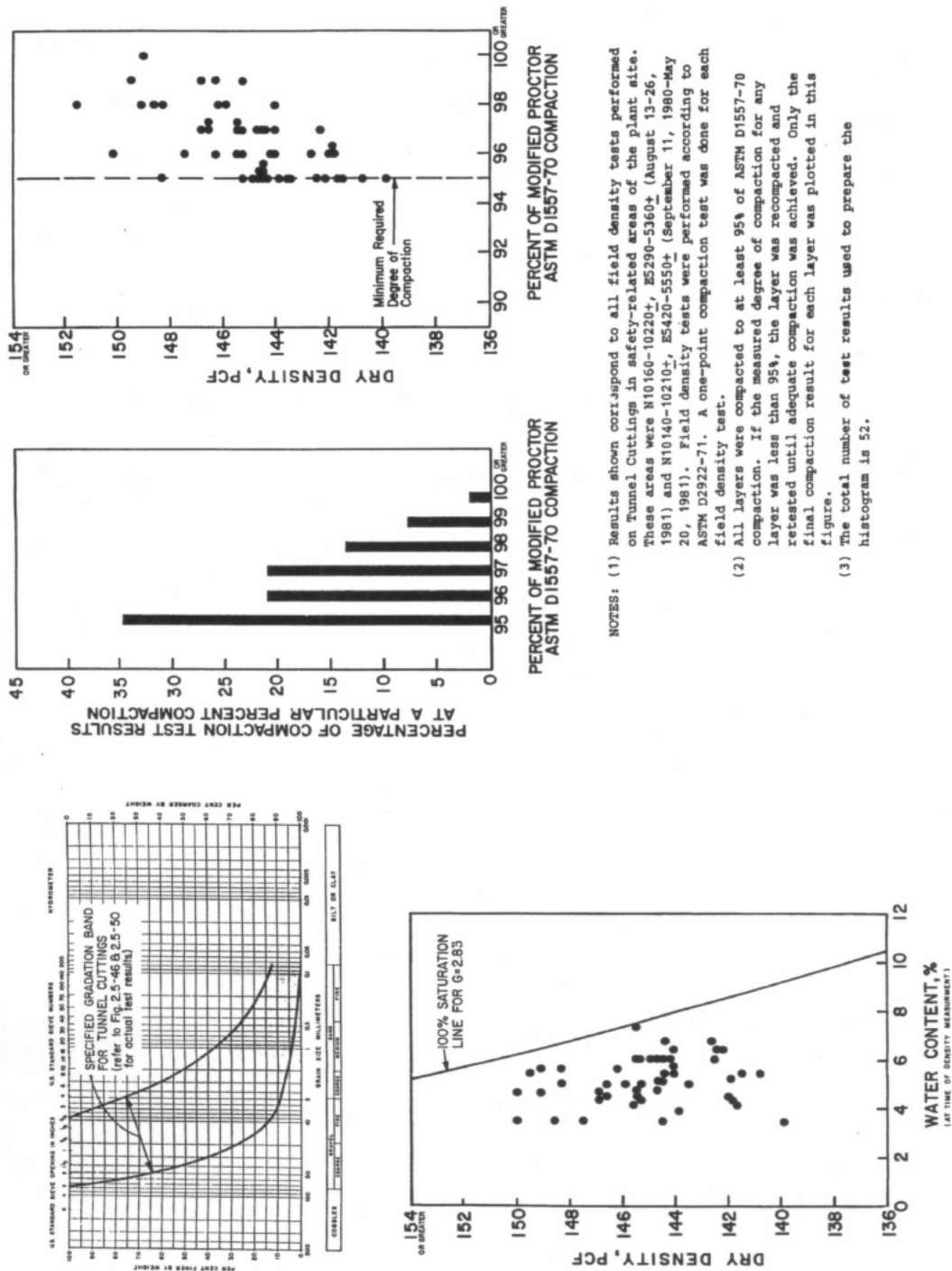
Offsite Borrow Compaction Test Results – Typical Summer Period

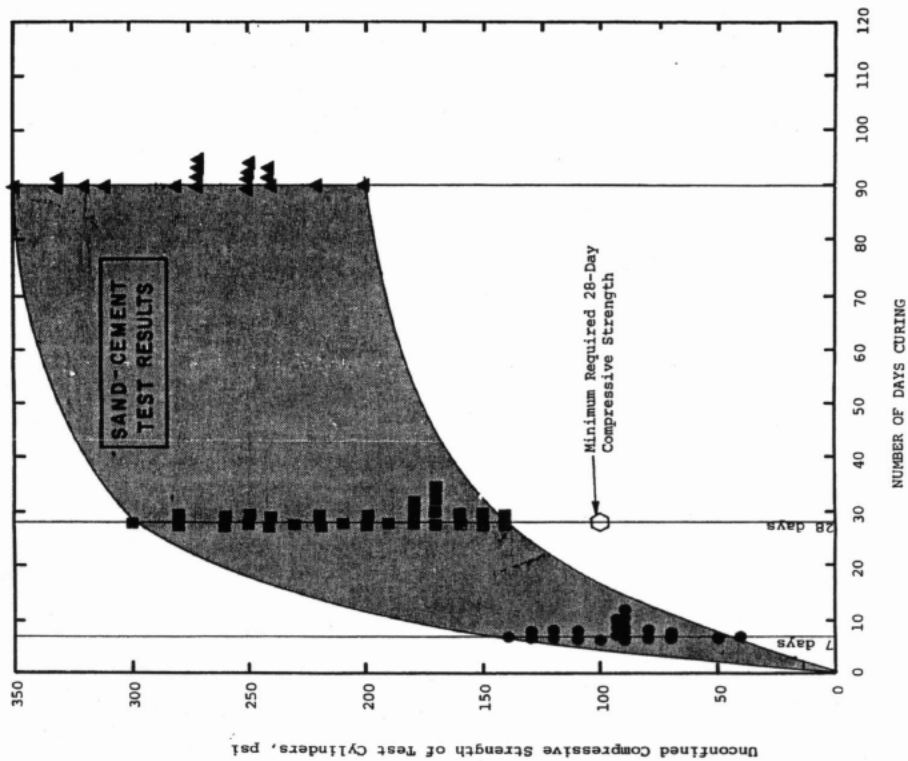
Figure 2.5-54



- NOTES: (1) Results shown correspond to all field density tests on Offsite Borrow placed in the Revetment area shown on the site plan during Sept., Oct., Nov. 1977 and May, June, July 1978. Field density tests were performed according to ASTM D2922-71. A one-point compaction test was done for each field density test.
- (2) All layers were compacted to at least 95% of ASTM D1557-70 compaction. If the measured degree of compaction for any layer was less than 95%, the layer was recompact and retested until adequate compaction was achieved. Only the final compaction result for each layer was plotted in this figure.
- (3) The total number of test results used to prepare the histogram is 9.





