



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

MAR 02 1978

MEMORANDUM FOR: Norman M. Haller, Director, Division of Safeguards
Inspection, IE

FROM: James G. Keppler, Director, RIII

SUBJECT: DOW CHEMICAL COMPANY - RECOMMENDED CIVIL PENALTY

During a recent security inspection at the subject licensee's TRIGA Reactor facility, two RIII inspectors gained unchallenged access from outside the licensee's facility through a limited control access area and into the licensee's reactor building and reactor room, areas which are required to be controlled by the licensee's security plan. After about ten minutes inside the security area, the inspectors identified themselves to licensee personnel.

A second item of noncompliance relating to access control was also identified. Noncompliance with this same area of access control was found during the previous security inspection at this facility. Because of the significance of the one item of noncompliance and the repetitive nature of items related to access control, we recommend that a civil penalty be issued to the subject licensee.

Upon completion of the inspection we issued an Immediate Action Letter on January 13, 1978 (copy attached). A reply from the licensee (copy attached) did not indicate a full response, but during the enforcement conference held at the licensee's facility on February 7, 1978, it was confirmed that the licensee did, in fact, take prompt steps to carry out the items set forth in the immediate action letter.

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ATTACHMENT CONTAINS
10 CFR 2.790 (d) INFORMATION

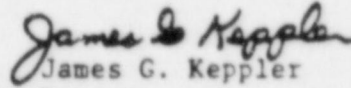
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Norman M. Haller

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Attached for headquarters use is a letter to the licensee with the appropriate notice of violation and proposed imposition of civil penalties.


James G. Keppler
Director

Attachments:

1. Draft ltr w/Appended Notice
of Violation (Part 2.790(d)
Information) and Notice of
Proposed Imposition of Civil
Penalties
2. Draft Inspection Report
(Part 2.790(d) Information)
3. Immediate Action Letter dtd
1/13/78 (Part 2.790(d)
Information) and licensee's
response dtd 1/19/78

cc w/attachment 1 only:
E. Volgenau, Director
J. G. Davis, Deputy Director

cc w/all attachments:
E. L. Jordan, XOOS

Docket No. 50-264

Dow Chemical Company
ATTN: James H. Hanes
Vice President and
General Counsel
Building 2030
Midland, MI 48640

Gentlemen:

During an inspection of the TRIGA Research Reactor facility on January 10, 1978, inspectors from our Region III (Chicago) office entered the security area of the reactor building from outside the limited access area without being challenged regarding their identity. This constitutes a violation of your security plan. This item and two other items of noncompliance identified during the inspection, are set forth in Appendix A to this letter. One of the other items also relates to the matter of inadequate access control procedures. In view of the significance of these items and the finding of a noncompliance item similar in nature during a previous inspection in January 1976, we plan to impose civil penalties in the amount of Two Thousand Dollars (\$2,000) as set forth in Appendix B. In responding to this letter, you should follow the instructions in Appendix A.

We acknowledge that following the inspection, you took action to limit access to the reactor building according to the steps outlined in the January 13, 1978, letter from Region III. In addition to describing the specific action you have taken to correct the items of noncompliance set forth in Appendix A, your response should focus on the long range management control actions being taken to assure continued compliance with the requirements of your security plan.

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The information in Appendix A concerns a subject matter which is exempt from disclosure according to Section 2.790 of the NRC's Rules of Practice, Part 2, Title 10, Code of Federal Regulations. Accordingly, our report of the January 10-12, 1978 inspection (50-264/78-01), the enclosed Appendix A and your response to the items listed in Appendix A, will not be placed in the Public Document Room.

We wish to reiterate the necessity of taking prompt management action to assure full compliance with NRC requirements in the future. We plan to continue to conduct unannounced inspections to determine whether such action has been taken. Our findings and your reply to this letter will determine whether any further enforcement action, such as additional civil penalties or orders, are required.

Sincerely,

E. Volgenau
Director, IE

Enclosures:

1. Appendix A, Notice
of Violation
(Part 2.790(d) Information)
2. Appendix B, Notice of
Proposed Imposition
of Civil Penalties

cc w/encls:

Dr. Ralph Langner, Chairman
Radiation Safety Committee
Central Files
Reproduction Unit NRC 20b

cc w/o encls:

PDR

Part 2.790(d) Information

Appendix A

NOTICE OF VIOLATION

Dow Chemical Company

Docket No. 50-264

This refers to the inspection conducted by representatives of the Region III (Chicago) office at the Dow TRIGA Research Reactor Facility, Midland, Michigan, of activities authorized by NRC License No. R-108.

