John Larkins
1130-55

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

FEB 18 1983

MEMORANDUM FOR: Zoltan R. Rosztoczy, Chief, Research and Standards Coordination Branch, DST

FROM: Roger J. Mattson, Director, Division of Systems Integration

SUBJECT: COMMENTS ON IDCOR DEGRADED CORE ISSUES

As requested in your memorandum of December 13, 1982, enclosed are our comments on the IDCOR degraded core issues for which the Division of Systems Integration has significant areas of responsibility.

Tables 1A and 1B provide priority ratings (L, M and H) for in-vessel and ex-vessel phenomenological issues with potential importance for the IDCOR program and also for SECY-82-1B, "Proposed Commission Policy Statement on Severe Accidents and Related Views on Nuclear Reactor Regulation." Likewise, Table 2 provides priority ratings for containment issues.

If you like this approach and decide that other elements of NRR (e.g., RRAB) should use it, we would be willing to ask our BNL contractor to review these priority ratings and provide a more detailed basis for addressing the issues in our cognizance. If such a course is taken, it needs to be coordinated with Jim Malaro's work on element 5.13 of the SARP.

I have asked Miller Spangler to provide additional input, especially those degraded core issues relating to the issues involving policy decisions treated in SECY-82-1B, following Commission action on the proposed policy statement.

Roger J. Mattson

Roger J. Mattson, Director
Division of Systems Integration

Enclosure:
As stated
cc: H. Denton
D. Ross
NRR Division Directors
DSI A/Ds
B. Sheron
W. Butler
J. Meyer
M. Spangler

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TABLE 1A. - IMPORTANT PHENOMENOLOGICAL ISSUES:IN-VESSEL

PHENOMENOLOGICAL ISSUES (THAT ARE UNRESOLVED)	IMPORTANCE TO CHARACTERIZING CONTAINMENT FAILURE			IMPORTANCE TO CHARACTERIZING RADIONUCLIDE RELEASE FRACTIONS (ASSUMING REALISTIC TREATMENT OF SOURCE TERMS)			IMPORTANCE TO CONSIDERIN MITIGATION FIXES		
IN-VESSEL	PWR LD[1]	PWR IC[2]	BWR SP[3]	PWR LD	PWR IC	BWR SP	PWR LD	PWR IC	BWR SP
a. CORE-HEATUP & UNCOVERY INCLUDING PRIMARY SYSTEM THERMAL HYDRAULIC & "GAP" RADIONUCLIDE RELEASE	L	L	L	M	M	M	M	M	M
b. H_2 GENERATION & RELEASED TO CONTAINMENT (RATE, AMOUNT & STEAM MIXING)	M	H	L[4]	L[5]	L[5]	L[5]	M	M	L[4]
c. CORE DEGRADATION/COOLING RECOVERY INCLUDING "MELT" RADIONUCLIDE RELEASE	L	L	L	M	M	M	M	M	M
d. CORE DEGRADATION/CORE MELT, INITIAL SLUMPING INCLUDING "MELT" RADIONUCLIDE RELEASE	L	M	M	H	H	H	M	M	H
e. MOLTEN CORE IN LOWER HEAD, INCL. FUEL/COOLANT INTERACTIONS (E.G., STEAM EXPLOSIONS & CONTRIB. TO RADIONUCLIDE RELEASE)	L	M	M	M	M	M	M	M	H
f. VESSEL FAILURE CHARACTERISTICS (MODE, TEMP. & COMP. OF CORIUM & AMT., COMP. & CHARACT. OF RADIONUCLIDES RETAINED & RELEASED TO CONTAINMENT)	L	M	M	M-H	M-H	M-H	M	H	H
g. PRIMARY SYSTEM FAILURE CHARACTERISTICS (1) Steam Generator Tube Ruptures (2) Pump Seal Failure (3) Piping Failures (Therm. & Mech.) (4) Direct. Cont. Bypass (Event V)	L	L	L	H	H	H	M	M	M

1. LD = LARGE DRY
2. IC = ICE CONDENSER
3. SP = SUPPRESSION POOL
4. HIGH IF BWR IS NOT INERTED
5. EXCEPT AS IT IMPACTS CORE-HEATUP

H = IMMEDIATE ATTENTION; MAJOR RESEARCH RESOURCES REQUIRED
M = DESERVING OF ATTENTION; MODERATE RESEARCH RESOURCES REQUIRED
L = LOW PRIORITY; ONLY LIMITED RESOURCES WOULD BE COST-EFFECTIVE

TABLE 1B. - IMPORTANT PHENOMENOLOGICAL ISSUES: EX-VESSEL*

PHENOMENOLOGICAL ISSUES (THAT ARE UNRESOLVED)	IMPORTANCE TO CHARACTERIZING CONTAINMENT FAILURE			IMPORTANCE TO CHARACTERIZING RADIONUCLIDE RELEASE FRACTIONS (ASSUMING REALISTIC TREATMENT OF SOURCE TERMS)			IMPORTANCE TO CONSIDERING MITIGATION FIXES		
EX-VESSEL	PWR LD[1]	PWR IC[2]	BWR SP[3]	PWR LD	PWR IC	BWR SP	PWR LD	PWR IC	BWR SP
a. INITIAL INTERACTION WITH WATER (OXIDATION RELEASE)	L	H	M	M	H	H	L	M	M
b. INITIAL INTERACTION WITH CONCRETE & STRUCTURES (VAPORIZATION RELEASE)	L	M	H	M	H	H	M	H	H
c. INITIAL DISPERSION	M	H	H	H	H	H	M	M	H
d. LONG-TERM INTERACTION WITH WATER, (INCL. COOLABILITY OF DEBRIS & SCRUBBING)	L	M	L	L	L	L	L	L	L
e. LONG-TERM INTERACTION WITH CONCRETE (VAPORIZATION RELEASE)	H	H	H	M	M	M	M	M	M
f. FINAL DISPOSITION OF CORIUM	M	M	H	M	M	M	M	M	M
g. HYDROGEN GENERATION BURNING	M	H	L[4]	M	M	L	M	H	L[4]