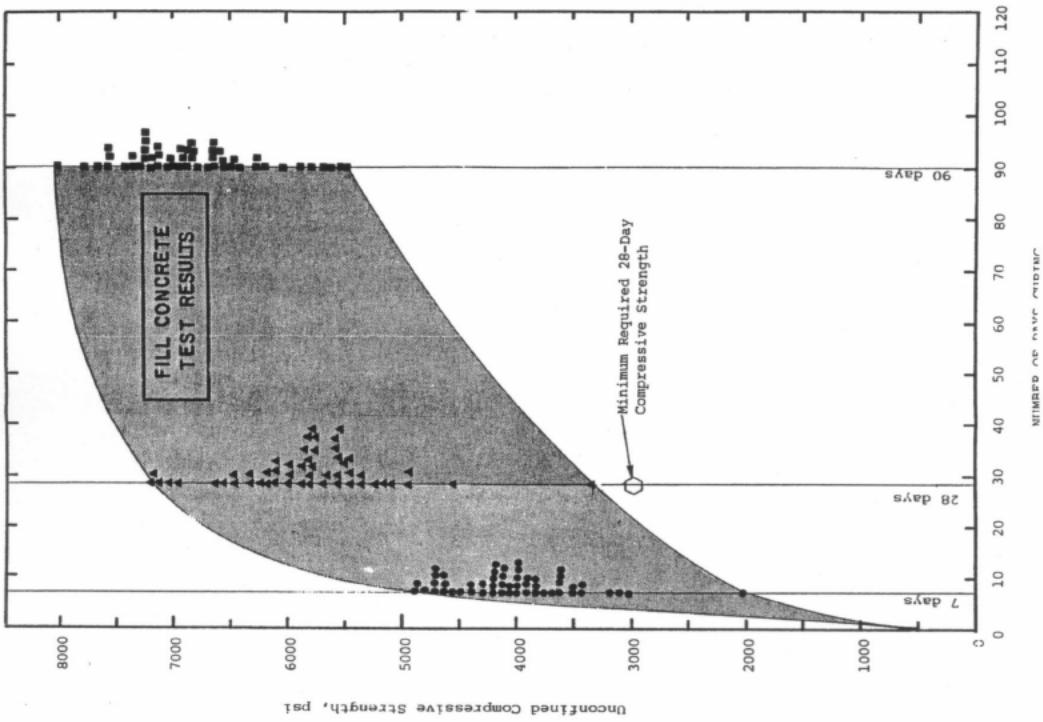


LEGEND

- Unconfined Compressive Strength after 7 days of curing
- Unconfined Compressive Strength after 28 days of curing
- ▲ Unconfined Compressive Strength after 90 days of curing

NOTE:

Results shown correspond to all safety-related SAND-CEMENT placed within the plant site, which was placed in a 10-ft-wide service water pipe trench excavated in rock, centerline N9774, between E6250 and E6430 during the period February 16 to March 29, 1978. Tests performed according to ASTM C39-74. Ref. Table 2.5-17.



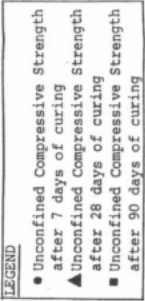
LEGEND

- Unconfined Compressive Strength after 7 days of curing
- ▲ Unconfined Compressive Strength after 28 days of curing
- Unconfined Compressive Strength after 90 days of curing

NOTE:

Results shown are for all tests of FILL CONCRETE placed under the containment mat, Unit 2, during the period May 24-November 11, 1978. Tests performed according to ASTM C39-71.

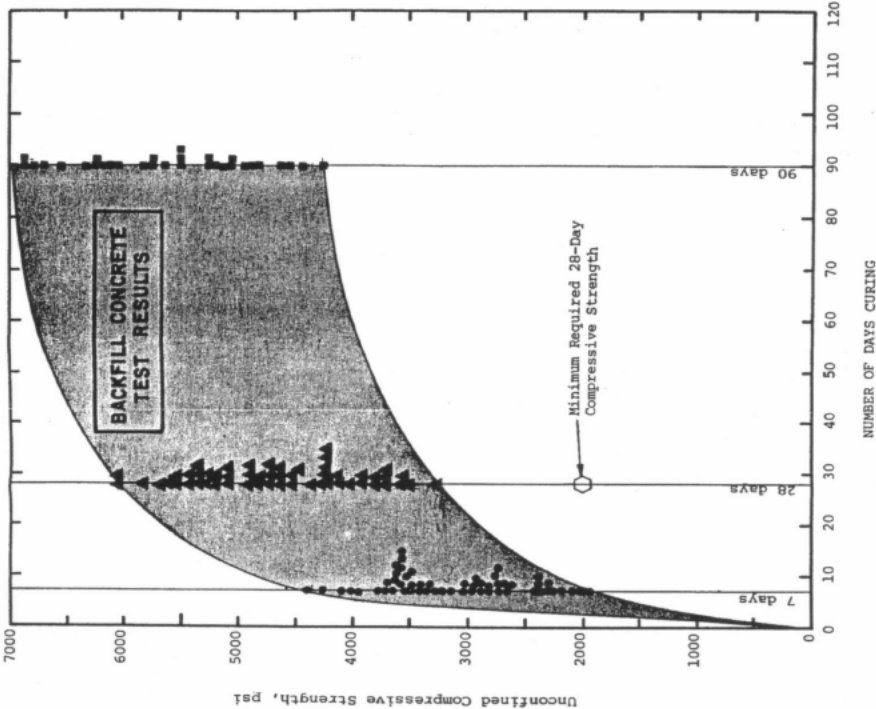
SEABROOK STATION UPDATED FINAL SAFETY ANALYSIS REPORT	Fill Concrete Test Results	
		Figure 2.5-59

