



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

OCT 18 1978

Docket Nos: 50-275
and 50-323

APPLICANT: Pacific Gas & Electric Company (PG&E)

FACILITY: Diablo Canyon Nuclear Power Station, Units 1 and 2 (Diablo Canyon)

SUBJECT: SUMMARY OF MEETING HELD ON OCTOBER 5, 1978 TO DISCUSS THE DIABLO CANYON REVIEW SCHEDULE

We met with the applicant on October 5, 1978 in Bethesda, Maryland to discuss the Diablo Canyon review schedule. A list of attendees is provided in Enclosure No. 1.

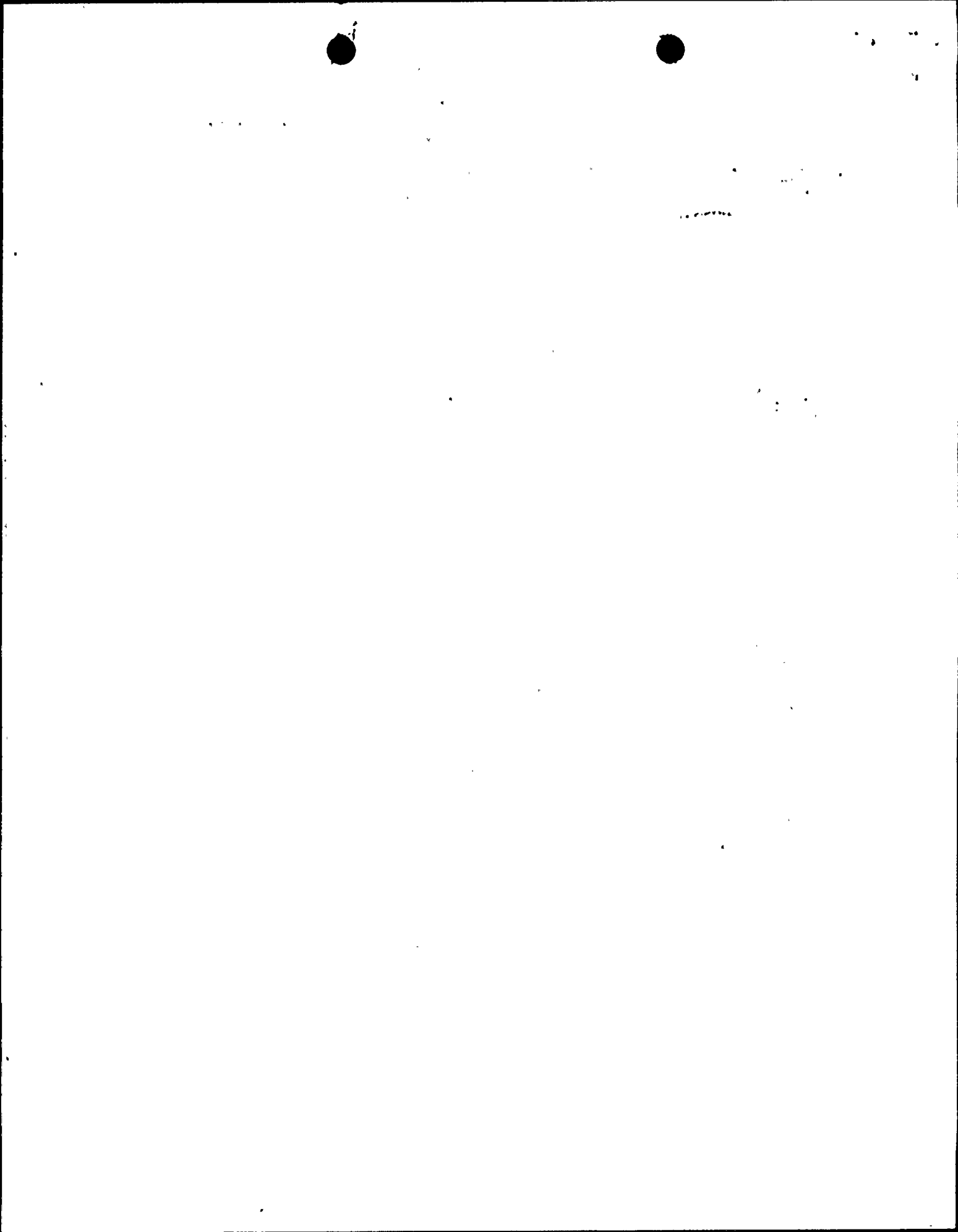
The Diablo Canyon review schedule called for completing our review of seismic design issues and publishing Supplement No. 8 to the Safety Evaluation Report (SER) by November 15, 1978. This would support beginning the safety hearings on schedule on December 4, 1978 provided the other hearing preparation items such as filing testimony, identifying and deposing witnesses, and completing discovery were also completed on schedule.

