

License No. SUB-986
Docket No. 40-8006

Notice of Violation

Based on the results of the NRC inspection conducted on May 6, 1976, certain activities appear to be in noncompliance with NRC regulations and the conditions of your NRC License No. SUB-986 as indicated below:

1. Contrary to License Condition II, which requires that licensed material be possessed and used in accord with procedures contained in the application dated May 9, 1974, with addendums, access to the material in the five test pits located at the Kerr-McGee Corporation Technical Center was not protected by locked steel covers on May 6, 1976.

This is an infraction.

2. Contrary to 10 CFR 20.203(e)(2), two test pits containing 39.73 pounds and 44.15 pounds, respectively, of Uranium (natural) were not posted with signs bearing the radiation caution symbol and the words: CAUTION (or DANGER) RADIOACTIVE MATERIALS.

This is a deficiency.

4/11

INSPECTION & ENFORCEMENT - STATISTICAL DATA

FACILITY NAME Oklahoma City, Okla. INSPECTOR(S) C. M. Wiblin PRINCIPAL INSPECTOR _____
 LICENSEE/VENDOR Kerr-McGee Corporation REVIEWER _____

A-E TRANS-ACTION TYPE 1 (CHECK ONE) <input type="checkbox"/> Delete <input checked="" type="checkbox"/> Insert <input type="checkbox"/> Modify	DOCKET NUMBER (A) 2 9 <u>04008006</u> OR LICENSE NO. (BY PRODUCT) 2 15 _____	REPORT NO. (B) 16 19 <u>7601</u>	DATES INQ/INVEST/INSP FROM 20 25 TO 26 31 (C) <u>050676</u> M M D D Y Y (D) <u>050676</u> M M D D Y Y	REGION CONDUCTING ACTIVITY (E) 32 <u>4</u>
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TYPE OF ACTIVITY CONDUCTED (CHECK ONE BOX ONLY)
33-34

INSPECTION				OTHER
01 <input type="checkbox"/> ROUTINE (FEE)	05 <input type="checkbox"/> MANAGEMENT AUDIT	09 <input type="checkbox"/> MATL ACCT.	13 <input type="checkbox"/> IMPORT	14 <input type="checkbox"/> INQUIRY
02 <input checked="" type="checkbox"/> ROUTINE (NO FEE)	06 <input type="checkbox"/> MANAGEMENT VISIT.	10 <input type="checkbox"/> PLANT SEC.		15 <input type="checkbox"/> INVESTIGATION
03 <input type="checkbox"/> INCIDENT	07 <input type="checkbox"/> SPECIAL	11 <input type="checkbox"/> INVENT. VERIF.		(IF INVEST. ALSO CHECK BLOCK 0)
04 <input type="checkbox"/> ENFORCEMENT	08 <input type="checkbox"/> VENDOR	12 <input type="checkbox"/> SHIPMENT/EXPORT		

G INSPECTION OR INVESTIGATION: 1 ANNOUNCED 2 UNANNOUNCED

H INSPECTION/INVESTIGATION NOTIFICATION (CHECK ONE BOX ONLY)
36

1 591 2 REGIONAL OFFICE LETTER 3 REFERRED TO HOS FOR ACTION 4 REGION LETTER & HOS FOR ACTION

I INSPECTION/INVESTIGATION FINDINGS (CHECK ONE BOX ONLY)
37

1 CLEAR 2 NONCOMPLIANCE 3 DEVIATION 4 NONCOMPLIANCE & DEVIATION

J NUMBER OF NONCOMPLIANCE ITEMS IN LETTER TO LICENSEE: 02 (38 39)

K NUMBER OF DEVIATION ITEMS IN LETTER TO LICENSEE: 00 (40 41)

NOTE: CHANGE MUST BE SUBMITTED ON 766 WHENEVER PREVIOUSLY CITED ITEM OF NONCOMPLIANCE IS OFFICIALLY DELETED FROM THE RECORD.