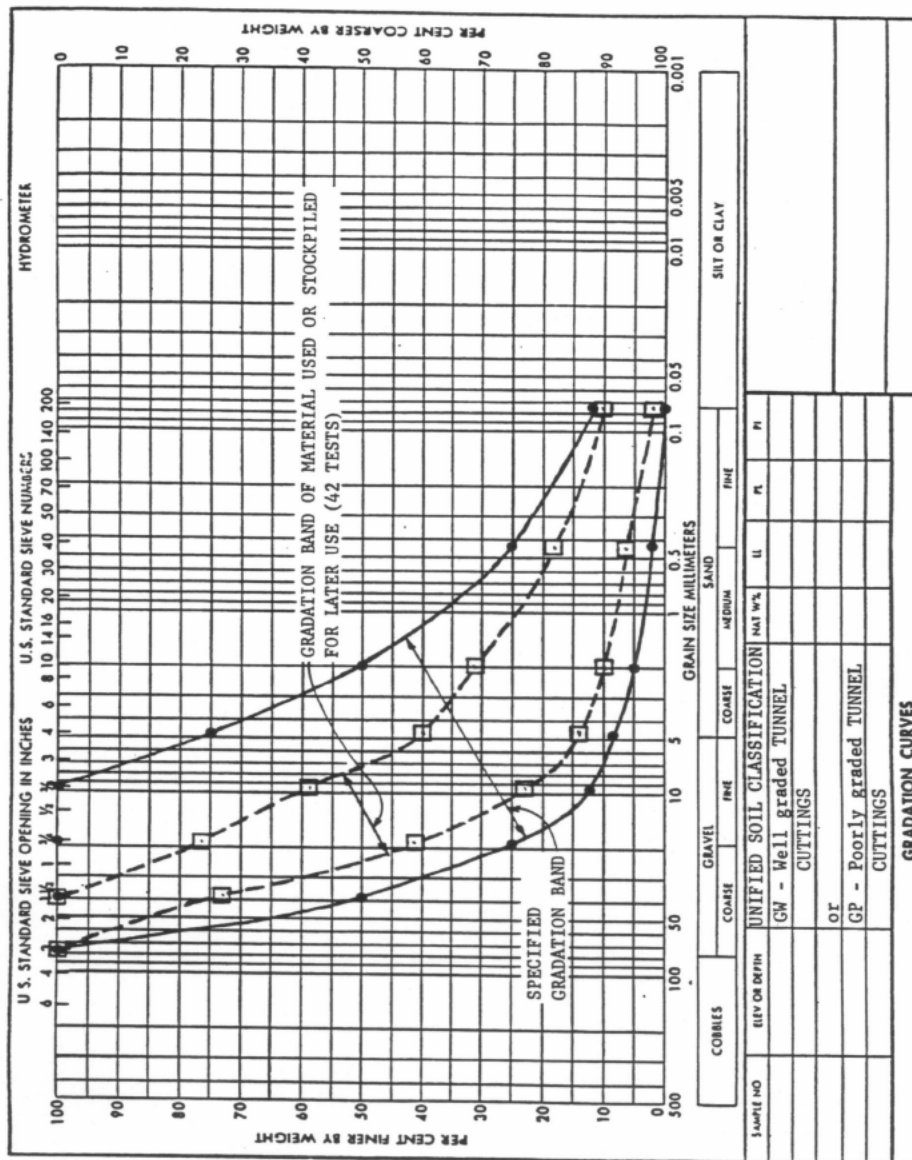


NOTE:
Test results shown are typical for BACKFILL CONCRETE placed in various safety-related areas of the plant site during the period May 30, 1978 to October 30, 1980. Tests performed according to ASTM C39-71.

NOTE:
These test results pertain to BACKFILL CONCRETE placed around the outer walls of the following safety-related structures on the dates indicated:

Structure	Date of Pour
Waste Processing Bldg.	May 30,31, 1978
	December 19, 1979
	October 30, 1980
Diesel Gen. Bldg.,	March 23,27, 1979
Unit 1	May 4,8,22,23,24,29,30, 1979
Fuel Storage Bldg.,	September 21,25, 1979
Unit 1	March 12, 1980
Primary Aux. Bldg.,	May 16,18, 1979
Unit 1	
Service Water Pumphouse	January 4, 1980
	July 14, 1980
Containment Bldg.,	June 4,28, 1979
Unit 1	July 3,6, 1979
Control Bldg., Unit 1	March 8, 1979
	June 1, 1979