The object of this meeting was to discuss the review status of numerous specific items that were under review and to identify the items of most concern with respect to meeting the schedule. The items we discussed and their status are summarized in Enclosure No. 2.

It was apparent that meeting the schedule would be difficult. The staff's review of seismic design items should have been completed and preparation of draft SER sections should have been underway in order to have assurance of meeting the schedule. Instead, however, the review had been 2/3 to 3/4 completed. It would be necessary to write the draft SER sections and to resolve the remaining items within about the next 2 weeks in order to publish SER Supplement 8 on schedule.

We indicated that we would continue attempting to meet the schedule including compressing the time available for writing and reviewing

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OCT 18 1978

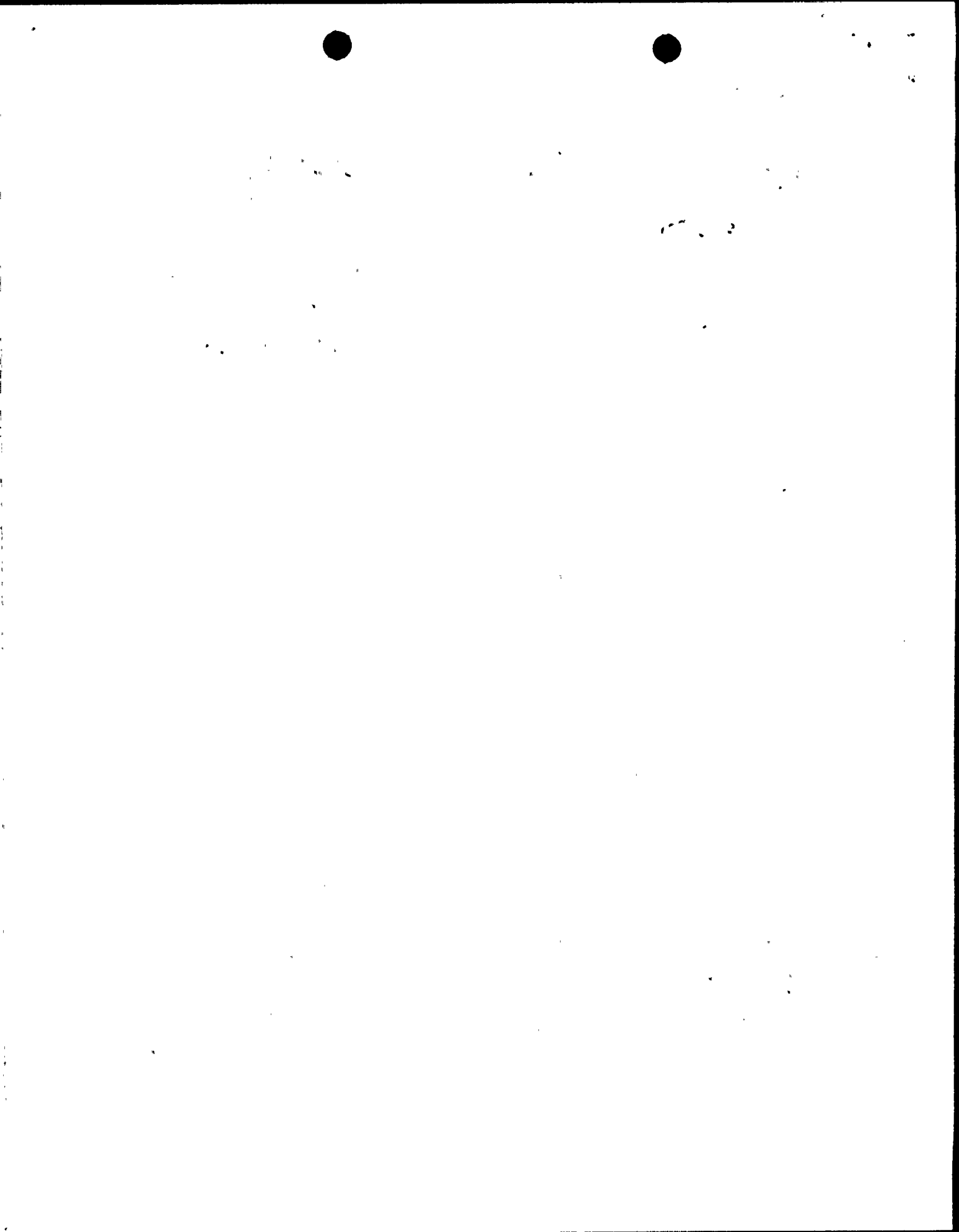
the SER supplement. PG&E indicated that it would attempt to provide the information needed to resolve the outstanding items as soon as possible.



