

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 030-20431/89001(DRSS)

Docket No. 030-20431

License No. 04-23264-01

Category K

Priority VII

Licensee: NDC Systems
730 East Cypress
Monrovia, CA 91016

Inspection Conducted: September 19, 1989

Location of Inspection: Promac Inc., Michigan City, Indiana

Inspector: *Bryan A. Parker*
Bryan A. Parker
Radiation Specialist/HP

10/5/89
Date

Reviewed By: *Roy J. Caniano*
Roy J. Caniano, Chief
Nuclear Materials Safety
Section 2

10/10/89
Date

Approved By: *Bruce S. Mallett*
Bruce S. Mallett, Ph.D., Chief
Nuclear Materials Safety Branch

10/11/89
Date

Inspection Summary

Inspection on September 19, 1989 (Report No. 030-20431/89001(DRSS))

Areas Inspected: This was a special, assist inspection, conducted for the NRC Region V office, prompted by an incident involving the theft and subsequent recovery of two 25-millicurie americium-241 thickness gauges. The incident occurred on August 31, 1989 in Detroit, Michigan. The stolen gauges were under the control of Promac Incorporated (one of five places of storage authorized on the license) prior to the incident. This inspection consisted of a review of the circumstances surrounding the incident as well as a routine review of the licensed program maintained by Promac. The routine review included the licensee's organization; inspection history; materials, facilities, and equipment; personnel monitoring; transportation; leak tests and inventories; training; postings and labeling; and confirmatory measurements.

Results: Two apparent violations were identified. The specific violations were:

1. Two individuals, one since December 1987, the other since May 1989, have routinely used licensed material who were not named or under the direct supervision of anyone named on the license as authorized users, License Condition No. 11(A).
2. Since December 1987, the licensee has failed to use film badges during gauge demonstrations, License Condition No. 16.

DETAILS

1. Persons Contacted

*J. Bert Fishman, President, NDC Systems
Dan Fishman, Vice-President, NDC Systems
*William Spartz, President, Promac, Inc.

*Attended exit meeting on September 19, 1989.

1. Purpose of Inspection

This was a special safety inspection conducted by the NRC Region III office at the licensee's facilities, Promac Incorporated, located in Michigan City, Indiana, and authorized by NRC License No. 04-23264-01. The inspection was prompted by an incident involving the theft and subsequent recovery of two 25-millicurie americium-241 thickness gauges possessed by Promac. The inspection was limited solely to the licensed program as it relates to Promac. The circumstances surrounding the incident were reviewed and a full routine inspection was conducted.

3. Inspection History

The last inspection of the licensee's program was conducted by the NRC Region V office on February 3, 1988, at the licensee's Monrovia, California facility. No violations were identified within the scope of that inspection.

4. Summary of Program

NDC Systems is a company based in Monrovia, California involved in the sales, distribution, and maintenance of fixed americium-241 and curium-244 thickness gauges. Their activities are authorized under NRC License No. 04-23264-01, which was issued from the NRC Region V office. The license was last renewed in its entirety in December 1987. The authorized activities include storage, demonstration, training, leak testing, shutter testing, maintenance, installation, removal, and relocation of gauges anywhere in the United States where the NRC maintains jurisdiction. NDC has a total of 19 authorized users named on their license, along with five authorized places of storage around the country. The focus of this report is Promac, Inc., one of the authorized storage locations located in Michigan City, Indiana. Promac Inc. is contracted with NDC Systems to demonstrate and sell NDC thickness gauges.

The Radiation Safety Officer named within the license is J. Bert Fishman, who is also the president of NDC Systems and an authorized user.

5. Incident Review

On August 31, 1989, at approximately 2:00 p.m., a representative of Promac, Inc. reported to the Detroit Police that his car had been stolen along with its contents. The contents of the car included two 25-millicurie americium-241 thickness gauges contained in a single plastic transport case. At approximately 7:20 p.m. on the same day, a call was received by NRC Headquarters reporting the theft of the gauges. On September 1, 1989, it was reported that the car and the case containing the two gauges were both recovered. Detroit police and fire officials and Michigan Department of Public Health (MDPH) personnel were all dispatched to the area where the gauges were found. MDPH took possession of the gauges and held them at their Pontiac, Michigan office until the licensee claimed them on September 15, 1989.