*For Footnotes see Table 1A.

TABLE 2 . - IMPORTANT PHENOMENOLOGICAL ISSUES: CONTAINMENT

PHENOMENOLOGICAL GENERIC ISSUES	IMPORTANCE TO CHARACTERIZING CONTAINMENT FAILURE			IMPORTANCE TO CHARACTERIZING RADIONUCLIDE RELEASE FRACTIONS (ASSUMING REALISTIC TREATMENT OF SOURCE TERMS)			IMPORTANCE TO CONSIDERING MITIGATION FIXES		
	PWR LD[1]	PWR IC[2]	BWR SP[3]	PWR LD	PWR IC	BWR SP	PWR LD	PWR IC	BWR SP
LOADING	H	H	H				M	M	M
CAPABILITY	H	H	H				M	H	H
FAILURE MECHANISMS (DEFINITION OF FAILURE, COMPLETENESS)	H	H	H				H	H	H
EQUIPMENT SURVIVABILITY IN CONTAINMENT	L	M	L[6]				L	M	L[6]

6 = MODERATE IF BWR IS NOT INERTED.

PRELIMINARY LIST OF ISSUES

The Commission must answer four basic questions:

1. How safe are nuclear power plants?

2. How can the level of safety be improved and at what cost?

3. To what extent should such improvements be required?

4. How should such requirements be imposed?

Severe accident research is (or should be designed to answer the first two questions. This requires resolution of the following:

1. Use of PRA
   - To what extent do we rely on PRA?
   - How complete a PRA is needed?
   - How do we handle external events, human error, sabotage, etc?

2. Use of Surrogates

The Commission proposes (SECY 82-1B) to make generic decisions on existing plants using existing PRAs (rebaselined).

- To what extent can surrogates be used for classes of plants, containments, accident sequences, consequences, external events, costs (e.g., ATWS)?
- What is our fallback position (e.g., NREP, SEP Phase III)?

3. Uncertainties

- What uncertainties are important to the decisionmaking process?
- What are the sources of these uncertainties?
- Can the uncertainties be reduced to a tractable level? How long will it take? What will it cost?
- Is there a practical way to compensate for the uncertainty (e.g., by adding margin, another system)?
- If the answer to the last two questions is negative, what do we do?

4. Phenomenology

- What unresolved phenomenological issues (in-vessel and ex-vessel) are important to the decisionmaking process?
- Is there NRC/Industry consensus on this?
- How are these issues being addressed?
- When will they be resolved?

5. Human Factors

(Same as for Phenomenology)

6. Benefit/Cost Analysis

- What are the benefits/costs of each corrective action?
  - o What benefits/costs do we consider?
  - o How are benefits/costs quantified?

- o Do we use a surrogate cost (e.g., 1000 man-rem)?
- o Do we use discounting?

- How are benefits and costs summed and balanced?
  - o Are weighting factors used?
  - o How are results displayed?

In order to answer questions 3 and 4 we need to resolve the following:

1. <u>How safe is safe enough</u>:
   - What benchmark(s) (e.g., safety goal) will be used to assess the adequacy of existing plant designs?
   - Should a defense-in-depth safeguard be superimposed on any benchmark?
   - How will plants be assessed against the benchmark?
   - Should we be satisfied with simply eliminating risk outliers?

2. <u>Regulatory Options</u>
   - How do we balance, prevention, management and mitigation requirements?
   - Should regulatory changes be made on an ad hoc basis or as part of a coordinated rulemaking effort?
   - What form should regulatory changes take?
   - Should new requirements specify acceptable performance or should they be prescriptive (e.g., GDC)?
   - Do we change the Design Basis to add class 9 accidents? If so, how do we handle class 10 accidents?
   - Do we change the DBA source term?
   - Do we change the failure criteria (e.g., go to double failure criteria)?
   - What are the advantages and disvantages of each regulatory option?