Dennis P. Allison, Project Manager
Light Water Reactors Branch No. 1
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Enclosures:
As Stated

cc:
See next page



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OCT 18 1978

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Mr. John C. Morrissey

OCT 18 1978

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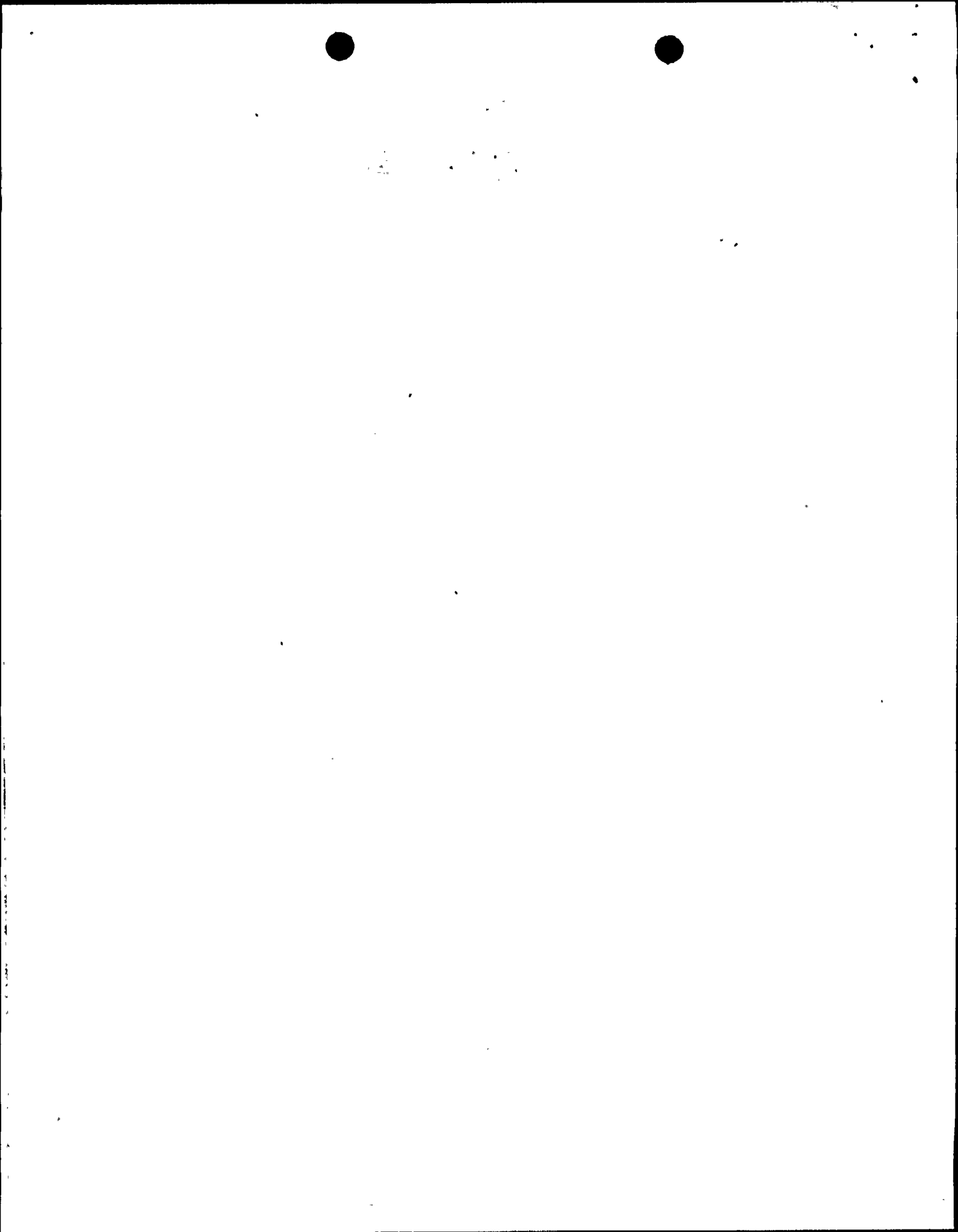
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ENCLOSURE NO. 1

