DKF-44201 R1

GPU Nuclear

Technical Functions
Safety/Environmental Determination and 50.59 Review

UNIT OCNGS

PAGE 1 OF 11

+ TRENCH CUTTING

SE No. 328227-001

Rev. No. 5

ACTIVITY TITLE Drywell Core Boring and Repair

Document No. _____ (if applicable)

Type of Activity Sampling and Replacement in Kind
(Modification, procedure, test, experiment, or document)

1. Is this activity/document listed in Section I or II of the matrices in Corporate Procedure 1000-ADM-1291.01? ☒Yes ☐No

   If the answer to question 1 is "no" stop here. (Section IV activities/documents should be reviewed on a case-by-case basis to determine if this procedure is applicable.) This procedure is not applicable and no documentation is required. If the answer is "yes" proceed to question 2.

2. Is this a substantive revision to the activity/document? ☐Yes ☒No
   (See Exhibit 3, paragraph 3, this procedure for examples of non-substantive changes)

   If the answer to question 2 is "no" stop here. This procedure is not applicable and no documentation is required. If the answer is "yes" proceed to answer all remaining questions. These answers become the Safety/Environmental Determination and 50.59 Review.

3. Does this activity/document have the potential to adversely affect nuclear safety or safe plant operations? ☒Yes ☐No

4. Does the activity/document require revision of the system/component description in the FSAR or otherwise require revision of the Technical Specifications or any other Licensing Basis Document? ☐Yes ☒No

5. Does the activity/document require revision of any procedural or operating description in the FSAR or otherwise require revision of the Technical Specifications or any other Licensing Basis Document? ☐Yes ☒No

6. Are tests or experiments conducted which are not described in the FSAR, the Technical Specifications or any other Licensing Basis Document? ☐Yes ☒No

7. Does this document involve any potential Non-Nuclear environmental impact? ☐Yes ☒No

   If any of the answers to questions 3, 4, 5, or 6 are yes, proceed to EXHIBIT 6 and prepare a written safety evaluation. If the answers to 3, 4, 5, or 6 are no, this precludes the occurrence of an Unreviewed Safety Question or Technical Specifications change. If the answer to question 7 is yes, either redesign or provide supporting documentation which will permit Environmental Licensing to determine if an adverse environmental impact exists and if regulatory approval is required (Ref. LP-010). If in doubt, consult the Radiological and Environmental Controls Division or Environmental Licensing for assistance in completing the evaluation.

Signatures		Date
Engineer/Originator	Heather Gotthard	12-3-86
Section Manager	[illegible]	12/3/86
Responsible Technical Reviewer	Stephen D. Leshnoff	12/4/86
Other Reviewer(s)		

TID

GPU Nuclear

Technical Functions Safety Evaluation

UNIT OCNGS

SE No. 328227-001

Rev. No. 5

ACTIVITY/DOCUMENT TITLE Drywell Core Boring & Repair

Document No. _____ (if applicable)

Type of Activity/Document Sampling and Replacement in Kind
(Modification, procedure, test, experiment, or document)

This Safety Evaluation provides the basis for determining whether this activity/document involves an Unreviewed Safety Question or impacts on nuclear safety.

Answer the following questions and provide reason(s) for each answer per Exhibit 7. A simple statement of conclusion in itself is not sufficient. The scope and depth of each reason should be commensurate with the safety significance and complexity of the proposed change.

1. Is the margin of safety as defined in Licensing Basis Documents other than the Technical Specifications reduced? ☐Yes ☒No
2. Will implementation of the activity/document adversely affect nuclear safety or safe plant operations? ☐Yes ☒No

   The following questions comprise the 50.59 considerations and evaluation to determine if an Unreviewed Safety Question exists:

3. Is the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report increased? ☐Yes ☒No
4. Is the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report created? ☐Yes ☒No
5. Is the margin of safety as defined in the basis for any Technical Specification reduced? ☐Yes ☒No

   If any answer above is "yes" an impact on nuclear safety or an Unreviewed Safety Question exists. If an adverse impact on nuclear safety exists revise or redesign. If an unreviewed safety question with no adverse impact on nuclear safety exists forward to Licensing with any additional documentation to support a request for NRC approval prior to implementing approval.

6. Specify whether or not any of the following are required, and if "yes" indicate how it was resolved

	Yes	TR/TFWR/Other	No
a Does the activity/document require an update of the FSAR?			X
Explain: Commitments are not violated			
b. Does the activity/document require a Technical Specification Amendment?			X
Explain: Commitments are not violated			

	Yes	TR/TFWR/Other	No
c. Does the activity/document require a Quality Classification List (QCL) Amendment?			X

Explain: _____

	Yes	Resolution	No
d. Does the activity/document require a review of a commitment as outlined in the site commitment document?			X

Explain: _____

e. Other: N/A
(If none, use NA)

This form with the reasons for the answers, together with all applicable continuation sheets constitutes a written Safety Evaluation.

List of Effective Pages

Page No.	Rev. No.	Page No.	Rev. No.	Page No.	Rev. No.
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2	5				
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7	4				
8	4				
9	4				
10	4				
11	4				

Signatures		Date
Engineer/Originator	Heather Gotthard	12-3-86
Section Manager	[illegible]	12/3/86
Responsible Technical Reviewer	Stephen D. Leshnoff	12/4/86
Independent Safety Reviewer	Josh Nyari	12/4/86
Other Reviewer(s)		

N55046B (09-86)

1.0 PURPOSE

The purpose of this Safety Evaluation is to assess the consequences of core drilling the drywell steel pressure vessel in order to be able to verify the accuracy of UT measurements of plate thickness and to examine the outer surface of the drywell wall for causes of the apparent thinning indicated by UT. Corrosion on the outer surface is one possible cause. Sand removed from behind the shell wall will be tested for evidence of contamination.

This Safety Evaluation addresses the core boring, the repair of the core bored areas, the excavation and replacement of a portion of concrete only. Two inch diameter cores will be drilled in the vicinity of the Downcomers and at elevations 51'±3'and 85'±3' in the vessel shell. The evaluation of the problems related to operating the plant with the potentially thinned drywell shell will be addressed in a different Safety Evaluation.