During this inspection conducted on January 10-12, the following apparent items of noncompliance were identified. Item 1 is considered to be a violation. Item 2 is considered to be an infraction. Item 3 is considered to be a deficiency.

10 CFR 73.40 requires that each licensee shall provide physical protection against industrial sabotage and against theft of special nuclear material at the fixed sites where licensed activities are conducted. To this end, security plans submitted to the Commission for approval shall be followed by the licensee after March 6, 1974. The Dow TRIGA Research Reactor Facility Security Plan was submitted to the Directorate of Licensing by letter dated January 3, 1974 and was subsequently found acceptable as amended August 28, 1974. The revised Security Plan for the Dow TRIGA Research Reactor Facility submitted to NRC by letter dated February 24, 1976 was approved by NRR on April 2, 1976.

1. Section 3.3.7(B) of the revised Security Plan for the Dow TRIGA Reactor Facility which was approved April 2, 1976 describes the limited access area and provides that access to this area is controlled by entry through _____ which border the limited access area. Access to _____ is controlled through the front entrance of the building.

Contrary to the above, access to _____ was not controlled on January 10, 1978 in that NRC inspectors gained undetected and unchallenged access through the _____ into the limited access area and further into the _____ and the reactor room.

This violation had the potential for causing or contributing to an occurrence related to security.

(Civil Penalty - \$1500)

2. Section 3.3.7(C)(1) of the revised Security Plan for the Dow TRIGA Research Reactor Facility which was approved April 2, 1976 requires that Dow employees, other than those normally employed in _____ who enter the building, are required to carry identification

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Appendix A

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Ladges with photographs and must identify themselves as Dow employees when entering the building. The sign-in procedure at the receptionist's desk at the front entrance to the _____ is the accepted method for other than _____ permanently assigned employees to identify themselves.

Contrary to the above, it was observed on January 10, 1978 that a Dow employee in the _____ building, other than a permanent building employee, was not carrying his Dow photo identity badge and had not identified himself as a Dow employee by signing in as he entered the building.

(Civil Penalty - \$500)

3. Section 3.2.5(5) of the revised Security Plan for the Dow TRIGA Reactor Facility which was approved April 2, 1976 requires that officers of the plant protection and security force will be requalified on a semiannual basis through review sessions.

Contrary to the above, according to training records and interviews, officers of the plant protection and security force have attended requalification sessions only on an annual basis.

(Civil Penalty - \$0)

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Appendix A

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In addition to the above items, it was determined during the inspection that the intrusion alarm in the reactor room, while activated, required an _____ by the inspectors to cause the device to alarm, making the detector ineffective. We understand that you had the detectors checked for operability shortly before the inspection, but were not aware of the criteria used to determine the operability of the detectors. In your response, please describe your action to assure that your intrusion alarm system will effectively respond to

☐ Include your plans for frequency of testing and criteria for determining effective operability.

The "Criteria for Determining Enforcement Action," which was provided to NRC licensees by letter dated December 31, 1974, delineated the enforcement options available to the NRC as including administrative actions in the form of written notices of violation, civil monetary penalties, and orders pertaining to the modification, suspension or revocation of a license. After careful evaluation of the nature and number of items of noncompliance and the repetitive nature of one such item, this office proposes to impose civil penalties pursuant to Section 234 of the Atomic Energy Act of 1954 as amended (42 USC 2282) and 10 CFR 2.205. in the cumulative amount of Two Thousand dollars (\$2,000), as set forth in the "Notice of Proposed Imposition of Civil Penalties," enclosed herewith as Appendix B.

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Appendix A

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This notice of violation is sent to Dow Chemical Company pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulation. Dow Chemical Company is hereby required to submit to this office, within twenty (20) days of its receipt of this notice, a written statement or explanation in reply, including for each item of noncompliance; (1) admission or denial of the alleged item of noncompliance; (2) the reasons for the items of noncompliance, if admitted; (3) the corrective steps which have been taken and the results achieved; (4) corrective steps which will be taken to avoid further noncompliance; and (5) the date when full compliance will be achieved.

