

April 19, 1979

MEMO TO: V. STELLO, JR.  
FROM: W. D. LANNING *WDL*  
SUBJECT: UPDATE 2 - NATIONAL LAB WORK FOR TMI

Attached is a status of "Requests for Work" to the National Labs which have been made since Sunday, April 8, 1979.

WDL:dr  
Attachment  
cc: T. Murley

7906070004

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NATIONAL LAB WORK SUMMARY

LABORATORY Los Alamos Scientific Lab

Date 16 April 1979

PRC CONTACT: S. Fabric

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Work 301-427-4275

Home [REDACTED]

DOE CONTACT: None

Work

Home

CONTRACTOR CONTACTS: (a) Rich Pryor (b) J. Jackson

(a) Work 505-672-2020 (b) Work 505-672-2125 Work

Work

(a) Home [REDACTED] (b) Home [REDACTED] Home

Home

SUMMARY OF WORK PERFORMED:

1. Gas bubble analysis; tried to model the B&W plant to determine how long it would take to depressurize system from 1000 psia to 300 psia; sensitivity to nodalization (30 mesh cells) - 800 fts.
2. Develop finer mesh calculation for 2-3 minutes transient.
3. TRAC calculation of TMI-2 transient

STATUS:

1. Answer provided 1400 sec in real time.
2. Waiting in standby
3. Continuing

COMMENTS:

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NATIONAL LAB WORK SUMMARY

LABORATORY Brookhaven National Laboratory

Date 16 April 1979

PIPC CONTACT: Fuat Odar

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Work 301-492-7588

Home

DOE CONTACT: --

Work

Home

CONTRACTOR CONTACTS: (a) W. Kato, (b) M. Levine      Telecopy 516-345-3000

(a) Work 516-345-2444	(b) Work 516-345-2607	Work	Work
Home <span style="border: 1px solid black; padding: 2px;">.....</span>	Home	Home	Home

SUMMARY OF WORK PERFORMED:

1. Oconee Plant on RELAP. DSS asked to run the RELAP3-B and IRT (trying to simulate accident)
2. Trying to estimate solubilities/H<sub>2</sub> radiolysis work
3. Radiotron monitoring/radiological assessments.

STATUS:

1. Ongoing
2. On standby
3. Completed

COMMENTS:

NATIONAL LAB WORK SUMMARY

LABORATORY Battelle Columbus

Date 16 April 1979

PRINCIPAL CONTACT: Mark Cunningham

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Work 301-492-8377

Home

SECONDARY CONTACT: --

Work

Home

CONTRACTOR CONTACTS: (a) Rich. Denning (b) Bob Collien

(a) Work 614-424-7510	(b) Work 614-424-7504	Work	Work
Home	Home	Home	Home

SUMMARY OF WORK PERFORMED:

1. Doing meltdown calculations using the "March" thermal-hydraulics code and "Corral" to determine radionuclide release in containment.
2. Also working on a hydraulic simulation to estimate flow blockage and natural circulation (being done by private Co.: T.E. Corp., Ted Mott 615-956-5856).
3. Doing pebble bed calculations to determine heat-up during natural circulation.
4. Vessel integrity during melt down.

STATUS:

1. Done
2. Continuing: Effects on natural circulation due to make-up and let down flows.
3. Continuing: Analyzing single channels and entire core as rubble beds. Obtain exit quality as function of pressure drop.
4. Continuing

COMMENTS:

NATIONAL LAB WORK SUMMARY

LABORATORY Sandia  
CONTACT: R. DiSalvo  
Work 301-492-8377  
Home

Date 16 April 1979

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OE CONTACT: --  
Work  
Home

CONTRACTOR CONTACTS: Dave McClosky, Walt Murfim

Work 505-264-8870	Work 505-264-8909	Work	Work
Home	Home	Home	Home

SUMMARY OF WORK PERFORMED:

1. They did origin calculations to predict core inventory - they are redoing them to correct a 10% error.
2. Looked at calculating the possibility of H<sub>2</sub> explosions and or burning.
3. Did calculations on the solubility of H<sub>2</sub> in water.
4. Provided data on survivability of pressure transreceivers in high radiation fields and submergence in water.
5. Conceptual design option for TMI-2 containment venting.

STATUS:

1. Done except for correcting small error.
2. Done
3. Done
4. Done
5. Done. Will be presented to ACRS

REMARKS:

They are standing by to help if needed.

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NATIONAL LAB WORK SUMMARY

LABORATORY Oak Ridge National Lab

Date 16 April 1979

NRC CONTACT: S. Hanauer/Mark Cunningham for item (4)

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Work

Home

DOE CONTACT: B. Adams

Work 615-576-0728

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CONTRACTOR CONTACTS: (a) J. Anderson; (b) Les Oates (c) Mario Fontana

(a) Work 615-574-5536 (b) Work 615-574-5527 (c) Work 615-574-0557

Work

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SUMMARY OF WORK PERFORMED:

1. Diagnostics of Noise Evaluation - evaluating response of TMI AP's in plant and pressurizer
2. Evaluating use of resistance thermocouple as an alternate means of pressurizer level in plant.
3. Consultation on loose parts monitoring/Gil Zigler of :
4. Work on possible core configuration using SABER code.
5. Establish validity of incore TC measurements
6. Analyzing BF<sub>3</sub> count rate (J. Robinson at TEC)

STATUS:

1. Ongoing at site. Additional studies using BDHT for reference.
2. Analyzing results of tests at INEL. Testing of resistance thermocouple at ORNL.
3. Ongoing at site
4. Ongoing
5. Ongoing
6. Concluding

COMMENTS:

1. Noise analyzer available upon request (not at site presently)
2. Available upon request
3. Need NRC contact at site (presently W. Lanning)

