

UNITED STATES GOVERNMENT

Memorandum

TO : File

DATE: August 11, 1967

FROM : H. S. North, Radiation Specialist
Region V, Division of Compliance

SUBJECT: INSPECTOR'S EVALUATION AS PER MM 900-15
DEPARTMENT OF THE ARMY
HEADQUARTERS, US ARMY, ALASKA
APO SEATTLE, WASHINGTON 98749
LICENSE NO. 50-10023-1

CO:V:HSN

Since the last inspection of this licensee on September 22, 1966, all operating and administrative personnel have been reassigned and new personnel are on duty or will arrive at Fort Richardson in the near future.

Due to changes in the administration of the SMI reactor at Fort Greely, Alaska, it is entirely possible that the volume of waste disposed by this licensee will drop substantially in the near future.

The inspection revealed no problems of health and safety significance. It is the inspector's opinion that the licensee's activities do not constitute a hazard to the operating personnel, station complement of Fort Richardson, or the general public.

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 6
FOIA- 92-187

591 Notes
North/msa
8/11/67

W. E. Book Inspector 8/11/67
H. E. Book Reviewer 8/14/67

Department of the Army
Headquarters, US Army, Alaska
APO Seattle, Washington 98749

License No. 50-10023-1
Docket No. 27-38

1. An announced reinspection of the subject licensee was conducted on August 1, 1967 by H. S. North, Radiation Specialist, Region V. The inspector was accompanied by Richard Mikkelsen, USPHS Assignee to the state of Alaska.
2. The subject licensee was last inspected on September 22, 1966, at which time no items of noncompliance were noted.
3. As a result of this inspection, no items of noncompliance were noted, and a Form AEC-591 was issued at the conclusion of the inspection. Results of the inspection were discussed with Major G. L. Bower, Sergeant Scales, Specialist SP4 Ellett and SP4 Borkowski, representing both the administrative and operating side of the program, and also with Lieutenant Colonel H. H. Ledbetter, Chief, CBR Division G-3, who represents the administrative side of the licensed program.

Administration

4. During the course of the inspection, the following persons were interviewed: Major G. L. Bower, Nuclear Effects Engineer, USARAL Radiation Protection Officer, as described in the licensee's procedures, paragraph 5.a(1). Master Sergeant T. J. Brooks, Chemical Operations NCO, USARAL, Administrative Assistant in Major Bower's office. Lieutenant Colonel H. H. Ledbetter, Chief, CBR Division G-3, Headquarters, USARAL,

Major Bower's Commanding Officer. Major G. F. Baldwin, S2 Support Command, USARAL, provides administrative support for the waste disposal group during the absence of the Chemical Officer. It is noted that the Chemical Officer is the senior man on the operating side of this program. This division was formerly held by Major Tengler. Sergeant (SFC E-7) K. E. Scales, Chief, Chemical Lab Specialist and Radioactive Material Disposal Facility (RMDF), Senior NCO. Scales is a member of the Fort Richardson Rad-Con team. Specialist SP4 W. N. Ellett, Clerk-Typist - Lab Technician, and SP4 J. J. Borkowski, Lab Technician, are both NCOs assigned to the RMDF and Rad-Con team members. Both men have completed the CBR lab course at Fort McClellan. Actual operating personnel present during the inspection included Sergeant Scales, SP4 Ellett and Borkowski. The two officers to be assigned to the RMDF are presently in training and were expected in Fort Richardson during August or September.

Organization

5. See attached chart for the organization. The licensee has no Isotopes Committee.
6. The licensee's Radiation Protection Officer is as described in the licensee's procedures. It is noted that amendments to the license, including a renewal requested in the application dated February 14, 1966 and amendments of the minimum training requirements in Annex VI to the application described in the application received in October, 1966, have both been granted. Copies of these amendments were not present in the Compliance file at the time of the inspection. Personnel occupying the position of Radiation Protection Officer will have the duties,

responsibilities, authority and training described in the procedures.

