UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 7, 1990

Docket No. 50-285

LICENSEE: Omaha Public Power District

FACILITY: Fort Calhoun Station, Unit 1

SUBJECT: SUMMARY OF MEETING TO DISCUSS THE REVISING OF THE FUEL HANDLING ACCIDENT IN THE UPDATED SAFETY ANALYSIS REPORT AS A RESULT OF AIR BY-PASSING THE SPENT FUEL POOL CHARCOAL FILTER

On October 15, 1990, NRR staff members met with the licensee to discuss the revising of the Fuel Handling Accident (FHA) in Fort Calhoun's Updated Safety Analysis Report (USAR) as a result of the Spent Fuel Pool (SFP) charcoal filter by-pass. Enclosure 1 is a listing of the meeting attendees.

The licensee made an overview presentation on this issue as shown in Enclosure 2 The licensee indicated that during a recent refueling outage, it was discovered that in-leakage of air through a roll-up door to the Auxiliary Building, where the SFP is located, could disrupt airflow patterns and prevent suction of radiological releases from the SFP through its charcoal filter, VA-66. On January 1, 1990, the licensee performed a test which found air by-passing the SFP charcoal filter. Based on this test, the licensee determined that the plant was not within the design basis established by the USAR. The analysis in the USAR assumes that in the event of an FHA in the SFP, all the air in the vicinity of the pool passes through the charcoal filter. This item was also reported in the NRC Inspection Report 50-285/90-13 which stated that the issue was an unreviewed safety question; therefore, the licensee must reestablish the design configuration or obtain approval prior to moving spent fuel. Consequently, this meeting was held with NRR to resolve the issue.

In its presentation, the licensee indicated that it determined that the analysis for an FHA in the containment envelopes the consequences of an FHA in the SFP; hence, an FHA in the pool would not exceed regulatory requirements. Therefore, no actions are required to modify the ventilation system to ensure that the air passes through the charcoal filter. However, the staff stated that General Design Criteria 61 specifies that fuel storage systems should have

A001
11

filtering systems. Therefore, this conclusion that no license action was required is not valid. The staff requires that the updated FHA be submitted for its review prior to its update in the USAR, and that the resolution of this item be in-place prior to the licensee's 1991 refueling outage.

Anthony Bournia

Anthony Bournia, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

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Original signed by:

Anthony Bournia, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects - III, IV, V and Special Projects
Office of Nuclear Reactor Regulation

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PD4-1 Plant File
R. Mullikin, Region IV

OFC	:PD4-1/LA	:PD4-1/PM	:PD4-1/D	:	:	:
NAME	:LBerry	:ABournia:lh	:TQuay	:	:	:
DATE	:11/6/90	:11/6/90	:11/7/90	:	:	:

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Document Name: MEETING SUMMARY FT CALHOUN

Enclosure 1

Meeting Attendees

Name	Organization
A. Bournia	NRR/DRSP/PDIV-1
C. R. Nichols	NRR/DST/SPLB
R. E. Architzel	NRR/DST/SPLB
J. Y. Lee	NRR/DREP/PRPB
T. R. Quay	NRR/DRSP/PDIV-1
J. W. Chase	OPPD
R. L. Phelps	OPPD
B. Van Sant	OPPD
B. Weber	OPPD

