

J. A. JONES CONSTRUCTION COMPANY  
SPECIAL PROCESS PROCEDURE

FOR  
ADDITIONAL GROUTING

OF

499S02-10B

WATERFORD SES UNIT NO. 3  
CONTRACT NO. W3-NY-4

REV.	DATE	ENGINEERING REVIEWED BY	DATE	CONSTRUCTION REVIEWED BY	DATE	QUALITY ASSURANCE APPROVED BY	DATE
0	3-21-77	<i>C. L. Jones</i>	3-22-77	<i>D. E. Harris</i>	3-22-77	<i>Robert L. Thomas</i>	3-22-77
1	4-19-77	<i>A. L. Jones</i>	4-19-77	<i>D. E. Harris</i>	4-19-77	<i>Robert L. Thomas</i>	4-20-77
2	4-22-77	<i>C. L. Jones</i>	4-22-77	<i>A. L. Jones</i>	4-22-77	<i>Robert L. Thomas</i>	4-22-77

REVIEWED

W/ COMMENTS —

W/O COMMENTS X

REJECTED —

EBASCO QUALITY ASSURANCE

BY: *Joe. L. Thomas*

DATE: 4-22-77

FREEDOM OF INFORMATION  
ACT REQUEST

84-455

C/633

8506220122 850222  
PDR FOIA  
GARDE84-455 PDR



SPECIAL PROCESS PROCEDURE	PROCEDURE NO. W-SP-17
TITLE OF PROCEDURE: ADDITIONAL GROUTING OF PLACEMENT 499S02-10B	Issue Date: 3-21-77
PROJECT TITLE: WATERFORD SES UNIT #3	Rev. No. & Date: 2 4-22-77

#### 1.0 PURPOSE

The purpose of this procedure is to outline the methods to be used by J. A. Jones Construction Company and Subcontractors to perform additional grouting of placement 499S02-10B as directed by letter #F-15396, dated 4-15-76 and letter #F-15449, dated 4-18-76, from Ebasco Services, Incorporated.

#### 2.0 SCOPE

This procedure includes the requirements for further grouting of placement 499S02-10B.

#### 3.0 REFERENCES

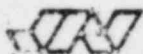
- 3.1 Ebasco Services, Incorporated Letters F-15396 and F-15449.
- 3.2 ACI-503, Guide for use of Epoxy compounds with concrete.
- 3.3 Adhesive Engineering Company Technical Bulletin Numbers AE-354/1, AE-408/1, and Specification Number AEMS 309.
- 3.4 J. A. Jones Special Process Procedure, W-SP-13, Revision 3.
- 3.5 J. A. Jones Special Process Procedure, W-WP-7, Revision 6.

#### 4.0 DEFINITIONS

- 4.1 Engineer: Ebasco Services, Incorporated.
- 4.2 Grout Refusal: A pressure of 180 PSI  $\pm$  15 PSI that has stabilized for a period of approximately five (5) minutes.

#### 5.0 RESPONSIBILITY

- 5.1 Ebasco Services, Incorporated shall be responsible for documentation review, acceptance, and determining if further grouting is necessary.
- 5.2 J. A. Jones Construction Company and Subcontractors shall be responsible for the coring, purchasing, receiving and acceptance of grouting materials, grouting operation, quality verification inspection, and documenting information for review by the Engineer.
- 5.3 J. A. Jones Construction Company shall have a qualified supervisor present during all grouting operations who shall be in responsible charge of the work.



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#### 6.0 MATERIAL QUALIFICATION

- 6.1 The grouting material, Concessive 1380\*, shall meet the requirements of Reference 3.4, J. A. Jones Special Process Procedure W-SP-13, Revision 3, Paragraphs 6.6 and 6.7.

#### 7.0 CORING OF GROUT HOLES

- 7.1 At the locations specified in paragraph 7.2, the surface shall be chipped to expose the top mat of reinforcing steel.
- 7.2 Nine (9) two (2) inch diameter cores shall be drilled to a depth of seven (7) foot at the locations specified by numbers 1A through 9A on Attachment 1.
- 7.3 Core logs shall be initiated for each core containing the core and piece number, depth and questionable areas. All holes shall be plugged after drilling.
- 7.4 After cores are drilled they shall be labeled, stored in core boxes, and photographed.
- 7.5 Additional cores shall be drilled at the direction of the Engineer in accordance with paragraph 7.1 through 7.4.