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NATIONAL LAB WORK SUMMARY

LABORATORY Lawrence Livermore Laboratory

Date 16 April 1979

PI CONTACT: Bernie Weiss

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Work 301-492-8111

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JOE CONTACT: --

Work

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CONTRACTOR CONTACTS: Fred Jessen

Work 415-422-4784

Work

Work

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SUMMARY OF WORK PERFORMED:

1. Supplied atmosphere release predictions/inductifying where containments are going/ 24 hr./day/periodic reports on 2 hr. cycle.
2. Hot stop vans/2 mobile truck and trailer units/used for running people through.
3. Health safety
4. Remote control robot - WORM
5. Equipment
6. Water samples for analysis

STATUS:

1. Still operational
2. On Standby
3. On Standby
4. On Standby (not deployed)
5. On Standby
6. Completed

COMMENTS:

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NATIONAL LAB WORK SUMMARY

LABORATORY Idaho National Engineering

Date 16 April 1979

CONTACT: T. E. Murley

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Work 301-427-4281

Home

CONTACT: R. E. Tiller

Work 208-526-9708

Home

CONTRACTOR CONTACTS: Hank Zeile (all work requests are to be cleared thru Hank)

Work 208-526-9708

Work

Work

Work

Home 208-522-505<sup>a</sup>

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SUMMARY OF WORK PERFORMED:

1. H<sub>2</sub> degassing during depressurization tests being conducted (Billings)
2. Use of a RTD to determine liquid/gas level in pressurizer tests being conducted (Billings)
3. Semiscale tests to examine bubble behavior.
4. Natural circulation calculations to benchmark B&W calculations.
5. Fuel damage analyses
6. Semiscale tests to simulate TMI transient.
7. Tests on EMOV
8. Analyses of SPND's
9. Reactor coolant analyses
10. Analytical description of TMI-2 accident

STATUS:

1. Complete. Report due 4/20/79. Preliminary results attached.
2. Complete. Report due 4/20/79. Preliminary results attached.
3. Complete. Reported on two tests 3/31 and 4/2
4. Continuing. Completed 18 runs. Analyzing EP-32 transient. See attached summary.
5. Complete. Reported to R. Meyer, NRC.
6. Continuing. Expect test to be run 4/22
7. No work in progress. Awaiting input fr v.
8. Complete. Analyses due 4/17/79.
9. Complete. Report provided. Continuing to provide on-site assistance to TMI in radiation and contamination analyses.
10. Continuing. Analyses using RELAP<sup>4</sup>.

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NATIONAL LAB WORK SUMMARY

LABORATORY Battelle Pacific Northwest

Date 16 April 1979

PRINCIPAL CONTACT: Stan Fabric

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Work 301-427-4275

Home                     

DOE CONTACT: --

Work

Home

CONTRACTOR CONTACTS: (a) Don Trent (b) Chuck Stewart

(a) Work 509-946-2105	(b) Work 509-946-2455	Work	Work
Home	Home	Home	Home

SUMMARY OF WORK PERFORMED:

1. Diagnostic work on the possible core configuration using COBRA IV
2. Using Cobra to determine if it was really a bubble of steam vapor trapped in pockets in the core that gave such a large estimate of H<sub>2</sub> bubble size.

STATUS:

1. (a) Completed calculation to match core exit thermocouples (not unique solution).  
(b) Calculated  $\Delta T$  as function of Natural circulation flow rates (320, 97, 13 lbm/sec)  
(c) Will calculate transient natural circulation case  
Preliminary results attached
2. Delayed

COMMENTS:

1. Work coordinated with INEL natural circulation calculations.

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NATIONAL LAB WORK SUMMARY

LABORATORY Savannah River

Date 16 April 1979

DOC CONTACT: D. Vollmer

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Work

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DOC CONTACT: D. Morgan

Work 239-2405

Home [REDACTED]

CONTRACTOR CONTACTS: Al [REDACTED] eters

Work 803-450-3183

Home [REDACTED]

Work

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SUMMARY OF WORK PERFORMED:

1. Mel Pendergast of Savannah is on his way here to relieve U of California meteorology personnel at TMI at request of U.C.
2. Friday/deliver carbon to plant/9000 lbs. from Nuclear consulting services
3. Supporting ARAC
4. Obtain components for backup RHR System/Need multiples of 2 per Westinghouse
5. J. Lieberman/what can you get for fillers in Aux. Building
6. Performing RCS sample analyses
7. Analyzed Aux. Bldg. filters

STATUS:

1. Return to SRO
2. Done
3. On going
4. Completed
5. Suspended
6. Completed sample analyses
7. Complete

COMMENTS:

1. Have not been contacted for HP assistance (elite capability)

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NATIONAL LAB WORK SUMMARY

LABORATORY Bettis Atomic Power Lab  
Knolls Atomic Power Lab  
CONTACT: T. Telford, L. Barret  
Work 717-944-0301  
Home

Date 16 April 1979

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DOE CONTACT: Murray Miles; Bob Brodsky; Ted Schoenburg     J. McCool (coolant samples)  
301-353-5555 or 4435  
Work  
Home [REDACTED] (Murray)

CONTRACTOR CONTACTS: Bettis: Jim Fong     KAPL: Dar Kromehock  
Work 412-462-5000 x6531     Work 518-393-6611     Work  
Home     Home [REDACTED]     Home     Home

SUMMARY OF WORK PERFORMED:

1. Radiolysis
2. Environmental monitoring
3. Coolant sample evaluations

STATUS:

1. No more work ongoing
2. Environmental monitoring teams here; other on standby
3. Completed pressurized coolant sample analyses

COMMENTS:

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