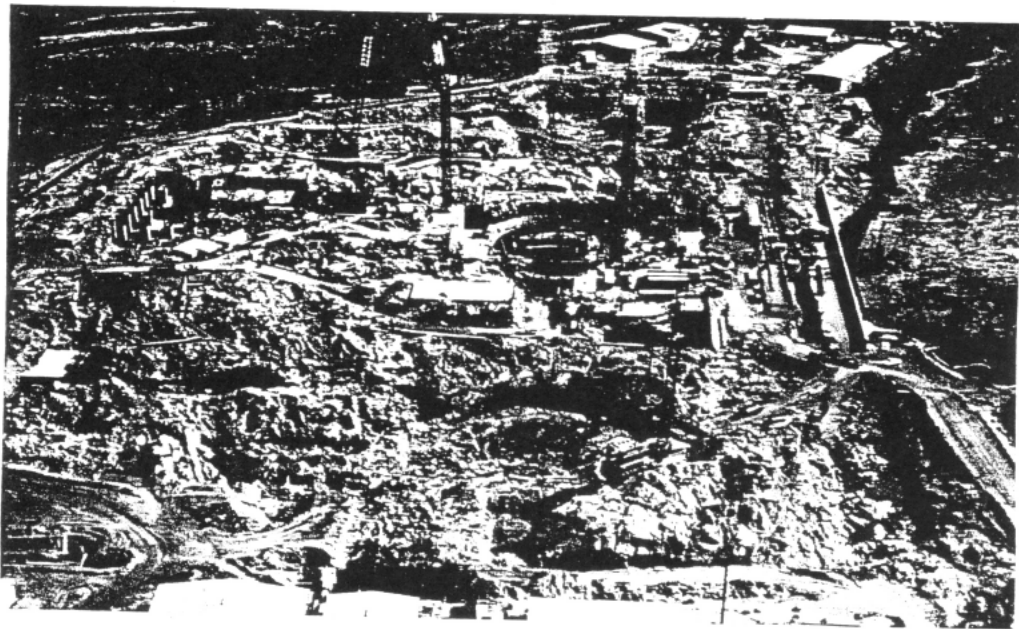




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Tunnel Cuttings

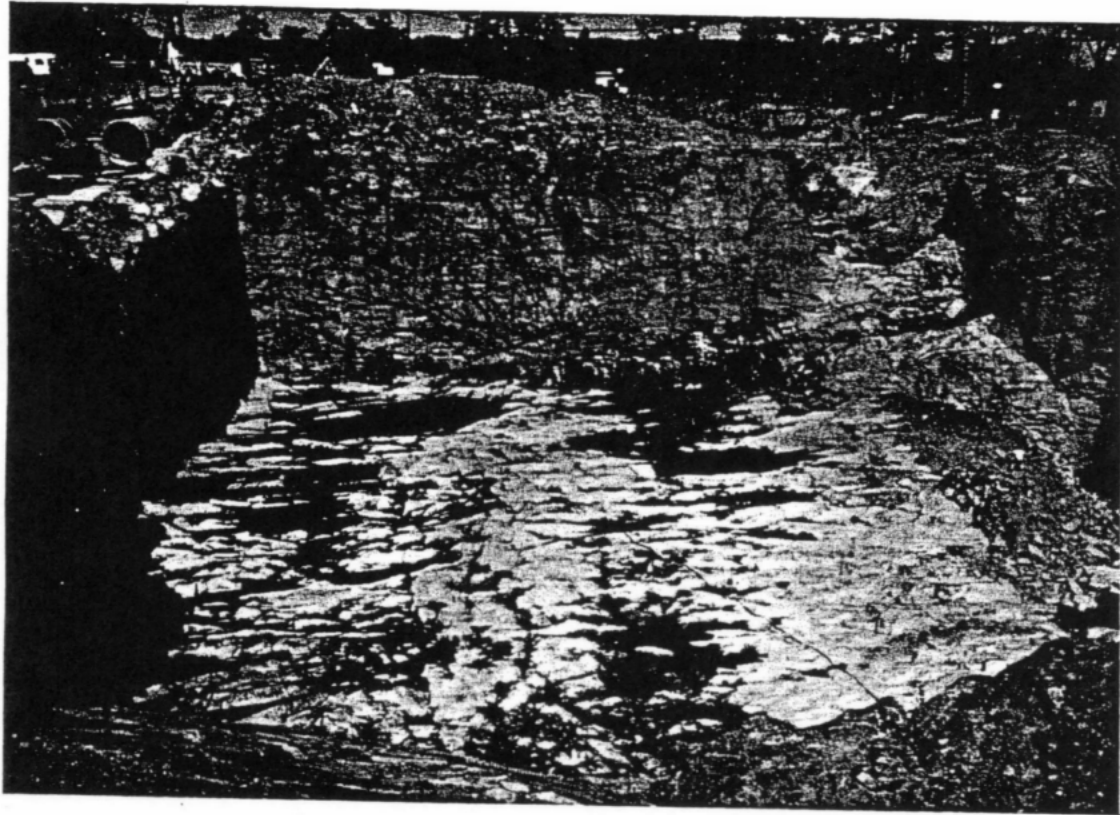
Figure 2.5-61



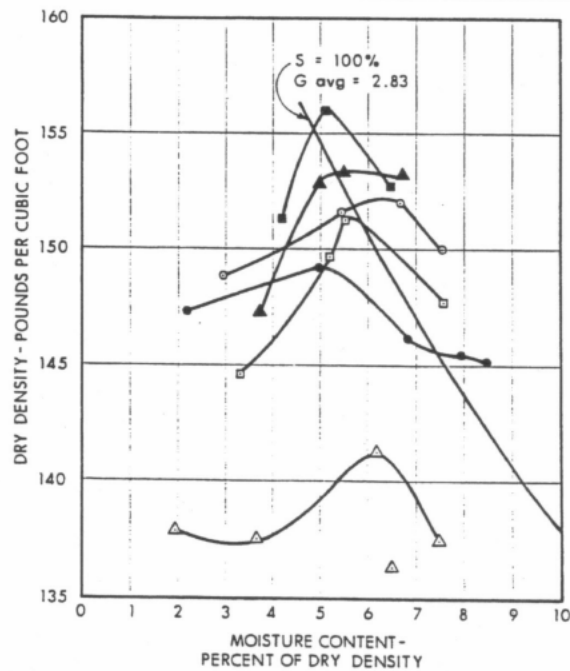
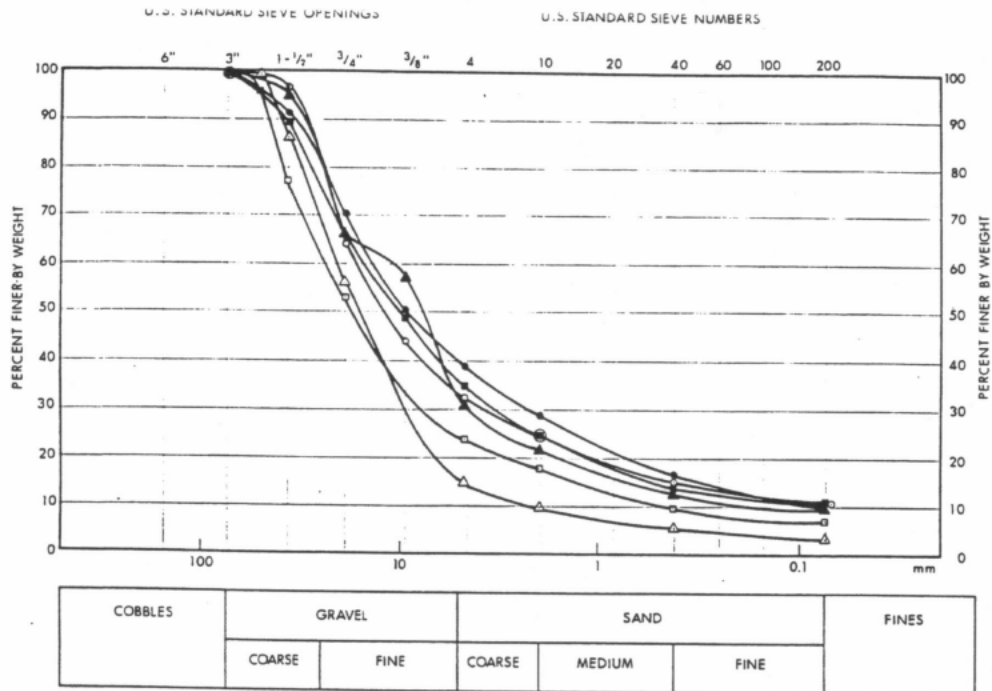
SEABROOK STATION
UPDATED FINAL SAFETY
ANALYSIS REPORT