#### 8.0 GROUTING

- 8.1 The measurement of grout shall be accomplished with a dip stick (standard ruler) attached to the "B" component reservoir. Measurements shall be taken before and after injection into each grout hole and recorded in the remarks section of Attachment C. If the reservoir requires filling during the grouting of any hole, measurements shall be taken before and after filling the "B" reservoir and recorded. The quantity of grout used shall equal three (3) times the calculated volume of "B" component.
- 8.2 The volume of each grout hole shall be calculated from measurements taken of each grout hole before injection. The estimate of grout for filling each hole shall be determined later by utilizing the void ratio of the aggregate as determined from the sieve analysis and the calculated volume of each grout hole.
- 8.3 The material and equipment checklist, Attachment B, shall be completed by Quality Verification Personnel before proceeding.
- 8.4 Complete Part "A" of the Inspection Checklist, Appendix C for each injection hole before grouting begins.

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8.5 Begin grouting lines A-A and C-C from East to West. Beginning with holes 1A and 3A, checking to see if grout flows to the holes in row B-B of the five (5) four (4) inch diameter holes, 1B thru 5B.

8.6 Each hole shall be grouted to refusal or until grout is observed in another location. If grout is observed in a surrounding hole, fill the hole as needed with aggregate. A Packer shall be installed if required. If grout is observed at the surface, the leak shall be sealed with plug setting material.

8.7 Drill eight (8) additional 2' diameter holes in lines D-D and E-E to a depth of seven (7) feet. Drilling and documentation shall be in accordance with section 7. The holes shall be staggered halfway between the A series and numbered 1-C thru 8-C.

8.8 Grout lines D-D and E-E as outlined in paragraphs 8.1 thru 8.6 above.

8.9 Upon completion of 8.8 above a determination of which of the following paragraphs best describes the condition encountered will be made. Proceed accordingly as described below. Verification cores shall be taken at the direction of the Engineer.

8.9a All holes do not take an excess of grout. Grout the holes in Row B-B and 1B thru 5B as outlined in 8.1 thru 8.6 above.

8.9b One or more of the holes is questionable and no grout appears in row B-B or holes 1B thru 5B. Holes shall then be drilled as indicated by triangles on Attachment D in accordance with section 7. Grout these holes as outlined in paragraphs 8.1 thru 8.6 above.

8.9c One or more of the holes is questionable and grout appears in Row B-B or in holes 1B thru 5B. Holes shall then be drilled as indicated by triangles on Attachment E in accordance with section 7. Grout these holes as outlined in paragraphs 8.1 thru 8.6 above.

9.0 INSPECTION

9.1 J. A. Jones Quality Verification shall complete the applicable appendixes during the grouting operations.

9.2 Quality Verification personnel during the grouting operations shall inspect surrounding cores for influence of grout.

9.3 Any direction recieved from the Engineer during the completion of the repair shall be in written form, signed and dated, and included in Q.V. Documentation.

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10.0 ACCEPTANCE

10.1 After completion of the grouting operation, documentation shall be transmitted to the Engineer for review and discussion.

11.0 ATTACHMENTS

- A. Core Grid Locations
- B. Material and Equipment Checklist
- C. Inspection Checklist
- D. Excess Grout Take Grid
- E. Observed Grout Take Grid
- F. Previous Coring and Grouting Locations.
- G. Orientation of Surface Cracks



3.50

N4213.50



N4145.00

W3924.00

W3922.50

N4145.00

BLOCK 10B

- — NEW CORE HOLES (2"  $\phi$ )
- ⊗ — PREVIOUSLY DRILLED HOLES (2"  $\phi$ )
- — PREVIOUSLY DRILLED HOLES (4"  $\phi$ )

ATTACHMENT A

MATERIAL AND EQUIPMENT CHECKLIST

<u>MATERIALS</u>	<u>ACCEPT</u>	<u>REJECT</u>
250 lbs. washed and dried bagged aggregate	_____	_____
50 gals. of Concessive* 1380 epoxy grouting material	_____	_____
1/4" tubing with Certification	_____	_____
12 1/4" screw plugs	_____	_____
25 lbs. plug setting material	_____	_____
1/4" packing gland fittings for 1/4" tube	_____	_____
12 tubing connectors 1/4" tubing to quick connect	_____	_____
quick disconnects	_____	_____
Waterless hand cleaner	_____	_____
 <u>EQUIPMENT</u>		
Packers with vents and entry port for 2" and 4" diameter grout holes	_____	_____
4 grouting machines with mixing heads	_____	_____
6 flashlights with bulbs and batteries	_____	_____
vacuum cleaner	_____	_____
power outlets connected to one source with equal back up system connected to independent source with tag to "DO NOT DISCONNECT WITHOUT NOTIFYING J. A. JONES SUPERVISOR LOCATED ON PLACEMENT 10B"	_____	_____
Air source	_____	_____
0 to 200 PSI minimum pressure gauges with Certification	_____	_____
2 portable light stands with lights	_____	_____
Barrier rope with AUTHORIZED PERSONNEL ONLY signs	_____	_____
Protective glasses for all personnel	_____	_____
1 gang box with lock	_____	_____
Tubing cutter	_____	_____

INSPECTED BY: \_\_\_\_\_

TIME/DATE: \_\_\_\_\_

INSPECTION CHECKLIST

Material and Equipment Checklist

- Area Chipped and Cleaned
- Hole Clean
- Grout Tube Installed
- Grout Hole Filled with Aggregate
- Packer Installed
- Fitting Installed

ACCEPT

REJECT

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

INSPECTOR: \_\_\_\_\_

SHIFT: \_\_\_\_\_ DATE: \_\_\_\_\_

T B

Estimated Time of Pumping

Estimated Quantity of Epoxy Injected

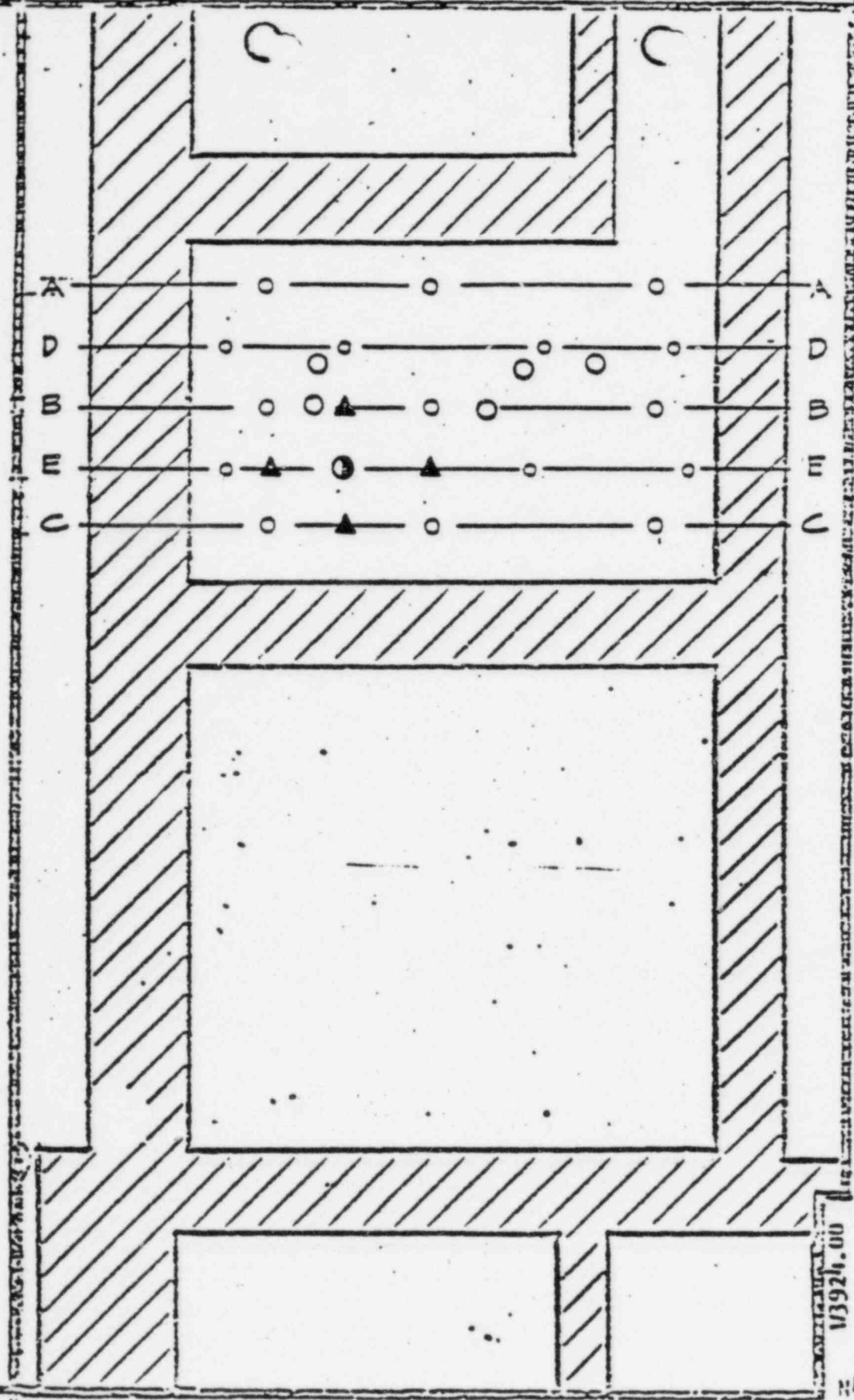
Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INSPECTOR: \_\_\_\_\_

SHIFT: \_\_\_\_\_ DATE: \_\_\_\_\_



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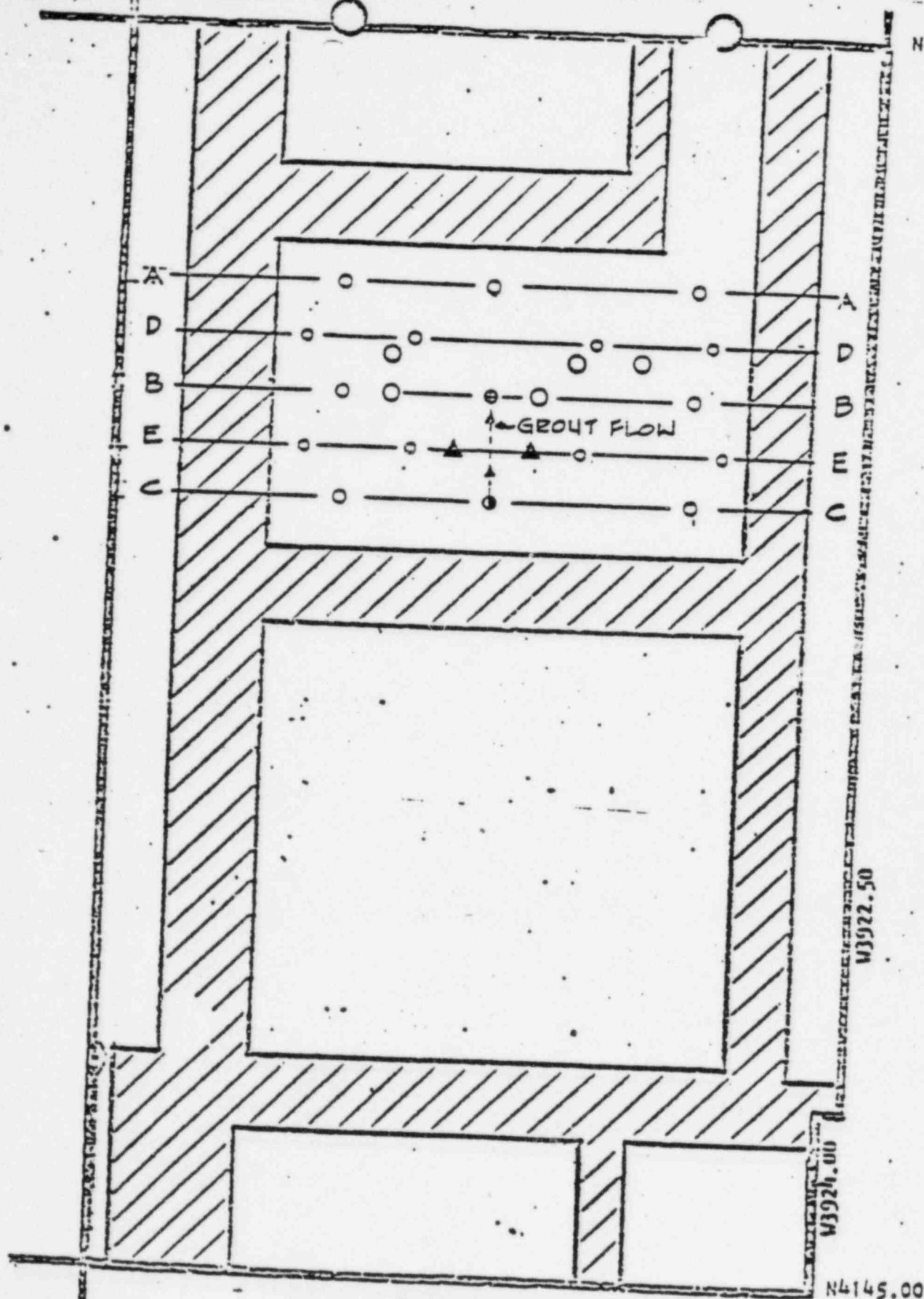


BLOCK 10B

- — HOLE W/ EXCESS GROUT TAKE - CASE 2
- ▲ — NEW 2"  $\phi$  GROUT HOLES

ATTACHMENT D

N4213.50



BLOCK 10B

- — HOLE W/ EXCESS GROUT TAKE - CASE 3
- ▲ — NEW 2" + GROUT HOLES
- ⊕ — GROUT FLOW OBSERVED

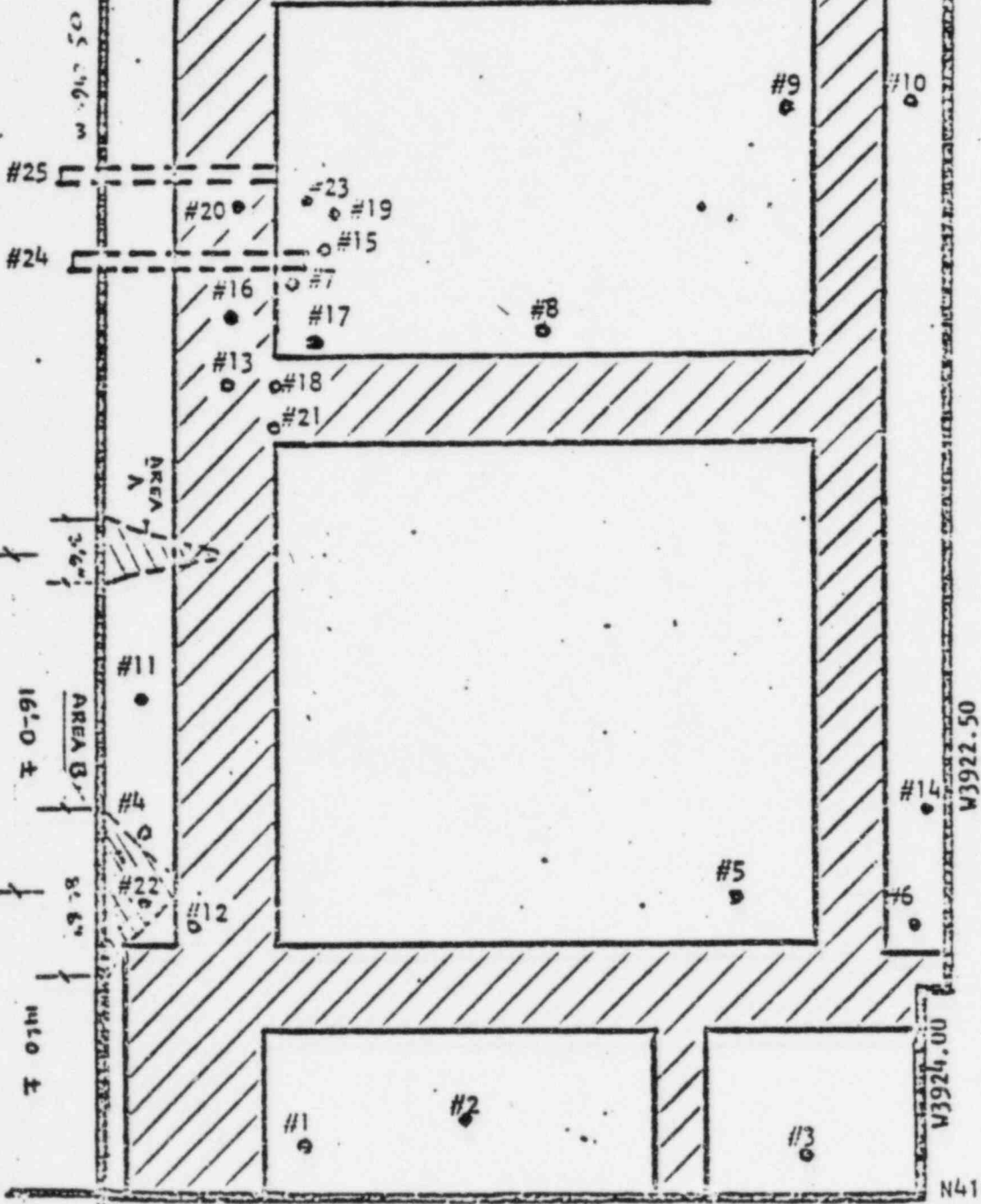
ATTACHMENT E

LOCATION PLAN  
POUR NO. 499-108

DRILL HOLE AND HONEYCOMBED AREA

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- Drill Hole