OPPD Meeting With NRC on Fort Calhoun

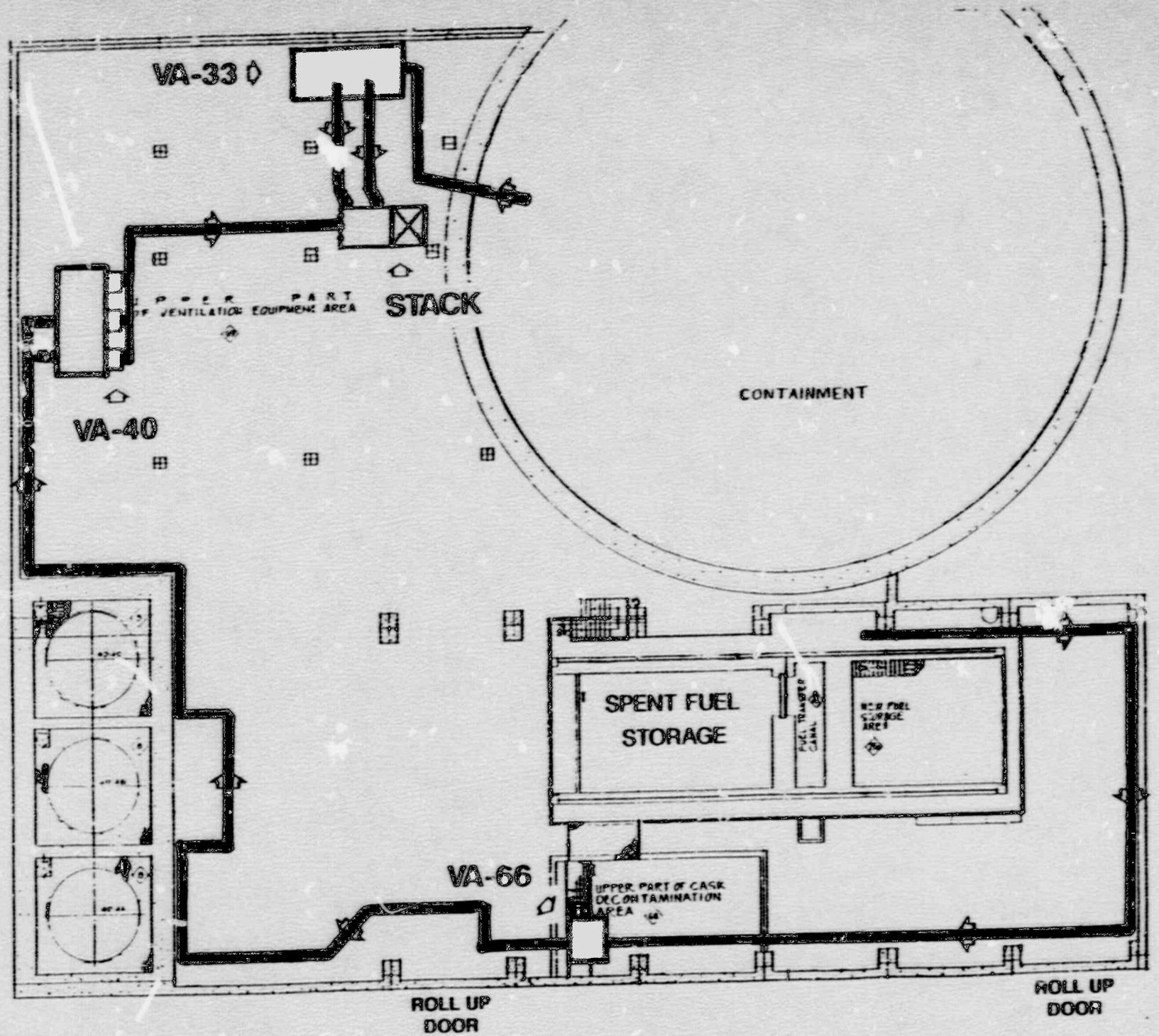
Fuel Handling Accident Analysis

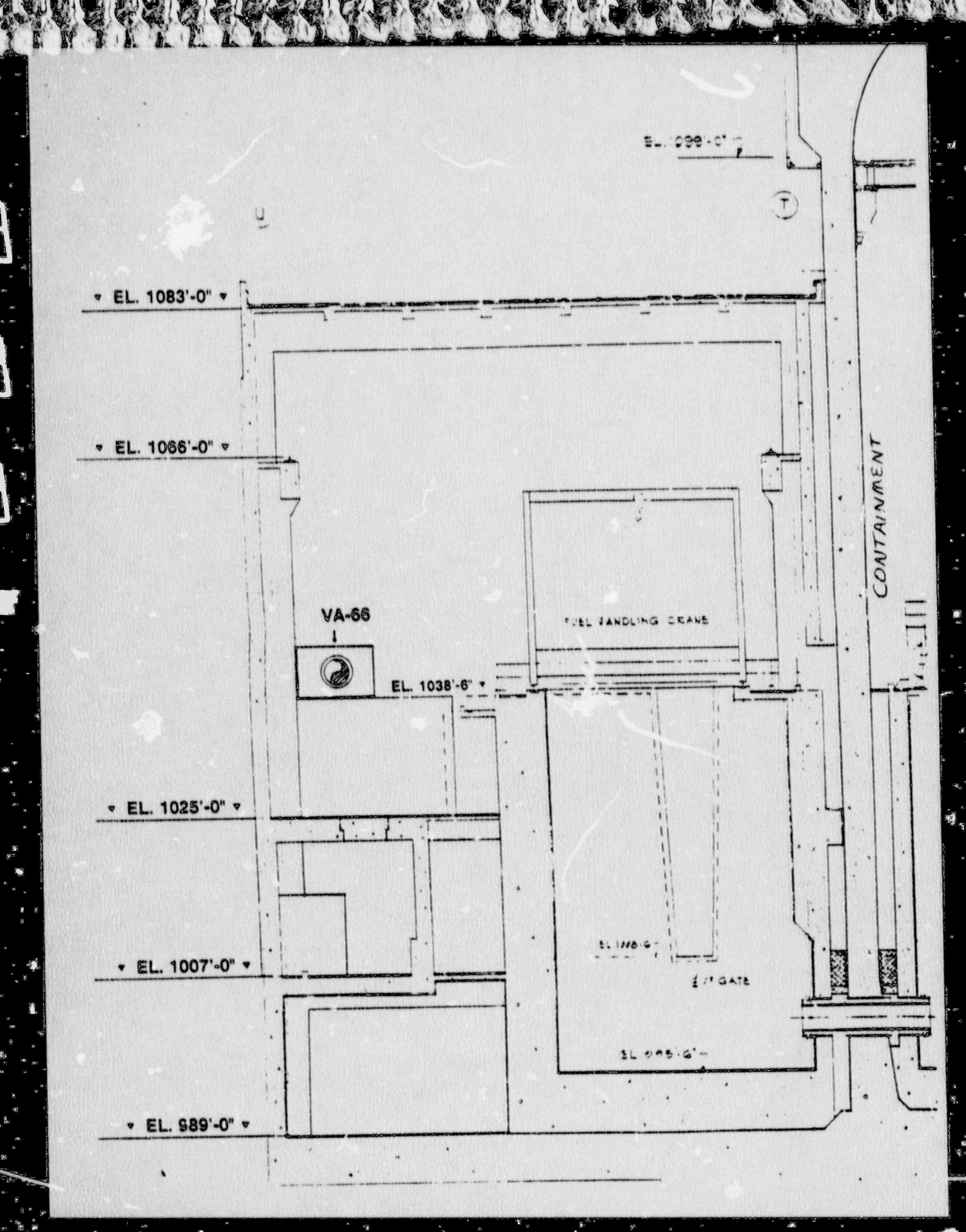
October 15, 1990

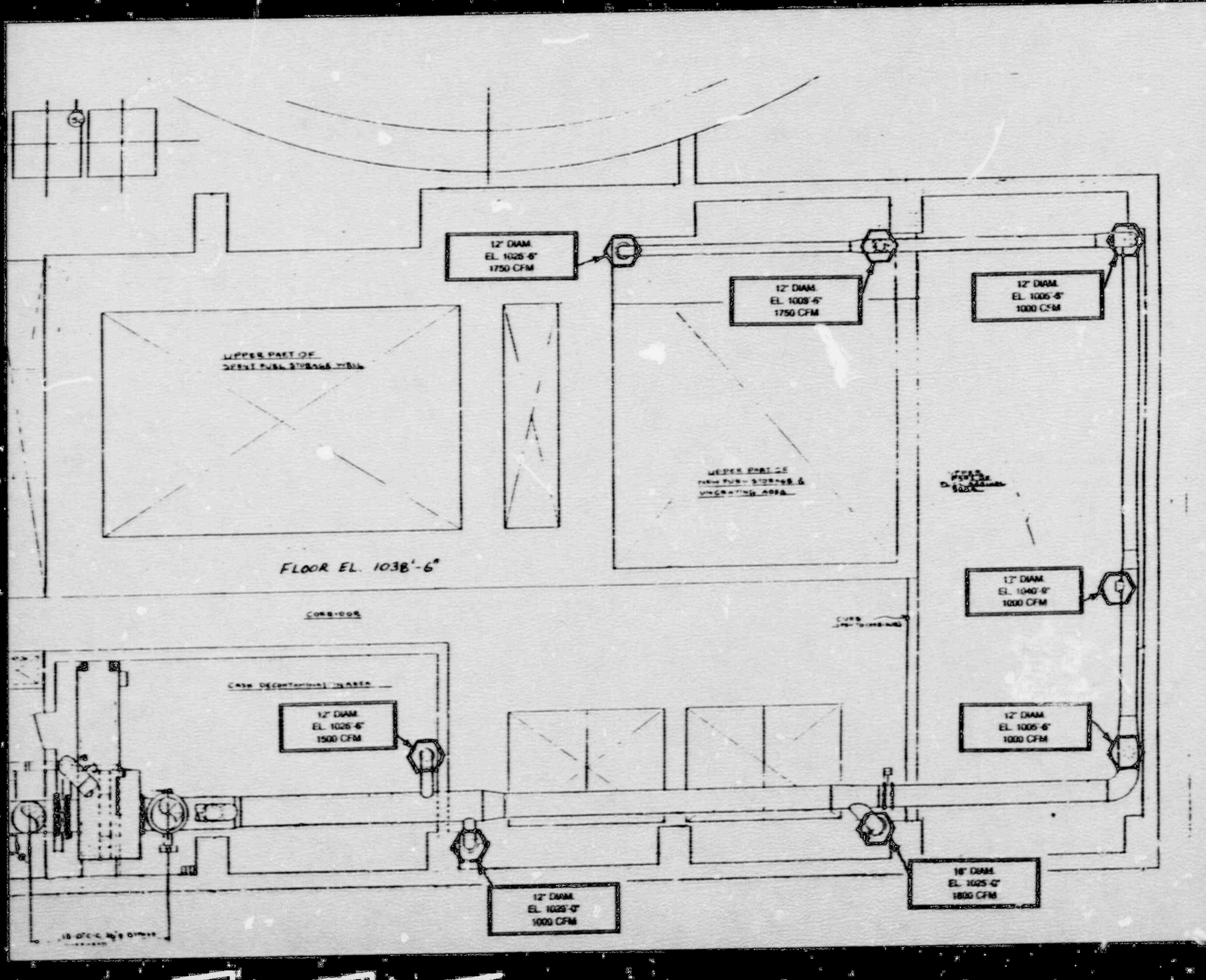
1.	Introduction	J. Chase
2.	Meeting Goals and Objectives	R. Phelps
3.	Review of VA-66 Issues a. LER Submittal b. Current Status	B. VanSant
4.	Review of Current FHA Analysis a. No Credit for VA-66 b. SAO Basis c. USAR Revisions	W. Weber
5.	Discussion of Changes to FHA for Next Reload	W. Weber
6.	Meeting Summary	R. Phelps
7.	Closing Remarks	J. Chase

MEETING OBJECTIVES

- Clarify the design basis for our current Fuel Handling Accident (FHA) Analysis
  - VA-66 Performance
  - Reasons for LER and SAO
  - No USQ Involved
- Discuss potential FHA analysis changes for the next reload submittal

