NY80
PMKlevin
EE Epstein

LR:JBH

NOV 30 1961

Commanding Officer
Department of the Army
Evans Signal Laboratory
Belmar, New Jersey

Dear Sir:

This refers to the inspection conducted on May 18, 1961, of your activities authorized under AEC Byproduct Material License No. 29-1022-6.

It appears that certain of your activities were not conducted in full compliance with a license condition and the requirements of the AEC's "Standards for Protection Against Radiation," Part 20, Title 10, Code of Federal Regulations, in that:

1. Leak testing of two 100 curie Cobalt 60 sealed sources was not performed at intervals of 6 months or less in violation of License Condition No. 10(C), "Leak testing."

2. A radiation area located in the storage vault of Building No. 353 was not posted as required by Section 20.203(b), "Caution signs, labels and signals."

3. A high radiation area located in the Calibration Room of Building No. 401, was not posted as required by Section 20.203(c)(1), "Caution signs, labels and signals."

4. The lead storage containers located in Building No. 353, holding 944 millicuries of Cobalt 60, 370 millicuries of Promethium 147, 33 millicuries of Strontium 90, 1.5 millicuries of Thallium 204, and two millicuries of Silver 110 were not labeled as required by Section 20.203(f)(1), "Caution signs, labels and signals."

REGISTERED MAIL.
RETURN RECEIPT REQUESTED

AA1)

Commanding officer

5. The lead storage containers located in Building No. 401, holding 3 curies of Cobalt 60 and 120 curies of Cesium 137 were not labeled as required by Section 20.203(f)(1) and (f)(4), "Caution signs, labels and signals."

6. The two lead storage containers located in Building No. 401, each holding a 100 curie Cobalt 60 source, were not labeled as required by Section 20.203(f)(4), "Caution signs, labels and signals."

7. A radiation incident in which an individual received a radiation exposure of 1050 millirem during the week of November 13, 1960, was not reported to the Commission, in violation of Section 20.403(a), "Notification of reports of incidents."

Pursuant to the provisions of Section 2.201(a), "Notice of violation," of the AEC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, you are requested to notify this office, within thirty days of your receipt of this notice, of the steps taken or to be instituted to achieve correction of the alleged violations and the date when such correction has been or will be achieved.

Please note that the citation in Item 7 above is made under 10 CFR 20 prior to its revision on January 1, 1961. Enclosed is a copy of the former 10 CFR 20 under which you were inspected and a copy of the amended Part 20 which is currently effective.

Enclosed are sample signs containing the coloring, wording and symbol which meet the requirements of Section 20.203(b), (c) and (f)(1). Signs more suitable for posting and labeling might be procured from a radioisotope supplier or a commercial sign company.

Very truly yours,

bcc: Compliance Division, HQ
Compliance Division, NYOO
Public Document Room

Albert E. Price
Assistant Director
Division of Licensing
and Regulation

Enclosures

cc: Lt. Col. Roswell G. Daniels
Chief, Occupational Health Branch
Code: MDSCH-OH

LR:EB
JBH:lrm:REC

11-15-61

CO LR
ERPrice

U.S. ATOMIC ENERGY COMMISSION
REGULATORY OPERATIONS, REGION I
Inspection Field Notes

Rev. 11/15/72

A. Docket Number	B. Report Number	C. Priority/ Category	D. Inspection Dates
	7301	-6 A(1) II -9 - E III -7 - E III -8 - E III	11-20-73

E. Licensee	F. Facility	G. License No.
Dept of Army U.S. Army Electronics Command.	Fort Monmouth	20-01022 -06 -07

H. Type of Inspection	I. No. and date of last Amendment	J. Dates of Last Inspection
~~Announced~~ Unannounced		Feb '72

K. Principal Inspector and Date of Report	L. Accompanying Inspector	M. Other Accompanying Personnel
J. Brandbeerg 11/29/73	None	None

N. Proprietary Info.	O. Reviewer	P. Date of Review
None	RO Mellencamp	11/26/73

Q. Individuals Interviewed* and Titles
a. Chas Pullen, Supervisor Rad. Facilities
b. James Garner Jr, RD&E, H.P., RSO
c. Bart Savignac, H.P. Tech
d. M. Harmatz
e. D. W. McAfee
f.
g.
h.