In addition to core drilling in the area of the base sand entrenchment and elevations 51'±3' and 85'±3' where the inside face of the shell is accessible, the drywell concrete floor will be excavated in two locations to permit UT measurements of plate thickness of the pressure boundary wall under the concrete floor. Core samples below the basement floor and within the sand cushion will be taken if UT readings warrant.

The concrete floor will be excavated in two areas next to vent pipes 5B and 11A (or 17D). The excavation will be one foot wide and will remove the concrete from the curb edge to 6 feet from the pedestal and down to the drywell shell in a vertical direction.

In order to monitor the drywell wall thickness during 12R, an approx. one foot length of the concrete curb and floor under the curb (to one foot depth) in the vicinity of vent bay 17 will be removed 5

The core bored areas will be repaired and pressure tested in accordance with the requirements of the Tech. Spec, ASME Boiler and Pressure Vessel Codes Section VIII - 1962, Code Cases No. 1270N5, 1271H, 1272N5, or Section III Division I, Subjection NE 1986, where appropriate and 10CFR50 Appendix J. Section VIII Division 1, 1986 of the Code was used for the repair, as permitted. The excavation in the concrete floor will be filled with Dow Corning Silicone RTV Foam, topped by a layer of Light Density Silicone Elastomer. The removed portion of the concrete curb at vent bay 17 will not be replaced. The space left by the removal of the concrete under the curb will be filled as above. 5

2.0 SYSTEMS AFFECTED

2.1 System No. 243, Drywell and Suppression System particularly the drywell pressure vessel structure. This structure is directly affected by the proposed activity, i.e., core boring and repairing of the shell.

2.2 System No. 212, Core Spray and Automatic Depressurization System

2.3 Drawings showing this area of the shell and concrete:

2.3.1 Chicago Bridge and Iron Co. Contract Drawings 9-0971.

2.3.2 Burns and Roe Contract Drawings 2299 Drawings No. 4059, Sheets 1 and 2 of 3 and #4070.

2.4 Documents that Describe the Drywell Structure are listed below.

2.4.1 Amendment #15 to O.C. FDSAR, Primary Containment Design Report.

2.4.2 FSAR Updates, Paragraph 3.8.2.

2.4.3 OC Technical Specification Section 3.5, 4.5 and 5.2.

2.4.4 10CFR 50 Appendix J.

2.4.5 CB&I Stress Report, "Structural Design of the Pressure Suppression Containment Vessels" for JCPL/Burns & Roe, Inc., CB&I Company Contract No. 9-0971, 1965.

2.4.6 ASME Boiler and Pressure Vessel Code, Section VIII, - 1962, as well as 1986.

2.4.7 ASME Boiler and Pressure Vessel Code, Section III, Division I, Subsection NE, 1986.

2.4.8 National Boiler Inspection Code, 1983.

3.0 EFFECTS ON SAFETY

3.1 Documents that define the safety function of the Drywell are 2.4.1 & 2.4.2 as above.

3.2 Safety Function of Drywell Containment Structure

The Drywell Containment Structure (DCS) of the O.C. Nuclear Power Plant houses the reactor vessel, reactor coolant circulating loops, a portion of the main steam line, and other components associated with the reactor system. It is a combination sphere, right cylinder and ellipsoidal dome that resembles an inverted light bulb. The pressure vessel is constructed of welded carbon steel SA 212 GR.B as defined by ASME-1965, having different thicknesses in different areas. Ten vent pipes, 6 ft. in. diameter and spaced equally along the circumference of the bottom spherical dome connect the drywell and the vent headers in the pressure absorption chamber which is called the torus.

The primary safety function of DCS is containment of radioactive and contaminated substances that may form during and after the postulated design basis accident (DBA). In addition, the DCS physically supports safety related systems and components inside the drywell. The DCS should be capable of maintaining structural integrity for a combination of loads at different plant operating modes, as described in FSAR.

3.2.1 Effect of this activity on safety:

Technical Specification 3.5.A.2 specifies the conditions which must exist for maintenance and repair of the containment. These conditions are:

- o Reactor mode switch must be locked in shutdown or refuel
- o An operable flow path from Condensate Storage Tank (CST) to vessel
- o Fire protection system must be operable
- o RCS is less than 212°F and vented
- o At least one core spray pump and associated valves are operable from control room
- o Torus mechanically intact
- o No work shall be performed which could drain vessel below 4'- 8" above TAF
- o The CST has a level greater than 30 ft.

These conditions will be satisfied during this activity.

There does not appear to be any formal requirement for a recirculation flow path capable of returning RCS leakage to the torus. It is believed that the absence of this requirement results from an inherent assumption that such a flow path would always exist. The requirement for a "Mechanically intact" torus in addition to the required CST volume suggests this is the case. The proposed sample removal process would invalidate this assumption. Therefore, although the likelihood of needing a recirculation path is extremely low, it would be prudent to minimize the number of openings below the downcomers at any one time and to have available a means for sealing these openings in short order, if required, based on any observed leakage from the RCS.

3.2.2 In order to maintain primary containment integrity during this work, any hole that is not being used will be temporarily plugged before it is permanently repaired.

For each opened hole there must be an assigned individual to ensure that the hole is plugged with a temporary plug by that person whenever the hole is not in use for inspection activity or before leaving the work area.

The temporary plug must be able to withstand the hydrostatic pressure and temperature expected following a loss of primary coolant under the current shutdown condition.In keeping with the design basis of the drywell, loadings due to DBA will not be considered rapid.

Spacing of the replacements-in-kind will be as per Code requirements. Replacements-in-kind will be permanently installed per Code requirements.

3.2.3 A plug that is 1.18" high will be used for uniformity. In the cylindrical portion of the drywell at elevation 85'±3' the vessel wall is 0.640" minimum which could result in the plug extending 0.540" beyond the back surface of the wall. Calculation (C-1302-243-5310-035) shows that no contact with the concrete will occur in the worst postulated design accident, including jet impingement, provided that the insulation is removed in an equivalent amount. For additional safety, all the insulation at the back of the plugs at elevation 85'±3' will be removed.