LIST OF ATTENDEES

DIABLO CANYON MEETING OCTOBER 5, 1978

NRC STAFF

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J. Knox
P. T. Kuo
P. Y. Chen
J. Tourtellotte
J. Lawrence

PG&E

J. Hoch
M. Williamson
H. Gormly
P. Antiochos
M. Furbush
G. Blane
et al

Westinghouse

W. Sugnet
W. Gangloff
et al



ENCLOSURE NO. 2

MARKED-UP DIABLO CANYON REVIEW SCHEDULE

Indicates the status of items under review as a result of the discussions between the applicant and the NRC Staff at a meeting on October 5, 1978



PUNCHLIST RESULTING FROM MEETING OF 10/5/78

10/15/78

DIABLO CANYON REVIEW SCHEDULE - STATUS 8/13/78

1. ITEMS REQUIRED FOR HEARINGS

(V) SPACE >

DPM
DPM
ASB
PSB

ALAB 444 (River Bend) material
Address Category III regulatory guides
Draft description provided 10/5/78
Fire protection
Review nearly completed
Submittals in letter 8/3/78 ~~Am 66~~ *Reviewed*
on (1) alternate shutdown
(2) seismic aspects
(3) schedule for modification
(4) other information not previously provided

SER input ~~4-6 weeks later 9/27/78~~ *completed 10/5/78*
Additional submittals expected 10/20/78

(V) CPB
AB

Reactor fuel analysis - LOCA + seismic-coolable geometry
Review completed
A few items documented 8/3/78
Revised letter expected 8/25/78

CPB SER input ~~8/21/78~~ *completed*
AB SER input *expected 10/20/78*

(V) AAB

Turbine missiles
Review completed
SER input was due 8/4/78

RSB
PSB
ASB
GSB
HMB

Systems for cold shutdown

(V)

(1) Instruments in control room - completed
SER input was due 8/1/78 by LPM

(V)

(2) Raw water reservoir - Later
Resolve issue ~~for~~ with tanks below
Draft report ~~under review 3/3/78~~ *reviewed*
GSB SER input completed
HMB SER input was due 10/13/78

(3) Fire water tank and transfer storage tank
Submittal on hose connections reviewed (Am 66)
~~Submit further minor information 8/31/78 Am 65~~
~~ASB SER input 3 weeks later was expected~~
was submitted 7/26/78
Review completed 10/5/78

However, PG&E ~~is~~
~~going to change~~
~~design~~

Seismic qualification of electrical equipment (electrical review)

PSB

(1) BOP equipment that will not be retested
Audit completed *Review completed*
Documentation of informal information *expected 8/15/78*
Submittal of details on indicators
and controllers See AM 62 (May 26) Page 18-21a
Hogri
SER input _____

Draft question 10/12/78
Response _____



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PSB

(2) BOP equipment that will be retested
Testing completed 8/11/78

~~Revised draft submittals describing results 8/31/78 - AM 66~~

~~Review and audit _____~~

~~Document solenoid valves and limit switches in FSAR 8/31 - AM 66~~

~~SER input _____~~

*Limit switches AM 68
Solenoids p 10-22c
of Hoyer report*

*Audited 8/31/78
Revised material
mostly provided
9/22/78
Questions at meetings
of 10/12/78 and
10/19/78
Provide responses*

ICSB ~~(primary)~~

(3) NSSS equipment (generic program items)
Audit completed 8/4/78

Document answers to draft questions ~~8/18/78~~ 9/22/78

Describe seismic qualification of replacements ~~Rosemont for Fischer & Porter transmitters AM 66 (8/31/78)~~ 10/4/78

Describe seismic qualification of Barton transmitters ~~10/2/78~~ 9/29/78

Provide information on environmental qualification of Barton transmitters (necessary to close out seismic) ~~10/2/78~~ 9/29/78

Also submerged qualification ~~10/2/78~~
Describe seismic qualification of Barton 351/396 containment pressure transmitter ~~AM 66~~ 9/22/78

Describe seismic qualification of containment fan coolers 10/15/78

Limatorque valve actuators will be handled with 14" valve test described below on page 5
SER input _____

MEB also

MEB also

PSB also

MEB also

MEB primarily

PSB

Seismic scram

~~Submit Detailed information 8/31/78 AM 66 under review~~
~~SER input _____~~ *Review completed*

SEB

Containment SIT

Under review *was due*

Memo to LPM 9/1/78

(Not an SER item)

SEB

Baseline correction information on time histories

~~Baseline correction under review~~ *Review Completed*
(Was not listed in Supp. 7)

SEB

Containment stability

MEB

Reviewed

~~Submitted further information 8/18/78~~

SEB review completed

MEB review underway



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SEB Intake structure stability analysis (A-5)
 Submitted further information 8/25/78
 Under review *Reviewed analysis 10/5/78*

SEB ~~Duwidog post tensioning system~~
 ~~Turbine building threaded rebar couplers~~ *Test procedures under*
 ~~Submit further information~~ review
 (Was not listed in SER)

SEB Turbine building computer codes
 ~~Under review~~ *Reviewed*
 Submitted further information 9/29/78

(V) SEB Turbine building torsion studies
 ~~Under review~~ *Review completed*

SEB Turbine building end bents
 Under review WAITING TILL LAST

SEB Turbine building modifications description
 Under review CHECK FSAR

SEB Turbine pedestal gap modification
 Submitted analysis and design modifications 8/18/78
 ~~Under review~~ *Reviewed*
 Provided final analysis 9/29/78

- SEB Turbine building items previously submitted
 Under review
- (1) Crane trolley vertical restraints
 - (2) Turbine crane
 - (V) (3) Foundation mat *- review completed*
 - (NA) (4) ~~Turbine pedestal~~
 - (V) (4) (5) Building mathematical models *- review completed*
 - (V) (5) (6) Examples of smoothed spectra *- review completed*
 - (4) (7) Crane mathematical model

(V) SEB Turbine building quantitative assessment of welded & bolted joints
 Review completed Submit information 8/25/78
 (not listed in SER)

SEB Outdoor tanks
 (V) ~~Under review~~ *underground tanks - review completed*
 Provided final report on above ground tanks 10/5/78

SEB Cranes
 ASB Submit Analyses 9/15/78 *(may be able to improve)*
 were expected

Structural analyses available for audit 10/6/78
 Provide safety analyses



- ✓ MEB Damping of Reactor Coolant System
Review completed
- ✓ MEB Sensitivity of non-linear systems
Review completed
- ✓ MEB Unit 1 vs Unit 2 reactor coolant system
Review completed
- ✓ MEB Supporting of Class 2 piping
Audit completed 8/4/78, found acceptable
~~Document this information 8/23/78~~
- ✓ MEB Piping snubber study
Review completed, found acceptable
~~SER input~~
- MEB Results of requalification by testing equipment (*mechanical review*)
Many items available for audit 8/9/78
Remainder available 8/18/78 *Provide Retest results of*
4.16 KV Switchgear *under review.*
~~Formal documentation of reports by 9/15/78~~
- MEB PSB Retest of 14" valve, Limitorque and limit switches
PSB audit completed, found acceptable subject to
documentation of test reports *and MEB review.*
MEB has under review
Submit Final test data results & evaluation *were expected 9/15/78*
Final report 10/5/78, under review
- MEB Additional in situ tests reports
~~Preliminary reports under review~~
Final reports in for audit 8/4/78
CCWHX analysis in for audit 8/4/78 ¹²
Provide computer code verification 9/15/78
Provide information addressing modes 9/15/78 ¹²
- INDENT THESE FOUR {
- ✓ MEB Test inputs for 14" valve
~~Under review 5/26 (6/30)~~
~~Additional draft information reviewed 8/8/78~~
~~Correct existing documentation with respect to~~
~~limiting accelerations~~
Review completed
- ✓ MEB Limitorque qualification reports
Item dropped, covered by 14" valve above



2
.