Overall View of Foundation Excavations, Looking East from
Unit 2 toward Unit 1

Figure 2.5-62



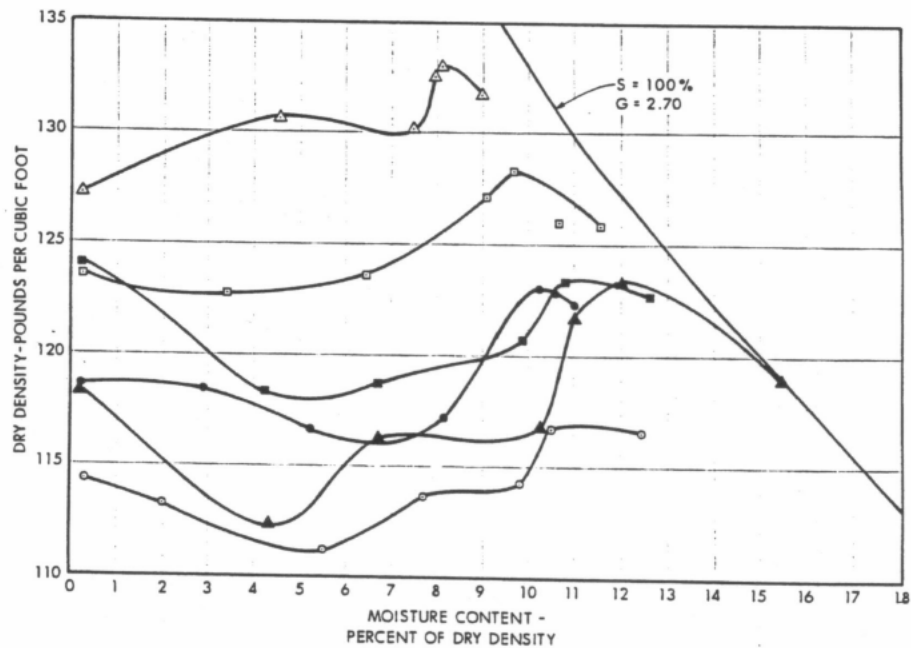
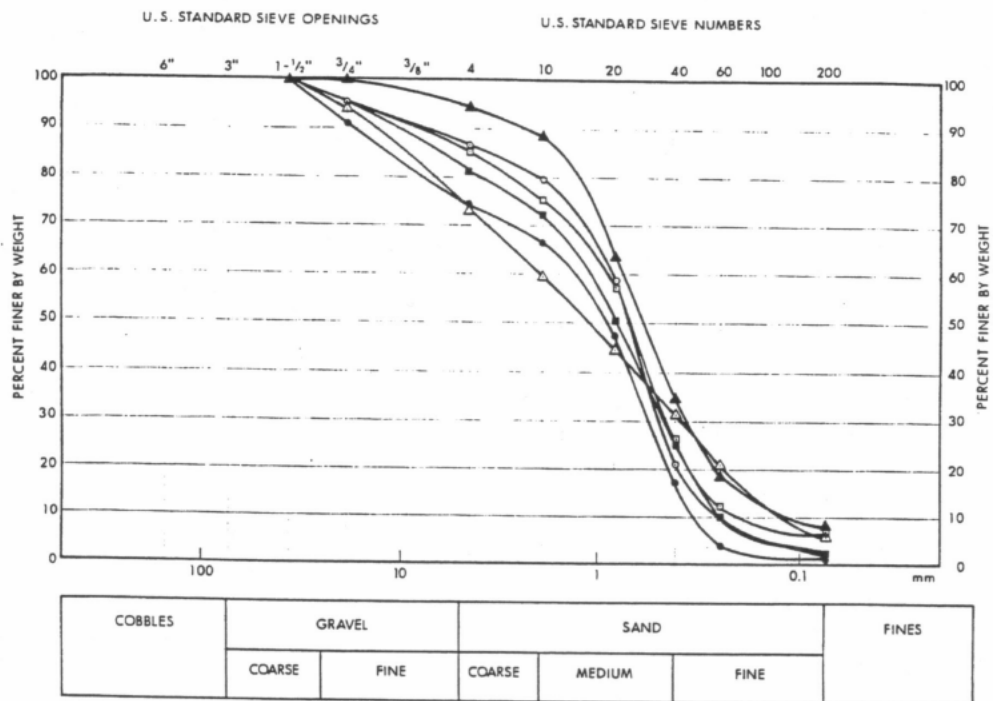
SEABROOK STATION UPDATED FINAL SAFETY ANALYSIS REPORT	Foundation Excavation for Service and Circulating Water Pumphouse Looking North	
		Figure 2.5-63



SEABROOK STATION
UPDATED FINAL SAFETY
ANALYSIS REPORT

Summary Plot of Compaction Curves for Tunnel Cuttings
(March to September 1979)