ENCLOSURE II

Proposed Alterations to IDCOR Degraded Core Issues

Attachment 1

Degraded Core Issues

1. Sequences and Plant types

external - no

* -surrogate (How generic are findings?) dominant seq.
- initiating events
- component reliability data (NPRDS)
- risk assessment methodology
- plant specific features and affect on risk
- safety goal (need for and use)
→ - differention between current generation and new standard plants

2. Phenomenological Generic Issues → Containment Guidelines (Design specific) → to 4

In-vessel Issues

- hydrogen release from primary system (rate and amount)
- release of radionuclides and core materials from primary system
→ - consequences of direct containment bypass ? why is this an in-vessel issue?
→ - potential for vessel failure from in-vessel quenching of molten fu
- recovery potential prior to vessel failure
- potential for containment failure from in-vessel steam explosions
- primary system failure from steam overpressure
- vessel failure: causes and effects (mode of failure)
→ - retention of fission products in primary system

Ex-vessel Issues

- hydrogen generation, distribution, and combustion
- debris coolability limits
- corium-concrete interactions, effect of coolant addition
- steam and noncondensible gas overpressure
- fission product transport, deposition, and retention
→ - steam explosion consequences from quenching of molten core d
→ - high pressure melt injection, burn ignition, melt dispersal

3. Integrated analysis issues

- modeling of key phenomena and how these influence course of accident
- MAAP/MARCH and RETAIN/TRAP-MELT comparisons of dominant sequences in reference plants
→ - effects of operator actions (both ommission and commission)
- effects of uncertainites and sensitivities
→ ~~- applicability to other plants~~ delete, redundant to Issue No. 1
- validation and verification requirements for MAAP and RETAIN

4. Containment

- loading
- capability
- failure mechanisms, including completeness considerations
→ - definition of containment failure
→ - operator rolls

B/15

5. Equipment Survivability
→ -qualification requirements
-in containment
-ex containment
→ -probabilistic consideration
6. Accident Management Issues
→ -functional allocation criteria (i.e., automation vs. operator actio
-operator diagnostic instrumentation
-credible operator actions
-off-site procedures
-use of MAAP/RETAIN in operator action mode
-management training
-strategies: guidance vs. procedures
-diagnostic training
-configuration planning/control ⇒ m-li analysis?
→ -means for validating accident management strategies
7. Cost-benefit Issues
→ -experience status of proposed alternatives
-methodology
-cost/benefit criteria
-safety goal

8. Credit to be Given for Preventive Measures

-Hardware reliability improvement
-Human reliability assessment
→ -validation means for credits given
9. Need for Mitigative Features

-containment spray systems
-containment cooler systems
-filtered-vented containment
-core retention devices
-passive decay heat removal systems
-hydrogen control measure
-ex-vessel flooding
-enhanced equipment survivability

10. Treatment of other Issues

-ATWS
-External events
-Sabotage
-Pressurized thermal shock
→ -Organized armed attack

3/2/83

IDCOR Mtg

Cordell Reed

IDCOR II

- obtain technical & regulatory closure

Rawlston - IDCOR II

→ suggest rules ←

close out July 84

then II - prevent individual, uncoordinated responses from licensees

for closure

technical management mtgs

technical mtgs 7/1 - 2/1/84

management mtgs throughout

3 ph < 7/1 7/1 - 2/1 > 2/1/84

for tech mtgs

- agree on issue scope
- NRC/IDCOR exchange summaries month ahead
- mtg
  - agree/disagree/confirmatory
  document mtg results

B/16

BX Issues - IDCOR

key seq. & phen.
methodology
source term
cont analysis
mitigation features
other - seismic, sabotage, acc. risk

next management mtg
- exec. summ. of results
- agree on key issues
- " " overall schedule
- normal business

next tech mtg
- repres. seq.
- plant specificity
- key phen
  - s. ex.
  - s. sp.
  - H_2 gen/burn
  - core concrete
  - debris coolability

Minogue - need feedback on IDCOR results before publication

* cpts - 3 layer approach
[A1 B- for c/r b/mark]

IDCOR II - no significant effort planned for further technical analysis

RBM - wants a look-thru of reports, not detailed review

(IDCOR)
constituents will control access to codes
(pay for MAAP ?)

MAAP will have daughter code to do U/A } ?

Mario
{ M-2/MAAP comparison - back burner

RETAIN - T/M* faster
some model changes

SOURCE TERM - INDUSTRY

Sen Acc. → IDCOR
EPZ's, etc → AIF SUB.

FRED BUCKMAN/WARREN OWEN

surrogates
- similar to what M des.
- more emphasis on extending likelihoods
- not as much detail on plant specifics &
- M seis. studies

Zoltan - 82 1B mods
- basically tone downs PRA reliance
ACRS main comment -
reliance on PRA

ARB - 82 1B *
- waffles on 0/84
- seismic words ~~=~~ (more important)

AGENDA

IDCOR/NRC MANAGERS MEETING

March 2, 1983, 10:30 A.M.

AIF Bethesda Offices

I.	Description of the industry proposed process for closure of degraded core issues - IDCOR II	
	A. Objectives	Cordell Reed
	B. Overview	John Raulston
	C. Description of types of meetings	John Raulston
	D. Scope of proposed meetings	John Raulston
	E. Technical areas for closure discussions	John Raulston
	F. NRC Reaction	Denny Ross
	G. Agenda/objectives of next IDCOR/NRC Management meeting	John Raulston
	H. Scope/objectives of next NRC staff and contractor technical meeting	John Raulston
II.	Status of IDCOR	Mario Fontana
III.	Status on NUREG-0900, RES Programs, and SECY 82-1B	NRC
IV.	Relationship of Bernero's new office to NRC's resolution of degraded core issues	NRC