One gauge was intact when found, but the other sustained some damage. The end opposite the source was bent and dented and the spring-activated shutter over the source end was missing. MDPH had shielded the damaged unshielded gauge within a bucket before taking possession of it. Prior to taking back possession of the gauges from MDPH, the licensee replaced the missing shutter so the gauge could be safely transported to their facilities. Leak tests performed on both gauges by a Promac representative on September 15, 1989, produced negative results. It was determined at the site by a representative from MDPH that the unshielded source did not pose a significant threat to the health and safety of the general public.

The two gauges which were recovered have subsequently been returned to the Monrovia, California office for repair and maintenance.

6. Training

If an individual wishes to become an authorized user for NDC Systems, he must first complete an approved radiation safety training course. The safety course provided by NDC has met with NRC approval. Secondly, the individual must be approved by the company RSO, J. Bert Fishman, who, upon approval, must have the individual added to the list of authorized users by name. The individuals authorized to use material for NDC are listed in License Condition 11(A). Then, upon being added to the license by the NRC, the individual can begin using material as authorized in the license.

With regard to Promac, two individuals have completed the NDC safety course, one in January 1987 and the other in May 1989. Therefore, two individuals are qualified to use licensed material as specified in License Condition No. 11(A), which allows for storage, gauge demonstrations, training, leak testing, shutter testing, and radiation surveys by named individuals. However, the licensee failed to add the two qualified individuals to the list of authorized users who routinely used licensed material since approximately December 1987 and May 1989, respectively. One of the individuals had been demonstrating the gauges

prior to the theft of his car containing the two americium-241 gauges. The failure of the licensee to assure that individuals using licensed material are authorized by the license or are under the direct supervision of individuals authorized by the license constitutes a violation of License Condition No. 11(A).

One apparent violation was identified.

7. Personnel Monitoring

License Condition No. 16 requires the licensee to conduct its program in accordance with the statements, representations, and procedures contained in certain referenced documents. These referenced documents included the application for license renewal dated February 17, 1987, which states in Item 10 that when doing gauge demonstrations, a film badge shall be worn by all NDC personnel. Since Promac began using material and performing gauge demonstrations in December 1987, no film badges or other type of personnel monitoring devices have been employed. The licensee's failure to wear film badges during gauge demonstrations constitutes a violation of License Condition No. 16.

According to the RSO, the incorporation of the statement in their application for renewal was an oversight on NDC's part. The RSO stated that he had done an evaluation of radiation exposures expected for individuals performing gauge demonstrations and those exposures were well below the limit set forth in 10 CFR Part 20.202(a)(1) that requires personnel monitoring. (That limit is 25 percent of the applicable value specified in paragraph (a) of 10 CFR Part 20.101, (1.25 rem whole body exposure per calendar quarter)). A review by the inspector of the licensee's use of the gauges by Promac, taking into consideration radiation levels and demonstration protocols, determined that it is unlikely that any individual exceeded the 25 percent quarterly limit stated in 10 CFR Part 20. According to the licensee, a request to remove the requirement for film badges from their license will be forthcoming.

One apparent violation was identified.

8. Transportation

Although the licensee routinely transports the thickness gauges as Instruments and Articles as described in 49 CFR Part 173.422, which exempts them from requirements such as packaging, labeling, shipping papers, etc., the licensee has committed to certain other Department of Transportation regulations.

In Item 10 of the application dated February 17, 1987, the licensee stated that the procedures in 49 CFR 177 would be followed during gauge transportation. These procedures include proper shipping papers, accessibility to said papers, and blocking/bracing of material. Item 10 further states that when transporting gauges in a car, the material will be securely locked in the trunk.

From interviews with licensee representatives, Promac appears to be satisfying all pertinent Department of Transportation requirements for transporting licensed material. It should be noted that the two gauges involved in the theft incident were reportedly locked and braced in the trunk at the time the car was stolen and were accompanied with proper shipping papers.

No violations were identified.

9. Inventories and Leak Tests

The licensee is required by License Condition No. 13 to conduct a physical inventory to account for all licensed material every six months. This is accomplished via telephone from NDC in Monrovia, California to each of its field offices nationwide. The records of the inventories are maintained at the head office in Monrovia.