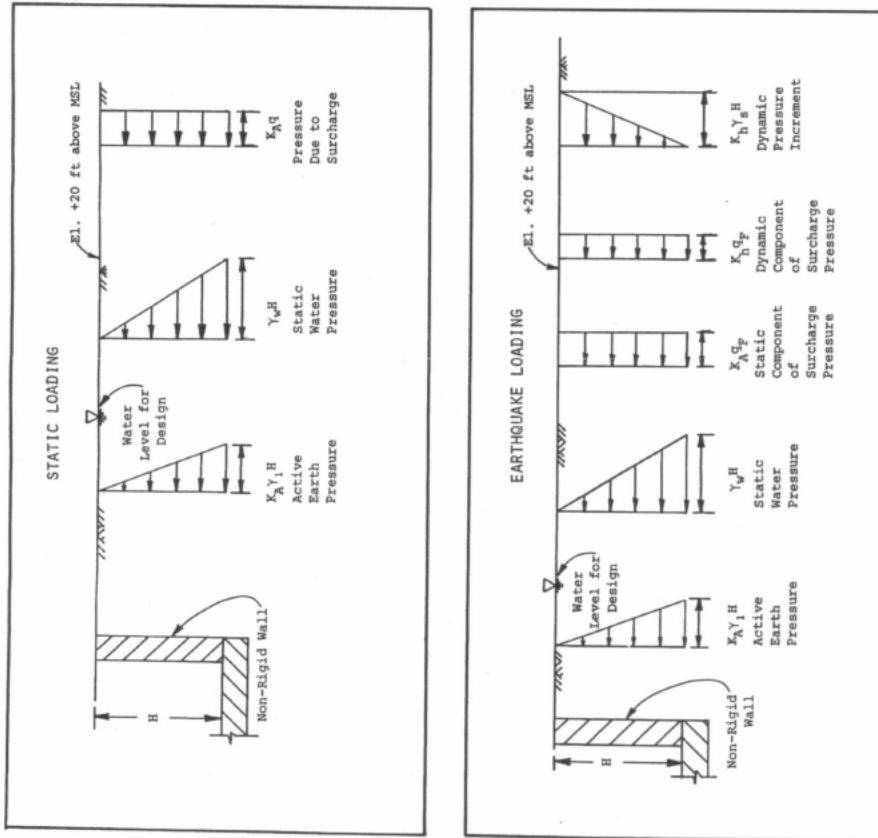
Figure 2.5-64



SEABROOK STATION
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ANALYSIS REPORT

Summary Plot of Compaction Curves for Offsite Borrow
(June to December 1979)

Figure 2.5-65

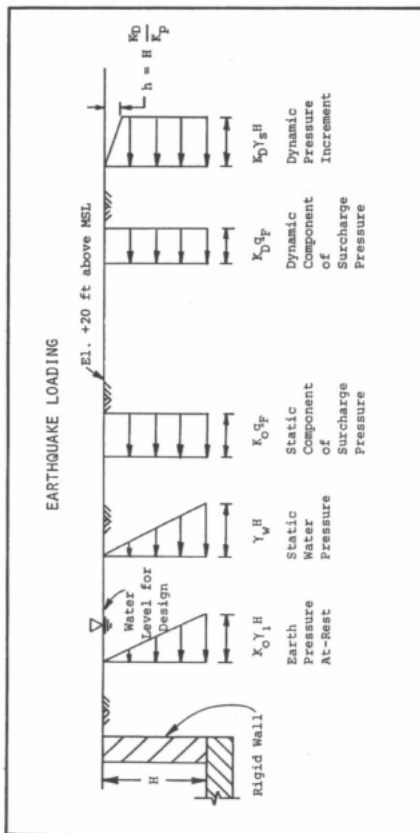
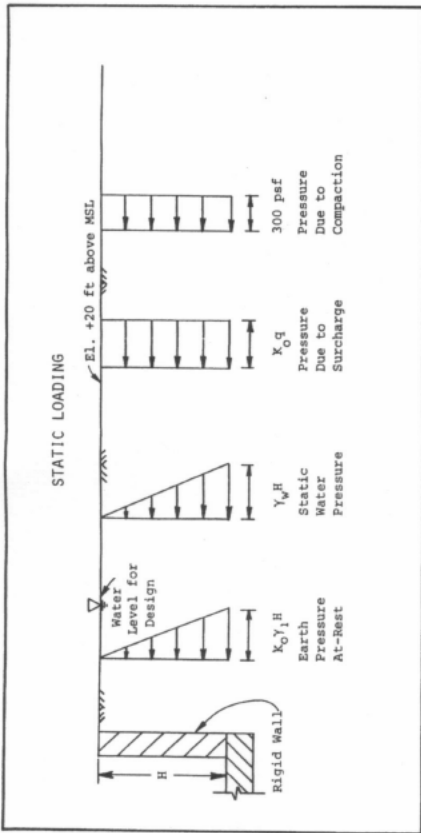


NOTATION

H = Depth of wall below grade, ft.
 γ_i = Buoyant Unit Weight, use 62.5 pcf for offsite borrow
 γ_s = Saturated Unit Weight, use 125 pcf for offsite borrow
 γ_w = Unit Weight of water, use 62.5 pcf
 q = Live Load Surcharge = 500 psf minimum
 q_F = Fixed or Permanent Surcharge, psf (where applicable)
 K_A = Coefficient of Active Earth Pressure, use $K_A = 0.30$
 K_h = Coefficient of Dynamic Earth Pressure, use $K_h = 0.19$ for SSE
 $K_h = 0.10$ for OBE

NOTES

1. A non-rigid wall is defined as a retaining wall which is not supported at the top by floors, etc., and can deflect under earth pressure.
2. Finished plant grade is +20 ft MSL. Design groundwater level is El. +20 ft MSL (refer to Section 2.5.4.6).
3. See Fig. 2.5-53 for lateral loads on rigid walls.



NOTATION

H = Depth of wall below grade, ft.

γ_1 = Buoyant Unit Weight, use 62.5 pcf for offshore borrow

γ_s = Saturated Unit Weight, use 125 pcf for onsite borrow

γ_w = Unit weight of water, use 62.5 pcf

q = Live Load Surcharge = 500 psf minimum

q_f = Fixed or Permanent Surcharge, psf (where applicable)