B/17

TECHNOLOGY for ENERGY CORPORATION

THE IDCOR PROGRAM

A. R. BUHL

M. H. FONTANA

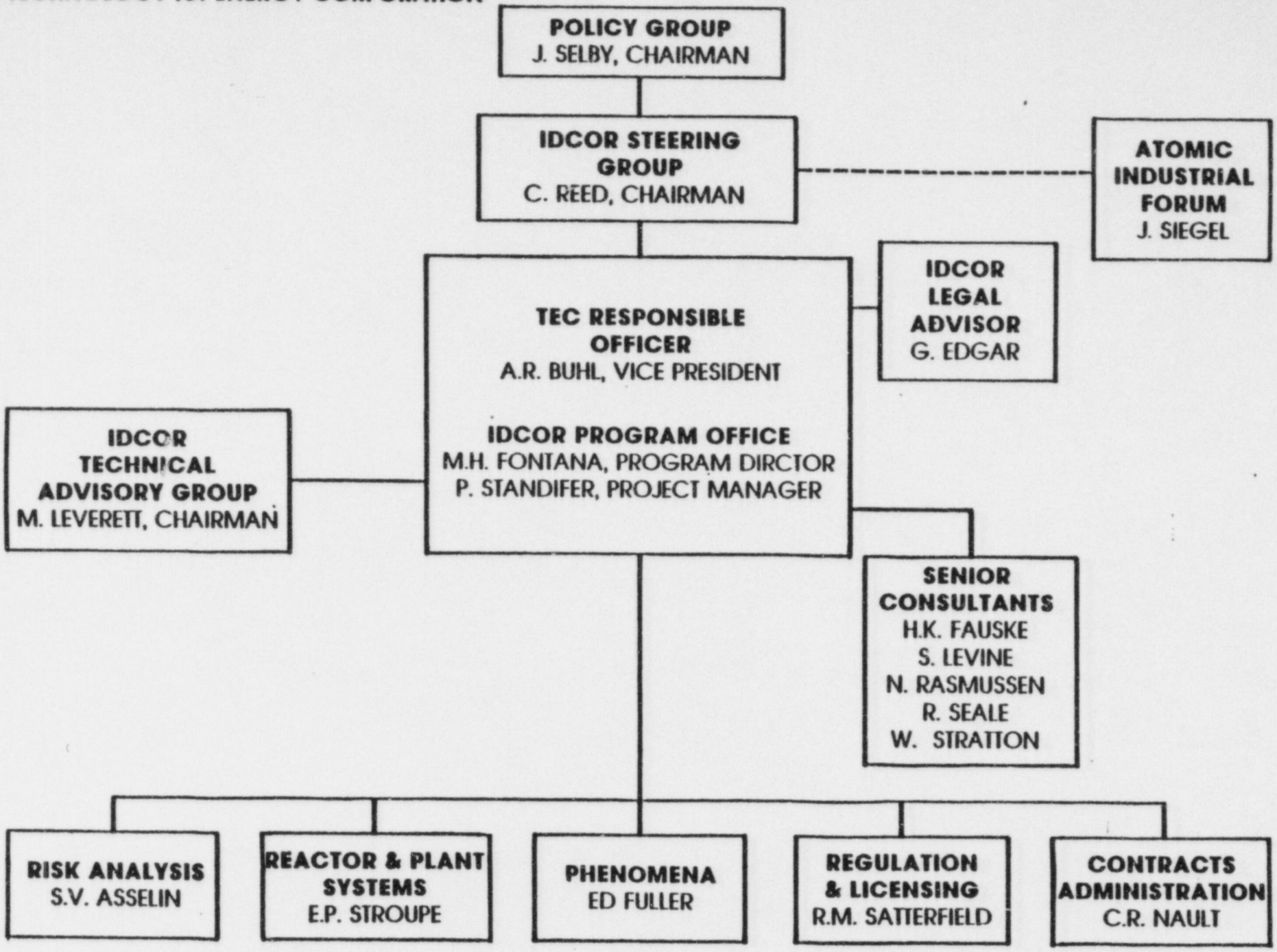
OBJECTIVE

- TO DEVELOP COMPREHENSIVE, INTEGRATED, WELL-DOCUMENTED, TECHNICALLY SOUND POSITIONS ON THE ISSUES RELATED TO DEGRADED CORE ACCIDENTS.
- THESE POSITIONS WILL BE THE BASIS OF INDUSTRY PARTICIPATION IN ANY NRC SEVERE ACCIDENT DECISION PROCESS

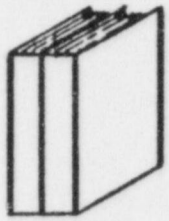
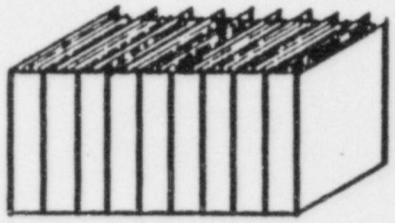
POLICY

- USE EXISTING INFORMATION
- ENHANCE TECHNICAL UNDERSTANDING AND COMMUNICATIONS
- USE REALISTIC ANALYSIS
- USE PEER REVIEW

TECHNOLOGY for ENERGY CORPORATION



DEVELOPED PLAN AND PROCESS FOR IDCOR DOCUMENTATION

REPORT	FUNCTION
 CONCLUSIONS & RECOMMENDATIONS	IDENTIFIES ISSUES AND IDCOR POSITIONS
 TECHNICAL SUMMARY	SUPPORTS IDCOR POSITIONS ON ISSUES AND INDEXES SUPPORTING TECHNICAL INFORMATION REPORTS
 TECHNICAL REPORTS	PROVIDES DETAIL TECHNICAL INFORMATION IN SUPPORT OF IDCOR POSITIONS ON ISSUES