R. Date of Interview
11/20/73

S. Place of Interview
"Hexagon" - Fort Monmouth, N.J.

T. Enforcement Action	U. Previous Outstanding Items
-06 L/C 14 - See ¶ 2.1.1 20.205 See ¶ 1.8.3 19.11 See ¶ 1.9.3 -07 20.205 See ¶ 1.8.3 19.11 See ¶ 1.9.3	3/8/72 letter to AEC re leaky source

V. Unresolved Items	W. Previously Reported Unresolved Items
None	None

X. Recom. Reinspection	Y. Name & Tele. # of RSO	Z. RMS Code Number
-06: May '74 -07: May '75	Mr. Garner 201-596-1292	AAA37

ZZ. Scope of Inspection: (✓ complete, ( ) partial, ( ) special _____

*Identify individuals who attended Management Interview by asterisks.

See Potter re -08 -09

DETAILS

Scope of the Program

-Number of individuals occupationally exposed _____.

-06 - ~230 - occasional + badged
-07 - 2 operators + 2 others
-08 - ~10 - 2
-09

-Number of individuals subject to significant* risk _____.

-Potential for external exposure

	Negligible	Slight	Moderate	High
Whole body				
Skin				
Extremities				

-Potential for internal exposure (✓) negligible ( ) slight ( ) moderate ( ) high

-Effluents

	Negligible	Slight	Moderate	High
Airborne				
Liquids				

-Unusual aspects
none except leaky Po-210 source reported in letter dated 3/8/72

General

All records examined and all inquiries made by the inspector related to records and events made or experienced in the time interval from the date of the last inspection, or the date of license issuance in the case of initial inspections, until the date of this inspection, unless otherwise noted.

Unless otherwise specified, radiation level measurements, shown in these notes as having been made by the inspector, were made using a radiation survey meter type gm, model E120, calibrated 9/73 by BNL.

The findings reported here were based on: (1) observations made by the inspector during his physical inspection of the licensee's facilities (2) a selective examination of procedures and representative records and documents, (3) Information furnished by Individuals Interviewed and (4) Measurements made by the inspector.

*Reasonable probability of incurring 25% or more of MPC or MPE.

Items of Noncompliance and Safety Found in the Last Inspection

The licensee's action to correct and prevent recurrence of items of noncompliance and/or safety, found in the last inspection, were given particular attention during this inspection. Unless these items are shown under the section below, entitled "Findings Indicating Noncompliance or Conditions Prejudicial to Health and Safety", the inspector found that the licensee's corrective and preventive action was adequate.

Findings Indicating Compliance

Annex A identifies the specific procedures followed by the inspector in determining compliance with each relevant section of Title 10. The inspector also made such inquiries, examined such records and made such observations as were necessary for him to determine that the licensee had complied with the requirements of each license condition.

When a section of Annex A is notated "N/I", this means that compliance with this section was not determined during this inspection. During the next inspection this area will be covered.

When a section of Annex A is notated "N/A", this means that it is readily apparent that the section is not applicable to the licensee's program (e.g. the requirements of 10 CFR 20.103 or 106 are not applicable if the licensee possesses only sealed sources).

The paragraphs in Annex A that are initialed by the inspector indicate how the inspector determined compliance.

Status of Previously Reported Unresolved Items

Additional Information Relating to Incidents Reported Since Last Inspection

Attached as Annex B, or referenced on identified pages of these notes.

Findings Indicating Noncompliance or Conditions Prejudicial to Health and Safety

Attached as Annex C, or referenced on identified pages of these notes.