Appendix B

NOTICE OF PROPOSED IMPOSITION OF CIVIL PENALTIES

Dow Chemical Company

Docket No. 50-264

This office proposes to impose civil penalties pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (42 USC 2382), and to 10 CFR 2.205 in the cumulative amount of Two Thousand Dollars (\$2,000) for the specific items of noncompliance set forth in Enclosure A to the cover letter. In proposing to impose civil penalties pursuant to this section of the Act and in fixing the proposed amount of the penalties, the factors identified in the statements of consideration published in the Federal Register with the rule making action which adopted 10 CFR 2.205 (36 FR 16894) August 26, 1971, and the "Criteria for Determining Enforcement Actions," which was sent to NRC licensees on December 31, 1974, have been taken into account.

Dow Chemical Company may, within twenty (20) days of receipt of this notice, pay the civil penalties in the cumulative amount of Two Thousand Dollars (\$2,000) or may protest the imposition of the civil penalties in whole or in part by a written answer. Should Dow Chemical Company fail to answer within the time specified, this office will issue an order imposing the civil penalties in the amount proposed above. Should Dow Chemical Company elect to file an answer protesting the civil penalties, such answer may (a) deny the items of noncompliance listed

in the Notice of Violation in whole or in part, (b) demonstrate extenuating circumstances, (c) show error in the Notice of Violation, or (d) show other reasons why the penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate by specific reference (e.g., giving page and paragraph numbers) to avoid repetition.

Dow Chemical Company's attention is directed to the other provisions of 10 CFR 2.205 regarding, in particular, failure to answer and ensuing orders; answer, consideration by this office, and ensuing orders; requests for hearings, hearings and ensuing orders; compromise; and collection.

Upon failure to pay any civil penalty due which has been subsequently determined in accordance with the applicable provisions of 10 CFR 2.205, the matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Atomic Energy Act of 1954, as amended, (42 USC 2282).

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-264/78-01

Docket No. 50-264

License No. R-108

Licensee: Dow Chemical Company
Building 2030
Midland, MI 48640

Facility Name: Dow TRIGA Research Reactor Facility

Inspection at: Dow TRIGA Research Reactor Facility Site, Midland, MI

Inspection conducted: January 10-12, 1978

Inspectors: T. J. Madede _____

J. J. Dunleavy _____

Approved by: J. A. Hind, Chief
Safeguards Branch _____

Inspection Summary

Inspection on January 10-12, 1978 (Report No. 50-264/78-01)

Areas Inspected: Routine, unannounced inspection of the approved security plan and its implementation relative to the protection of SNM; security organization; access control; alarm systems; key, locks, and hardware; communications; surveillance; procedures; security program review; and protection against radiological sabotage. Additionally, the inspectors reviewed the licensee's corrective action relative to two items of noncompliance identified during the physical protection inspection conducted January 15 and 16, 1976. The inspection involved 30 inspector-hours onsite by two NRC

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inspectors.

Results: Of the eleven areas inspected, no apparent item of noncompliance were identified in eight areas; three items of noncompliance were identified in two areas (Security Organization - Paragraph 5; and Access Controls - Paragraph 6.a and 6.b. One item is considered to be a violation, one item is considered to be an infraction, and one item is considered to be a deficiency.

Attachment: Details

(Part 2.790(d) Information)

S-F3-78-

Copy _____ of _____ copies
_____ Pages.

THIS DOCUMENT IS NOT TO BE
REPRODUCED WITHOUT SPECIFIC
APPROVAL OF RIII

DETAILS

1. Persons Contacted

- *R. Westover, Research Manager, Analytical Laboratories, Dow Chemical
- *O. Anders, Reactor Supervisor, Dow TRIGA Research Reactor Facility
- *M. Kelyman, Manager, Security and Plant Protection, Dow Chemical
- *S. Humbyrd, Assistant Manager, Security and Plant Protection, Dow Chemical
- *D. Barsten, Health Physicist, Dow Chemical
- *T. Quinn, Senior Reactor Operator, Dow TRIGA Research Reactor Facility
- V. Turkelson, Research Chemist, Dow Chemical
- K. Kelly, Research Chemist, Dow Chemical
- K. Feaster, Office Assistant, Dow TRIGA Research Reactor Facility
- H. Spillers, Journeyman, Refrigeration, Dow Chemical
- L. McJames, Captain, Security and Plant Protection, Dow Chemical
- J. Thompson, Special Services Supervisor, Security and Plant Protection, Dow Chemical
- V. Banaszan, Lock and Key Supervisor, Security and Plant Protection, Dow Chemical
- K. Compton, Security Officer, Security and Plant Protection, Dow Chemical
- J. Reed, Dispatcher, Security and Plant Protection, Dow Chemical
- D. Langner, Health Physicist, Dow Chemical
- R. Smith, Captain, Security and Plant Protection, Dow Chemical

*Denotes those present at the exit interview.

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2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (050-264/76-01): Failure of the Security and Plant Protection Department to maintain

By way of response the licensee submitted a revised security plan to NRR reflecting actual security practices at the site relative to this item. The revised security plan was approved on April 2, 1976 and is considered, therefore, corrective action. (Refer to Paragraph 9) Region III has no further questions on this item.

(Closed) Noncompliance (050-264/76-01): The entire is not of controlled access during the in that, the

By way of response the licensee submitted a revised security plan to NRR reflecting actual security practices at the site relative to this item. The revised security plan was approved by NRR on April 2, 1976 and is considered, therefore, corrective action. (Refer to Paragraphs 6.a and 6.b) Region III has no further questions on this item.

The following item, which is not an item of noncompliance, was identified during a previous physical protection inspection (050-264/76-01) as a significant weakness in the security system.

(Closed) As forcible entry through the

a modification to the security plan, to include the under alarm protection, should be

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made. Even though NRR accepted the justification offered by the licensee for not requiring the and subsequently approved on April 2, 1976 the revised security plan, Region III

has no further questions on this item.

3. Security Plan

The inspectors reviewed and evaluated the licensee's revised security plan which was approved by NRR on April 2, 1976. The inspectors determined that no change to the approved security plan has been made subsequent to that date. The inspectors also reviewed the licensee's security areas and essential equipment to assure that they are properly designated in the approved security plan.

No items of noncompliance or deviations were identified.

4. Protection of SNM

The inspectors determined that the SNM actually possessed by the licensee for the Dow TRIGA Research Reactor is below the threshold quantities outlined in 10 CFR 73.1(b).

No items of noncompliance or deviations were identified.

5. Security Organization

The inspectors determined that the licensee is conforming to commitments stated in the approved security plan concerning the overall structure and functional responsibilities of the security organization. This was determined through interviews with supervisory and operational staffs of the Dow TRIGA Research Reactor and the Security and Plant Protection Department and by review of pertinent records.

It was revealed through personnel interviews with members of the Security and Plant Protection Department and confirmed by the Supervisor of the Health Physics Department that fifteen officers of the security and plant protection force are not requalified on a semiannual basis, through review sessions supervised by Health Physics, on the use of radiation monitoring equipment and on the following of the procedures in effect pertaining to radioactivity and guarding the Dow TRIGA Research Reactor. Such requalification was found to be on an annual basis only.

These findings represent apparent noncompliance with Section 3.2.5(5) of the approved Security Plan for the Dow TRIGA Reactor Facility which states part: "Fifteen officers of the plant protection and security force have received instruction in health physics to use radiation monitoring equipment and follow the procedures in effect pertaining to radioactivity and guarding the Dow TRIGA Research Reactor. They are requalified on a semiannual basis through review sessions supervised by Health

Physics."

6. Access Control

Evaluation of the access control system in effect at Dow Chemical was based on visual observation, personnel interviews, and physical testing.

- a. Testing of the licensee's access control procedures governing admittance to the limited access area to include the _____ as detailed in the approved security plan, revealed that the inspectors were able to gain undetected and unchallenged access into the limited access area to include the _____. Specifically, the inspectors entered the _____ at the perimeter of the limited access area at 1:40 p.m. on January 10, 1978,

and proceeded unchallenged and apparently unobserved by the receptionist through the _____ into the interior of the limited access area. Further, the inspectors were able to proceed across the interior of the fenced in city block and enter the _____ at _____.

Despite being observed in the building by no fewer than five authorized individuals, two of whom were near the reactor control room, the inspectors accomplished unchallenged access to the reactor control room and to the reactor room itself. Approximately ten minutes after entering the _____ and experiencing unlimited access, the inspectors reported their presence to an authorized individual working near the reactor control room.

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It should be noted that the NRC inspectors were refused admittance into the limited access area by a member of the plant protection force when the inspectors initially sought entry into the limited access area through the guard controlled gate north of the

These findings represent apparent noncompliance with Section 3.3.7(b) of the approved Security Plan for the Dow TRIGA Reactor Facility which states in part: "The enclosed plan drawings and sketches - - - of the facility depict the limited access area consisting of the fenced-in city block bordered by - - - Austin, Pershing, Barth, and Washington."