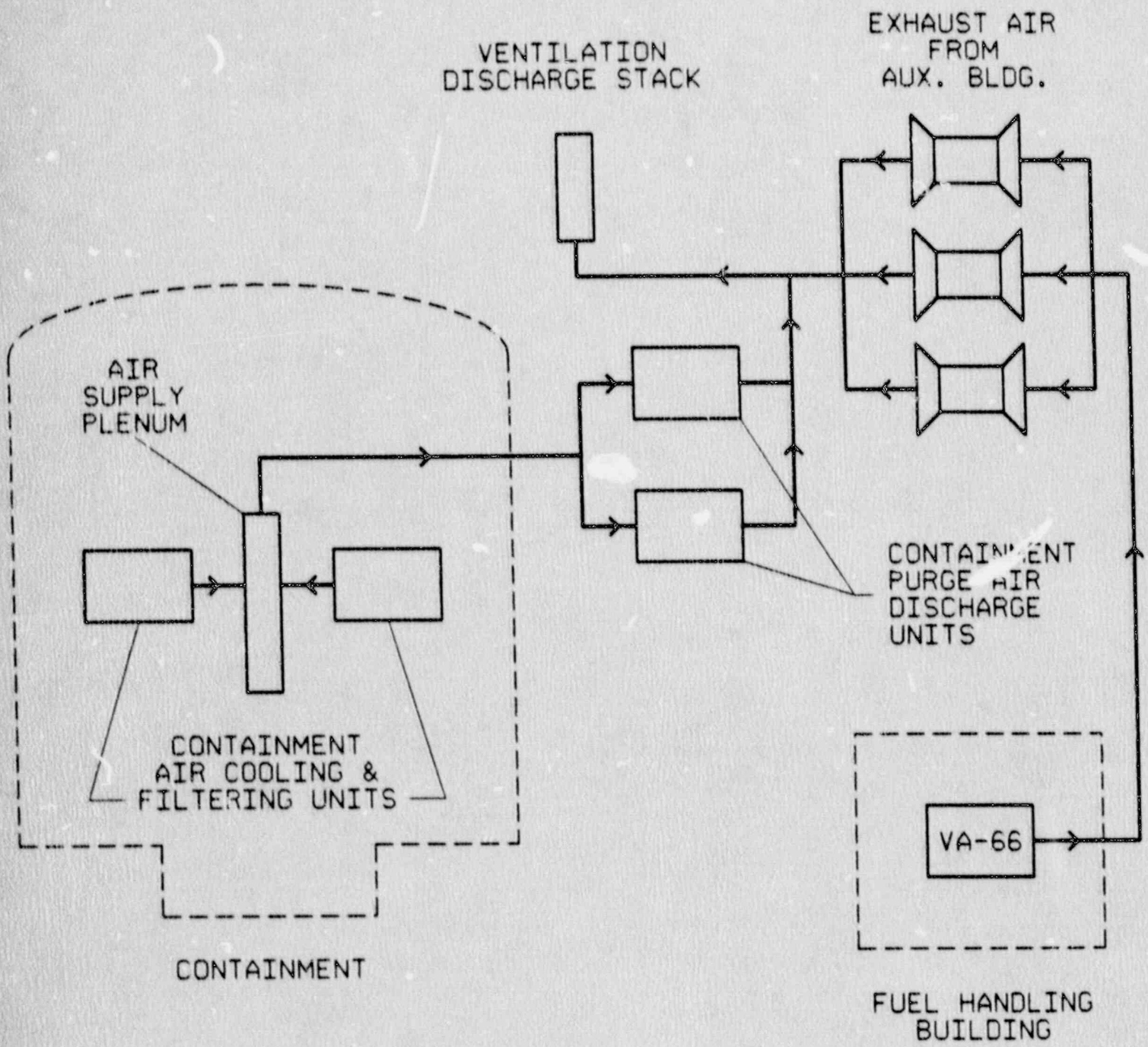

VA-33
STACK
CONTAINMENT
VA-40
SPENT FUEL
STORAGE
VA-66
ROLL UP
DOOR
ROLL UP
DOOR


EL. 1083'-0"
EL. 1066'-0"
VA-66
FUEL HANDLING CRANE
EL. 1038'-6"
CONTAINMENT
EL. 1025'-0"
EL. 1007'-0"
EL. 989'-0"