Principals

Persons	Radionuclides	Locations of Use	Rate of Use

See Supp F

Line of Authority (from user to Management)

committee authorizes activities & makes recommendations to Commanding Gen. Fuller does surveys in certain bldgs; RSO does also - The General has a rep on the committee

Facilities

Use: ( ) Radiochemistry labs used exclusively for licensed material; ( ) Conventional labs used exclusively for licensed material; ( ) Conventional labs with shared use; ( ) Room or area used exclusively for preparation and application of licensed material, and storage; ( ) Mfg or processing areas designated for radiologic operations only; ( ) Entire building used exclusively for radiologic operations ( ) Other:

Storage: - Waste storage area not too neat - mentioned same

(✓) Ample space, ( ) Adequate lighting, ( ) Uncluttered, ( ) Shielding adequate
(✓) Material identified
( ) Refrigerator, (✓) cabinet, (✓) fume hood, (✓) cave, ( ) separate room, ( ) separate building

Access Control:

(✓) locked, (✓) posted and administratively controlled
( ) locked when unattended, ( ) custodial personnel instructed

Control Devices and Alarms: ( ) 20.203(c)(2), ( ) Other

Comments:

Equipment

Monitoring, portable: ( ) alpha, ( ) beta, ( ) gamma, ( ) neutron
(✓) adequate no., ( ) accessible, ( ) calibrated, ( ) appropriate sensitivity

Monitoring, area: (✓) alpha, (✓) beta, (✓) gamma, (✓) air sampling, ( ) adequate no.
(✓) properly located, ( ) calibrated, ( ) tested, ( ) appropriate sensitivity.

Special Equipment:

( ) BZ samplers: ( ) adequate no., ( ) properly used, ( ) accessible ( ) fume hoods, ( ) glove boxes, ( ) hot cells-large, ( ) hot cells-small ( ) local exhaust ventilation, ( ) remote tongs, ( ) shields, ( ) protective handwear, ( ) protective footwear, ( ) protective clothing, ( ) absorbent paper, ( ) working trays, ( ) designated radioactive waste disposal sinks, ( ) respirators, ( ) eye wash fountains, ( ) DOP filter testing equipment, ( ) disposable pipettes, ( ) disposable syringes, ( ) Other:

Management Interview

The inspector(s) met with _____, _____ and _____ in _____'s office, on _____, at the conclusion of the inspection. The inspector(s) gave
date
_____a Form AEC-591 indicating (that no items of) noncompliance had been found during the inspection.

- - - - - - - - - - - - - - - - -

The inspector(s) met with _____, _____, and _____ in _____'s office, on _____, at the conclusion of the inspection. The inspector(s) informed
date
_____ that no items of noncompliance had been found during this inspection. He informed ____ that he would receive a letter enclosing a Form AEC-591 confirming these findings. (Inspector: No Form AEC-591 may be issued if there were Outstanding Items reviewed during this inspection except, if our acknowledgement letter, written following the issuance of an AEC Form 592, predated July 1, 1971.)

No form AEC-591 was issued because Outstanding Items had been reviewed during this inspection.

- - - - - - - - - - - - - - - - -

The inspector(s) met with _____, _____, and _____ in _____'s office, on _____, at the conclusion of the inspection. The inspector(s) explained the purpose of the inspection. With respect to the item(s) of noncompliance, the inspector(s) explained the relevant requirements of the AEC regulations and described the inspection findings that indicated noncompliance with these requirements. _____ acknowledged the validity of the citation(s) and stated that prompt action would be taken to correct them. He also described procedures whereby he would assure that these and similar item(s) of noncompliance would not recur. He signed and dated the Form AEC-591.

- - - - - - - - - - - - - - - - -

The inspector(s) met with _____, _____ and _____ in _____'s office, on _____, at the conclusion of the inspection. The inspector(s) ex-
date

plained the purpose of the inspection. With respect to the items of noncompliance, the inspector(s) explained the relevant requirements of the AEC regulations and/or the conditions of the license and described the inspection findings that indicated noncompliance with these requirements. _____ acknowledged the validity of the citations and stated that prompt action would be taken to correct them. He also described procedures whereby he would assure that these and similar items of noncompliance would not recur.