- ▨ Honeycombed Area

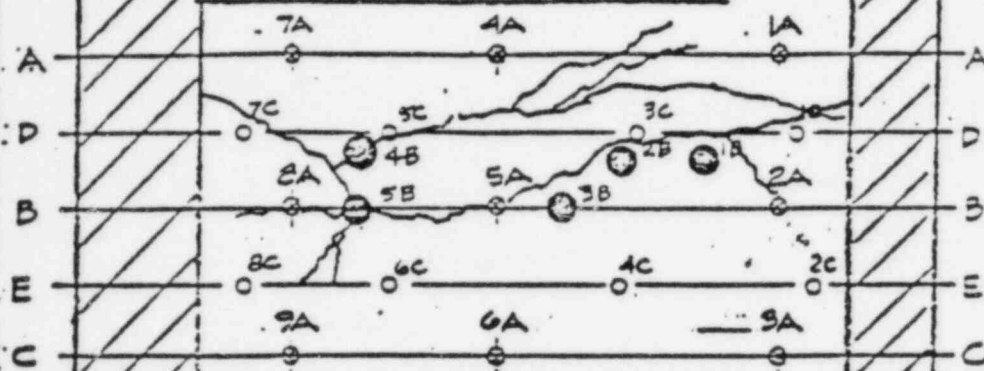
PREVIOUS CORING  
AND GROUTING  
LOCATIONS

(SEE J.A. JONES CURVE LOGS  
FOR EXACT LOCATIONS)

ATTACHMENT F

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N4213.50



# BLOCK 10B

- — NEW CORE HOLES (2"  $\phi$ )
- ⊗ — PREVIOUSLY DRILLED HOLES (2"  $\phi$ )
- ⊙ — PREVIOUSLY DRILLED HOLES (4"  $\phi$ )

APPROXIMATE ORIENTATION  
OF SURFACE CRACKS