K_o = Coefficient of At-Rest Earth Pressure, use $K_o = 0.5$

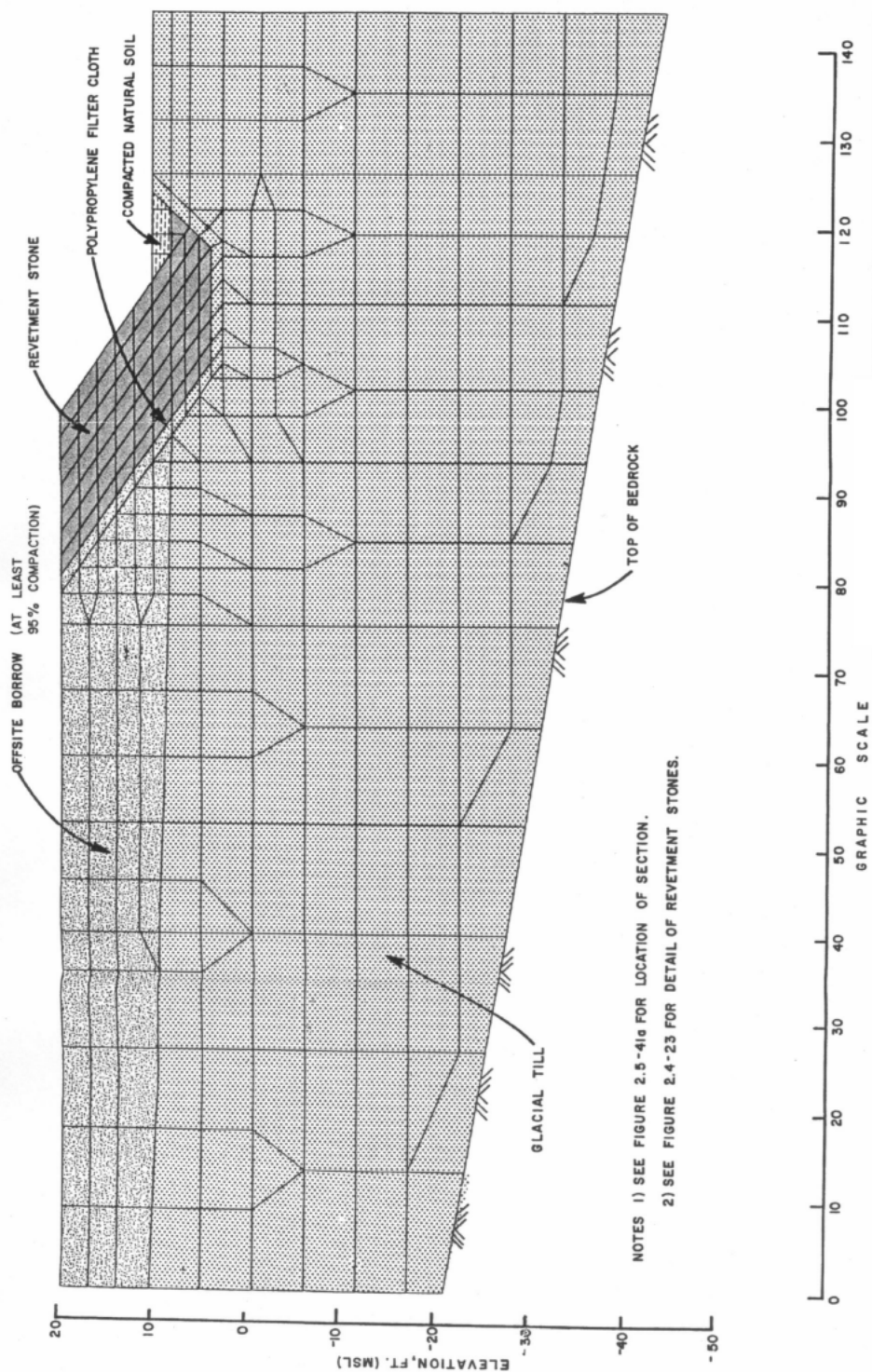
K_p = Coefficient of Passive Earth Pressure, use $K_p = 3.3$

K_D = Coefficient of Dynamic Earth Pressure, use $K_D = 0.28$ for SSE

$K_D = 0.15$ for OBE

NOTES

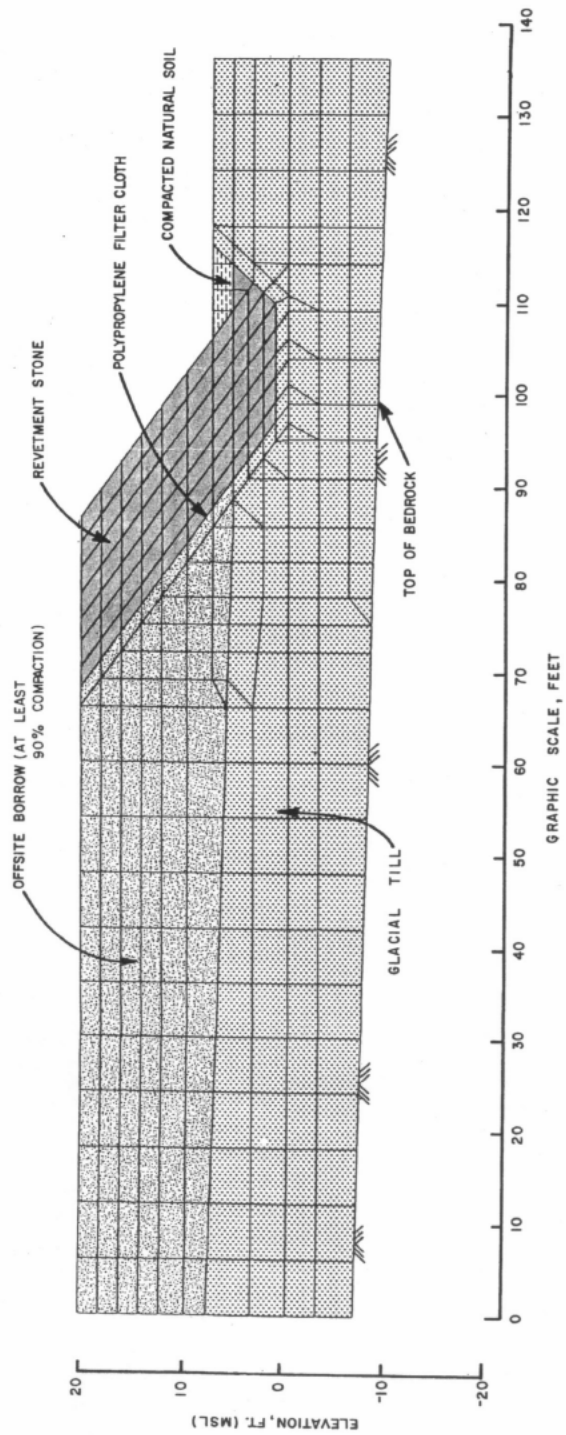
1. A rigid wall is defined as a foundation wall supported and effectively restrained by the floors, walls, etc., which cannot deflect under earth pressure.
2. Finished plant grade is +20 ft MSL. Design groundwater level is El. +20 ft MSL (refer to Section 2.5.4.6).
3. See Fig. 2.5-52 for lateral loads on non-rigid walls.