- - - - - - - - - - - - - - - - - -

Other:

ANNEX A

1.0 10 CFR 20

1.1 20.101, "EXPOSURE OF INDIVIDUAL TO RADIATION IN RESTRICTED AREAS"

1.1.1 By examination of records of ( ) receipts, ( ) inventories, ( ) surveys, ( ) personnel dosimetry, ( ) bioassay, and ( ) disposal transfers, and/or ( ) by questioning the RSO and/or ( ) these users _____ _____ _____, ( ) and by my physical inspection of the restricted areas, I IDENTIFIED those INDIVIDUALS WHOSE external EXPOSURES MIGHT reasonably be expected to EXCEED 25% OF THE LIMITS of 20.101(a).

1.1.1.1 I asked the RSO and/or the principal users HOW the EXPOSURES to these individuals had been EVALUATED and what magnitudes of exposure had been found.

1.1.2 I found that the licensee's METHODS of evaluating exposures was in each case APPROPRIATE to the type and energy of the radiation and the area of the individuals body that was at risk.

1.1.3 I found that the licensee's evaluations of exposures showed that NO INDIVIDUAL had been EXPOSED IN EXCESS of the limits of 20.101.

1.1.4 ____ stated that the licensee did not avail himself of the provisions of 10 CFR 20.101(b) and therefore NO FORMS AEC-4 WERE MAINTAINED.

1.1.5 ( ) I observed a CORRECTLY COMPLETED FORM AEC-4 for each individual whose quarterly whole body exposure exceeded 1.25 rems; or

( ) I identified approximately ____% of the individuals whose quarterly whole body exposure had exceeded 1.25 rems and examined each individual's Form AEC-4 and found each to be correctly completed.

1.2 20.103, "EXPOSURE OF INDIVIDUALS TO CONCENTRATIONS OF RADIOACTIVE MATERIAL IN RESTRICTED AREAS"

1.2.1 By examination of records of ( ) receipts, ( ) inventories, ( ) surveys, ( ) personnel dosimetry, ( ) effluent monitoring, and ( ) disposals/transfers, by questioning the RSO and these users ____ _____ _____, and by my physical inspection of the restricted areas, I IDENTIFIED those INDIVIDUALS WHOSE internal EXPOSURES MIGHT reasonably be expected to EXCEED 25% OF THE LIMITS of 20.103.

1.2.1.1 I asked the RSO and/or the principal users HOW the EXPOSURES to these individuals had been EVALUATED and what magnitude of exposure had been found.

1.2.2 I found that the licensee's METHODS of evaluating compliance with 20.103 was APPROPRIATE to the circumstances of exposure in each case.

1.2.3 I found that the licensee's evaluations of exposures showed that in NO instance had an INDIVIDUAL been EXPOSED IN EXCESS of the limits of 20.103. X

1.3 20.104, "EXPOSURE OF MINORS"

1.3.1 I determined by questioning ( ) the RSO, and/or ( ) _____, and/or ( ) examining Forms AEC-5 or their equivalents and/or ( ) observing individuals in the restricted areas that NO INDIVIDUALS under 18 years of age had been EXPOSED in the restricted areas, or

1.3.2 In the manner indicated above, I IDENTIFIED those INDIVIDUALS under 18 years of age who had been exposed in the restricted areas by questioning ( ) the RSO, ( ) the minors, ( ) the minor's supervisors. I determined the circumstances of exposure and the licensee's method of evaluating the minor's exposures. I determined that the METHOD OF EVALUATION had been ADEQUATE. I found that the evaluations showed that the exposures had NOT EXCEEDED 10% of the limits of 10 CFR 20.101(a).