Through interviews with licensee representatives and a review of records pertaining to the sources possessed by Promac, the licensee appears to be fulfilling the requirement. The licensee's current inventory at Promac consists of two thickness gauges each containing 25 millicuries of americium-241.

The licensee is required by License Condition No. 14 to conduct tests for leakage and/or removable contamination at intervals not to exceed six months. Leak tests of the sealed americium-241 sources are taken by personnel within the field offices and sent to the Monrovia office for analysis. Copies of the results are then sent back to the field offices.

A review of records pertaining to the sources possessed by Promac indicated that the licensee is in compliance with this requirement. It should be noted that leak tests were performed on the two gauges involved in the theft shortly after being recovered and all results were negative.

No violations were identified.

10. Instrumentation and Surveys

In the letter dated May 6, 1987, and referenced in License Condition No. 16, the licensee stated that survey instruments would be provided to all personnel who perform gauge demonstrations; a radiation survey would be conducted before and after each demonstration; and instruments would be calibrated every twelve months.

Through interviews with licensee representatives, it appears that the licensee has fulfilled all of the aforementioned requirements. According to the licensee, survey instrument calibrations are performed every six months and radiation surveys are conducted before and after each demonstration. The instrument inspected at Promac was found to be in calibration, operable and in good condition.

No violations were identified.

11. Storage

The gauges possessed by Promac are stored in a metal locked cabinet when not in use. Only those trained to use the gauges have access to the cabinet, which was found to be posted and located in a corner at the far end of the room, away from all working and traffic areas.

No violations were identified.

12. Postings and Labeling

All required postings and labels were affixed in an appropriate place and manner. Each gauge at Promac was also appropriately labeled as was the transport case.

No violations were identified.

13. Confirmatory Measurements

Radiation surveys were conducted of one of the gauges in possession of Promac using an Eberline Model E-530 GM survey meter (NRC No. 000661, last calibrated July 19, 1989). A reading of 0.5 milliroentgens per hour was obtained at the surface of the source end with the shutter closed. A reading of 4.5 milliroentgens per hour was obtained at a distance of one foot from the source end with the shutter open. Radiation levels adjacent to the storage cabinet were found to be at background.

No violations were identified.

14. Exit Meeting

An exit meeting was held with the licensee on September 19, 1989, following the inspection. The two apparent violations were discussed and the licensee agreed with the results. The NRC Enforcement Policy was also discussed and it was emphasized to the licensee that final action on this issue would come from Region V. The licensee also provided adequate short term corrective action to the inspector.

INSPECTOR'S REPORT
 Office of Inspection and Enforcement

KARVER, BRYAN A
 REVIEWER

Wlodarczyk, Stanislawski
CAZAVO

INSPECTORS

LICENSEE/VENDOR	TRANSACTION TYPE	DOCKET NO. (Right of License No. 387 PRODUCT 113 right)	REPORT				NEXT INSP. DATE	
			NO.	SEQ.	MO.	YR.	MO.	YR.
<i>NDC systems</i> <i>730 East Cypress</i> <i>Monterey, CA</i> <i>91016</i>	<input checked="" type="checkbox"/> I - INSERT M - MODIFY D - DELETE R - REPLACE	<i>03020431</i>	<i>09001</i>	A				

PERIOD OF INVESTIGATION/INSPECTION						INSPECTION PERFORMED BY						ORGANIZATION CODE OF REGION/NO. CONTRACTING ACTIVITY (See E-AC 0500 "Assignment Report" by Monthly Assignment Fluctuation "Ex code")		
FROM		TO		X		1 - REGIONAL OFFICE STAFF		OTHER		REGION		DIVISION	BRANCH	
MO.	DAY	YR.	MO.	DAY	YR.	2 - RESIDENT INSPECTOR				3		4	2	
<i>09</i>	<i>14</i>	<i>87</i>	<i>09</i>	<i>17</i>	<i>87</i>	3 - PERFORMANCE APPRAISAL TEAM								

REGIONAL ACTION (Check one box only)		TYPE OF ACTIVITY CONDUCTED (check one box only)				
<input checked="" type="checkbox"/> 1 - NRC FORM 501		<input checked="" type="checkbox"/> 02 - SAFETY - <i>fee</i>		<input type="checkbox"/> 06 - MGMT. VISIT		<input type="checkbox"/> 10 - PLANT SEC.
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		<input type="checkbox"/> 04 - ENFORCEMENT		<input type="checkbox"/> 08 - VENDOR		<input type="checkbox"/> 12 - SHIPMENT/EXPORT
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						<input type="checkbox"/> 14 - INDUSTRY - <i>NO REF</i>
						<input type="checkbox"/> 15 - INVESTIGATION

INSPECTOR/INVESTIGATION FINDINGS (Check one box only)				TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS				ENFORCEMENT CONFERENCE HELD				REPORT CONTAIN 2,790 INFORMATION				LETTER OR REPORT TRANSMITTAL DATE									
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	MO.	DAY	YR.	MO.	DAY	YR.				
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MODULE INFORMATION														MODULE INFORMATION																		
REC. ORG.	MODULE NUMBER INSP.					PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	PHASE	MANUAL	CHAPTER	PROCEDURE NUMBER	LEVEL	REC. ORG.	MODULE NUMBER INSP.					PRIORITY	DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED TO DATE	STATUS	PHASE	MANUAL	CHAPTER	PROCEDURE NUMBER	LEVEL			
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	follow-up Previous N/C														Rad. Protection																	

INSPECTOR'S REPORT (Continuation)

Office of Inspection and Enforcement

(CHECK) NO. OF INSPECTOR LICENSE NO. BY PRODUCT (13 digit)		REPORT		MODULE NUMBER		SITE RELATED		SUPPL.	
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INSPECTOR'S REPORT

(Continuation)

Office of Inspection and Enforcement

DOCKET NO. OR ENGINE LICENSE NO. (BY PRODUCT) (BY 18)

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REPORT NO.

89010

SEC

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MODULE NUMBER

587101B

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VIOLATION OR DEVIATION (Limit up to 240 characters for each item. If the text exceeds this number, it will be necessary to paraphrase. Limit boxes to 30 characters each.)

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NDC Systems

License No. 04-23264-01

ATTN: J. Bert Fishman, President

730 East Cypress

Monrovia, CA 91016

Gentlemen:

This refers to the special safety inspection conducted by Mr. B. A. Parker, of the NRC Region III office on September 19, 1989, of activities authorized by NRC Byproduct Material License No. 04-23264-01 and to the discussion of our findings with you and William Spartz at the conclusion of the inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of a selective examination of procedures and representative records, observations, independent measurements, and interviews with personnel.

During this inspection, certain of your activities appeared to be in violation of NRC requirements, as specified in the enclosed Notice. A written response is required.

The responses directed by this letter and the accompanying Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

Enclosure: Notice of Violation

cc w/enclosure:

DCD/DCB(RIDS)

Michigan Dept. of Public Health

NOTICE OF VIOLATION

WDC Systems
Monrovia, CA 91016

License No. 04-23264-01

As a result of the inspection conducted on September 19, 1989, and in accordance with 10 CFR Part 2, Appendix C - General Statement of Policy and Procedure for NRC Enforcement Actions (1989), the following violations were identified:

1. License Condition No. 11(A) requires that licensed material used for storage, gauge demonstrations, training, leak testing, shutter testing, or radiation survey be used by or under the direct supervision of certain named individuals.

Contrary to the above, two individuals of Promac, Inc. not named or under the direct supervision of anyone named in License Condition No. 11(A) have routinely used four americium-241 thickness gauges, for demonstration purposes, since December 1987 and May 1989, respectively.

This is a Severity Level IV violation (Supplement VI).

2. License Condition No. 16 requires that the licensee conduct its program in accordance with the statements, representations, and procedures contained in certain referenced documents.

The referenced application dated February 17, 1987, requires in Item No. 10 that film badges be worn during gauge demonstrations.

Contrary to the above, since inception of the program at Promac, Inc. in December 1987, film badges have not been worn during any gauge demonstrations.

This is a Severity Level IV violation (Supplement VI).

Pursuant to the provisions of 10 CFR 2.201, you are required to submit to this office within thirty days of the date of this Notice a written statement or explanation in reply, including for each violation: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further violations; and (3) the date when full compliance will be achieved. Consideration may be given to extending your response time for good cause shown.

Dated