L NUMBER OF NONCOMPLIANCE ITEMS IDENTIFIED BY LICENSEE (AND NOT CITED) 00 (42 43)

M NUMBER OF ABNORMAL OCCURRENCES REVIEWED ONSITE THIS INSPECTION 00 (44 45)

N REGIONAL OFFICE LETTER OR REPORT TRANSMITTAL DATE FOR INSPECTION OR INVESTIGATION

591 OR LETTER ISSUED TO LICENSEE (46 51) 051376 (M M D D Y Y)

REPORT SENT TO HOS FOR ACTION (52 57) _____ (M M D D Y Y)

O SUBJECT OF INVESTIGATION (CHECK ONE BOX ONLY)

TYPE A	10 CFR 20.403	TYPE B	10 CFR 20.405	MISC
01 <input type="checkbox"/> INTERNAL OVEREXPOSURE	06 <input type="checkbox"/>	11 <input type="checkbox"/> INT. OVEREXPOSURE	15 <input type="checkbox"/> CRITICALITY	21 <input type="checkbox"/> EQUIP. FAILURE
02 <input type="checkbox"/> EXTERNAL OVEREXPOSURE	07 <input type="checkbox"/>	12 <input type="checkbox"/> EXT. OVEREXPOSURE	16 <input type="checkbox"/> LOSS/THEFT	22 <input type="checkbox"/> ALLEGATION/COMPLAINT
03 <input type="checkbox"/> RELEASE TO UNREST. AREA	08 <input type="checkbox"/>	13 <input type="checkbox"/> EXCESS RAD. LEVELS	17 <input type="checkbox"/> MUF	23 <input type="checkbox"/> PUBLIC INTEREST
04 <input type="checkbox"/> LOSS OF FACILITY	09 <input type="checkbox"/>	14 <input type="checkbox"/> EXCESS CONC. LEVELS	18 <input type="checkbox"/> TRANSPORTATION	24 <input type="checkbox"/> SABOTAGE
05 <input type="checkbox"/> PROPERTY DAMAGE	10 <input type="checkbox"/>		19 <input type="checkbox"/> CONTAM/LEAKING SOURCE	25 <input type="checkbox"/> ABNORMAL OCCUR.
			20 <input type="checkbox"/> ENVIRONMENTAL EVENT	26 <input type="checkbox"/> OTHER

P HEADQUARTERS ENTRIES

HOS ACTION ON INSP/INVEST REFERRED BY REGION: (See Reference List for Code) (60 61)

Q DATE HQS ENFORCEMENT LETTER, NOTICE, ORDER ISSUED: _____ (62 67) (M M D D Y Y)

R CIVIL PENALTY ISSUED: 1 (68)

S DATE 766 ENTERED INTO COMPUTER FILE (MO/YR): _____ (69 72) (M M Y Y)

NOTE: BLOCKS I TO L MUST BE VERIFIED BY IE:HQS WHENEVER ENTRIES ARE MADE IN BLOCKS P, Q, AND R.

PP-25-8

AIIS REFERENCE: _____

UNITED STATES NUCLEAR REGULATORY COMMISSION

INSPECTION & ENFORCEMENT—STATISTICAL DATA SUPPLEMENT

GENERAL INSTRUCTIONS: BLOCK A MUST BE CHECKED TO SHOW TYPE OF INFORMATION CONTAINED ON THE FORM.
 ONE FORM IS TO BE COMPLETED FOR EACH:
 (A) ITEM OF NONCOMPLIANCE CITED.
 (B) ITEM OF NONCOMPLIANCE NOT CITED, AND,
 (C) DEVIATION CITED IN ENFORCEMENT CORRESPONDENCE

DOCKET NUMBER 04008006 OR LICENSE NUMBER _____ REPORT NUMBER 76-01

<p>A—TYPE OF FINDINGS (CHECK ONE BOX ONLY)</p> <p><input checked="" type="checkbox"/> 1 A NONCOMPLIANCE</p> <p><input type="checkbox"/> 2 B NONCOMPLIANCE (NOT CITED)</p> <p><input type="checkbox"/> 3 C DEVIATION</p>	<p>B—SPECIFIC NONCOMPLIANCE</p> <p>OR</p> <p>SPECIFIC DEVIATION</p> <p style="text-align: center;"> 3 M P A H R 2 8 </p> <p style="text-align: center;"> 3 7 8 17 </p> <p style="text-align: center;"> IDENTIFICATION SPECIFIC GUIDE OR STANDARD </p>
<p>C—HOW ITEM IDENTIFIED (CHECK ONE BOX ONLY)</p> <p><input type="checkbox"/> L LICENSEE</p> <p><input checked="" type="checkbox"/> 18 I INSPECTOR</p> <p><input type="checkbox"/> O OTHER</p>	<p>D—CONSEQUENCES (CHECK ONE BOX ONLY)</p> <p><input type="checkbox"/> A CAUSE OR CONSTITUTED ACTUAL OCCURRENCE</p> <p><input checked="" type="checkbox"/> 19 P HAD POTENTIAL TO RESULT IN ACTUAL OCCURRENCE</p> <p><input type="checkbox"/> N DID NOT HAVE POTENTIAL TO RESULT IN ACTUAL OCCURRENCE</p>
<p>E—EXEMPT INFORMATION</p> <p><input type="checkbox"/> 20 S CHECK BOX IF EXEMPT INFORMATION IS INCLUDED IN TEXT BELOW. PER 10 CFR 2.730</p>	<p>F—ADDITIONAL UNITS (ENTER "M" IN FIRST BOX FOLLOWED BY OTHER UNIT NUMBERS)</p> <p style="text-align: center;"> 21 24 </p>