3.2.4 A similar analysis for the spherical portion of the drywell at elevation 51'±3' was performed and shown to be adequate.

3.3 The core boring of the pressure vessel and concrete floor excavation will not affect the future performance of the drywell pressure vessel, due to the following:

3.3.1 System Performance:

1. The core drilling and subsequent repair will be performed during cold shutdown of the plant. During this time, primary containment integrity is not required as per Tech Specs Section 3.5.A as long as secondary containment integrity is maintained.

2. Care will be taken not to cut or damage any burried pipe or cable during excavation or core drilling.

3. The cores will be 2" in diameter. Holes will not be drilled near welds. Holes will be spaced such that ASME Section VIII requirements are not violated. Holes will not be drilled in reinforcing pads.

4. The hole produced by core boring will be permanently repaired as per Code requirements. Local pressure testing will be performed as required by Tech Specs Section 4.5.

5. The sand removed from behind the pressure vessel wall will enable visual examination using fiber optics and will be replaced prior to permanently repairing the openings.

6. The excavation in the concrete floor will be filled with Dow Corning 3-6548 Silicone RTV Foam which is a fire barrier material approved for nuclear applications. The top one inch to 1 1/2 inch of the fill will be Light Density Silicone Elastomer by Promatec Inc. which provides an effective barrier against water, gas pressure and fire. In order to prevent water penetration, the vertical and horizontal joints between the new cut in the concrete curb (bay 17) and the drywell vessel will be sealed using Silicone Elastomer. 4

7. This repair and pressure testing will be accomplished prior to restart of the plant. After the repair, the performance of the drywell pressure vessel will be restored to that prior to core boring.

8. The integrity of the concrete curb to be cut in bay 17 has no bearing on the stresses in the drywell pressure vessel. 4

3.3.2 Quality Standards

This activity does not affect the quality standards of the plant since the integrity of the drywell shell is assured after the repair.

3.3.3 Natural Phenomena Protection

Since the drywell shell is protected from outside elements by a safety class structure capable of withstanding tornado and hurricane, and since the plant elevation prevents natural flooding these loadings do not contribute to the concerns posed by the activity. This activity does not affect the integrity of the drywell shell after a seismic event, due to the repair accomplished. Drilling will not significantly reduce the load bearing capacity of the containment pressure boundary. In particular, this activity will not affect structural integrity during a seismic event because of the remaining strength of the drywell. Original strength is restored by the permanent repair.

3.3.4 Fire Protection

No effects of the core boring of the drywell shell in the affected area can be found on the fire protection program of the plant.

3.3.5 Environmental Qualifications

No effects are found by the activity since the structural integrity and stability requirements for the plant are assured.

3.3.6 Missile Protection

The affected area is quite isolated such that missile protection is not necessary.

3.3.7 High Energy Line Break; Internal Flooding

The core boring will not affect the capacity of the drywell shell to withstand the loads due to these events, because these areas will be repaired and pressure tested to code.

The effect of the jet forces on the plugs, as required by the original design, have been analyzed and found to be well within the allowables stresses for both plug and weld (Calculation No. C-1302-243-5310-030).

3.3.8 Electrical Separation

The core boring does not create any electrically related concerns.

3.3.9 Electrical Isolation

No effects because the core boring does not generate any electrically related concerns.

3.3.10 Electrical Loading Impact on Emergency Diesel Generators and Safety Buses

No effects per above explanation.

3.3.11 Single Failure Criteria

No effects on single failure criteria since the structural integrity of the drywell shell is assured.

3.3.12 Separation Criteria

No effects on this criteria due to same explanation in Section 3.3.11.

3.3.13 Containment Isolation

Containment isolation is the primary safety function of the drywell. After accomplishing the core boring, the repair and the pressure testing, the containment isolation capability of the drywell will not be changed. Additionally, 10CFR50 Appendix J testing will be performed as required by OCNGS Tech Specs Section 4.5.

3.3.14 Materials Compatibility

This is not a concern since the shell will be repaired using material compatible with the base metal regarding strength, chemical composition, expansion, and heat treatment (identical material is no longer available). The plugs used for repairing the core bores will be designed, fabricated, tested and installed to meet the original ASME Boiler & Pressure Vessel Code Section VIII 1962 and Section VIII 1986 as applicable.

3.4 Licensing Basis Documents Margin of Safety

The margin of safety of the drywell shell will not be changed by this core boring, after the repair and the pressure testing will be accomplished.

3.5 Nuclear Safety/Safe Plant Operation

Since the structural integrity of the drywell will not be affected by the core boring of the shell, nuclear safety and safe plant operation will not be affected.

3.6 Probability of Occurrence or Consequences of an Accident

The core boring of the shell will not cause an accident and therefore will not affect the probability of occurrence of any accident. Furthermore, since the containment isolation function of the drywell is intact, the consequence of any postulated accident will not increase.

3.7 Probability of Occurrence or Consequence of Malfunction of Safety Equipment

Due to the fact that the structural integrity of the drywell has not been affected by this activity, the probability of occurrence or consequence of a malfunction of safety equipment in the plant will not increase.

3.8 Possibility for an Accident or Malfunction of a Different Type Than Previously Identified in FDSAR

This activity is a departure from the conditions delineated in FDSAR in that containment is breached by other than a closure device, with fuel in the vessel. However, this condition will not cause more severe accident than those analyzed previously in FDSAR because this activity will not affect the performance of other safety related components, systems or structures in the plant, and any drilled hole that is not being used will be temporarily plugged.

4.2 Potential Environmental Impact

Since the activity does not affect the environment, it does not have any potential impact to the following:

A. Environmental Technical Specification

B. Applicable Environmental Permit Requirements

C. Final Environmental Statement

D. Environmental Impact Statement

Consequently, no evaluation is required to see if the above documents are violated.

5.0 CONCLUSION

In order to investigate the extent of the corrosion of the drywell shell at its outside face, to verify the accuracy of the Ultrasonic measurements and to chemically analyze the sand behind the shell to determine the cause of potential corrosion, two inch diameter cores will be drilled in the drywell shell. In addition, the concrete floor will be excavated in two areas for additional ultrasonic testing of the shell. The core bored holes will be repaired by installing welded plugs. Each repaired area will be pressure tested. The excavated concrete will be replaced by Silicone RTV Foam topped by a layer of Light Density Silicone Elastomer.

At the conclusion of this work:

(1) The structural integrity of the drywell shell will not be affected.

(2) The containment isolation safety function of the drywell shell will still be intact. Consequently, no environmental or radiological concerns exist due to this activity.

(3) FDSAR and Technical Specification Commitments have not been violated.

(4) Plant Procedures and Safe Practices are not affected.

GPU Nuclear

DOCUMENT NO. SE 328227-001

TITLE Drywell Core Boring and Repair

REV	SUMMARY OF CHANGE	APPROVAL	DATE
1	Revise to delete replacement of excavated concrete and replace by Silicone RTV Foam and Light Density Silicone Elastomer In addition, the effect on the plugs of the jet forces due to high energy line break is addressed Reference ASME Code Section III, Division 1, Subsection NE 1986.	Martha Gotthard [signature] S.D. Leshnoff [signature] Y Nagai	12-11-86 12/12/86 12/18/86 1/9/87 1/9/87
2	Revised to incorporate core boring and repair at elevation 85'±3'.	Martha Gotthard Joan Gentian S.D. Leshnoff RTR M. Laggard ISR	10/26/87 10-26-87 10/30/87 10/30/87
3	Revised to incorporate core boring and repair at elevation 51'±3'	[signature] G. Capodanno S.D. Leshnoff Michael Laggard ISR	10/30/87 10/30/82 10/30/87 10/30/87
4	Revised to incorporate the removal of a portion of the concrete curb elev. 12'.	Martha Gotthard [signature] S.D. Leshnoff M. Laggard ISR	12/1/88 12/1/88 12/1/88 12/1/88

FORM 5000-ADM-1218.01-1

A0000036 12-83

GPU Nuclear

DOCUMENT NO. SE-328-227-001

TITLE: Drywell Core Boring and Repair

REV	SUMMARY OF CHANGE	APPROVAL	DATE
5	Revised to incorporate the removal of the concrete floor under the removed portion of the curb.	L. Gotthard [illegible] S.D. LESHNOFF S.D. Leshnoff M. Lappert	12-29-88 12-29-88 12/29/88 12/29/88

FORM 5000-ADM-1218.01-1

GPU Nuclear

Release No. 013644

Document Release Form

(Refer to EMP-008)

Date 12/2/86

Page of

To: R. Blouch

Release Action

- ☐ Review/Comment
- ☐ As-Builts
- ☐ Record
- ☒ Construction
- ☐ Procurement
- ☐ Operations/Maintenance
- ☐ Hold Construction

Originator E.F. O'Connor

Home Base 5310

Tel 7248

Unit OC

Budget Activity # 328227

WO/SO #

List of Released Items (attached)

Company	Document No.	Sheet	Rev.	Title	QCL
GPUN	WR 328227	-02		Drywall Floor Exclusion	

Special Instructions

References

Approved: E.F. O'Connor Date: 12/1/8

CC:

Original (yellow) to ED & CC

A0001080A 5-82

GPU Nuclear Construction Release Checklist

DRF# 013644
B/A# 328227
WO/SO#

Activity:
EXCAVATION DRYWELL FLOOR

No.	Item	Yes	No	N/A
1.	**GENERAL** Will Construction recognize the end use of the document? If no, add special instructions on release form)	X		
2.	Have associated purchase requisitions been issued? (TAP-011)			X
3.	Has an Installation Specification been issued? (EP-020) (If yes, DRF #_____)			X
4.	Has an SDD Division II been completed? (EP-005) (If yes, DRF #_____)			X
5.	Are previously released documents affected by this DRF? (If yes, DRF #_____)			X
6.	Have construction funds been approved? (EMP-003) BJ Funding of Overall Effort Being Reviewed by Upper Mgt.	X		
7.	Has Human Engineering's review and concurrence been obtained, when appropriate?			X
8.	Has Fire Hazard Analysis Input and Status form been completed? (If yes, DRF #_____) (EP-013)		X	X
9.	Has the Nuclear Safety/Environmental Impact Evaluation Summary Sheet been released for this mod? (If yes, DRF #_____) (EP-016) Due For Release This Date	✓		X
10.	If this work impacts the loading of IE equipment (e.g., diesel generator or battery loads) has the Electrical Power Manager been advised? 12-3			X
11.	**IMPORTANT TO SAFETY** Are document(s) to be released Important to Safety? (EP-011, ES-011 and EP-016)	✓		X
12.	Do document(s) to be released have applicable QA concurrence, if required? 12-			✓
13.	Is environmental qualification of Class 1E components required? (If yes, System Component Evaluation Work Sheet #_____) (EP-031)			X
14.	Has Engineering Mechanics reviewed and concurred with any changes to ITS piping and/or pipe supports? (If yes, GPUN Memo #_____)			X
15.	**STATION TIE-IN** Have documents been verified? (EP-009) (If yes, Verification #_____)			✓
16.	If a Fire Hazards Analysis Report amendment is required, has it been requested? (If yes, TR #_____) (EP-013)			X
17.	If a FSAR amendment is required, has it been requested? (If yes, TR #_____) (EP-016)			X
18.	If a Unit Technical Specification amendment is required, has it been requested? (If yes, TR #_____) (EP-016, LP-004)			X
19.	If an unreviewed safety question is involved, has supporting documentation been provided to Licensing? (EP-016, LP-004)			X
20.	Are special instructions for training included, if required?			X
21.	If Limited Service Life components or subcomponents are involved, have they been identified to Preventive Maintenance?			X
22.	If components or subcomponents requiring spare parts have either been added or removed by this release, has Materials Control, Reading been informed of the change?			X
23.	Are plant computer configuration changes required? (If yes, TR #_____)			X