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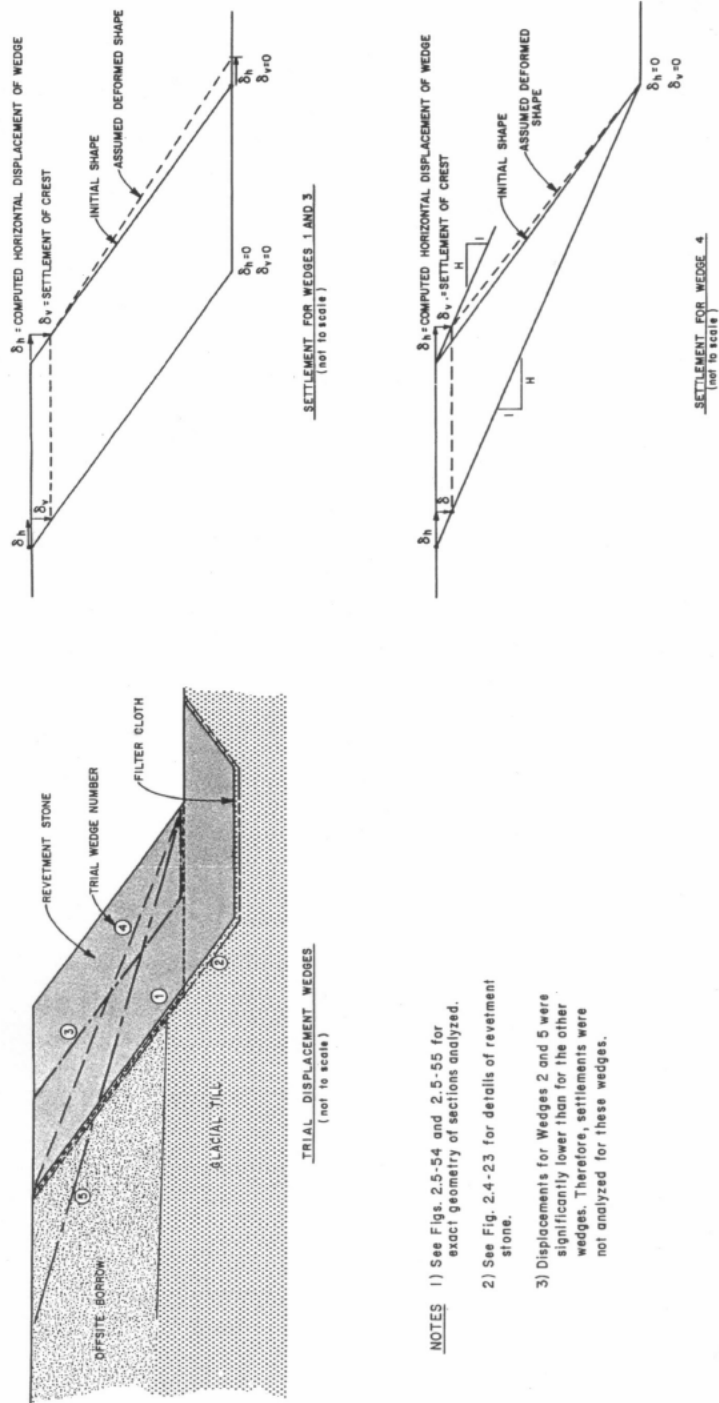
Soil Profile and Finite Mesh Revetment A – Deepest Soil
 Deposit Cross Section Q-Q

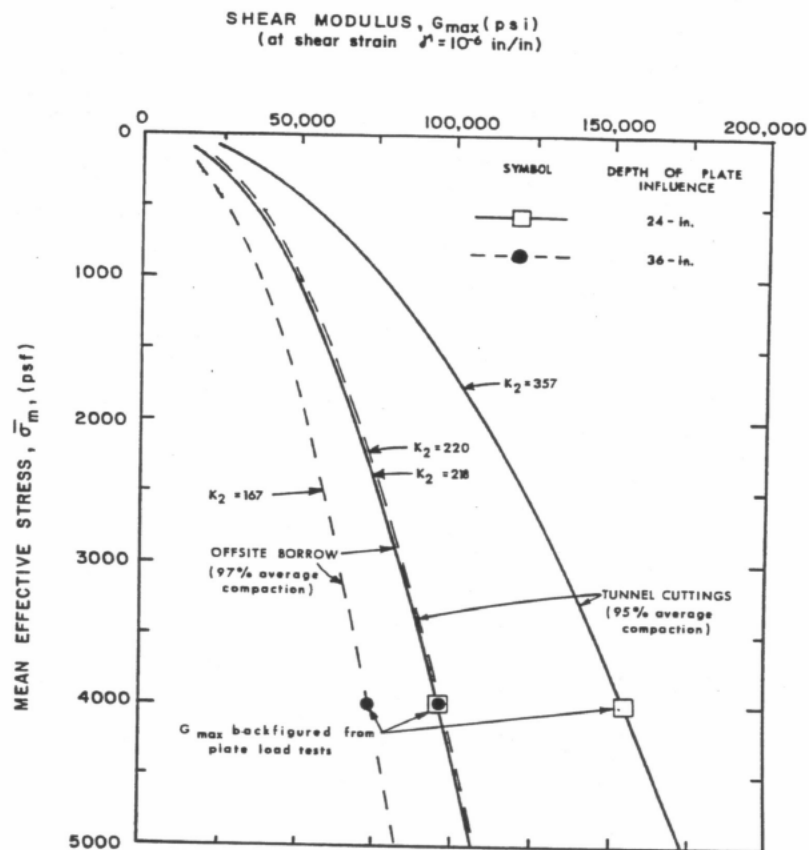
Figure 2.5-68



NOTES: 1) SEE FIGURE 2.5-41a FOR LOCATION OF SECTION.

2) SEE FIGURE 2.4-43 FOR DETAILS OF REVETMENT STONE.





- NOTES: 1. See FSAR text, Subsection 2.5.4.7 for description of method used to backfigure G_{\max} from plate load tests.
2. Curves for G_{\max} vs $\bar{\sigma}_m$ were generated from the plate load test data using the relationship $G_{2\max} = G_{1\max} \sqrt{\sigma_{2m}/\sigma_{1m}}$ with G_1 and σ_1 being the plate load test values.
3. Values of G for shear strain levels greater than 10^{-6} in./in. can be obtained using the average modulus reduction curve for sands presented in Seed and Idriss (1970).
4. Values of K_2 for use in the equation $G_{\max} = 1000 K_2 (\bar{\sigma}_m)^{1/2}$ are shown next to each curve.