G—TEXT (ENTER UP TO 800 CHARACTERS FOR EACH ITEM. IF THE TEXT OF THE NONCOMPLIANCE OR DEVIATION EXCEEDS THIS NUMBER, IT WILL BE NECESSARY TO PARAPHRASE)

<p>Contrary to License Condition 11, which requires that licensed material be possessed and used in accord with procedures contained in the application dated May 9, 1974, with addendums, access to the material in the five test pits located at the Kerr-McGee Corporation Technical Center was not protected by locked steel covers on May 6, 1976.</p>	50 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16)
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& E N D & NOTE: DATA ENTRY CLERK—THE LAST LINE ENTERED MUST CONTAIN THIS INFORMATION.

18. Radiological Safety Procedures (Written operating and emergency procedures, ~~availability of procedures~~, license and regulations, training, Form AEC-3, etc.) *were available.*
19. Personnel Monitoring and Exposure to External Radiation (Type of monitoring, range of exposures, supplier, period worn, exposure history, etc.) *Service provided by Sandauer, Glenwood, Del. Four individuals were provided whole body badges with a monthly exchange. 100% review of records indicated no exposure to March, 1976.*
20. Exposure of Employees to Airborne Radioactive Materials (Method of evaluation, type of samples, radioisotopes, records, bioassay, etc.)

None

21. Effluents to Unrestricted Areas (Types, source, measurements, flow rates, applicable MPC, analytical procedures, environmental samples, etc.)

None

22. Disposals (Methods, typical quantities, etc.)

110 lbs of U_3O_8 was shipped to Kerr-McBee Corp. in Grants, New Mexico on 12-10-73. Records of this transfer was maintained.

23. Miscellaneous Surveys, Evaluations and Records (External radiation levels, contamination levels, leak tests, etc.)

Contamination and radiation surveys are conducted in conjunction with other licenses. Records are maintained for these Bi-monthly Surveys. (60% review)

24. Special License Conditions

Were complied with except as noted in para. 16.

25. Posting and Labelling, Pits No 3 + 4 were not labeled pursuant to 10CFR20.203(e)(2). No 3 contained 39.73 lbs and No 4 contained 44.15 lbs of natural Uranium.

26. Independent Measurements (Type, results, comparison to licensee results, etc.)

No radiation levels were found to be greater than two mR/hr in unrestricted areas.

All measurements performed with R d/m No 517.

27. Operations Observed

None

28. Incidents, Overexposures, Theft or Loss, Equipment Malfunction (Those not described elsewhere should be reported here.)

None reported.

29. Other Information or Continuation from Previous Paragraphs

None

DRAFT INSPECTION REPORT FORM

1. Name and address of licensee
*Kerr-McGee Corporation
Mc Hae Tower
Oklahoma City, Oklahoma 73125*
2. Date of Inspection May 6, 1976
3. Type of Inspection R(3)
4. License number(s), docket number(s), number and date of last amendment for each license. Category and Priority of each licensee.
*SUB-786, Amend No. 5 dated June 20, 1974 E, III
Docket No. 40-8006*
5. Date of previous inspection May 26, 1972
6. Proprietary information
None
7. Scope of inspection if other than routine
Routine. Response to T.E. Bulletin dated 11/26/75 does not apply to this license.
8. Participants (Licensee representatives and titles, State representatives, etc.)
W. J. Robinson, man
9. Management Interview (Information required for N/C cases)
Performed with W.L. Utwage. The items of noncompliance and the NRC's inspection & enforcement policy were discussed. Mr. Utwage is the Technical Center Director, but the enforcement letter is to be sent to Mr. W.J. Shelley, Director, Regulation & Control.
10. Action and Date: Letter to Licensee
AEC-591 Clear _____
AEC-591 N/C _____
11. Recommend reinspection date May, 1978
12. Claude M. Whittin May 11, 1976
Inspector Date of Report
Go Brown 5/19/76
Reviewer Date of Review

13. Inspection Summary (Including violations and safety items, and status of previously reported violations and safety items, etc.)