Comments: (use reverse side of this form)

Preparer J.A. Yazem Date 12/2/86 Reviewer [illegible] Date 12-3-86

FORM 5000-ADM-1215.02-3

A0001086 12-85

Work Request

Maintenance & Construction

To: R. Blouch

From: E.F. O'CONNOR (Name) TF (Dept.) Work Request # 328227-02

Date: 11/28/86 Budget Activity # 328227 Authorized Funding $ —

Schedule Commitment ☐ NRC; ☐ Other

Authorized Work Description:

1. EXCAVATE 2 LOCATIONS OF THE DRYWELL CONCRETE FLOOR AS PER ATTACHED INSTRUCTIONS

2. COMMENCE PLANNING OF THE CORING OF 15-20, 1"-2" DIA holes IN THE DRYWELL SHELL IN THE FOLLOWING LOCATIONS:

   a) 4 holes - BAY 5B
   b) 2 holes - BAY 15A* OR 9D*
   c) 2 holes - BAY 19A
   d) 4 holes - BAY 11A* OR 17D*

Comments:

   e) 3-8 holes - TO BE SPECIFIED LATER BASED UPON FURTHER EVALUATION

15 - 20 TOTAL

* M&C TF TO SELECT LOCATION BASED UPON ACCESSIBILITY AND RAD LEVELS.

Approval: E F O'Connor

Copy Distribution
White-M&C Workload and Control. Yellow-M&C Document Control. Pink-Originator

A0001205, 2-82

EXCAVATION INSTRUCTIONS

1. EXCAVATE CONCRETE FLOOR OF DRYWELL IN THE VICINITY OF VENT PIPES NOTED BELOW AND SHOWN ON THE ATTACHED SKETCHES A, B, C & D

   1. VENT 5B

   2. VENT 11A OR 17D (ONLY ONE)
      (MCE TO SELECT BASED ON ACCESSIBILITY & RAD LEVEL)

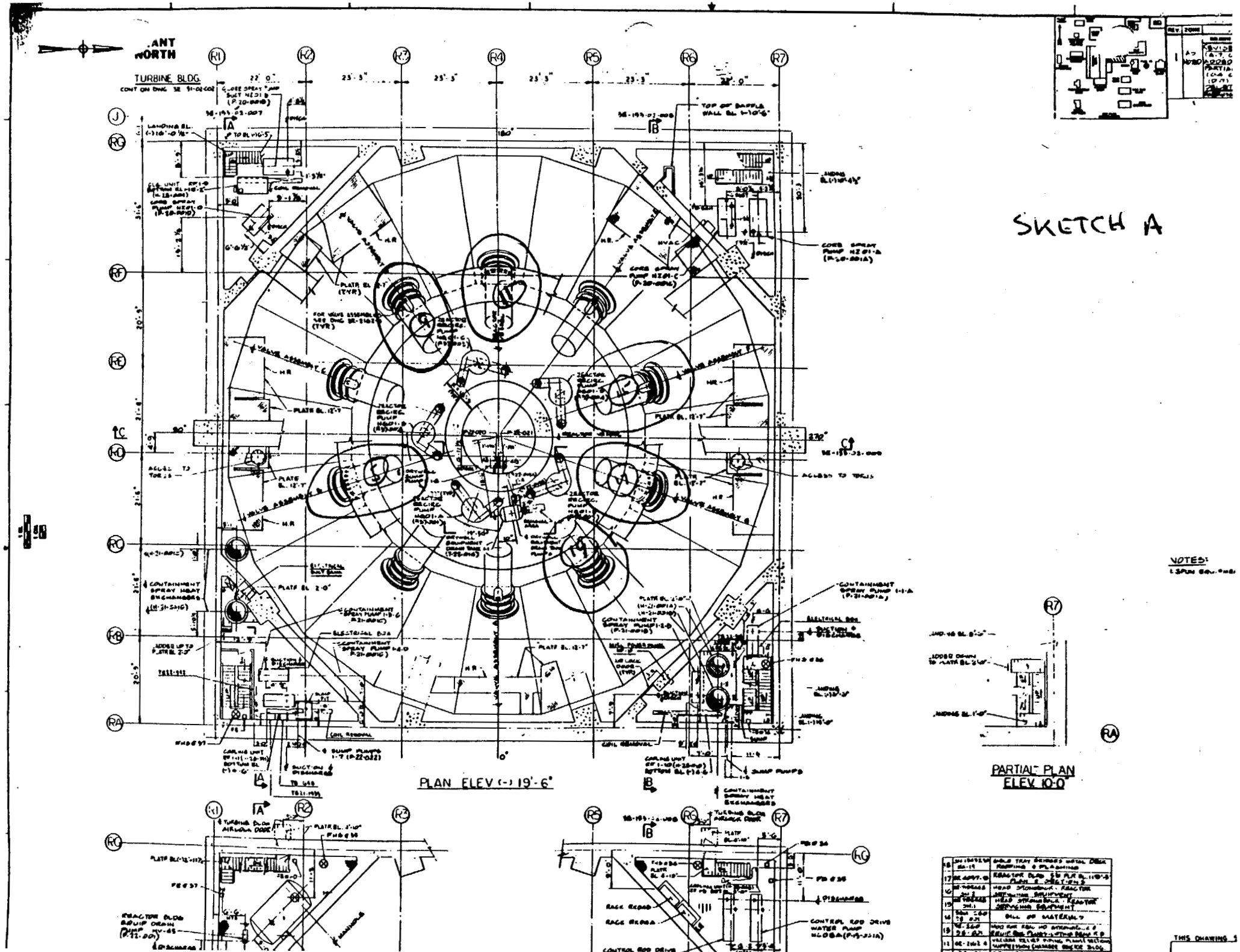
2. CONCRETE SHOULD BE REMOVED DOWN TO DRYWELL SHELL, AND STEEL SURFACE PREPARED FOR ULTRASONIC TESTING

3. THE EXCAVATION SHOULD BE ONE FOOT WIDE & AS SHOWN ON SKETCH E

4. REBAR MAY BE REMOVED OR LEFT IN PLACE, HOWEVER IF REBAR IS TO BE REMOVED, EXTREME CARE SHOULD BE TAKEN NOT TO KNICK OR BURN THE DRYWELL SHELL

5. INSTRUCTIONS FOR REPLACEMENT OF CONCRETE FLOOR WILL BE PROVIDED LATER

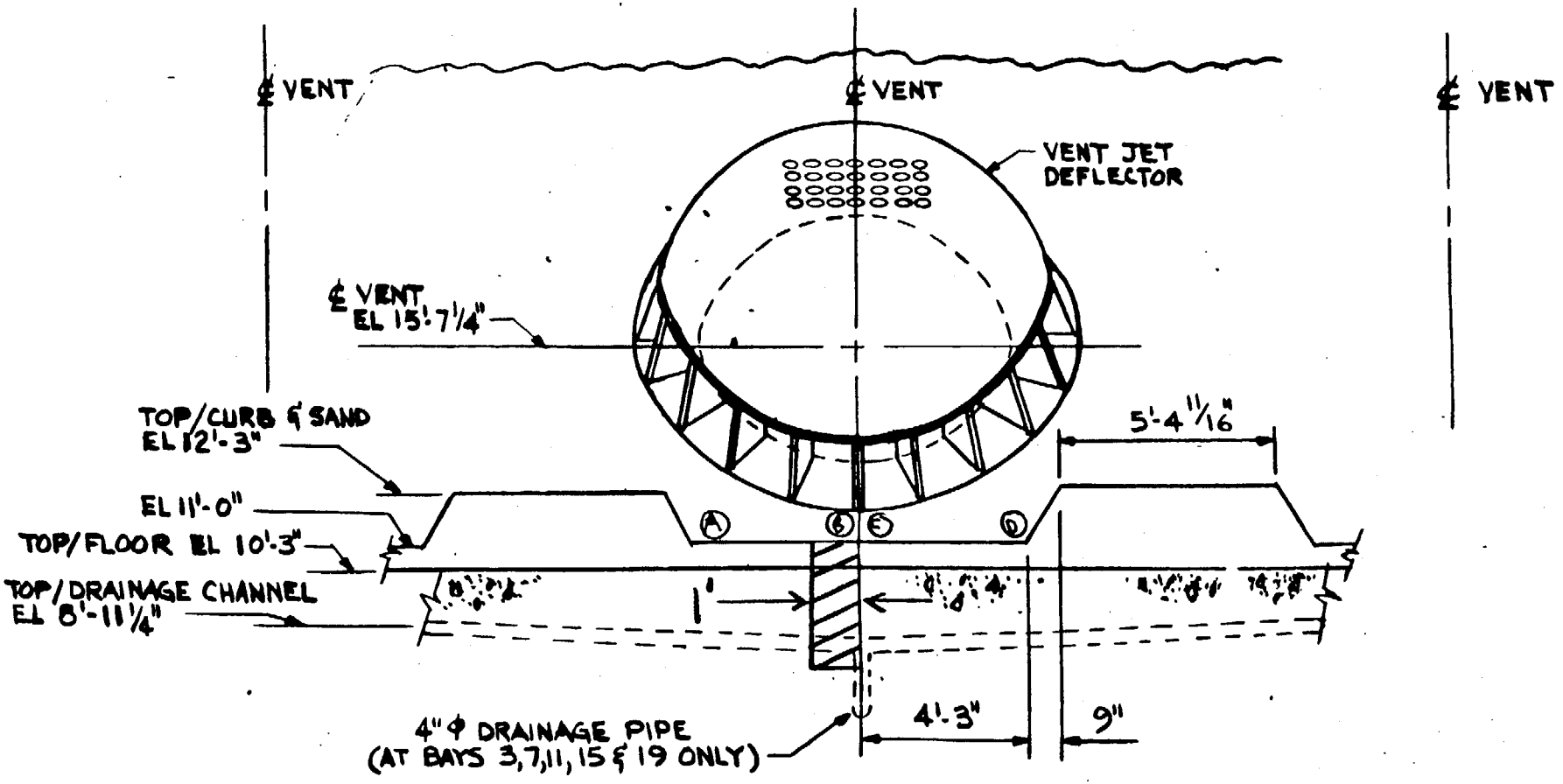
11/28/86
EFOC


SKETCH A
PLANT NORTH
TURBINE BLDG.
PLAN ELEV (-) 19'-6"
PARTIAL PLAN ELEV 10'-0"
NOTES:
THIS DRAWING

SKETCH B

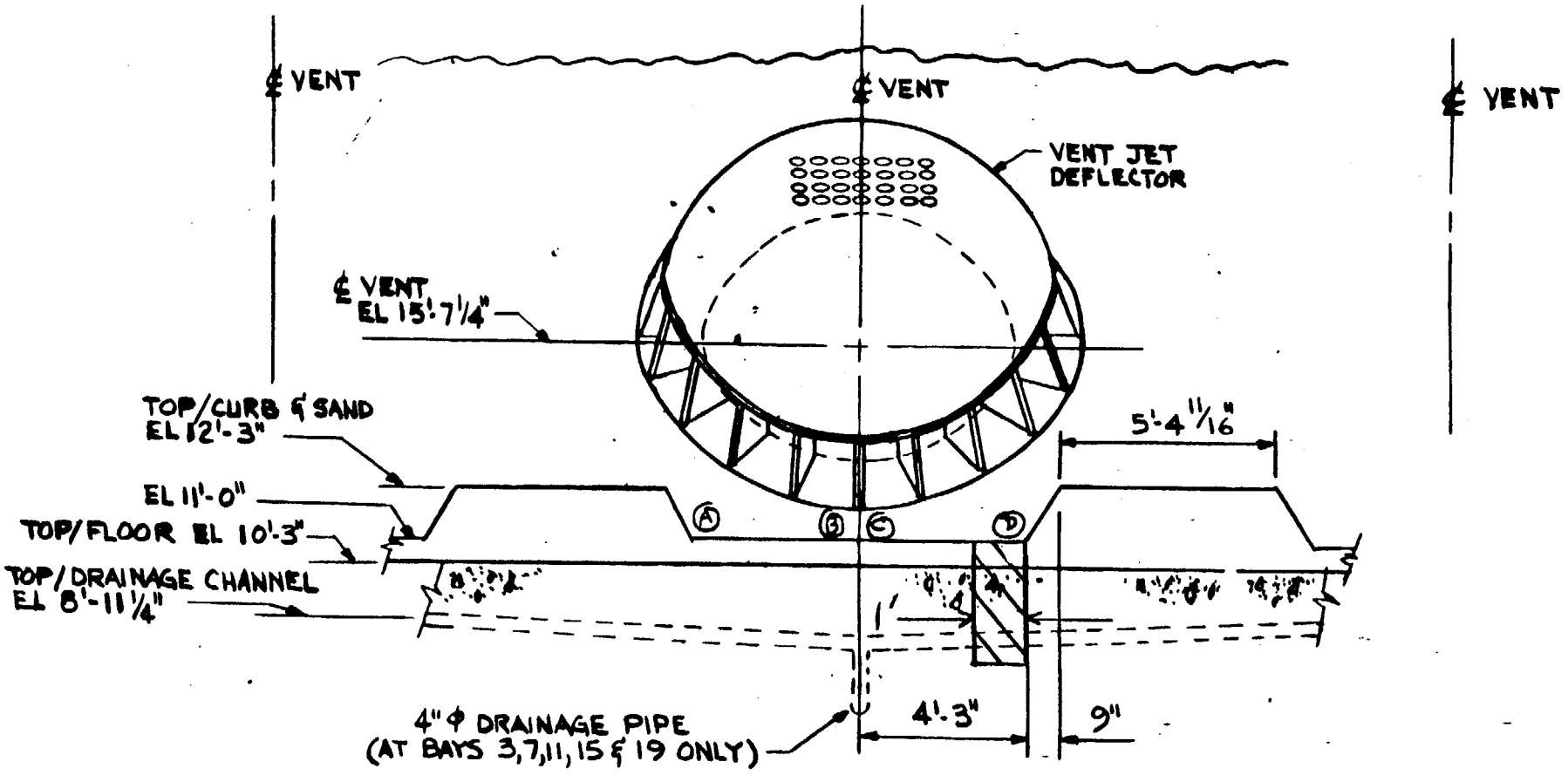
EXCAVATION

AT 5B



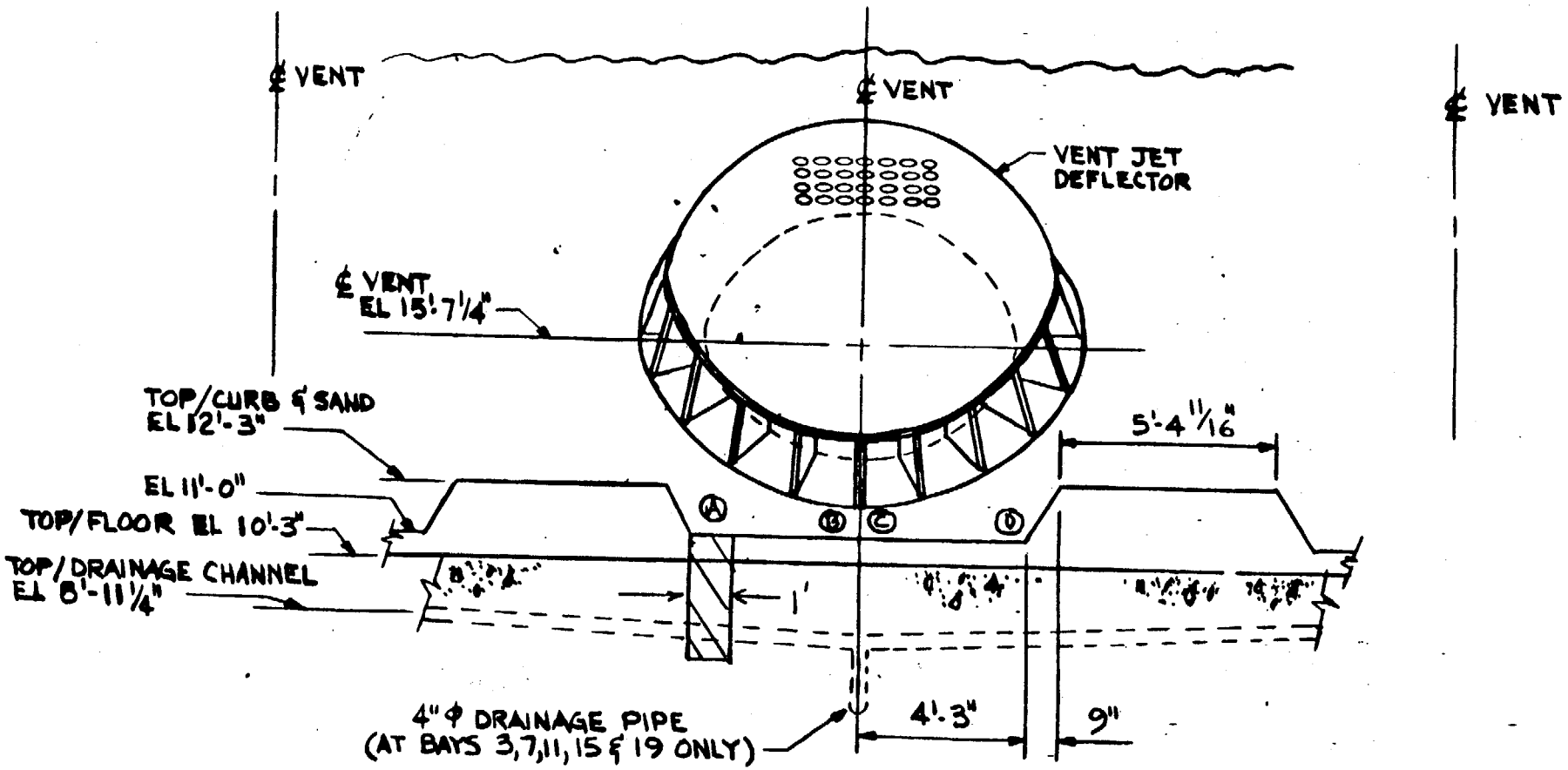
SECTION A-A AT VENT

SKETCH C
EXCAVATION
AT 17D

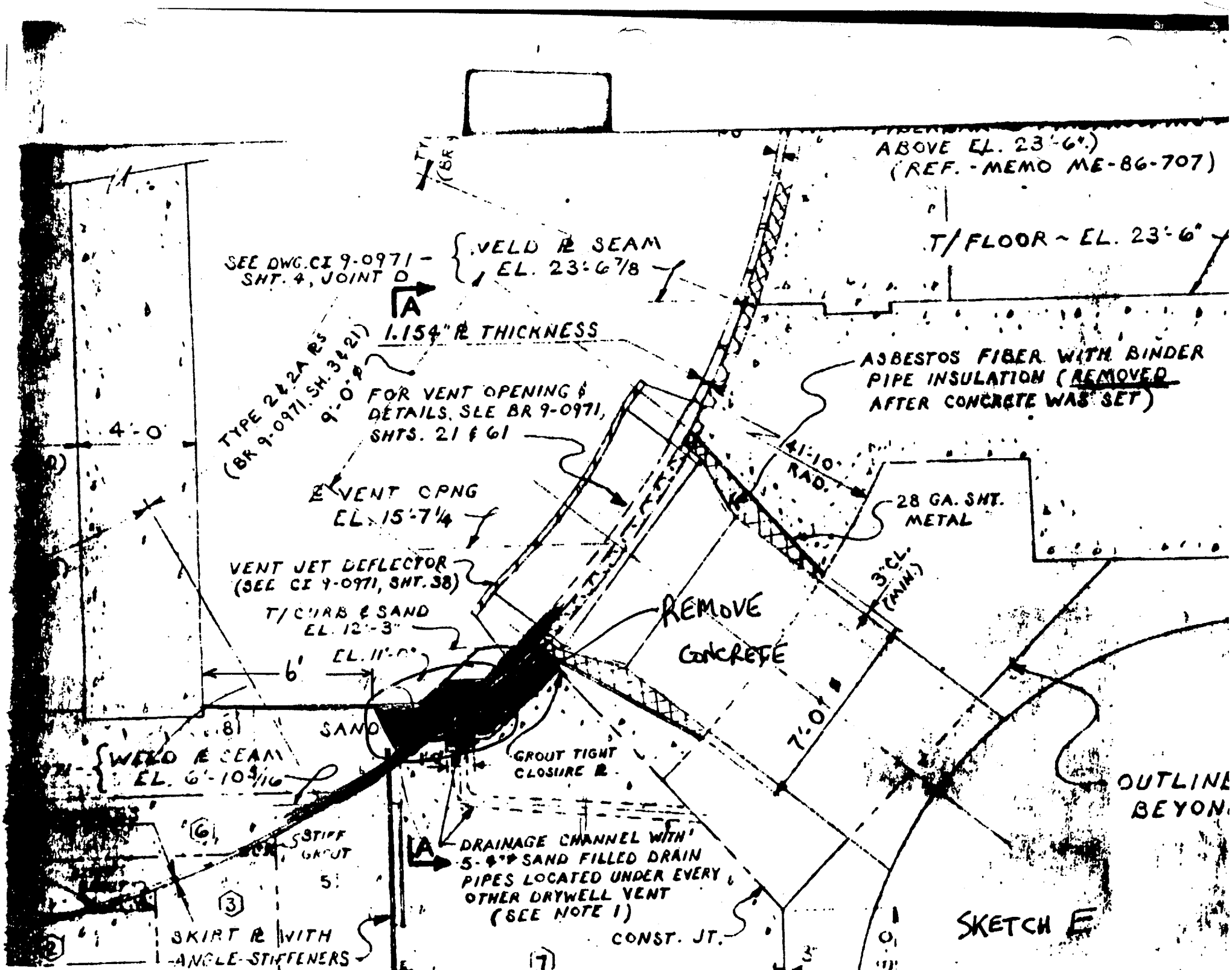


SECTION A-A AT VENT

SKETCH D
EXCAVATION
AT 11A



SECTION A-A AT VENT


ABOVE EL. 23'-6".)
(REF. - MEMO ME-86-707)
T/FLOOR ~ EL. 23'-6"
SEE DWG. CI 9-0971 - SHT. 4, JOINT D
WELD ℞ SEAM EL. 23'-6 7/8
A
1.154" ℞ THICKNESS
TYPE 2 & 2A ℞S (BR 9-0971, SH. 3 & 21)
9'-0" ø
FOR VENT OPENING & DETAILS, SEE BR 9-0971, SHTS. 21 & 61
ASBESTOS FIBER WITH BINDER PIPE INSULATION (REMOVED AFTER CONCRETE WAS SET)
4'-0"
℄ VENT OPNG EL. 15'-7 1/4
41'-10" RAD.
28 GA. SHT. METAL
VENT JET DEFLECTOR (SEE CI 9-0971, SHT. 38)
T/CURB & SAND EL. 12'-3"
EL. 11'-0"
REMOVE CONCRETE
3" CL. (MIN.)
6'
SAND
7'-0"
WELD ℞ SEAM EL. 6'-10 9/16
GROUT TIGHT CLOSURE ℞
OUTLINE BEYON
STIFF GROUT
A
DRAINAGE CHANNEL WITH 5-4" ø SAND FILLED DRAIN PIPES LOCATED UNDER EVERY OTHER DRYWELL VENT (SEE NOTE 1)
SKIRT ℞ WITH ANGLE STIFFENERS
CONST. JT.
SKETCH E