MEB Natural frequency of HCV 637
Under review 6/15/78 (6/30) *Further information provided 9/14/78*

MEB Qualification of several valves
Several under review 6/29/78 (6/30) *Will not complete until following item complete*
Submit Corrected audit forms for each valve
~~on page summary 3-66 of Supplement 7 9/15/78~~ *provided 9/22/78*
Provide further questions to LPM

MEB Ability of active valves to operate
In situ test reports for valve operability
under review 8/4/78
Will not complete until preceeding item completed



MEB Further justification, qualification of
solid state protection system cabinets
Review completed

MEB Update tables 7-5 through 7-8 and 10-1
7-5A Under review

Further update expected

Draft of others under review 8/4/78
Submit in Amendments 64 & 66
Further submittal expected in am 70



MEB Nozzle loadings on aux feed pump
Audit completed 8/4/78
Review completed



MEB Piping sensitivity studies
Review completed



MEB PSB Qualification of Rotork actuators
Item dropped, not Class IE

MEB ~~Audit~~ Stress calculations on instrument
tubes on reactor vessels ~~cccc~~

Completed?

Describe analysis and results

MEB Power range instruments

ICSB

Provided test response spectra 9/22/78

Provide detailed test report expected 10/13/78



2. ITEMS NOT REQUIRED FOR HEARINGS

Environmental qualification of electrical equipment

✓ PSB

(1) Normal environment nearly completed
Monitoring for NSSS equipment under review ~~(Am 56)~~
SER input _____

*{ Review completed
LPM write SER }*

PSB
PSB
ASB

(2) Severe environment BOP equipment
Justify or retest containment penetrations ~~9/15/78~~
Justify or retest Boston cable ~~9/15/78~~ *was expected*
Justify deleting two auxiliary feedwater valves
from list - Submitted ~~7/28/78~~ *review completed*
SER input _____

PSB

ICSB

(3) Severe environment NSSS equipment
(generic program items)
Describe environmental qualification of replacements
for Fischer & Porter transmitters ~~Submitted 8/1/78~~ *9/29/78*
Document information on Sostman RTD's ~~Am 56 (8/31/78)~~ *9/29/78*
Provide Model numbers on ASCO containment isolation
solenoid valves ~~8/31/78~~ *9/22/78*
Revise references on Fischer & Porter feedwater
flow and steam pressure transmitters ~~8/31/78~~ *9/22/78*
Document qualification of RC flow instruments
for required environment (which is not
severe) ~~8/31/78~~ *9/22/78*
Describe qualification of containment pressure
bellows and transmitter ~~8/31/78~~ *9/22/78*
SER input _____

*Justification
provided
10/12/78*
Indent

(4) Later, steam line break analysis is expected
to require reevaluation/requalification of a
few specific items

(5) Miscellaneous generic questions
Connectors, review completed
Polyethylene, review completed
Penetrations - dielectric strength, provide ^d further ~~30~~
information on details of penetration design 8/31/78
Penetrations - fault current, draft information under
review 8/4/78, *staff position TO P&E 10/12/78*

*INDENT
THESE
IN
LOCATION
INDICATED*

*{ Provide detailed report on series 100 tests 10/12/78
Compare epoxy types 10/12/78
Address moisture protection 10/12/78
Justify repair procedure _____ }*



200

PSB Degraded grid voltage
Submit further information meeting staff
position ~~9/2/78~~ ~~was expected 9/2/78~~ provided 10/5/78

CSB Containment purge system
Submittal, expected ~~8/15/78~~ 9/29/78
SER input 8/25/78
If not justified, can use tech. specs.

MTEB Reactor vessel toughness,
~~Under review~~
Question to applicant 7/25/78
Response 9/29/78

MTEB Inservice inspection plan *was expected*
MEB Evaluation to LPM *9/29/78*
MEB Evaluation to LPM

RSB Overpressure protection final fix *was*
Submittal, expected 8/15/78
SER input

RSB → Have accepted interim fix for Unit 1, first cycle
Document results of ECCS sump testing. UIM 69

CSB Main steam line break analysis
AB Submittal expected ~~10/2/78~~ 11/15/78
PSB SER input ~~10/2/78~~

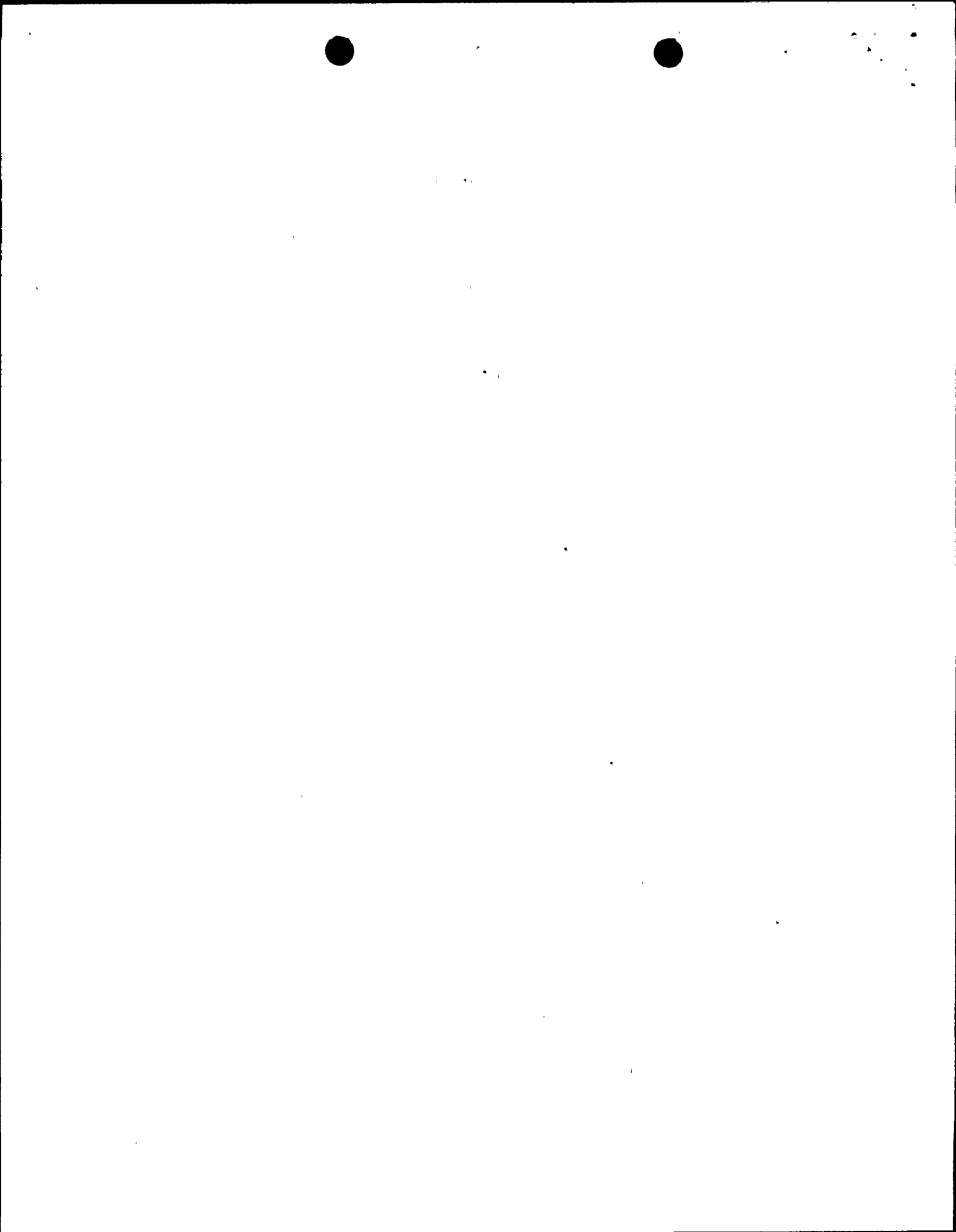
AB ECCS metal water reactions
RSB Completed generic review ~~9/15/78~~
Submit revised analysis ~~8/15/78~~ 10/15/78
SER input

TASK FORCE Regulatory Guide 1.97, Revision 1
Review applicant submittal
Not an issue to hold up licensing. To be completed on generic basis

HMB Meteorology
Review completed
SER input completed

FINANCIAL Financial update
Under review
Submit additional information 8/21/78
SER input ~~9/15/78~~ tentative 10/15/78

PSB Diesel testing technical specification
Provide confirmation of justification



- PAS Probability Studies
GSB GSB input completed
PAS input to ~~LPM 9/1/78~~ *completed*
Publish evaluation _____
- CSB Containment access hatch leak testing tech spec
Writeup to ~~LPM 9/1/78~~
SER input completed
- ASB *Provide results of moderate energy
walkdown _____*



MEETING SUMMARY DISTRIBUTION

LWR 1

Docket File

~~NRC PDR~~

Local PDR

TIC

NRR Reading

LWR 1 File

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L. Dreher

L. Rubenstein

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NRC Participants

C. Heltemes

NRC Attendees



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