A. No items of non-compliance were noted in the previous inspection.

B. Two items of apparent non-compliance were noted in this inspection.

1. Access to the test pits was not in accord with procedures.

2. Two test pits were not labeled pursuant to 10CFR20.203(e)(2).

14. Summary of Licensed Program (Kind of program, number of people, rate of use or quantities on hand, places and frequency of use, type, quantity and use as authorized, etc.)

Material is currently stored, has not been used since 1974.

15. Organization and Administration (Management organization, RSO, authorities and responsibilities, authorized users, qualifications, supervision, etc.)

W. L. UTRICK, Technical Center Director

W. J. Skelley, Director, Regulation and Control

W. J. Robinson, user

H. C. Eberling, user

16. Facilities (Use facilities, storage facilities, control of access, control devices and alarms, etc.)

Material was stored in 5 test pits or in a locked warehouse. Inventory sheets are attached. Access to the pits was not protected by locked steel covers as stated in the license application. Access to the warehouse was under key control.

17. Equipment (Devices utilizing licensed material, monitoring instrumentation, special equipment as glove boxes, hoods, handling tools, respirators, etc.)

Charlie E-120, calibrated 1 per year.

PAC-36, Alpha monitoring.

ORE LAYERS ARE 6' ϕ \sim 28.3 FT / FT. OF DEPTH

ORE WEIGHS \sim 130 LB/FT³

THUS: ORE LAYERS WEIGH $28.3 \times 130 = 3679$ LB/FT. OF DEPTH

PIT No. 1

$$6' \text{ OF } 0.24\% \text{ (U}_3\text{O}_8\text{) ORE: } 6 \times 3679 \times .0024 = \frac{\text{U}_3\text{O}_8}{52.98}$$

PIT No. 2

$$6' \text{ OF } 0.51\% \text{ ORE: } 6 \times 3679 \times .0051 = 112.58$$

PIT No. 3

$$6' \text{ OF SAND + Y.C. (.18\%): } 6 \times 3679 \times .0018 = 39.73$$

PIT No. 4

$$6' \text{ OF } 0.20\% \text{ ORE: } 6 \times 3679 \times .0020 = 44.15$$

PIT No. 5

$$\left. \begin{array}{l} 0.5' \text{ OF } 0.51\%: 0.5 \times 3679 \times .0051 = 9.38 \\ 5' \text{ OF } 0.083\%: 5 \times 3679 \times .00083 = 15.27 \\ 0.5' \text{ OF } 0.24\%: 0.5 \times 3679 \times .0024 = 4.41 \end{array} \right\} 29.06$$

252 CF TEST DRUM

$$4213 \text{ LB OF } 1.03\% \text{ ORE: } 4213 \times .0103 = 43.39$$

YELLOW CAKE BUCKET

$$\begin{array}{l} 30,277 \text{ G. @ } 2\% \text{ H}_2\text{O \& } 89\% \text{ U}_3\text{O}_8 \\ 30,277 \times .98 \times .89 = 26407 \div 454 = 58.16 \end{array}$$

ORE STORED IN DRUMS

(SEE ATT. SHEET) =

$$490.13 \times .85 \text{ (}^{30}\text{U}_3\text{O}_8\text{)} = 416.61 \text{ LB}$$

$$416.61 \div 2.2 = 189.37 \text{ Kg.}$$

$$146.84 \text{ kg U}$$

$$\begin{array}{r} 110.08 \\ 490.13 \\ \hline - 110.08 \\ \hline 380.05 \text{ lbs. U.} \end{array}$$

Thorium Inventory

	Material	Amount	Th Content	Pounds Th	
<i>Storage</i>	✓ Thorium Nitrate	5 lbs	x 0.407	2.0	
<i>about</i>	✓ Thorium Chloride	6.6 lbs	x 0.448	3.0	
<i>was prep</i>	✓ Thorite Concentrate	10 lbs	x 0.068	0.7	
	Monazite Hydrate	30 lbs	x 0.018	0.5	
<i>Storage</i>	Thorium Precipitate	15 lbs	x 0.135	2.0	
<i>55 gal Drum</i>	Thorium Precipitate	80 lbs	x 0.135	10.8	
	Monazite (Camden)	11 lbs	x 0.024	0.3	<i>used up</i>
			Total	19.3	