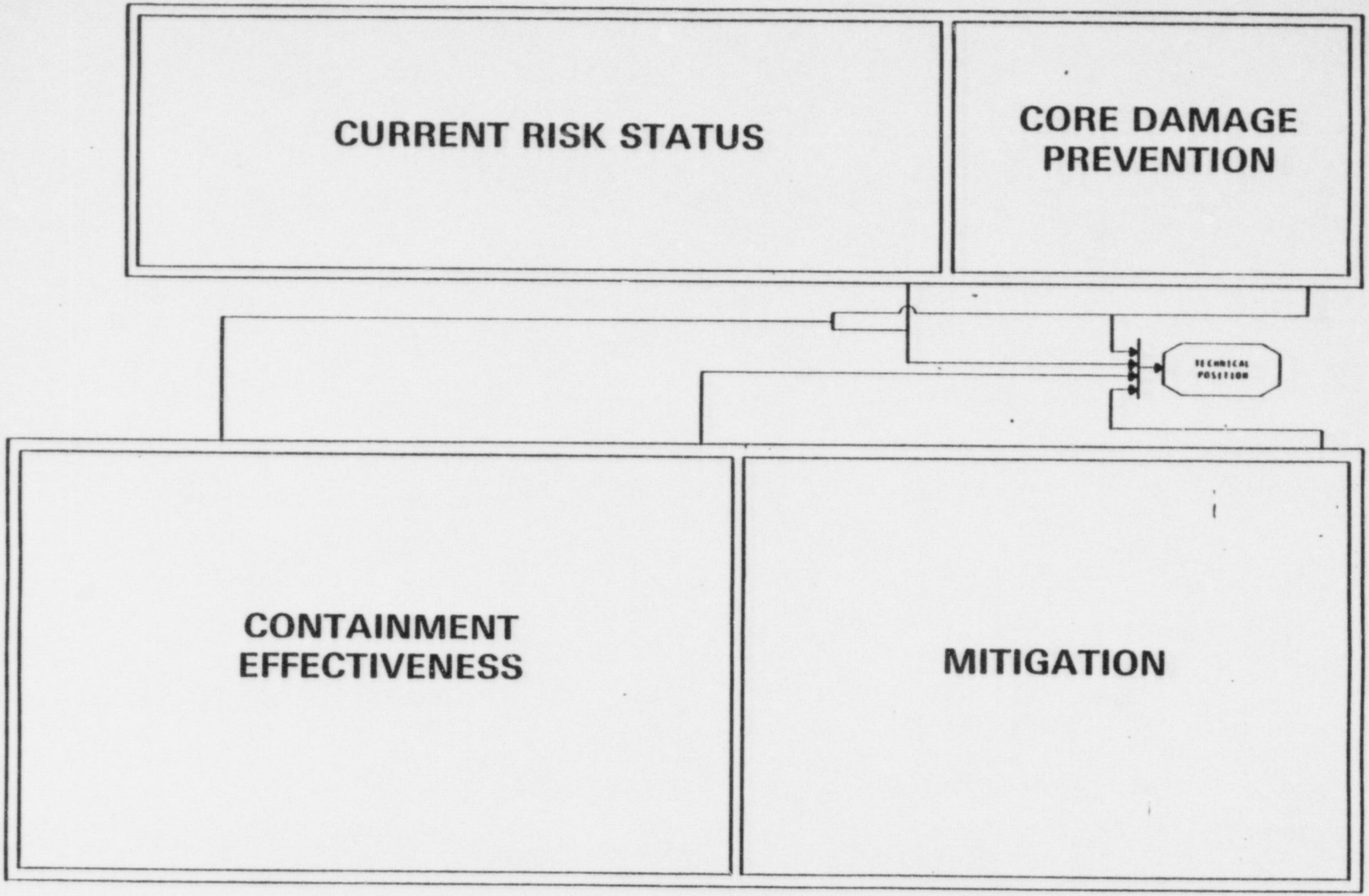
IMPLEMENTED NRC INTERACTIONS PROGRAM

- HELD FIRST MANAGEMENT MEETING IN MAY 1982
- REVIEWED NRC FUEL DAMAGE PROGRAM IN JUNE, 1982
- REVIEWED RISK CODES & VALUE IMPACT PROGRAMS IN JULY 1982
- REVIEWED SASA/IREP/NREP/ASEP IN AUGUST 1982
- HELD SECOND MANAGEMENT MEETING IN SEPTEMBER 1982

TECHNICAL APPROACH

- DEVELOP GENERIC EVALUATION CRITERIA
- SELECT REPRESENTATIVE REFERENCE PLANTS
- IDENTIFY DOMINANT ACCIDENT SEQUENCES WHICH CAN RESULT IN DEGRADED CORES IF UNCHECKED
- REALISTICALLY CHARACTERIZE REACTOR BEHAVIOR
- IDENTIFY & ASSESS OPPORTUNITIES FOR REDUCING RISKS THROUGHOUT THESE SEQUENCES
- RELATE RESULTS TO EVALUATIVE CRITERIA