1.4 20.105, "PERMISSIBLE LEVELS OF RADIATION IN UNRESTRICTED AREAS"

1.4.1 By questioning the RSO and/or the principal users, and ( ) by examining records of ( ) receipts, ( ) inventories, ( ) disposals/transfers, and ( ) surveys, and by a physical inspection of the restricted areas, I DETERMINED the TIMES AND CIRCUMSTANCES under WHICH the licensee's use and/or storage of materials would have resulted in the generation of exposure levels in the unrestricted area of a magnitude of WARRANTED CALCULATION OR MEASUREMENT to assure compliance with 20.105.

1.4.2 I questioned the RSO and/or the involved principal users to determine if these calculations or MEASUREMENTS had been MADE; HOW they had been MADE; and what CONCLUSIONS had been DRAWN. I found that adequate surveys had been made indicating that the levels of radiation in the unrestricted area had not exceeded the limits of 20.105.

1.4.3 I MEASURED THE EXPOSURE RATES IN THE UNRESTRICTED AREAS and found that at the time of inspection none exceeded the allowed levels.

1.4.4 Following the procedures described in paragraph 1.4.1 above, I determined that there had been NO circumstances under which there was any REASONABLE PROBABILITY OF the levels HAVING EXCEEDED the limits of 20.105.

1.5 20.106, "CONCENTRATION IN EFFLUENTS TO UNRESTRICTED AREAS"

1.5.1 By questioning the RSO and these principal users _____ _____ _____, by examination of records of ( ) receipts, ( ) inventories, ( ) effluent monitoring, and ( ) surveys, ( ) and by observations made during my physical inspection of the restricted areas, I IDENTIFIED those OPERATIONS WHERE there was a REASONABLE PROBABILITY of generation OF CONCENTRATIONS of radioactive material in effluents to the unrestricted area.

1.5.2 I asked the RSO or the principal user to describe the evaluation that had been made to ASSURE that the CONCENTRATION of radioactive material in these effluents DID NOT EXCEED THE LIMITS of 20.106.

1.5.3 I determined that the licensee's ( ) calculations, ( ) location of samplers, ( ) collection methods, and ( ) assay methods were SUITABLE for EVALUATION of the concentrations of the types of radioactive material that were discharged (i.e. considering its identity, physical and chemical form, particle size, the presence of dust loading or moisture . . . etc). I noted that the licensee's evaluations showed compliance with 20.106.

1.5.4 Having assured myself, from the findings of previous AEC inspectors, that the licensee's procedures for calculating, sampling and assaying the samples were in accord with accepted practices I ONLY EXAMINED the RECORDS of his measured concentrations. I found that these showed him to be in compliance with 20.106.

1.5.5 Following the procedures described in paragraph 1.5.1 above, I determined that quantities and forms of the material, and the circumstances under which it was handled were such that THERE WAS NO SIGNIFICANT PROBABILITY OF VIOLATION OF THE SECTION.

1.6 20.201, "SURVEYS"

1.6.1 In the course of determining the licensee's status of compliance with all sections of Part 20, I found that ADEQUATE SURVEYS had been CONDUCTED.

1.7 20.202, "PERSONNEL MONITORING"

1.7.1 As stated in paragraph 1.1.1 above, I identified those individuals whose external exposure might reasonably be expected to exceed 25% of the 20.101(a) limits. I ascertained that a FORM AEC-5 or its equivalent was maintained FOR EACH of these INDIVIDUALS.

1.7.1.1 I concurred in the licensee's evaluation that personnel monitoring was not required for any individual using material under this license.

1.7.1.2 _____ stated that each of these individuals had been INSTRUCTED TO WEAR his personnel DOSIMETER while he was in the restricted areas.

1.7.1.3 I noted that the licensee's written OPERATING PROCEDURES directed occupants of the restricted areas to wear their personnel dosimeters.

1.7.1.4 During my inspection of the restricted areas I OBSERVED that all individuals who I encountered, and who were required to wear PERSONNEL DOSIMETERS, were wearing them.