7. Written procedures are required by the license and copies of these procedures have been disseminated. The procedures have been changed with prior approval of DML.
8. The licensee stated that there had been no exports of licensed materials. The major source of procurement of materials for the RMDF is from the SMLA reactor at ^{Greely} Greely. Additional waste includes ~~two~~ radio tubes containing radioactive materials from Army and Air Force facilities, bridge markers from Corps of Engineers, and some radioactive materials from the Department of the Navy at Kodiak. The licensee maintains records of receipts in the form of vouchers, Army form AR-711-16, and debit-credit ledgers which show the date, source, or destination of the item, and the authority for disposal or transfer. Additional records maintained on Form DD-173 identify each item by description with authority for disposal. The licensee stated that in the last fiscal year, nine shipments of material were made to California Nuclear, the waste disposal contractor. The total weight of the shipment was approximately 49,000 pounds. Approximately 80% of this material was shipped directly from Fort Greely to California Nuclear disposal site at Richland. Such direct shipments are not handled by RMDF personnel, who are only involved in the paperwork involved in the arranging for the shipment of materials.

Inventory

9. At the time of the inspection the licensee had 37 drums of varying sizes containing radioactive waste. These drums were labelled with the isotope, quantity, date of measurement, and the dose rate at the surface

and at one meter.

Operations, Facilities, Instrumentation

10. The licensee's handling of radioactive waste continues essentially unchanged. Materials packaged at other military facilities are received at the RMDF, where they are stored in a fenced, locked enclosure. Any repackaging that is required consists of placing smaller containers into standard 55-gallon drums prior to shipment to California Nuclear. Such drums are then relabelled to properly reflect the actual content. The licensee opens no packages of radioactive waste.
11. The licensee's facilities and equipment remain unchanged. The licensee's restricted area is as previously described in inspection notes. The licensee's instrumentation includes AN/PDR-27P GM survey instrument, Eberline IM170/PDR-60 and Radiac IM174/PD.
12. Posting and labelling of the storage facility was found to be as required by the regulations. The licensee had posted a Form AEC-3 on the bulletin board of the chemical laboratory facility.

Radiological Practices

Survey Program

13. The licensee makes a monthly survey of the RMDF. This survey shows dose rates and wipes from specified locations. The licensee also performs surveys of drums prior to shipment and conducts wipe tests on these drums. The licensee stated that an attempt is made to survey all trucks which bring waste to the RMDF. The licensee stated, however, that some truck drivers are impatient to depart and leave immediately after unloading the drums. A review of the records of surveys

revealed dose levels at the perimeter of the restricted area less than 0.2^{rem/hr} and generally approximated 0.05 mr/hr. There was no detectable removable contamination.

Personnel Monitoring

14. The licensee uses film badges supplied monthly by the Sacramento Signal Depot, six of which are assigned to the RMDF. The licensee usually uses pocket dosimeters and has a large selection which cover the range of 0-200 mr to 0-600 R. Records of personnel monitoring are maintained on Forms DD-1141. A review of these records, which are maintained at the Fort Richardson dispensary, shows that the maximum exposure was 50 mr in a quarter to [REDACTED]. It was noted that when no exposure was recorded for a given period, no entries were made on the DD-1141. In effect for [REDACTED] who had received no exposure, there was no DD-1141 form in his medical jacket. It was pointed out to Sergeant Cortez of the records section of the Richardson dispensary that such records should be maintained, even when there is no reported exposure. Attached to these inspection notes is a report of an inspection conducted by the US Army Environmental Hygiene Agency. This report reveals inadequacies in the personnel monitoring records section. Sergeant Scales has been working with Sergeant Cortez in the dispensary to correct the discrepancies in the recordkeeping system. In view of the licensee's activities in this area and the low level of the exposures involved, it was felt that no citation was appropriate. It is noted that the licensee has personnel monitoring records in the form of film badge reports.

Waste Disposal

15. The licensee disposes of all radioactive waste by means of transfer to California Nuclear, Richland, Washington. Such materials are shipped by the most economical method, generally by truck over the Alcan Highway. The licensee has arranged for telegraphic notification from California Nuclear when each shipment is received.

Miscellaneous

16. The licensee stated that there have been no unreported incidents and no unusual occurrences. The licensee has no AEC contracts.

591 Notes
Fish/msa
12/1/66

R Inspector 12/5
AE Book Reviewer 12-12-66

Department of the Army
Headquarters, U. S. Army Alaska
APO 949
Seattle, Washington

License No. 50-10023-1

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Act, exemptions 6
FOIA- 92-187

1. An announced reinspection of the subject license was conducted on September 22, 1966, by R. Fish, Region V Inspector, Division of Compliance. During this inspection, the licensee was represented by Major Robert Knox, CBR Division of USARAL, and Major John Tengler, Officer in Charge of the radioactive waste operation. The following persons were also interviewed during this inspection:

Lieutenant Colonel Owen Osburn, Chief, CBR Division

Major Turner, CBR Division

Sergeant Baxley, Radioactive waste disposal operation

Mr. Richard Mikkelsen, Radiation Physicist, was present during this inspection as a representative of the State of Alaska Department of Health and Welfare. At the conclusion of the inspection, a verbal summary of the findings was presented to Lieutenant Colonel Osburn, and a Form AEC-591 was issued showing no items of noncompliance were noted.

2. The program conducted under the subject license was found to be essentially as described in the notes for the September 1, 1965 inspection. Therefore, these notes will cover only those items which have been changed or are different from the description contained in the previous set of notes.
3. The licensee's organization has not been altered; however, there have been some changes in upper management personnel. General Folda is now the Com-

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manding Officer of the U. S. Army in Alaska (USARAL). Colonel G. W. Bauknight is now in command of G-3 having replaced Colonel D. C. Rubottom. Lieutenant Colonel Osburn's staff is composed primarily of Majors Turner and Robert Knox. The Commanding Officer of the USARAL Support Command is now Colonel Johnson.

4. Major Knox stated that officially Major Turner was still the Radiation Safety Officer. Practically, Major Knox had assumed the responsibility. By application dated October 4, 1966, the licensee requested a change in the qualification requirements for the position of Radiation Safety Officer such that Major Knox would be qualified for the position. Major Knox explained their position as being an audit function with authority to require the necessary changes to bring the program into compliance with the terms of the license and applicable regulations.
5. The licensee's activities have not expanded since the previous inspection. Some repackaging of waste is performed. The repackaging is limited to electronic tubes and placing small containers into 55 gallon drums or wooden boxes. Three shipments of waste have been sent to Edgewood Arsenal, Maryland, ^{also there have been waste shipments directly from} ~~processing the necessary paper from~~ Fort Greely with the subject licensee processing the necessary papers only.
6. Since the previous inspection, the "record of receipt" system has been modified slightly. A Form DD-1149-4 is used for most shipments received. A Form DD-1348 is used for electronic tubes, ^{compacted} ~~and~~ lensatic, and other markers. The following information is now recorded on the form DD-1149-4: description of contents, isotopes present in the shipment, quantity of activity present, the radiation levels at contact and at one meter, the number of

units (I^C), the volume of waste in cubic feet, the total weight. Form DD-1348 shows only the description of the items and the number transferred. With respect to the electronic tubes and markers, Major Tengler explained they must obtain and review of the specifications for each item to determine the isotope and quantity present. Many of the items sent to the radioactive material disposal facility contain no radioactive material. For these reasons, they do not presently know what activity they possess in this form, but this information should be available in the near future.

7. Separate folders are prepared for each shipment received under a Form DD-1149-4. All Forms DD-1348 are kept in a single folder. A Form DA-272 is used for keeping a running account of the material received and shipped during a single year. Attached to these notes is a copy of the present Form DA-272. According to this list, the licensee's inventory of radioactive material is presently less than five curies (almost entirely cobalt-60) plus that activity present in the electronic tubes, lensatic compasses and markers.
8. The licensee's facilities were visited during this inspection. Posting and labelling were reviewed. One drum of radioactive waste had just been painted yellow and was not labelled. Sergeant Baxley stated that as soon as the paint was dry, the drum would be properly labelled again. Since the drum had been labelled and would be relabelled, no citation for this deficiency was noted on the Form AEC-591. The licensee's instrumentation and calibration procedures have not been changed.
9. The licensee uses film badges furnished by the Army Signal Depot, Sacra-

mento, California, to monitor personnel exposures. The badges are exchanged on a frequency of four weeks, four weeks, and five weeks per quarter. There has been no change in the personnel monitoring record-keeping system. A review of the Signal Depot reports shows no exposures have been received during the year 1966 except for a total of 30 mr to [REDACTED]

10. The licensee's survey program and associated records have not changed since the previous inspection. A review of the records disclosed results have not changed from those reported in the previous inspection notes. The licensee still possesses the drum of radioactive waste, ~~from~~ Fort Greely, which had radiation levels in excess of 200 mr/hr at the surface. Presently, the surface radiation levels are below 200 mr/hr; however, radiation levels at one meter still exceed 10 mr/hr. Captain Tangler stated the drum would not be disposed until the radiation had decayed to a satisfactory level.
11. The licensee's records of waste disposed via transfer to Edgewood Arsenal were examined. Since the previous inspection, there have only been two small shipments involving less than one curie of total activity. The records do reflect those shipments made directly from Fort Greely to Edgewood Arsenal.
12. During this inspection, items of noncompliance noted during the previous inspection were reviewed. The licensee has corrected the labelling deficiency by recording the radiation levels at the surface and at one meter. The records of receipt (Form DD-1149-4) now describe the radioactive waste being received.

13. At the conclusion of the inspection, a verbal summary of the findings was presented to Lieutenant Colonel Osburn. Major Knox and Mr. Mikkelsen were also present during this discussion. Lieutenant Colonel Osburn was informed that the inspection did not disclose any items of noncompliance. It was noted, however, that in some cases, information is not transferred from the labels of the waste containers to the permanent records until just prior to loading the containers on a truck for shipment to Edgewood Arsenal. It was suggested that this information should be transferred to the permanent records as soon as possible after receipt of the material. Major Knox stated that he would see that this was done. It should also be noted that during the inspection, Major Tengler had indicated in the future they would transfer information from the container labels to permanent records upon their receipt of the material.

REGISTER OF VOUCHERS TO STOCK ACCOUNT

VOUCHER NO. (1)	DATE FILED (2)	TO OR FROM (3)	FIRST ITEM (4)	DATE NUMBER ASSIGNED (5)	REMARKS (6)
D-7-63	3845	Bigwood Arsenal Maryland	5960-551-421; Radiac Set AN/PDR 46 (A)	3845	
B-8-64	3288	Electronic Maint.	M3 Source Set SM A-12	3288	USARL CHR School
B-23-64		166th Ord Co, APO 98731	Electron Tubes	4163	DA Form 1546
D-2-65		Fort Malmwright APO 98731	M-3 Source Set (1)	4343	3rd Ind Ltr dtd 5 Aug 64
D-4-65		Naval Station Kodiak	M-3 Source Set AN/UIM (1)	5082	Ltr 1 Mar 65
D-7-65		Elmendorf AFB	Electron Tubes (3)	5111	AF Form 695-7
D-8-65		Fort Greely APO 98733	Drum Low Level Waste (4) (MIXED FISSILE & NON-FISSILE)	5113	DD Form 1149-4
D-9-65		Elmendorf AFB	Electron Tubes (8)	5118	AF Form 695-7
D-10-65	5152	166th Ord Co	Electron Tubes (14)	5152	DD Form 1348-1
D-3-66	5260	SMIA Reactor	Low Level Waste (18) (Mixed Fissile & Non-Fissile)	5260	GBL# C-3956601 C-1-67
D-4-66	5263	SMIA Reactor	Low Level Waste (10) (Mixed Fissile & Non-Fissile)	5263	GBL# C-3956612 C-2-67
D-5-66	6018	Elmendorf AFB	Electron Tubes (2)	6018	AF Form 695-7
D-6-66	6019	Distribution Branch	Electron Tubes (15)	6019	DD Form 1348-1
D-7-66	6076	559th Eng Co (Combat)	MX1083C/PDR-27 (1)	6076	DA Form 2765-1
D-8-66	6143	538th Ord Co	Storage Battery (1)	6143	DD Form 1348-1
D-10-66	6158	ACID 94	Electron Tubes	6158	DD Form 1348-1
D-11-66	6181	AC2031	Electron Tubes	6181	DD Form 1348-1
C-1-67	6187	BMDF Bigwood Arsenal Maryland	Low Level Waste (18) (Mixed Fissile & Non-Fissile)	6187	GBL# C-8016706
C-2-67	6220	BMDF Bigwood Arsenal MD	Low Level Waste (10) (Mixed Fissile & Non-Fissile)	6220	GBL# C-8016708
D-3-67	6220	ACICSA	ELECTRON TUBES	6220	DD Form 1348-1
D-4-67	6220	ACICSA	LINSATIC Compass (10)	6220	DD Form 1348-1
D-5-67	6220	ACICSA	BRIDGE MATERIAL	6220	DD Form 1348-1