



WASTE MANAGEMENT
PROJECTS

Department of Energy
Chicago Operations Office
Salt Repository Project Office
505 King Avenue
Columbus, Ohio 43201-2693
Commercial (614) 424-5916
F.T.S. 976-5916

87 JAN 30 P12:09

January 22, 1987

David Schweller, Area Manager
Brookhaven Area Office

SUBJECT: BROOKHAVEN NATIONAL LABORATORY'S INCIDENT REPORT, DATED
OCTOBER 14, 1986

The Department of Energy - Salt Repository Project Office has reviewed the Brookhaven National Laboratory's (BNL) Incident Report submitted by BNL letter dated October 14, 1986. The results of the review indicate that no programmatic impact or data degradation occurred; therefore this Incident Report is considered closed and no further action is required by BNL.

Please transmit this information and the enclosed attachments to Dr. Alan Goland, Associate Chairman, Department of Applied Sciences.

If you have any questions concerning this matter, please contact K.K. Wu at (FTS) 976-5916.

David E. Star

for P.S. Van Loan
Chief
Budget and Project Control
Salt Repository Project Office

SRPO:KKW:max:1360KL

Enclosures:

- (1) Incident Report 10/22/86
- (2) Letter G. Strickland to J. Reese, 10/14/86
- (3) Form QAAP 4.2-1, Rev. 0, 10/85

WM Record File
106

WM Project 16
Docket No. _____

PDR
XLPR (3)

8702130166 870122
PDR WASTE
WM-16 PDR

1521

Distribution:

<u>Whinchan</u>	<u>R. Johnson</u>
<u>Verma</u>	<u>D. Galson</u>
(Return to WM, 623-SS)	<u>Sac</u>

David Schweller

- 2 -

January 22, 1987

cc: J. Neff, SRPO
K. Wu, SRPO
E. Langston, RW-40
C. Newton, RW-24
M. Flannigan, PMED
E. Sulek, Weston
~~T. Verma, NRC~~
I. Lefman, BPMD
T. Thornton, ONWI
M. Kowalewski, CER/Colts.
SRPO QA File 1.3.9.3.13.12

ET# 273-87



Battelle

Project Management Division

INCIDENT REPORT

(SEE INSTRUCTIONS ON REVERSE SIDE)

1. REPORT NO. ES11-16320- 86-02	2. DATE 10/22/86
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PAGE _____ OF _____

3. ORIGINATOR TITLE <u>G. ERIKSEN</u> BPMO DEPT. <u>QA SPECIALIST</u> <u>QAD</u>	4. BPMO PROJECT INVOLVED <u>QMWZ</u> CONTRACT NO. <u>ES11-16320</u>	5. CONTRACTOR OR BPMO DEPT. INVOLVED <u>BROOKHAVEN NATL LAB</u> LOCATION <u>NEW YORK</u>
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6. INCIDENT DESCRIPTION

SEE ATTACHED BROOKHAVEN NATIONAL LAB LETTER DATED 10/14/86 (BNL REPORT)

DATE 9/16/86 TIME 9:00 A.M. OF INCIDENT

CONTRACTOR'S REPORT NO. DATED 10/14/86

CONTRACTOR'S _____ REPORT (1st, 2nd, final, etc.)

7. CAUSE & IMMEDIATE EFFECTS

SEE ATTACHED BNL REPORT

8. REMEDIAL ACTION

SEE ATTACHED BNL REPORT

9. PRELIMINARY REPORT (Attach Copy)

REC'D FROM BNL VIA MAIL DATE 10/16/86 TIME N/A
(telephone, teletype, etc.)

10. SIGNED (QA Specialist) <u>A. H. Erikson</u>	DATE <u>10/22/86</u>	11. APPROVED (QAD Manager) <u>[Signature]</u>	DATE <u>12-9-86</u>
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11. DESCRIBE PROGRAMMATIC (e.g., reliability, cost, schedule, data loss, or invalid data), SAFETY, HEALTH, OR ENVIRONMENTAL IMPACT

DISCUSSIONS WITH P. LEVY AND A. PINELLI OF BNL STAFF HAVE GIVEN CONFIDENCE THAT NO DEGRADATION IN THE INTEGRITY OF THE DATA RESULTED FROM THE INCIDENT; ONLY A DELAY IN DATA ACCUMULATION.
TAT 12/5/86

13. RECOMMENDATION

REMEDIAL ACTION DESCRIBED ABOVE SUFFICIENT; NO FURTHER ACTION REQUIRED. DISTRIBUTION MADE _____ (Date)

RECOMMEND FURTHER ASSESSMENT BY INCIDENT REVIEW BOARD (IRB) FOR POSSIBLE REPORTING AS UNUSUAL OCCURRENCE.