1.7.2 _____ identified those individuals under 18 YEARS OF AGE who entered the restricted areas. He DESCRIBED the PROCEDURES followed by each of these individuals and the duration of times spent in the restricted areas. I noted that for each individual whose exposures could reasonably be expected to EXCEED 5% of the LIMITS of 20.101(a) there was on file a Form AEC-5 or its equivalent.

1.7.3 A stated that NO individuals UNDER 18 YEARS OF AGE entered the restricted areas.

1.7.4 By questioning the following individuals ____, ____, and ____ who were responsible for controlling access to High Radiation Areas or who entered these areas, I determined that all INDIVIDUALS WHO ENTERED the HIGH RADIATION AREAS were PROVIDED with PERSONNEL MONITORING equipment.

1.7.5 _____ stated, and my findings verified the fact, that there were NO HIGH RADIATION AREAS under the licensee's control.

1.8 20.203, "CAUTION SIGNS, LABELS, SIGNALS, AND CONTROLS"

1.8.1 In my physical inspection of the operational areas I observed that EACH ROOM OR AREA I visited was POSTED with the appropriate sign reading ( ) CRM, ( ) CRA, ( ) CHRA, or ( ) CARA, as applicable, and showing the radiation caution symbol. JB

1.8.2 In my physical inspection of the operational area I observed that EACH CONTAINER that required a label was in fact LABELED CRM, showing the radiation caution symbol, the identity of its contents and sufficient information to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures. JB

1.8.3 - 20.205 - Instructions re opening packages - n/c - see back of this page

1.9 20.206, "INSTRUCTION OF PERSONNEL; POSTING OF NOTICES TO EMPLOYEES"

1.9.1 A stated that all INDIVIDUALS working in or frequenting the restricted areas were ORALLY INSTRUCTED to a degree commensurate with the radiation hazards encountered. JB

1.9.2 I examined the licensee's OPERATING PROCEDURES and found that they PROVIDED individuals working in or frequenting the restricted areas with INSTRUCTIONS for the safe handling of material that were commensurate with the radiation hazards encountered.

1.9.3 I observed that the licensee had POSTED a current COPY of 10 CFR 20 a copy of the LICENSE and a copy of OPERATING PROCEDURES applicable to work under the license in a sufficient number of places to permit occupants of the restricted areas to observe them on the way to or from their place of employment. n/c see back of this page

1.9.3.1 _____ stated that these DOCUMENTS were AVAILABLE for employee's examination upon request. I saw these documents.

1.9.4 I observed that FORMS AEC-3 were conspicuously POSTED in a sufficient number of places to permit employees working in or frequenting any portion of the restricted areas to observe a copy on the way to or from their place of employment. JB

1.10 20.207, "STORAGE OF LICENSED MATERIALS"

1.10.1 In my inspection of the licensee's facilities, I observed that NO MATERIAL was STORED IN an UNRESTRICTED AREA. JB

1.10.1.1 A stated that all areas in which MATERIAL was stored were SECURED WHEN UNATTENDED by individuals who had been instructed in the safe use of the material. JB

1.10.2 I ASCERTAINED by physical inspection that all MATERIAL stored in unrestricted areas was SECURED against unauthorized removal from the place of storage.

1.11 20.301, "WASTE DISPOSAL - GENERAL REQUIREMENTS"

1.11.1 By questioning the RSO and these principal users _____ _____ _____, by examination of records of ( ) receipts, ( ) surveys, ( ) effluent monitoring, ( ) inventories, ( ) disposal/transfer, and by my physical inspection of the licensee facilities, I IDENTIFIED the PROCEDURES used by the licensee to dispose of waste material.

1.11.1.1 I determined that no material had been disposed of as waste.

1.11.2 I determined that these procedures INVOLVED either one or a combination of the FOLLOWING METHODS: (4) Transfer to an authorized recipient, ( ) In accordance with a license condition, ( ) Release into sanitary sewage system, ( ) Burial in soil, or ( ) As allowed by 20.106.