12" DIAM.
EL. 1025'-6"
1750 CFM
12" DIAM.
EL. 1028'-6"
1750 CFM
12" DIAM.
EL. 1005'-6"
1000 CFM
UPPER PART OF
SPENT FUEL STORAGE POOL
UPPER PART OF
NEW FUEL STORAGE &
UNCRATING AREA
FLOOR EL. 1038'-6"
12" DIAM.
EL. 1040'-9"
1000 CFM
CORE-DOG
CASK DECONTAMINATION AREA
12" DIAM.
EL. 1025'-6"
1500 CFM
12" DIAM.
EL. 1005'-6"
1000 CFM
12" DIAM.
EL. 1025'-0"
1000 CFM
18" DIAM.
EL. 1025'-0"
1800 CFM

CYCLE 12 SHUTDOWN
FUEL HANDLING ACCIDENT

CONTAINMENT	SPENT FUEL POOL
GAS GAP SOURCE TERM	SAME
DECONTAMINATION FACTOR	SAME
RADIOACTIVITY RELEASE POINT	SAME
X/Q DISPERSION FACTOR	SAME
NO IODINE FILTRATION	VA-66 FILTER


VENTILATION
DISCHARGE STACK
EXHAUST AIR
FROM
AUX. BLDG.
AIR
SUPPLY
PLENUM
CONTAINMENT
PURGE AIR
DISCHARGE
UNITS
CONTAINMENT
AIR COOLING &
FILTERING UNITS
VA-66
CONTAINMENT
FUEL HANDLING
BUILDING

RESULTS

EAB	10CFR100	DOSE CONSEQUENCE
TYHROID	300 REM	43.6 REM
WHOLE BODY	75 REM	0.75 REM
LPZ		
THYROID	300 REM	0.16 REM
WHOLE BODY	75 REM	0.03 REM

FUTURE CYCLE CHANGES

- HIGHER FUEL TEMPERATURES
- HIGHER PEAKING FACTORS
- HIGHER LINEAR HEAT RATES

CONSEQUENCE

- HIGHER GAS GAP ACTIVITY (SOURCE TERM)

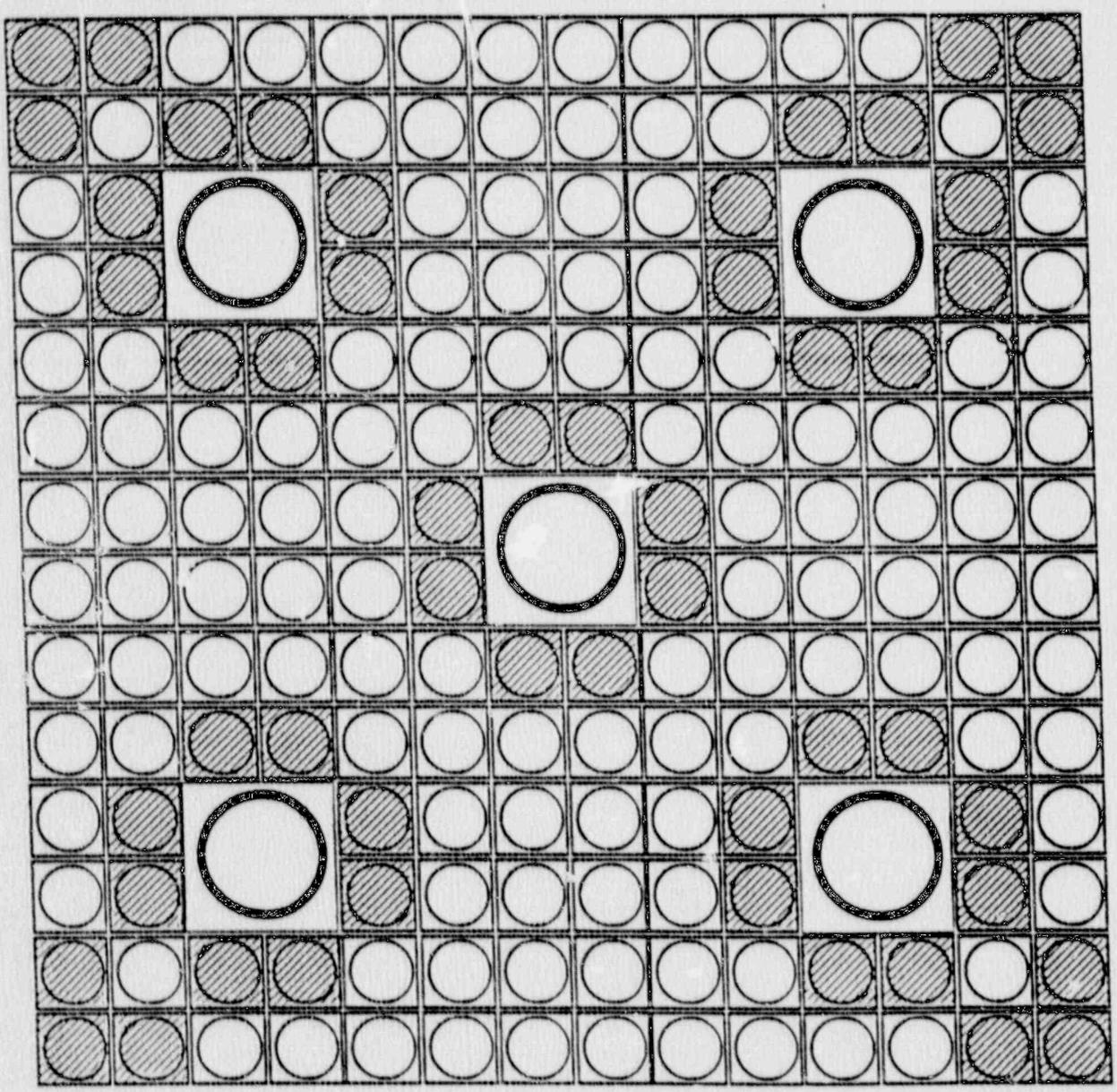
GAS GAP COMPARISONS

ISOTOPE	RELEASE FRACTION	CURRENT *	REVISED*
I-131	0.122	1.93 E4	4.53 E4
Xe-131m	0.064	1.57 E2	9.41 E2
Xe-133	0.029	3.89 E4	2.00 E4
Kr-85	0.075	7.50 E2	1.58 E2

*ACTIVITY IN CURIES

FUEL HANDLING ANALYSIS

- PERFORMED BY CE (REG. GUIDE 1.25)
- BOUNDING FUEL TEMPERATURES
- BOUNDING DUTY CYCLES
- NO CREDIT FOR VA-66
- REVISED STRUCTURAL DROP ANALYSIS BY CE



RESULTS

10CFR 100 LIMITS

EAB	10CFR100	REVISED	CURRENT
THYROID	300 REM	52.0 REM	43.6 REM
WHOLE BODY	75 REM	0.07 REM	0.75 REM

LPZ	10CFR100	REVISED	CURRENT
THYROID	300 REM	1.83 REM	0.16 REM
WHOLE BODY	75 REM	0.003 REM	0.03 REM

MEETING SUMMARY

- Current FHA analysis will be documented through USAR revision
- Design basis for VA-66 clarified
- NRC document agreement that no USQ exists
- OPPD determine if reasonable alternatives exist to FHA analysis changes for next reload

November 7, 1990
Meeting Summary Ft Calhoun

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