TECHNOLOGY for ENERGY CORPORATION



SEVEN PRA's WERE EXAMINED IN THE IDCOR PRESENT RISK WORK AREA

- SURRY
- OCONEE
- SEQUOYAH
- ZION
- PEACH BOTTOM
- GRAND GULF
- LIMERICK

DEVELOPED INTEGRATED CODE (MAAP) FOR ANALYSIS OF SEVERE ACCIDENT BEHAVIOR OF PWR's & BWR's WHICH INCLUDES:

- BEST ESTIMATE PHENOMENOLOGY
- DETAILED PLANT DESIGN INFORMATION
- SYSTEMS INTERACTIONS
- OPERATOR ACTIONS
- BATCH OR INTERACTIVE MODE
- CAPABILITY FOR OPERATOR TRAINING AS WELL AS SEVERE ACCIDENT ANALYSES

REFERENCE PLANTS

- ZION: PWR, LARGE DRY CONTAINMENT (COMED, WEST., FAI, TEC)
- SEQUOYAH: PWR, ICE CONDENSER (TVA, WEST, FAI, TEC)
- PEACH BOTTOM: BWR, MARK I (PECO, GE, BECHTEL, FAI, TEC)
- GRAND GULF: BWR, MARK III (MISS. P & L, GE, BECHTEL, FAI, TEC)

DEVELOPED APPROACH TO NON-REFERENCE PLANTS & GENERIC APPLICABILITY

- PREPARED LIST OF KEY ISSUES
- PREPARED LIST OF PARAMETERS OF ALL PLANTS
- IDENTIFIED PLANTS AS MODELS FOR NON-REFERENCE PLANTS
  - SUSQUEHANAH (BWR MK II)
  - CALVERT CLIFFS (CE)
  - OCONEE (B&W)
- HELD KICK-OFF MEETINGS WITH B&W, CE, PP&L, BG&E

DEVELOPED APPROACH TO NON-REFERENCE PLANTS & GENERIC APPLICABILITY (CONT.)

- INSPECTED SUSQUEHANAH, CLAVERT CLIFFS, OCONEE
  - STEERING GROUP APPROVED APPROACH OF MODIFYING MAAP CODE TO DO ANALYSES FOR THE ABOVE PLANTS
  - ACTUAL MAAP ANALYSES OF NON-REFERENCE PLANTS WOULD BE DONE AFTER JULY 1983

SET UP MAAP/MARCH-2 BENCHMARK ANALYSES WITH NRC

- ANALYSES TO BE PERFORMED ON KEY SEQUENCES FOR REFERENCE PLANTS (SAME SEQUENCES AS IDCOR TASK 23)
- ANALYSES TO BE PERFORMED USING COMMON (CORRECT) PLANT INFORMATION
- ANALYSES TO BE PERFORMED "BLIND"
- COMPARISON TO OCCUR IN JUNE 1983

FINALIZED EXPERT REVIEW PROCESS AND EXPERT REVIEW GROUP MEMBERSHIP

- HYDROGEN CONTROL, DISTRIBUTION, AND COMBUSTION
- PREVENTION SYSTEMS
- MITIGATIVE SYSTEMS
- EQUIPMENT SURVIVABILITY
- CONTAINMENT STRUCTURAL CAPABILITY
- SAFETY GOAL ADAPTATION
- GROUND RULES
- SEQUENCES AND RISK ASSESSMENT
- HUMAN FACTORS AND OPERATIONAL PROCEDURES
- CONTAINMENT ANALYSES
- DEGRADATION PHENOMENA
- SOURCE TERMS

MAINTAINED COGNIZANCE OF RELATED PROGRAMS

- ISSUED FINAL REPORT ON RELATED PROGRAMS WHICH COVERS WORK BEING DONE BY
  - EPRI
  - DOE
  - NRC
  - GERMANS
  - FRENCH
  - SWEDES
  - UTILITIES

INDUSTRY'S PLAN FOR ACCEPTABLE CLOSURE OF SEVERE ACCIDENT ISSUES

CORDELL REED
CHAIRMAN, IDCOR STEERING GROUP

JOHN RAULSTON
CHAIRMAN, IDCOR CLOSURE SUBCOMMITTEE

IDCOR/NRC 3/2/83 MANAGEMENT MEETING OBJECTIVE:

REACH UNDERSTANDING OF AND AGREEMENT IN PRINCIPLE ON THE INDUSTRY'S PROPOSED PROCESS TO SUPPORT THE REGULATORY CLOSURE OF SEVERE ACCIDENT ISSUES - IDCOR II

611A65

IDCOR II OBJECTIVE

- OBTAIN TECHNICAL CLOSURE ON SEVERE ACCIDENT ISSUES
- OBTAIN PERMANENT REGULATORY CLOSURE

THE SUCCESSFUL IDCOR PROGRAM HAS ESTABLISHED THE TECHNICAL FOUNDATION FOR PERMANENT RESOLUTION OF THE SEVERE ACCIDENT ISSUES

- DEVELOPED A COHERENT, COORDINATED PLAN FOR ASSESSING SEVERE ACCIDENT ISSUES
- FOCUSED THE BEST TECHNICAL AND MANAGEMENT TALENT ON THE PROBLEM
- ASSESSED WORLD-WIDE EXPERIMENTAL DATA AND METHODS
- IDENTIFIED AND ADDRESSED DEFICIENCIES IN EXISTING ANALYSIS METHODS

THE SUCCESSFUL IDCOR PROGRAM HAS ESTABLISHED THE TECHNICAL FOUNDATION FOR PERMANENT RESOLUTION OF THE SEVERE ACCIDENT ISSUES

- DEVELOPED STATE-OF-THE-ART METHODS FOR REALISTICALLY ANALYZING PLANT BEHAVIOR
- PROVIDED A BROAD PERSPECTIVE ON RESOLVING DEGRADED CORE ISSUES THROUGH COMPREHENSIVE INDUSTRY REPRESENTATION PARTICIPATION
- PROVIDED THE TECHNICAL BASES FOR PROCEEDING TO CLOSURE

THE SUCCESSFUL IDCOR PROGRAM HAS ESTABLISHED THE MANAGEMENT FOUNDATION FOR RESOLUTION OF THE SEVERE ACCIDENT ISSUES

- MANAGED THE PROGRAM ON SCHEDULE AND WITHIN BUDGET
- FOCUSED THE BEST MANAGEMENT AND LEGAL TALENT ON THE PROBLEM

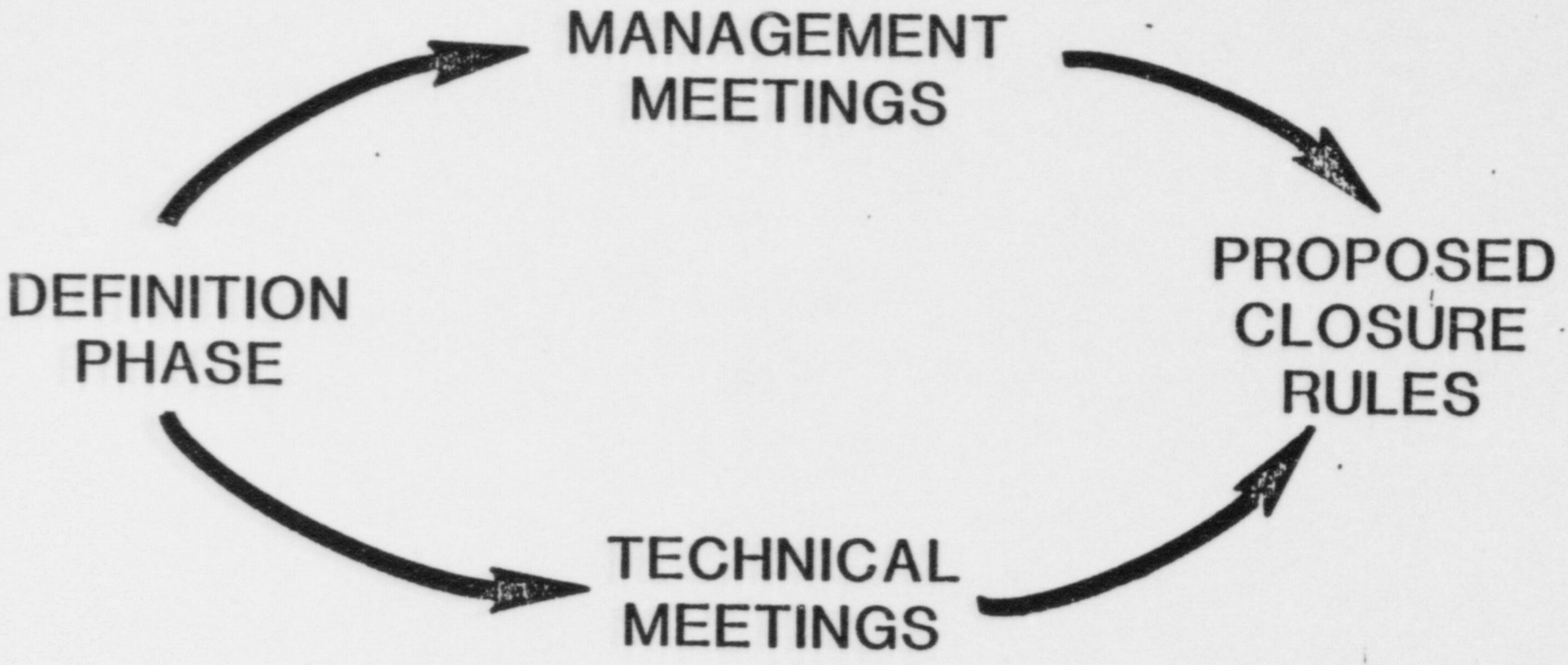
IDCOR II WILL ASSURE ACCEPTABLE PERMANENT REGULATORY DECISIONS ON THE SEVERE ACCIDENT ISSUES AFTER FILING IDCOR's TECHNICAL CASE

- OBTAIN AGREEMENT ON OBJECTIVES, SCOPE, DECISION PROCESS, PROCEDURES, AND TIMING.
- IDENTIFY KEY ISSUES FOR TECHNICAL RESOLUTION
- RANK ISSUES BY PRIORITY AND DEVELOP OPTIMUM ORDER OF RESOLUTION

IDCOR II WILL ASSURE ACCEPTABLE PERMANENT REGULATORY DECISIONS ON THE SEVERE ACCIDENT ISSUES AFTER FILING IDCOR's TECHNICAL CASE

- OBTAIN AGREEMENT ON KEY TECHNICAL AND REGULATORY ISSUES
- SUGGEST RULES AS APPROPRIATE AND SEEK ISSUANCE BY INFORMAL PROCEDURES

IDCOR CLOSURE PROCESS



611A62

IDCOR II WILL MINIMIZE SCHEDULE AND FINANCIAL RISK TO EACH UTILITY

- LICENSEES NOT REQUIRED TO RESPOND TO SEVERE ACCIDENT QUESTIONS INDIVIDUALLY
- PREVENTS UNCOORDINATED RESPONSES
- CLOSURE COSTS LESS THAN A SINGLE LICENSEE WOULD INCUR

- UNIFIED INDUSTRY APPROACH CARRIES MORE WEIGHT WITH NRC
- PROVIDES A FOCAL POINT FOR NRC

IDCOR II TYPES OF MEETINGS/BRIEFINGS

	BEFORE 7/1/83	7/1/83 2/1/84	2/1/84 7/1/84
SENIOR NRC MANAGERS	✓	✓	✓
NRC LICENSING STAFF	○	✓	✓
NRC RESEARCH STAFF & CONTRACTORS	○	✓	○
NRC COMMISSIONERS BRIEFING	✓	○	✓
ACRS/CRGR BRIEFING	✓	○	✓
NATIONAL LABS BRIEFING	○	✓	○
ADMINISTRATION/ COORDINATION	✓	✓	✓

11A61

SCOPE OF SENIOR NRC/IDCOR MANAGEMENT MEETINGS

- IDENTIFY SCOPE & TIMING OF EACH TECHNICAL MEETING
- CONFIRM AGREEMENT ON ISSUES FOR NEXT TECHNICAL MEETING
- REVIEW AGREEMENTS FROM PREVIOUS TECHNICAL MEETINGS
- REVIEW REGULATORY IMPLICATIONS
- REVIEW PROGRESS OF DECISION PROCESS
- DOCUMENT RESOLUTION

PROPOSED PROCESS FOR NRC RESEARCH STAFF & TECHNICAL CONTRACTOR MEETINGS

- AGREE ON ISSUE SCOPE
- IDCOR/NRC EXCHANGE SUMMARIES OF ISSUE PRIOR TO MEETING
- CONDUCT MEETING; DISCUSS SUBSTANTIVE ISSUES AND IDENTIFY AREAS OF:
  - AGREEMENT
  - DISAGREEMENT
  - CONFIRMATORY RESEARCH
- DOCUMENT RESULTS OF MEETING

TECHNICAL AREAS OF MEETINGS WITH NRC STAFF & CONTRACTORS

- KEY SEQUENCES AND PHENOMENA
- ANALYSIS METHODOLOGY
- SOURCE TERMS
- CONTAINMENT ANALYSIS
- MITIGATION FEATURES, OPERATIONAL FACTORS AND COST BENEFITS
- OTHER ISSUES (SEISMIC, SABOTAGE, ETC) ACCEPTABILITY OF RISK LEVEL

SCOPE OF NEXT IDCOR/NRC MANAGEMENT MEETINGS

- EXECUTIVE SUMMARY OF IDCOR RESULTS
- AGREE ON KEY ISSUES TO BE COVERED IN FUTURE NRC/IDCOR STAFF & CONTRACTOR TECHNICAL MEETINGS
- AGREE ON OVERALL SCHEDULE FOR FUTURE NRC/IDCOR MANAGEMENT MEETINGS & NRC STAFF & CONTRACTOR TECHNICAL MEETINGS
- ITEMS NORMALLY COVERED BY IDCOR/NRC SENIOR MANAGEMENT MEETINGS

611A60

SCOPE OF NEXT NRC STAFF & CONTRACTOR TECHNICAL MEETING ON KEY SEQUENCES & PHENOMENA

- REPRESENTATIVE SEQUENCES FOR SEVERE ACCIDENT ANALYSES
- PLANT SPECIFICITY
- KEY PHENOMENA
  - STEAM EXPLOSION
  - STEAM SPIKE
  - HYDROGEN GENERATION & BURN
  - CORE CONCRETE REACTION
  - DEBRIS COOLABILITY

PLEASE PRINT

ATTENDANCE

COMMITTEE IDCOR-NRC Closure Meeting

DATE 3/2/83 TIME 10:30

PLACE AIF Bethesda

NAME	ORGANIZATION
CORDELL REED	COM. ED - IDCOR STEERING GROUP COMM
MARIO FONTANA	TEC - IDCOR
TONY BUHL	TEC
TERRY TYLER	TEC - IDCOR
VONN LARKINS	NRC/RES/DAE
ROBERT MINOGUE	NRC
ZOLTAN R ROZSTOCZY	NRC / NRR / DST
MARK A. CUNNINGHAM	NRC/RES/DRA
Jim Malaro	NRC/RES/DRA
O.E. BASSETT	NRC/RES/DAE
Walter F. Pasedag	NRC/RES/ASTPO
JOHN R. SIEGEL	AIF / IDCOR
Fred Sears	Northeast Utilities - IDCOR Steering Grp.
John Raulston	TVA - IDCOR Steering Group
Don Bucci	ACRS
CORDELL REED	COMMANWEALTH EDISON - Chairman, IDCOR STEERING GROUP
ROBERT SEALY	AIF