1.12 20.303, "DISPOSAL BY RELEASE INTO SANITARY SEWAGE SYSTEMS"

1.12.1 4 stated that no licensed material had been released into the sanitary sewage system.

1.12.2 In the manner indicated in Paragraph 1.11.1, I IDENTIFIED those OPERATIONS from which waste was discharged to the sanitary sewage system.

1.12.3 By questioning the RSO and these principal users _____ _____ _____ regarding the details of the procedures being followed, I determined that the effluent was READILY SOLUBLE or DISPOSABLE in water.

1.12.4 By questioning the RSO and these principal users _____ _____ _____, and by my examination of records of ( ) receipts, ( ) disposals/transfers, ( ) survey of sewage release rates, ( ) calculations of concentrations of material per unit volume of sewage, or ( ) measurements of concentration of material per unit volume of sewage, I determined that:

1. The QUANTITY of radioactive material RELEASED in any one DAY did not exceed the larger of the following limits: (a) Appendix B, Table I, Col. 2 concentrations averaged over any one day or (b) Ten times the quantity of such material specified in Appendix C.

2. The MONTHLY average did not exceed Appendix B, Table I, Col. 2 CONCENTRATIONS.

3. The GROSS quantity of radioactive MATERIAL did not exceed 1 curie/year.

1.13 20.304, "DISPOSAL BY BURIAL IN SOIL"

1.13.1 By questioning the RSO and these principal users _____ _____ _____ and by examination of records of burials I DETERMINED that the LICENSEE had MET the requirements of this section.

1.13.2 A stated that no licensed material was disposed of by burial in soil.

1.13 20.305, "TREATMENT OR DISPOSAL BY INCINERATION"

1.13.1 Having noted that incineration was AUTHORIZED BY THE LICENSE, I questioned the RSO and these principal users who utilized this method of disposal, I EXAMINED the RECORDS, which showed the identity of the material, its quantity, and the date of incineration. I also determined that the QUANTITY LIMITATIONS (if any) given in the license had NOT been EXEEDED. I determined that the licensee had made valid surveys to ensure that the EFFLUENT AND ASH limits given in the license had not been exceeded. I did this by examining his sample collection techniques and his assay procedures.

1.13.2 By examination of waste disposal records, by questioning the principal users and the RSO, and by physical inspection of the licensee's facilities, I determined that he had NOT UTILIZED INCINERATION as a means of treatment or disposal of material.

1.14 20.401 "RECORDS OF SURVEYS, RADIATION MONITORING, AND DISPOSAL"

1.14.1 I examined (✓) all, ( ) approximately ___% of, the RECORDS OF RADIATION EXPOSURE of all individuals for whom monitoring was required under 20.202. I found that these records were maintained on FORMS AEC-5 or on clear and legible forms containing all the information required by Form AEC-5. I found they were kept in accordance with the INSTRUCTIONS contained ON THE REVERSE SIDE of Form AEC-5.

1.14.2 As indicated in paragraph 1.7.1.1 of these notes no individuals were required to wear personnel monitoring equipment.

1.14.3 I examined ( ) all records; ( ) a representative number of records, of surveys conducted in accordance with ( ) 20.201(b), disposals made under ( ) 20.302 (As allowed by License Amendment), ( ) 20.303 (Release to Sanitary Sewers) and ( ) 20.304 (Burial in Soil) and found that the records contained the essential elements for adequate evaluation of compliance.

1.15 20.402, "REPORTS OF THEFT OR LOSS OF LICENSED MATERIAL"

1.15.1 A STATED that there had been NO LOSS OR THEFT of licensed material in such quantities and under such circumstances that a substantial hazard might result to persons in unrestricted areas.

1.15.1.1 I VERIFIED this fact by comparison of records of ( ) receipts, ( ) inventories, and ( ) disposal/transfer, taking into consideration the decay rates of the various radionuclides.