14. SIGNED (Project Manager) <u>T.A. Thornton</u>	DATE <u>12/5/86</u>	15. APPROVED (Dept. Manager) <u>[Signature]</u>	DATE <u>12/5/86</u>
16. CONCURRENCE (Contract Specialist) <u>N/A (DOE CONTRACT)</u>	DATE	17. CONCURRENCE (QA Specialist) <u>A. H. Erikson</u>	DATE <u>12/5/86</u>

18. FINAL DISPOSITION OF INCIDENT BY IRB:

NO FURTHER ACTION REQUIRED. INCIDENT CLOSED _____ (Date)

REPORTED AS UNUSUAL OCCURRENCE.

19. SIGNED (IRB Chairman) _____ DATE _____

20. FINAL DISPOSITION OF INCIDENT BY QA SPECIALIST

INCIDENT CLOSED. DISTRIBUTION MADE _____ (Date)

UNUSUAL OCCURRENCE REPORT PREPARED
Number _____ Date _____

21. SIGNED (QA Specialist) _____ DATE _____

DISTRIBUTION: QA Specialist, QAD Manager/QAD Coordinator, Project Manager, Dept. Manager, Contract Specialist, Legal Dept. Mgr., BPMO Files.

WJ 10/22/86



Battelle

Project Management Division

MANAGEMENT REVIEW

(See instructions on reverse side)

1 Originator J. LEFMAN		2 Date 10/22/86		3 CDMS No. (or ID. No.)	
4 Contractor Name SNL		5 Contract No. ES11-16320		6 Work Package No. 931-009-1-30	
7 Project: <input checked="" type="checkbox"/> ONWI <input type="checkbox"/> OTSP <input type="checkbox"/> OOCR		8 Document Title BROOKHAVEN INCIDENT REPORT		9 Doc. Date 10/14/86	
10 Rev. No. (Draft No.) 0		11 Document Intended Usage: <input checked="" type="checkbox"/> Internal Use Only <input type="checkbox"/> Issue to Client <input type="checkbox"/> Release to Public		12 Scheduled Review Completion Date	

A. INITIAL MANAGEMENT REVIEWS:

13 Project Management Contractual Review Accept as is Suggested Comments Attached Mandatory Comments Attached

14 Technical Review Assigned or Required: No Additional Reviews Required Design Review (per TMP-05)
 Peer Review (per TMP-06) Technical Review (per TMP-16-17)
 Internal Internal
 External External

NO FURTHER ASSESSMENT REQUIRED, CLOSE INCIDENT.
 Name and Organization: **D. H. Eutice BPMD/QAD 12/5/86**
T. A. Thornton ONWI
T.A. Thornton 12/5/86

15 Work Package Manager Date Responsible or Cost Account Manager Date WBS Mgr. (when reqd. by procedure) Date
T.A. Thornton 12/5/86 J. LeFman 12/5/86

Quality Assurance Review: Concur Suggested Comments Attached Mandatory Comments Attached

16 QA Specialist **D. H. Eutice** Date **12/5/86**

17 Document Returned to Contractor or Author for Revision: NA No Yes
 (Date Scheduled for Return from Contractor or Author)

FILL OUT THIS SECTION FOR FINAL ACCEPTANCE

B. FINAL MANAGEMENT REVIEWS

18 Project Manager Review Accept Not Accepted (comments attached)

19 Project or Work Package Manager Date 20 Responsible or Cost Account Manager Date
J. LeFman

21 Quality Assurance Review: Concur Do Not Concur (comments attached)

22 QA Specialist Date

23 Distribution of this form made:
 By Title Date



BROOKHAVEN NATIONAL LABORATORY
ASSOCIATED UNIVERSITIES, INC.

Upton, Long Island, New York 11973

Handwritten notes:
E.E. / 10/16/86
G.S. / 10/22/86
Strickland / Eriksen / QA & T.

Department of Applied Science
Mr. T. J. Reese
Chief, Quality Assurance
Salt Repository Project Office
U.S. Department of Energy
505 King Avenue
Columbus, OH 43201-2693

October 14, 1986

(516) 282-4487
FTS 666-4487

OCT 16 1986

QA DEPARTMENT

MAIL DISTRIBUTION CENTER
I - 101685-439

Subject: Incident Report on Power Shutdown at Building 830

Dear Mr. Reese:

The enclosed Incident Report pertains to a 2-hour power shutdown that occurred on September 16 and affected gas-evolution measurements on a rock salt sample being irradiated at Building 830. The impact of the incident was that 10 days were required to re-establish equilibrium conditions.

Having decided to file an Incident Report on October 6, we were deficient in not providing verbal notice by September 18. On October 7 we told the visiting Surveillance Team from BPMD of the incident (D. E. Clark, out-going Project Manager; T. Thornton, incoming Project Manager; and G. Eriksen, QA Specialist).

For further information, or discussion, you may phone me (516-282-4487 or 666-4487 on FTS).

Sincerely yours,

Gerald Strickland
Gerald Strickland
Designated QA Representative

GS:mh
encs.

- cc: Dr. K.K. Wu
U.S. Dept. of Energy
Salt Repository Project Office
505 King Avenue
Columbus, OH 43201-2693
- Dr. D.E. Clark
- Mr. T. Thornton
- Dr. J. Schornhorst
- Mr. G. Eriksen ✓
Battelle-ONWI
505 King Avenue
Columbus, OH 43201-2693

- BNL: I. Brown
- A. Goland
- C. Krishna
- P. Levy
- K. Lynn
- E. Rohrer
- M. Shear
- D. Welch

ATTACHMENT 3
Rock Salt Radiation Effects Studies

Page 1 of 2

INCIDENT REPORT

Prepared by G. Strickland and P. Levy

Date October 14, 1986

This document is to be used to report any condition or occurrence which has, or could have, a significant programmatic or safety impact.*

1. Description of incident (Describe where, when, how and why the incident took place).

On September 16 there was a power shutdown (9-11 am) which affected the Chlorine Gas-Evolution Measurement Test at Building 830. Although the shutdown was scheduled (for installation of power meters), our personnel were not notified. When our operator arrived at 10 am to record gas-evolution mass data, he found that the system was not powered, and he shut the system down.

2. Programmatic or safety impact or possible impact:*

The impact of the incident was programmatic rather than safety. The important effects of the power loss were that the sample temperature was not maintained, and the vacuum pump did not remove the evolved chlorine at the usual rate. However, the system vacuum was maintained near the usual level.

3. Action taken to date:

The system was restarted when power was restored. Although the sample temperature (160°C) was quickly attained, it took about four days of pumping to achieve the prior gas pressure levels. Then six days more were required to ascertain that the gas pressure levels had reached the previous steady-state values, particularly the previous Cl₂ level.

4. Cause(s) or possible cause(s):

We were not able to supply a substitute power source because the person receiving the shutdown notice at Building 830 failed to inform our personnel. A notice was posted in the Building lobby; whereas our entry point is at a rear door near the experiment. Also, because of the location, our personnel rarely have contact with other workers in the Building who might have provided verbal communication on the pending shutdown.

*Events which have or could have significant programmatic (reliability, cost, or schedule), safety, health, or environmental impact.

ATTACHMENT 3
Rock Salt Radiation Effects Studies

Page 2 of 2

INCIDENT REPORT

5. Action or planned action to resolve and prevent recurrence:

Both the Maintenance and the Safety Coordinators for Building 830 were notified of the importance of our need to receive announcements about future power shutdowns.

6. Additional remarks:

If these measurements are to be continued, consideration should be given to installing an emergency power supply, and an automatic transfer switch, so that any power failure would result in only a momentary interruption of power for these measurements.

A brief power outage at Building 356, where optical transmission measurements will be made on rock salt exposed to radiation, would not cause similar problems. Here, a battery-operated alternator would indirectly maintain the source in position, allowing irradiation to continue. Although no data could be taken, a data gap of several hours would probably not have much impact because of the slow change in optical transmission.

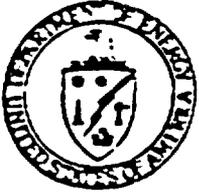
APPROVALS: DQAR *G. Strickland* G. Strickland Date 10/17/86

MMS Division Head *K.G. Lynn* K.G. Lynn Date 10/14/86

Assoc. Chm. for Energy *M. Becker*
Science Programs *for* A.N. Goland Date 10/14/86

BMPD *S.A. Ecker* Date 12/5/86

ATTACH. 3-2



**SALT REPOSITORY
PROJECT OFFICE
(SRPO)**

**CONTRACTOR QUALITY ASSURANCE PROGRAM
DOCUMENT REVIEW**

DATE(S) OF REVIEW December 5, 1986

OFFERER/CONTRACTOR COMPANY NAME Brookhaven National Laboratory

NAME OF QA CONTACT Marvin Shear **SOLICITATION NO.** _____

ADDRESS Brookhaven National Laboratory **CONTRACT NO.** _____
Upton, New York 11973

QA DOCUMENT TITLE Brookhaven Letter Dated 10/14/86 (Incident Report)

DOCUMENT NO. N/A **REVISION NO.** N/A **DATE** 10/14/86

DOCUMENT COPY NO. _____ **CONTROLLED** **UNCONTROLLED**

SOLICITATION/QA REQUIREMENT DOCUMENTS SRPO QA Spec Dated 7/10/85

(EXAMPLE: NQA-1 BR5)

CHECKLIST NO. _____

COMMENTS (ATTACH ADDITIONAL SHEETS AS REQUIRED) _____

The BPMD QA Department in conjunction with Tom Thornton, BPMD Project Manager for BNL, has reviewed BNL's Incident Report in accordance with BPMD Procedure QAP-15, Revision 1. Based on the information provided in the report and conversations with the BNL Staff, no programmatic impact has been caused by this Incident Report, and no degradation of the data from the study in progress at the time has been noted. Therefore, we recommend closure of this Incident Report with no further action required.

RECOMENDATION **ACCEPTABLE** **CONDITIONALLY ACCEPTABLE** **UNACCEPTABLE**

REVIEWED BY G. H. Eriksen *D.H. Eriksen / BPMD* **DATE** 12/5/86

CONCURRED BY *Jerry Beese* **DATE** 1/8/87
(CHIEF, QA)