Access is gained through the doors of the buildings in the limited access area, including

"The front entrance of the building is of controlled access. Other access to the building is through the above limited access area."

- b. During a review of access control procedures, it was observed by the inspectors that a Dow employee other than a permanently assigned employee was performing maintenance on refrigeration equipment in the
- It was revealed through an interview with the individual that he had not signed-in and he was not carrying his Dow photo identity badge, both of which are required for access to the . It should be noted that the sign-in procedure at the receptionist's desk at the front entrance to the is the accepted method for other than permanently assigned employees to identify themselves. The receptionist was unaware that the worker was in the

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building.

These findings represent apparent noncompliance with Section 3.3.7(C)(1) of the approved Security Plan for the Dow TRIGA Reactor Facility states in part: "Other Dow employees entering the building are also required to carry identification badges with photographs and must identify themselves as Dow employees when entering the building."

7. Alarm System

During a test of the alarm system on January 11, 1978, it was revealed that the intrusion alarm in the Reactor Room did not effectively operate in that it failed to detect the presence of the inspector during a series of tests. Only after by the inspector did the intrusion alarm effectively operate.

The licensee advised that corrective action would

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be promptly initiated.

8. Keys, Locks, and Hardware

The inspectors reviewed lock and key procedures, as they pertain to the licensee's security plan, by visual observations and personnel interviews. During interviews with staff and operational representatives, it was confirmed that security plan commitments for the issuance of keys to the _____ and to the reactor room are adhered to. It was further observed that such keys are adequately controlled to reduce the probability of compromise.

No items of noncompliance or deviations were identified.

9. Communications

No items of noncompliance or deviations were identified.

10. Surveillance

The inspectors determined that the licensee is conforming to

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commitments stated in the approved security plan. The licensee's conformance was so determined through visual observation, personnel interviews, and review of associated records and tapes.

No items of noncompliance or deviations were identified.

11. Procedures

The inspectors reviewed and evaluated the reactor security procedures outlined in the approved security plan which pertain to the (1) response to unauthorized intrusions of security areas; (2) bomb threats; and (3) acts of civil disorder. By review of operating procedures and through interviews with operating, supervisory, and security personnel responsible for the initial and/or any backup response in such situations, the inspectors determined that procedures have been implemented and are in effect.

No items of noncompliance or deviations were identified.

12. Security Program Review

The inspectors determined through a review of related correspondence, an evaluation of internal procedures, and through interviews with the reactor supervisor that the security program of the facility, as committed to in the approved security program, has been an item for review and discussion by the reactor supervisor at the meeting of the Reactor Operations Committee during the past two years.

No items of noncompliance or deviations were identified.

13. Protection Against Radiological Sabotage

During the inspection of the Dow TRIGA Research Reactor, the inspectors determined that access to the reactor rabbit tubes is limited to those individuals authorized to be in the The use of the rabbit tubes for experimentation is further limited to individuals who have been duly authorized. The actual operation of the rabbit tubes is performed by the control room only upon written authorization.

14. Exit Interview

The inspectors met with the licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on January 12, 1978. The inspectors summarized the purpose and the scope of the inspection and the findings. The inspectors expressly reemphasized the seriousness of the concern felt over the apparent breakdown in effectiveness of the access control procedures employed by the licensee and advised the licensee that RIII would be in contact with them on this item. The licensee representatives stated that the receptionists monitoring access into the buildings forming the perimeter of the limited access area are under the control and supervision of the respective building managers and are not centrally controlled or supervised by the Security and Plant Protection Department. There was, however, no substantive rebuttal to the apparent items of noncompliance. The licensee representatives advised that they would begin corrective action immediately.

An Enforcement Conference to further discuss the findings of

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the January 10-12, 1978 inspection was held on February 7, 1978 by C. Norelius, Assistant to the Director, J. Donahue, Chief, Security and Investigation Section, Safeguards Branch, and J. Dunleavy, Physical Security Specialist, Region III and G. Kochanny, Jr., Research Manager, Dow TRIGA Research Reactor, W. Lee, Manager, Health, Safety, and Security, L. Mute, Attorney, and J. Dix, Attorney, Dow Chemical Company. There was no substantive rebuttal to the apparent items of noncompliance. The licensee representatives outlined the scope of corrective action and advised that such action had been initiated.