1.16 20.403, "NOTIFICATION OF INCIDENTS"

1.16.1 In the course of my inspection of all sections of Part 20 I found that there had been NO CIRCUMSTANCES that WARRANTED the submission of NOTIFICATION under 20.403.

1.16.2 In the course of my inspection of all sections of Part 20 I found that in each instance where NOTIFICATION had been required such notification HAD BEEN MADE in accordance with the specifications of this section.

1.17 20.404, "REPORT TO FORMER EMPLOYEES OF EXPOSURE TO RADIATION"

1.17.1 _____ stated that NO FORMER EMPLOYEE HAD REQUESTED A REPORT of his exposure.

1.17.2 _____ stated that one or more FORMER EMPLOYEES HAD REQUESTED REPORTS of their exposures. _____ showed me copies of the licensee's response to these requests. I examined the copies and noted that they furnished all the information required by this section.

1.18 20.405, "REPORTS OF OVEREXPOSURES AND EXCESSIVE LEVELS AND CONCENTRATIONS"

1.18.1 In the course of my inspection of all sections of Part 20, I found that there had been NO CIRCUMSTANCES that WARRANTED the SUBMISSION of reports under 20.405.

1.18.2 In the course of my inspection of all sections of Part 20, I found that in each instance where a 20.405 REPORT had been required the report HAD BEEN SUBMITTED in accordance with the specifications of the section.

1.19 20.406, "NOTICE TO EMPLOYEES OF EXPOSURE TO RADIATION"

1.19.1 _____ stated that NO EMPLOYEE had REQUESTED an annual REPORT of his exposure.

1.19.2 _____ stated that each employee who had requested an annual REPORT of his exposure HAD BEEN FURNISHED with such report.

1.20 20.407, "PERSONNEL EXPOSURE AND MONITORING REPORTS"

1.20.1 By comparing the licensee's program with the specifications of this section I determined that the provisions of THIS SECTION DID NOT APPLY to the licensee.

1.20.2 I compared the licensee's copies of REPORTS with the specifications of this section and determined that they MET THE REQUIREMENTS.

1.21 20.408, "REPORTS OF PERSONNEL EXPOSURE ON TERMINATION OF EMPLOYMENT OR WORK"

1.21.1 As indicated above, I determined that the requirements of 20.407, and hence 20.408, were NOT APPLICABLE to this licensee.

1.21.2 By questioning _____ and by examining all records that gave evidence of the presence or absence of individuals who were using licensed materials (e.g. Forms AEC-5, B.Z sampling, bioassay isotope committee authorizations, etc.) I IDENTIFIED those INDIVIDUALS who had TERMINATED employment or work. I examined the licensee's copies of reports of their exposures which he had submitted to the individuals and to the AEC. I found that they had been completed in accordance with the requirements of this section.

2.1 30.3, 40.3 and 70.3 "ACTIVITIES REQUIRING LICENSE"

2.1.1 By questioning ( ) the RSO and/or ( ) the following individuals, _____ _____ _____, and/or ( ) by examination of records of ( ) receipts and ( ) transfer/disposal, I determined that the licensee had neither manufactured, produced, transferred, received, acquired, owned, possessed, used imported or exported licensed material except as authorized in a specific or general license issued pursuant to the regulations of Title 10. n/c

The leak test records reviewed indicated that two sealed sources, both unit quantities of activity, (of Mi^{63} + Co^{60}) had not been leak tested during July 1973 and were last leak tested in Jan '73. "C" said that the piece was out of his lab and that he ("C") had not remembered to follow up on the matter. Bauer said he will improve the control method.

2.2 30.51, 40.61 and 70.51, "RECORDS"

2.2.1 I inspected the licensee's records of receipt, transfer, export and disposal and found them to be complete; indicating the identities of the materials and the dates of change of status.

SUPPLEMENT F

SUBJECT: Training and Experience

1. Reference: Form AEC-313, Items 4, 5, 8, 9 and 14.

2. Members of the Ionizing Radiation Control Committee: