DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT. CORPS OF ENGINEERS
P. O. BOX 1580
ALBUQUERQUE, NEW MEXICO 87103-1580

REPLY TO
ATTENTION OF

Docket No. 30-19606
License No. 30-17283-02
EA 88-172

Director
Office of Enforcement
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

SUBJECT: Answer to a Notice of Violation and Proposed Imposition of Civil Penalty (NRC Inspection Report No. 30-19606/88-01)

Gentlemen:

We have for response the letter and notice of August 24, 1988 from the Regional Administrator, Region IV, under the above subject. In a conversation between Richard Bangart of your Regional Office and the undersigned on September 23, the time for posting our response was extended to Wednesday, September 28, 1988. Attached hereto is our sworn response to the findings set forth in the Notice. Included with our response are exhibits which we believe support the facts set forth therein.

Of significance, I believe, is that the matter which you found to be of particular concern, i.e., that a licensed gauge was stored at a location not under our control nor did it appear on our inventory, had been transferred to the Department of Energy, its rightful owner as it had been purchased with DOE funds for use at the Waste Isolation Pilot Plant (WIPP) site, and had been quite properly dropped from our inventory. While we recognize other deficiencies existed in our compliance, we respectfully suggest that the one you found most critical has been satisfactorily answered and the remaining concerns, though not in strict compliance, were not as significant. Further, appropriate steps have been taken to insure no further repetition will occur. Among other measures, these steps include the training and licensure of the District Safety Engineer as the Radiation Protection Officer. We also have in staffing a draft Standing Operating Procedure (SOP) that spells out how the Albuquerque District's radiation safety program will be administered. It will emphasize the necessity for security and strict compliance with the license conditions and requirements in the use and storage of the nuclear density gauges. We expect to adopt this SOP as a District Regulation shortly and thus avoid a repetition of the apparent breakdown in strict compliance when the former RPO retired.

IE14
1/1

Accordingly, and in view of the responses provided, we respectfully request the imposition the civil penalty be remitted and this proceeding be dismissed.

Sincerely,

Phillip L. Smith
Major, C.E.
Deputy Commander

Copy furnished:
Regional Administrator
U.S. Nuclear Regulatory
Commission, Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Docket No. 30-19606
License No. 30-17283-02
EA 88-172

RESPONSE TO NOTICE OF VIOLATION

)
State of New Mexico)
)ss
County of Bernalillo)
)

I, Phillip L. Smith, Major, CE, hereby state and affirm that the following responses to the Findings of Violations of the Albuquerque District, U.S. Army Corps of Engineers by the Regional Administrator, Nuclear Regulatory Commission, included in the Notice of Violation and Proposed Imposition of Civil Penalty (NRC Inspection Report No. 30-19606/88-01) are, on information and belief, true and correct:

Finding No 1. 10 CRF 20.207(a) requires that licensed materials stored in an unrestricted area shall be secured from unauthorized removal from the place of storage.

Contrary to the above, a moisture density gauge, Serial Number 10010, containing two sources of a nominal 10 millicuries of cesium-137 and 50 millicuries of americium-241 had been stored in a location which was not secured by the licensee to prevent unauthorized removal. The gauge had been stored in an unrestricted area near Carlsbad, New Mexico, from sometime in 1987 to the date of the inspection and was not under the licensee's control.

Response. The licensee respectfully denies the violation as stated. The violation relates to the storage of moisture density gauge, Serial Number 10010. Erroneously, this was thought to be property of the Corps of Engineers, Albuquerque District, at the time of the inspection in June, 1988. At that time, transfer of the responsibility for administration of this District's property accountability function was underway from the Fort Worth District, COE to the Albuquerque District; and, because of lack of familiarity with the background events which occurred in connection with the WIPP Project, the personnel with whom the matter of this Troxler gauge was discussed were not familiar with the fact that this gauge no longer appeared on our property rolls nor should it ever have appeared on the rolls. A review of the property records of the District since has revealed that the density gauge in question was dropped from the property control records as COE property on August 4, 1986. See DA Form 444 attached hereto as Exhibit 1. The Inventory Adjustment Report, Ex. 1, identifies that the gauge was purchased with Department of Energy funds and was erroneously taken up on the Albuquerque District property records. This transfer of custody and "ownership" in the gauge was effected by an appropriate transfer document signed by the COE Area Engineer and Resident Contracting Officer on July 30, 1986 and accepted by the Department of Energy on or before 8 August 1986. See excerpt from diary of Joe Pickens, Area Engineer, WIPP Project, New Mexico, attached hereto as Exhibit 2. Unfortunately, we

have been unable to locate the District's copy of this document of transfer and the personnel directly involved are no longer with this District. However, there is no doubt but what documents of transfer were signed prior to the execution of the Inventory Adjustment Report, Ex. 1, and the gauge in question has been the property of and under the control and custody of the Department of Energy, Albuquerque Projects Office, WIPP site since that time. I regret this was not known to our personnel directly participating in your inspection, but because of the internal reorganization then underway and the change in personnel directly responsible for administrating the property accountability function, this information was not then known or identified by those persons.

Further, we invite your attention to the fact the gauge in question was transferred to the Department of Energy and to a facility which is under tight security.

Finding No 2. License Condition 17 requires, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the application dated March 10, 1987. Item 7 of the application names the Radiation Protection Officer (RPO) and provides his training and experience.

Contrary to the above, from April 1987 to the date of the inspection, the responsibilities of the RPO were performed by an individual not specified in the license as the RPO.

Response. The licensee admits to this violation with the following explanation: At the retirement of the former Safety Manager and RPO in October, 1986, the position of Safety Manager was vacant for several months. To fill the void until the new Safety Manager could be trained to fill his duties as an RPO, the District's alternate RPO was designated as the one responsible on the renewal application. Admittedly, the current Safety Manager who assumed some of the duties had not received Nuclear Gauge Safety Training at the time of the inspection, but he has since successfully completed the course and an amended application has been filed. Attached as Exhibit 3 is a copy of Certificate No. 21245 issued James Jaffe, the District Safety Manager, verifying successful completion of the training course for the use of Nuclear Testing Equipment conducted by Troxler Electronic Laboratories, Inc. Also attached as Exhibit 4 is a copy of an application for amendment of the Application for Materials License to substitute James Jaffe as the RPO for the nuclear density gauges.

Finding No 3. License Condition 15 requires that the licensee conduct a physical inventory every 6 months to account for all sources and /or devices received and possessed under the license. Records of inventories shall be maintained for 2 years from the date of each inventory.

Contrary to the above, from June 1985 to the date of the inspection, physical inventories had not been conducted to account for three gauges with serial numbers 4425, 10010, and 11323.

This is a repeat violation.

Response. The licensee denies this violation. Physical inventories of the items in question were conducted for the years 1987 and 1988. See Exhibit 5, attached hereto, for nuclear gauge 4425 and Exhibit 6, attached hereto, for nuclear gauge 11323. As described in Response No. 1, above, nuclear gauge No. 10010 was no longer the property of the COE but had been transferred to the Department of Energy and thus would not appear on the property inventory. The reason for the failure to identify these inventories at the time of the inspection was stated in Response No. 1, above. It is more likely than not that the gauges were inventoried in 1986 as well, but the inventory records are not readily available. Provisions for the accomplishment of inventories on a more frequent basis (i.e., every six months) will be separately addressed in a District Radiation Safety Program SOP.

Finding No 4. 10 CFR 30.51(a) requires, in part, that each person who receives byproduct material shall keep records showing the receipt, transfer, and disposal of such byproduct material.

Contrary to the above, the licensee had not maintained records showing the receipt of two moisture density gauges containing byproduct material, Serial Number 11323 and 10010, which were received since the time of the previous inspection on November 1, 1983.

Response. The licensee denies this violation. Please note that attached to Exhibits Nos. 5 and 6 are hand receipts identifying the Kirtland Resident Contracting Officer, Kirtland AFB Resident Office, Albuquerque District, COE, as the custodian of gauges Nos. 11323 and 4425. As noted above, gauge No 10010 was no longer on the property inventory rolls of the COE.

Finding No 5. License Condition 12 (a)(1) requires, in part, that sealed sources shall be tested for leakage and/or contamination at intervals not to exceed six months. License Condition 12.B requires, in part, that any source in storage and not being used need not be tested. When the source is removed from storage for use or transfer to another person, it shall be tested before use or transfer.

Contrary to the above, the required leak tests for sealed sources contained in two moisture density gauges, Serial Number 11323 and 4425, had not been completed prior to use when they were removed from storage.

Response. The licensee admits to this violation. One gauge has been leak tested and found to be in compliance (see Exhibit 7). The other gauge was returned to storage, and a leak test will be performed prior to putting it back into operation. Further, a District SOP is in final staffing prior to adoption. This SOP will implement ER 385-1-80, Sec. 14 (see Exhibit 8, attached) in clearly requiring the inventorying and testing of the licensed devices every six (6) months by the RPO.

Finding No 6. 10 CFR 19.11(a), (b) and (c) requires, in part, that each licensee shall post current copies of the regulations in Parts 19 and 20, operating procedures, and the license or a notice specifying where such documents may be examined, and Form NRC-3.

Contrary to the above, neither the regulations, license, procedures, notice, nor Form NRC-3 were posted at the time of the inspection.

Response. The licensee admits to this violation. The documents had been inadvertently misplaced from the previous jobsite. The District now has in place clear direction requiring each Residence Office wherein the gauges may be used to have in stock copies of NRC Form 3 and other related materials to post at the construction site when the gauges are in use. Appropriate corrective action was completed in June, 1988.

Phillip L. Smith
Major, C.E.

Subscribed and sworn to before me, a Notary Public, this 28th day of September, 1988.

Notary Public

My Commission Expires: Feb 12, 1992

INVENTO../ ADJUSTMENT REPORT (IAR)

FOR THE USE OF THIS FORM, SEE DA PAM 710-2-2; THE PROPONENT AGENCY IS THE OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS.

SSA: US Army Engineer District Albuquerque

MATCAT:

VOUCHER NUMBER: DODAAC | DATE | SERIAL

TOTAL NUMBER OF ITEMS:

IAR REASON:

STATION: Office of Admin Services R/E 114

COUNT CARD LOCATION:

ITEM	STOCK NUMBER	ITEM NOUN	COND	SEC	RICC	RECORDED BALANCE	QUANTITY INVENTORIED	POST GAIN	POST LOSS	UI	UNIT PRICE	EXTENDED PRICE GAIN	EXTENDED PRICE LOSS
	Cap Acct 19	"DROPPED AS" Tester, Troxler, Nuclear Moist 10010				1	0		4650.00		4650.00		

DV

BASIS: This document is necessary to drop the above item from the property record. This item was purchased with DOE funds and was erroneously taken up in the property record on property voucher 84-0003.

CREDITED TO RE # 11.2 C/A 19
$ 4650.00

REVIEWED BY PROP ACCT SECTION
☑ N ☐ MP ☐ M ☐ P ☐ WS ☐ E

86-0213

CUT

STOCK RECORD OFFICER
THESE ADJUSTMENTS WERE MADE FOR THE REASON SHOWN. IF THE REASON IS "INVENTORY" THEY HAVE BEEN MADE PENDING THE SSA COMMANDER'S APPROVAL.

DATE: 4 Aug 86 SIGNATURE: L. C. PINKSTON

SSA COMMANDER
I APPROVE THE ADJUSTMENT OF ALL ITEMS NOT CIRCLED. THE CIRCLED ITEMS WILL BE SUPPORTED BY ACTION UNDER (CIRCLE ONE) AR 15-6 AR 735-11

DATE: SIGNATURE:

ASSET REPORT COPY SENT
DATE: INITIALS:

IAR REVIEWED
DATE: INITIALS:

GAIN | TOTAL DOLLARS | LOSS

GAIN | NET DOLLARS | LOSS
AUG 4 1986

DA FORM JAN 92 444

EDITION OF JUN 78 IS OBSOLETE.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1992 — 355-946

Ex 1

CHECK BOX IF APPLIES: [X] ORDER FOR SUPPLIES OR SERVICES

[ ] REQUEST FOR QUOTATIONS NO. — RETURN COPY(IES) OF THIS QUOTE BY (THIS IS NOT AN ORDER. See DD Form 1155r)

PAGE 1 OF 1

5. CERTIFIED FOR NATIONAL DEFENSE UNDER DMS REG 1 DO: N/A

1. CONTRACT/PURCH ORDER NO.	2. DELIVERY ORDER NO.	3. DATE OF ORDER	4. REQUISITION/PURCH. REQUEST NO.
DACW47-83-M-0405		83 Aug 17	SWACB-83-026

6. ISSUED BY: 505-766-2645 CODE CW47
DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1580, 517 GOLD AVE, SW
ALBUQUERQUE, NM 87103

7. ADMINISTERED BY (If other than 6) CODE CW47
SWACB
US ARMY CORPS OF ENGINEERS, ALBUQUERQUE

8. DELIVERY FOB: [X] DEST [ ] OTHER (See Schedule if other)

9. CONTRACTOR/QUOTER: CODE — FACILITY CODE
NAME AND ADDRESS
TROXLER ELECTRONIC LAB, INC.
ATTN: CHRIS BECK
2000 E. RANDAL MILL RD, SUITE 605
ARLINGTON, TX 76011

10. DELIVER TO FOB POINT BY: 19 Sep 83

11. CHECK IF: [ ] SMALL BUSINESS [ ] MINORITY BUSINESS

12. DISCOUNT TERMS: NET 30

13. MAIL INVOICES TO: ORIGINAL PLUS CPY
COPY TO ADDRESS IN BLOCK #15

14. SHIP TO: CODE C247
US ARMY CORPS OF ENGINEERS
CARLSBAD AREA OFFICE
401 CANAL ST.
CARLSBAD, NM

15. PAYMENT WILL BE MADE BY: CODE CW47
USAED, FT WORTH
ATTN: SWFPA-FE
P.O. BOX 17300
FT WORTH, TX 76102

MARK ALL PACKAGES AND PAPERS WITH CONTRACT OR ORDER NUMBER

16. TYPE OF ORDER
DELIVERY [ ]
PURCHASE [X]

This delivery order is subject to instructions contained on this side of form only and is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.

Reference your quote by Chris Beck to , furnish the following on terms specified herein, including, for U.S. purchases, General Provisions of Purchase Order on DD Form 1155r (EXCEPT CLAUSE NO. 13 APPLIES ONLY IF THIS BOX [ ] IS CHECKED. AND NO.15 IF THIS BOX [ ] IS CHECKED), special provisions and delivery as indicated. This purchase is negotiated under authority of 10 USC 2304 (a)(3) or as specified in the schedule if within the U.S., its possessions or Puerto Rico; if otherwise, under 2304(a)(6).

[ ] If checked, Additional General Provisions apply; Supplier shall sign "Acceptance" on DD Form 1155r and return copies.

17. ACCOUNTING AND APPROPRIATION DATA/LOCAL USE
Gauge, Nuclear moist/density Troxler Mdl 3411-B
TA-GS5013112A0-0 AKDA-PCX BOE 96-89X0221 596291 # 10010

18. ITEM NO.	19. SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/ ACCEPTED*	21. UNIT	22. UNIT PRICE	23. AMOUNT
0001	Direct transmission Nuclear Surface moisture/ density gauge, Troxler Model 3411-B with 12" rod 2" increments with 5" notch, standard access and case. (Purchased w/DOE Funds) should not be COE Property.	1	EA	$4,650.00	$4,650.00

REVIEWED BY PROP ACCT SECT
[X] NON-EXPENDABLE [ ] MINOR NONEXP
[ ] WHS STOCK [ ] PILFERABLE

Debited to Acct. No. 131/19 4650.00

7/31/84

ATTACHED ADDITIONAL GENERAL PROVISIONS APPLY

*If quantity accepted by the Government is same as quantity ordered, indicate by X mark. If different, enter actual quantity accepted below quantity ordered and encircle.

24. UNITED STATES OF AMERICA
BY: BILL L. SEAVELY CONTRACTING/ORDERING OFFICER

25. TOTAL: $4,650.00
29. DIFFERENCES:

26. QUANTITY IN COLUMN 20 HAS BEEN
[ ] INSPECTED [X] RECEIVED [ ] ACCEPTED AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED
24 Oct 83 — Clyde Faulk
DATE — SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

27. SHIP NO. [ ] PARTIAL [ ] FINAL
28. D.O. VOUCHER NO.
30. INITIALS
31. PAYMENT [ ] COMPLETE [ ] PARTIAL [ ] FINAL
32. PAID BY
33. AMOUNT VERIFIED CORRECT FOR
34. CHECK NUMBER
35. BILL OF LADING NO.

I certify this account is correct and proper for payment.
DATE — SIGNATURE AND TITLE OF CERTIFYING OFFICER

37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED	40. TOTAL CONTAINERS	41. S/R ACCOUNT NUMBER	42. S/R VOUCHER NO.
					84-0003

DD FORM 1155 1 FEB 77 — PREVIOUS EDITION IS OBSOLETE — OCT 14 1983

8 Aug 86

- Call to ~~al~~ Marie Farnsworth
  - the Labelle Projector is being carried to Alb. by Ira Nadelman. She will sign Hand Receipt to clear me off it
  - Marie needs the permanent property transfer for the Nuclear Density Ga. signed by DOE. I left paperwork w/ John O'Donnell on 30 July for his signature.
  - Marie is checking on status of my PCS advance $3,500.—

8 Aug

- Call to Tom Re. Pumphouse Reprocurement conf. call w/ Franklin, Arlen Huntkeoh & al
  1. Can CoE proceed w/ restoration w/o funds auth. for total obligation/liability
  2. Determine alternatives if no finding by board is available
     a. Separate contract
     b. Supplemental agreement w/ Foley
     c. "Coop" claim against Foley.
  3. LTC P. meet w/ Cooper Tue (then call on Foley). Tom will discuss Procurements w/ Ron Breen. (Some changes wanted)
  4. CoE needs DOE direction, funds, Est & CCR.

Ex 2

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

James Jaffe

of

U.S. Army Corps of Engineers

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC. TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

1. *Principles and practices of radiation protection.*
2. *Leak testing procedures.*
3. *Mathematics and calculations basic to the use and measurement of radioactivity.*
4. *Biological effects of radiation.*
5. *Radioactivity measurement standardization and monitoring techniques and instruments.*
6. *Accident and incident procedures.*
7. *Procedures for nuclear gauge storage and transportation.*
8. *General safety precautions.*

Gauge Operation

1. *Instrument theory*
2. *Operating procedures*
3. *Maintenance*
4. *Field application*
5. *Gauge calibration*

INSTRUCTOR

09/22/88
DATE

W.F. Troxler
PRESIDENT

No 21245

Ex 3

DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1580
ALBUQUERQUE, NEW MEXICO 87103-1580

REPLY TO
ATTENTION OF

11 August 1988

USNRC REGION 4
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Dear Mr. Cain:

As Safety Manager for the Corps of Engineers in Albuquerque, New Mexico, I would like to propose some amendments to the Albuquerque District's license. These amendments to appoint myself as the Radiation Safety Officer in place of Frank Collins. Enclosed are my qualifications and experience which allow me to function as Radiation Safety Offic

Please feel free to contact me if you have any questions regarding this application for amendment.

JAMES JAFFE
Safety Manager

Enclosure

8810070135 24pp

Ex 4

U.S. ARMY ENGINEER DISTRICT, ALBUQUERQUE
P.O. BOX 1580
ALBUQUERQUE,NEW MEXICO 87103

AMENDMENT SUPPLEMENT SHEET TO ITEM 7

7. individual(s) responsible for radiation safety program and their training and experience.

INDIVIDUAL: RADIATION PROTECTION OFFICER - JAMES JAFFE, CIVIL ENGINEER

TRAINING: A. TROXLER NUCLEAR GAUGE TRAINING COURSE
ALBUQUERQUE, NEW MEXICO
SEPTEMBER 22, 1988

8 HOUR TRAINING COURSE

EXPERIENCE: Mr. James Jaffe is a graduate Civil Engineer. He has had college courses in Nuclear Engineering,Physics and Nuclear Physics. He will have the Troxler Nuclear Gauge Course in september of this year.

CD	CAP NO	A/C	NOMENCLATURE	SERIAL NUMBER	ACQ DATE	UNIT COST	QTY	TOTAL COST	R/E NO	PROP CODE
1		27	AUTO CHEVY S4	CE-23927	0584	.00	1	.00	132	CIX
1		02	AUTO PLYMOUTH 85	USA CL-0837		7,265.00	1	7,265.00	132	DHF
1		80	CALCULATOR MONROE	0654109		552.50	1	552.50	132	CVP
1		43	CALCULATOR SHARP	99034279	1279	143.20	1	143.20	132	AML
1		42	CAMERA CANON 35MM	5192208		259.00	1	259.00	132	BSE
1		41	CAMERA CANON 35MM	6657947	0886	137.92	1	137.92	132	DHY
1		44	CAMERA KODAK INSTAMATIC	NSN		15.26	1	15.26	132	DJK
1		43	CAMERA POLAROID SX70	NSN		27.97	1	27.97	132	CVQ
1		83	COMPUTER IBM	250508	0586	3,941.00	1	3,941.00	132	DGM
1		82	COPIER XEROX	K02-323478	0588	3,058.00	1	3,058.00	132	DUU
1		83	GUAGE NUCLEAR TROXLER	11323	0984	4,650.00	1	4,650.00	132	CMP
1		40	LEVEL ZEISS	15579		560.00	1	560.00	132	CVS
1		80	MONITOR AMDEK 722	Y6D307818	0586	518.00	1	518.00	132	DFU
1		40	MONITOR TV PANASONIC	UG4327914	1184	512.78	1	512.78	132	CVT
1		82	PRINTER SPINWRITER	541237436	0588	1,636.00	1	1,636.00	132	DUT
1		80	REC/TRANS GE	5394627	1285	647.00	1	647.00	132	CYL
1		85	REC/TRANS MIDLAND 70-535A	12479	0484	690.00	1	690.00	132	CIO
1		80	REC/TRANS RCA	M-17528	0381	1,406.97	1	1,406.97	132	ASM
1		80	REC/TRANS RCA MOBILE	KJ19024	0381	1,890.35	1	1,890.35	132	BOX
1		40	RECORDER CODE-A-PHONE	152497		179.95	1	179.95	132	CVV
1		44	RECORDER CODE-A-PHONE	5188M115840		123.16	1	123.16	132	DJL
1		40	RECORDER LANIER	285219	1383	243.45	1	243.45	132	CVW
1		40	RECORDER LANIER	3494327	1383	379.20	1	379.20	132	CVY
1		43	RECORDER PANASONIC VIDEO	M4HD00479	1184	525.00	1	525.00	132	CVU
1		80	TELECOPIER RAPICOM	331508289	1285	3,450.00	1	3,450.00	132	CXE
1		27	TRUCK CHEV. 83 1/2T	CE-23914	0583	.00	1	.00	132	BWA

E76

Items shown as "counted"
on attached were physically
verified by Linda Smith,
Marie Farnsworth, L.C. Purdon
and Bill McCollum on
Friday, 6 May 88. The
Printer, Copier & Scales were
listed as "found on installation"
on ENG Form 3051 and have
been entered into Property
records

5/6/88

Calculator & Camera already in
Maine - Will xfr to McCollum -

Kirtland

22 APR 1988 RIG-2A191BA LIST OF PROPERTY INVENTORY BALANCES FOR FIELD OFFICES INVENTORYING PAGE 0012

CD NO	CAP A/C	NOMENCLATURE			UNIT COST	QTY	TOTAL COST	COUNTED	OVER -SHORT	R/E NO	
1	27	AUTO CHEVY 84	CE-23927	0584	.00	1	.00	(/)	( )	132	
1	02	AUTO PLYMOUTH 85	USA CL-3837		7,265.00	1	7,265.00	(/)	( )	132	
1	80	CALCULATOR MONROE	D654109		552.50	1	552.50	(/)	( )	132	
1	40	CALCULATOR SHARP	99004279	1279	143.20	1	143.20	(/)	( )	132	
1	42	CAMERA CANON 35MM Also 45C 2410	5192208		259.00	1	259.00	(/)	( )	132	
1	40	CAMERA CANON 35MM	6657947	0886	137.92	1	137.92	(/)	( )	132	
1	44	CAMERA KODAK INSTAMATIC	NSN		15.26	1	15.26	(/)	( )	132	
1	40	CAMERA POLAROID SX70	NSN		27.97	1	27.97	(/)	( )	132	
1	80	COMPUTER IBM	250508	0586	3,941.00	1	3,941.00	(/)	( )	132	
1	80	GUAGE NUCLEAR TROXLER	11323	0984	4,650.00	1	4,650.00	(/)	( )	132	medical
1	40	LEVEL ZEISS	15579		560.00	1	560.00	(/)	( )	132	
1	80	MONITOR AMDEK 722	Y60037818	0586	518.00	1	518.00	(/)	( )	132	
1	40	MONITOR TV PANASONIC	UG4327914	1184	512.78	1	512.78	(/)	( )	132	
1	80	REC/TRANS GE	5394627	1285	647.00	1	647.00	(/)	( )	132	
1	80	REC/TRANS MIDLAND 70-530A	12479	0484	690.00	1	690.00	(/)	( )	132	
1	80	REC/TRANS RCA	M-17529	0381	1,406.97	1	1,406.97	(/)	( )	132	
1	80	REC/TRANS RCA MOBILE	KJ18024	0381	1,890.35	1	1,890.35	(/)	( )	132	
1	40	RECORDER CODE-A-PHONE	152497		179.95	1	179.95	(/)	( )	132	
1	44	RECORDER CODE-A-PHONE	5188H115840		123.16	1	123.16	(/)	( )	132	
1	40	RECORDER LANIER	285219	1083	243.45	1	243.45	(/)	( )	132	
1	40	RECORDER LANIER	3494927	1083	379.20	1	379.20	(/)	( )	132	
1	40	RECORDER PANASONIC VIDEO	H4H000479	1184	525.00	1	525.00	(/)	( )	132	
1	80	TELICOPIER RAPICOM	331508289	1285	3,450.00	1	3,450.00	(/)	( )	132	
1	27	TRUCK CHEVY 83 1/2T	CE-23914	0583	.00	1	.00	(/)	( )	132	- Medical
1	27	TRUCK CHEVY 86 1/2T	CE-26250	0586	.00	1	.00	(/)	( )	132	
1	27	TRUCK DODGE 84 1/2T	CE-23924	0384	.00	1	.00	(/)	( )	132	- Medical

CJ NO	CAP A/C	NOMENCLATURE		UNIT COST	QTY	TOTAL COST	COUNTED	OVER -SHORT	R/E NO
1	02	TRUCK FORD 83 1/2T	USA CK-4000	5,477.00	1	5,477.00	(/)	( )	132
1	80	TYPEWRITER IBM	4261489	931.50	1	931.50	(/)	( )	132
				28,602.00	28	34,[illegible]26.21	R/E TOTALS		

Printer, Spinwriter 541237436 12-85 1636.00 (+1)

Copier, Xerox KO2-323478 1-86 3058.00 (+1)

Scales, Fiden Abatel 86204894 Model 8620 (+1)

Calculator, TI-5219, 138934 (Marie's 114 Acct) (+1)

~~Lens~~

Camera, Canon 35mm (Sure-Shot) 6612960 (+1)

(Marie's 11A Acct)

STATEMENT OF AGREEMENT OR DIFFERENCE

(ER 735-1-1)

RESPONSIBLE EMPLOYEE ACCOUNT *(Name and Telephone No.)*: William J. McCollam, Responsible Employee No. 132

DISTRICT OR OFFICE: Kirtland AFB Project Office

ARTICLE	CHARGED ON ACTPO RECORD	INVENTORY COUNT	DIFFERENCE OVERAGE	DIFFERENCE SHORTAGE	UNIT PRICE	TOTAL COST	REMARKS
Information is furnished that no differences were noted between the quantities found during your recent physical inventory completed on 28 Sep 87 and quantities charged in the records of the Accountable Property Officer.							

A physical inventory of this account was completed on (date) 28 Sep 87. The inventory is in ☒ AGREEMENT with the ACTPO record, or as shown above, there are ☐ DIFFERENCES between the inventory and the ACTPO record.

ACCOUNTABLE PROPERTY OFFICER *(Type or Print)*	SIGNATURE	DATE THIS STATEMENT TRANSMITTED
L. C. PINKSTON	L. C. Pinkston	6 Oct 87

ENG FORM 3064, Jan 85 EDITION OF APR 68 IS OBSOLETE (Proponent: DEAN-RMF-C)

PROPERTY INVENTORY LIST

PAGE NUMBER

PROPERTY ACCOUNT		LOCATION	PHYSICAL INVENTORY	
OF William J. McCollam	NO. 132	Kirtland AFB Project Office	STARTED 21 Sep 87	COMPLETED 28 Sep 87

CALLER /

RECORDER /

I have personally inventoried or supervised the inventory of property as shown on this report, pages to and represents the balance of property on hand as of / (date)

(Name and designation)

ITEM	UNIT	CHARGED	COUNTED	OVER	SHORT	UNIT PRICE
THRU PROPERTY VOUCHER NUMBER 87-0167						

"(I)" or "(we)" have inventoried the items and quantities listed on the attached. The counted quantities are shown in ink. The inventory was completed on / 28 September 1987. All of the items are marked in accordance with current regulations.

/ 28 Sep 87 — date

/ Eloisa M. Okino Eloisa M. Okino — (Signature of Person performing inventory)

/ — date

/ — (Signature of Person performing Inventory)

"This inventory listing is a true and correct record of items and quantities of property in my custody."

/ 9-29-87 — date

/ William J. McCollam William J. McCollam — (Signature of Responsible Employee)

I have read and am familiar with the provisions of ER 735-1-1 reguarding property accounting.

/ 9-29-87 — date

/ William J. McCollam William J. McCollam — (Signature of Responsible Employee)

ENG FORM 3062 (EM 735-345-1) (EM 735-2-1)
INOV 62

PREVIOUS EDITIONS MAY BE USED

RETURN TO SESNF-LOG

ORIGINAL

27 AUG 1987 PIN-2AORIRA LIST OF PROPERTY INVENTORY BALANCES FOR FIELD OFFICES INVENTORYING PAGE 000

CD NO	CAP A/C	NOMENCLATURE			UNIT COST	QTY	TOTAL COST	COUNTED	OVER -SHORT	R/E NO
1	27	AUTO CHEVY P4	CE-23927	0584	.00	1	.00	( )	( )	132
1	02	AUTO PLYMOUTH P5	USA CL-0837		7,265.00	1	7,265.00	( )	( )	132
1	80	CALCULATOR MONROE	0654109		552.50	1	552.50	( )	( )	132
1	40	CALCULATOR SHARP	99[illegible]4279	1279	143.20	1	143.20	( )	( )	132
1	42	CAMERA CANON 35MM	5192209		259.00	1	259.00	( )	( )	132
1	42	CAMERA CANON 35MM	6587947	0886	137.92	1	137.92	( )	( )	132
1	44	CAMERA KODAK INSTAMATIC	NSN		15.26	1	15.26	( )	( )	132
1	40	CAMERA POLAROID SX7	NSN		27.97	1	27.97	( )	( )	132
1	80	COMPUTER IBM	25[illegible]508	0586	3,941.00	1	3,941.00	( )	( )	132
1	80	GUAGE NUCLEAR TROXLER	11323	0584	4,650.00	1	4,650.00	( )	( )	132
1	40	LEVEL ZEISS	15079		560.00	1	560.00	( )	( )	132
1	80	MONITOR AMDEK 722	Y60007818	0586	518.00	1	518.00	( )	( )	132
1	40	MONITOR TV PANASONIC	DG4327914	1184	512.78	1	512.78	( )	( )	132
1	80	REC/TRANS GE	5394627	1285	647.00	1	647.00	( )	( )	132
1	80	REC/TRANS GE MOBILE	4446372	0185	598.65	1	598.65	( )	( )	132
1	80	REC/TRANS MIDLAND 70-535A	12479	0484	690.00	1	690.00	( )	( )	132
1	80	REC/TRANS RCA MOBILE	KJIP024	0381	1,890.35	1	1,890.35	( )	( )	132
1	40	RECORDER CODE-A-PHONE	152497		179.95	1	179.95	( )	( )	132
1	44	RECORDER CODE-A-PHONE	518PH115849		123.16	1	123.16	( )	( )	132
1	40	RECORDER LANIER	285219	1083	243.45	1	243.45	( )	( )	132
1	40	RECORDER LANIER	3494327	1083	379.20	1	379.20	( )	( )	132
1	40	RECORDER PANASONIC VIDEO	HAHD03479	1184	525.00	1	525.00	( )	( )	132
1	80	TELECOPIER RAPICOM	331508289	1285	3,450.00	1	3,450.00	( )	( )	132
1	27	TRUCK CHEVY B3 1/2T	CE-23914	0583	.00	1	.00	( )	( )	132
1	27	TRUCK CHEVY B6 1/2T	CE-26250	0586	.00	1	.00	( )	( )	132
1	27	TRUCK FORD B2 1/2T	CE-18595		.00	1	.00	( )	( )	132

TROXLER

P.O. Box 12057, 3008 Cornwallis Rd. Research Triangle Park,
North Carolina 27709, U.S.A.

Device - Model # 3411-B, Serial # 4425

Source(s) - Serial# CC1429, Serial # _____

Date of Test: 7/18/88

Please print legibly and firmly
This is your return address label

CORPS OF ENGINEERS
BOX 1580
ALBUQUERQUE, NM 87103
ATTN: LESWA-SO

Your Name: JAMES JAMES

Telephone: (505) - 766-1315

LEAK TEST ANALYSIS

This certifies that the sample accompanying this form has been analyzed using an approved monitoring method that measures both beta/gamma & alpha contamination; and, that the results of this analysis shows the removable activity to be less than 0.005 microcuries.

B. Franklin

7/22/88

Ex 7

Lit

DEPARTMENT OF THE ARMY
US Army Corps of Engineers
Washington, D.C. 20314

ER 385-1-80

DAEN-SO

Regulation
No. 385-1-80

7 May 1982

ACTION

DATE

EXEC OFC
RES MGMT
BUDGET
FOA
MGMT
PAO
COUNSEL
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OC & SUP
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ADP
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IEOM

Safety
RADIOLOGICAL SAFETY

This is a complete revision of ER 385-1-80. Issue of supplements to this regulation by Commanders, Field Operating Activities (FOA), is permitted but is not required. If supplements are issued, DIVCDR and CDR, separate FOA, will furnish one copy of each to HQDA (DAEN-SO) and (DAEN-ASP-R), WASH D.C. 20314; DISTCDR will furnish required copies to appropriate DIVCDR.

1. Purpose. This regulation prescribes procedures and guidance for:

a. Obtaining US Nuclear Regulatory Commission (NRC) licenses and license amendments for radioactive materials.

b. Obtaining OCE and DA authorization for radioactive materials not licensed by the US Nuclear Regulatory Commission.

c. Controlling radioactive materials and equipment which produce ionizing radiation.

d. Transferring radioactive materials outside of the immediate command of the USACE.

2. Applicability.

a. This regulation is applicable to all OCE/HQ elements and all field operating activities (FOA) procuring, storing, possessing, shipping, transferring, using and disposing of radioactive materials or devices which produce ionizing radiation.

b. This regulation is not applicable to the procurement of radioactive materials in nuclear weapons, fuel for nuclear reactors, or installed equipment and material made radioactive in nuclear reactors established in accordance with provisions of Section 91, Atomic Energy Act of 1954, as amended, including byproduct material arising from normal operating and testing of nuclear reactors unless transferred beyond the immediate control of the reactor staff.

3. References. References are listed in Appendix A.

This regulation supersedes ER 385-1-80, 15 August 1980

Ex 8

4. Definitions. Definitions are listed in Appendix B.

5. Responsibilities.

a. The Chief, Safety and Occupational Health Office, OCE is responsible for staff supervision of licensing, accountability, possession, use, storage, transfer and disposal of all radioactive sources. This responsibility shall be discharged by:

(1) Maintaining on staff a qualified individual to manage the Radiological Safety Program.

(2) Providing for staff coordination, administration, and technical review of all applications for NRC radioactive material licenses.

(3) Providing staff coordination, administration, technical review, and authorization regarding the possession or use of radioactive material not subject to NRC license control.

(4) Maintaining a record of radioactive sources, including a copy of current NRC licenses, letters of authority, correspondence, and related papers.

(5) Providing technical guidance and assistance in controlling radiation hazards.

(6) Providing consultation and special radiological surveys.

(7) Establishing and maintaining liaison with the US Nuclear Regulatory Commission, the Deputy Chief of Staff for Logistics, and The Surgeon General on matters pertaining to radioactive materials.

(8) Providing Command-wide safety management surveys to determine the adequacy of the radiation protection program on not less than a biennial basis.

b. Each FOA Commander or Director shall be responsible for insuring the radiological portion of the FOA safety programs is adequate. This responsibility shall be discharged by:

(1) Establishing a formal radiation safety program consistent with Federal and OCE directives and with status of forces agreements.

(2) Maintaining adequate resources to assure safety of personnel, property, and the environment and to cope with emergencies.

(3) Designating a qualified individual as FOA Radiation Protection Officer and alternate Radiation Protection Officer, and when required, a Radiation Protection Committee.

(4) Obtaining required licenses or authorizations prior to procurement, receipt, use, transfer, or disposal of radioactive material.

(5) Providing technical and administrative review of application for NRC licenses and DA and OCE authorizations.

(6) Insuring annual inspections are conducted to determine compliance with conditions of NRC licenses, Department of the Army and OCE authorizations.

(7) Maintaining a current inventory of radioactive materials and registry of ionizing radiation producing devices within its jurisdiction.

(8) Establishing procedures which will assure that the Safety Office is advised of any anticipated change in use of radiation sources or operations under its command and that the RPO has evaluated the hazards and procedures prior to utilization of such sources.

c. Each FOA Safety and Occupational Health Manager will be responsible for:

(1) Assuring the radiation protection portion of the FOA Safety and Occupational Health program complies with Federal and CE regulations.

(2) Assuring users are instructed in safe working practices, emergency procedures, harmful effects of radiation overexposure and other topics required by 10 CFR Part 19, and 29 CFR Part 1910.

(3) Reviewing equipment, materials, facilities, operations, and procedures and advising the commander of the FOA of any unsafe practices, defects or noncompliance with applicable regulations.

(4) Advising contractors in the proper procedures for obtaining service permits or authorizations for use of radioactive materials on DOD installations (see para 10).

d. FOA Radiation Protection Officer.

(1) The Radiation Protection Officer (RPO) is responsible for:

(a) Obtaining and insuring compliance with and complete documentation of the provisions of NRC licenses, Department of the Army, Department of the Air Force, and OCE permits or authorizations.

(b) Reviewing specific operations being conducted to evaluate the hazards and assure adequate controls and safeguards are used. This evaluation includes physical measurements or calculations of radiation levels that may be involved.

(2) The RPO must be technically qualified by virtue of education, training and/or experience to assure capabilities commensurate with the requirements of the assignment.

6. User Assignment and Qualifications.

a. Users of radioactive materials shall be selected from the unit or branch to which the equipment is assigned.

b. Personnel utilizing radioactive materials shall receive training in the hazards of radiation and the safeguards required when using radioactive material.

c. The Safety and Occupational Health Manager and RPO shall establish procedures which will assure that users have been trained in the hazards of radiation and are qualified to handle and use radioactive materials safely.

7. Allowable Exposures.

a. Exposure to ionizing radiation shall be kept to an absolute minimum consistent with essential operations and training. The standards set forth in 10 CFR Part 20 and Paragraph 6, AR 40-14 shall be strictly enforced.

b. Only authorized personnel with appropriate monitoring devices shall be permitted access to radiation areas.

8. Personnel Dosimetry.

a. Appropriate monitoring devices shall be used to measure the exposure of each individual who is likely to receive an accumulated dose of radiation in excess of 10 percent of the applicable quarterly basic radiation protection standard dose. (AR 40-14)

b. The standard dosimetric device shall be film badges. Direct reading dosimeters may be utilized to supplement the film badge for personnel exposed to X-ray and in areas where the individual is likely to receive more than 100 millirem in one hour.

c. Preplacement and termination medical and ophthalmological examinations will be given to all individuals who are likely to receive an accumulated dose of radiation in excess of 10 percent of the applicable quarterly radiation dose. (AR 40-14)

9. Exposure Records and Evaluation.

a. Exposure of personnel to ionizing radiation shall be reported and recorded in accordance with the requirements of AR 40-14. All exposures shall be recorded on DD Form 1141 (Record of Occupational Exposure to Ionizing Radiation) and shall become a permanent part of the employee's health record.

b. Any individual engaged in activities using radioactive materials shall, when such information is requested by the individual, be furnished records annually indicating the individual's radiation exposure.

c. The RPO or Personnel Office will, upon request of a former employee who was occupationally exposed to ionizing radiation, furnish a report of the employee's accumulated radiation exposure to the employee, or his/her current employer.

d. All exposure records shall be reviewed by the RPO to determine that exposures are being kept at the lowest possible level.

10. Nuclear Regulatory Licenses.

a. All applications for NRC licenses and correspondence related thereto shall be forwarded through command channels to DAEN-SOI. DAEN-SOI will review and forward applications to NRC.

b. Three (3) signed copies of NRC Form 313(I) (Application for Byproduct Material License), with three copies of each inclosure, executed in accordance with 10 CFR, Part 30, shall be forwarded so as to reach DAEN-SOI not later than ninety (90) days prior to the need for the license. NRC Form 313(I) is available through NRC Regional Offices.

c. Licenses by NRC are issued for five year periods based on information contained in the applications. Any change in use or personnel from the information contained in the license requires that an amendment be made to the license.

d. A request for amendment is made by submitting a letter, stating the desired changes, through command channels to CDR USACE (DAEN-SOI) WASH DC 20314. DAEN-SOI will review and forward request to NRC.

11. Department of the Army and Department of the Air Force Authorizations and Permits.

a. When USACE controlled radioactive material is used or stored on an active Army or Air Force installation, the appropriate Department of the Army (DA) or Department of the Air Force (DAF) radioactive material authorization must be obtained.

b. Application for DA authorization is submitted through USACE channels to DAEN-SOI on DA Form 3337 (Application For Department Of The Army Radiation Authorization or Permit) executed in accordance with AR 385-11.

c. Application for DAF authorization is submitted to the installation Environmental Health Section (in accordance with AFR 161-16) with a copy furnished to DAEN-SOI.

d. Contractors contemplating the use of radioactive materials or radiation producing equipment on an active DA or DAF installation must obtain the appropriate permit or authorization. A 45 day lead time should be allowed for obtaining a permit (see EM 385-1-1, Sec).

(1) DA permit requests should be submitted to the installation commander as described in AR 385-11.

(2) DAF authorization requests should be submitted to the installation Environmental Health Section as described in AFR 161-16.

(3) The Department of the Navy does not have a formal permit or authorization requirement; however, the installation Safety Office should be informed of the intended use.

12. OCE Authorization to Possess or Use Radioactive Material.

a. Radioactive materials in excess of one microcurie, not requiring a NRC license, DA, or DAF authorization, must be authorized for possession or use by OCE. Application for an OCE authorization is submitted on DA Form 3337 to DAEN-SOI at least 30 days prior to procurement of the equipment or material. FOA possessing other materials under a NRC license or DA authorization may submit their request by letter to OCE giving the manufacturer's name, model number, type of source, and activity of the source.

b. OCE authorizations are for a period of three years based on information provided on the application. Any deviation from the information stated in the application requires approval by OCE.

13. Application for Possession and Use of Radiation Producing Equipment.

a. Requests for the procurement, possession and use of radiation producing equipment such as X-ray machines, particle generators, particle accelerators, and other equipment capable of producing X-rays will be submitted by letter through normal channels to DAEN-SOI at least 30 days prior to procurement of the equipment.

b. As a minimum, the request shall provide the following information:

(1) Type of equipment and the manufacturer's model number of the equipment.

(2) The purpose for which the equipment is to be utilized.

(3) The instrumentation available to assure adequate monitoring during use.

(4) Detailed drawings and specifications used to determine the protective shielding provided by the facility.

(5) Voltage output of the machine.

(6) Workload of the equipment in millampres-minutes per week.

14. Inventory and Leak Tests.

a. The RPO shall physically inventory the radioactive sources on hand at least every six months and record the results of the inventory. Unless specifically exempted by a NRC license, DA authorization, or OCE authorization, all sealed sources will be leak tested at least every six months. Changes in use procedures, or location of sources will require leak tests. All leak tests will be recorded on ENG Form 3309-R (Record of Radioactive Material) (Appendix C) and filed with the appropriate license at the FOA.

b. If a leak test reveals the presence of 0.005 microcuries or more of removable contamination, the sealed source shall be immediately withdrawn from use. It shall then be decontaminated, returned to the manufacturer for repair, or disposed of in accordance with paragraph 18 of this regulation.

15. Radiological Surveys.

a. Upon request of the FOA commander, the Surgeon General will provide personnel to perform on-site surveys. Requests for assistance will be forwarded through command channels to DAEN-SOI.

b. Radiological surveys shall be made when there is a possibility of exposure to on and/or off-site personnel in excess of that allowed by 10 CFR, Part 20.

16. Storage.

a. Radioactive materials shall be stored in a fire-resistive building or within a fire-resistive inclosure.

b. The storage facility shall be locked and access controlled at all times.

c. Access to radioactive material in the stored condition shall be restricted so as to limit the exposure level to those limits in 10 CFR Part 20.

d. Appropriate radiation signs shall be posted as required by 10 CFR Part 20.203.

e. Only authorized personnel shall be allowed to enter the storage area. Time in the area shall be kept to a minimum.

f. Storage areas will be survey for radiation leakage at least every six months using appropriate equipment if stored materials have not been leak tested in that period.

17. Transfer of Radioactive Material.

a. The transfer of any radioactive material requires approval of the Chief of Engineers.

b. Requests for the transfer of radioactive materials shall be submitted through command channels to CDR USACE (DAEN-SOI) WASH DC 20314 on ENG Form 4790-R (Request for Authorization to Transfer Radioactive Materials) (Appendix D).

c. Upon receipt of authorization to transfer radioactive materials, the owning installation will prepare all shipping documents and NRC Form 314 (Certificate of Disposition of Materials) and forward a copy of NRC Form 314 to DAEN-SOI.

18. Disposal and Transportation of Radioactive Materials.

a. Radioactive materials shall be transported in accordance with 10 CFR, Part 71, 49 CFR, Part 173 or AR 385-11, whichever is applicable.

b. Moisture and density gauges identified for disposal will be returned to the manufacturer for removal of the source (see para 17).

c. Solid radioactive materials will not be disposed of locally unless approved by the Chief of Engineers, even when methods are approved by NRC and are not contrary to state regulations.

d. Disposal of radioactive effluents in unrestricted areas will be in accordance with 10 CFR, Part 20, provided local governments do not prohibit such disposal.

19. Notification of Incidents and Reports of Loss of Radioactive Materials.

a. Incidents or losses involving radioactive materials shall be reported immediately by telephone to DAEN-SOI as required by AR 385-40. (RCS: DD-AE(AR)1168).

b. Reports required by 10 CFR, Part 20 must be made and forwarded to DAEN-SOI. (RCS: DD-AE (AR)1168).

c. Accidents and incidents shall be investigated and reported as required by USACE Supplement 1 to AR 385-40. (RCS: DAEN-SO-8(R1)).

20. Reporting and Evaluation of Substantial Safety Hazards. Organizations which provide hardware and safety-related services to users of radioactive materials will report any noncompliance with existing licenses and any defects which relate to substantial safety hazards in accordance with 10 CFR, Part 21.

21. Procurement of Radioactive Materials. Radioactive materials will not be procured until the required NRC licenses, DA, DAF or OCE authorization have been received.

FOR THE COMMANDER:

JAMES W. RAY
Colonel, Corps of Engineers
Chief of Staff

4 Appendixes
APP A - References
APP B - Definitions
APP C - ENG Form 3309-R
APP D - ENG Form 4790-R

APPENDIX A

REFERENCES

1. Title 10, Code of Federal Regulations, Chapter 1, 1 Jan 81.

2. Title 29, Code of Federal Regulations, Part 1910, 1 Jul 80.

3. AR 40-5, Health and Environment, 25 Sep 74.

4. AR 40-14, Control and Recording Procedures for Occupational Exposure to Ionizing Radiation, 15 Mar 82.

5. AR 385-11, Ionizing Radiation Protection, 1 May 80.

6. USACE Supplement to AR 385-10, Army Safety Program, 16 Apr 80.

7. USACE Supplement to AR 385-40, Mishap Reporting & Records 5 Jul 79.

APPENDIX B

DEFINITIONS

For the purpose of this regulation the following terms shall be defined as:

1. Radioactive Material. Any material or combination of materials which spontaneously emits ionizing radiation, including natural elements such as radium and accelerator produced radionuclides.

2. Ionizing Radiation Producing Devices. Electronic devices which are capable of generating ionizing radiation such as X-ray machines, linear accelerators, cyclotrons, or radio frequency generators which produce X-rays.

3. Byproduct Materials. Any radioactive material (except special nuclear materials) yielded in or made radioactive by exposure to radiation incident to the process of producing or utilizing special nuclear materials.

4. Curie. A common measure of radioactivity which equals 3.7×10^{10} disintegrations per second (dps). Common submultiples of the curie are:

(a) millicurie (m Ci) = 3.7×10^{7} dps = 0.001 Curie (Ci)

(b) microcurie (m Ci) = 3.7×10^{4} dps = 0.000001 Curie (Ci)

5. License Material. Source, special nuclear material and byproduct material received, stored, possessed, used or transferred under a general or specific license issued by the US Nuclear Regulatory Commission.

6. Radiation Sources. Materials or devices which generate or are capable of generating ionizing radiation, including naturally occurring radioactive materials, byproduct materials, source material, special nuclear materials, fission products, materials containing induced or deposited radioactivity, radiographic and fluoroscopic equipment, particle generators and accelerators and other electronic equipment which utilize electron tubes to produce X-rays.

7. Sealed Source. Any radioactive material that is inclosed in, and is to be used in, a container intended to prevent leakage or escape of the radioactive material or any of its daughter properties.

8. Source Material. Uranium or thorium or any combination thereof, in any physical form or ores which contain by weight one twentieth of one percent 0.05 percent or more of uranium, thorium or any combination thereof.

9. RAD Unit of absorb dose equal to 100 ergs/gram.

10. Roentgen Special unit for measuring X and gamma radiation (2.58×10^{-4} coulombs/kg air). A roentgen of X radiation in the energy range of 0.1-3 MeV $\simeq$ 1 RAD.

11. REM Dose equivalent equal to absorbed dose (RAD) multiplied by a quality factor (QF), (REM = RAD X QF).

QF = 1 for X, gamma, or beta radiation
QF = 10 for neutrons or high energy protons
QF = 20 for particles heavier than protons with sufficient energy to reach the lens of the eye

12. Radiation Protection Survey. Evaluation of the radiation hazards incident to the production, use of existence of radioactive materials or other source of radiation in and around an installation or equipment.

13. Restricted Area. An area to which access is controlled for the purpose of protection of individuals from exposure to radiation and radioactive materials.

14. Radiation Protection Officer. An individual designated by the Division or District Commander or Commanding Officer of a separate installation or activity to administer the technical portion of the FOA's Radiation Protection Program.

APPENDIX C

RECORD OF RADIOACTIVE MATERIAL		
THRU:	TO:	FROM:

DEVICE CONTAINING SOURCE	SOURCE
NAME *(Source ret, density gauge, etc.)*	ELEMENT/ISOTOPE
	TYPE *(Form)*
MANUFACTURER	PRESENT AMOUNT OF ACTIVITY
	MANUFACTURER
MODEL NO.	
SERIAL NO.	MODEL NO.
AEC LICENSE NO.	SERIAL NO. (S)
NAME OF RADIATION PROTECTION OFFICER	

CHRONOLOGICAL RECORD

DATE	ACTION OR EVENT RECORDED *(Received from; transfer or disposal to; consumed, lead test, etc.)*	REMARKS *(Indicate lead test results in microcuries)*	INITIAL

FOR ILLUSTRATION PURPOSES ONLY
(Local reproduction authorized · blank masters available from local FMO)

ENG FORM 3309-R 1 JUL 80 REPLACES ENG FORM 3309, 1 OCT 84, WHICH MAY BE USED. *(ER 385-1-80)*

REQUEST FOR AUTHORIZATION TO TRANSFER RADIOACTIVE MATERIAL (ER 385-1-80)			DATE:
THRU:	TO:	FROM:	

1. REQUESTOR *(Field Operating Activity)*

NRC LICENSE, DA OR USACE AUTHORIZATION NUMBER:	NAME AND ADDRESS:

2. ITEMS TO BE TRANSFERRED

EQUIPMENT *(Source Containing or Using)*				SOURCE *(Radioactive Material)*	
TYPE	MANUFACTURER	MODEL	SERIAL NUMBER	ELEMENT AND MASS NO.	ACTIVITY

FOR ILLUSTRATION PURPOSES ONLY
(Local reproduction authorized · blank masters available from local FMO)

3. RECEIVER *(Field Operating Activity, Firm)*

NRC LICENSE, DA OR USACE AUTHORIZATION NUMBER:	NAME AND ADDRESS:	
TITLE *(Requesting RPO)*:	SIGNATURE:	DATE:

4. OCE/USACE APPROVAL:	COMMENTS:
☐ APPROVED ☐ DISAPPROVED	
TITLE *(RPO DAEN-SOI)*:	SIGNATURE: DATE:

ENG FORM 4790-R, May 82

(Proponent: DAEN-SO)