

EXPERT SYSTEM LICENSE EVALUATION  
EVALUATION REPORT FOR LICENSE 41-10185-01

Licensee: UNION CARBIDE CORPORATION  
Site of operation: LAWRENCEBURG, TENNESSEE

INFORMATION ON EXACT AMOUNTS OF MATL WAS NOT NEEDED TO EVALUATE

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THIS LICENSE WAS ELIMINATED FROM CONSIDERATION  
The reason for elimination was: TRANS. TO AGREEMENT STATE

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EXPERT SYSTEM EVALUATION WAS BASED ON THE  
INVENTORY RECORD IN JOB 0318, BOX 05

Docket

Licensee: UNION CARBIDE CORPORATION  
Address: LAWRENCEBURG, TENNESSEE Zip: 38464  
THIS LICENSE WAS LISTED AS BEING TRANSFERRED TO AN AGREEMENT STATE: TN  
State of operation: TN  
Site used: LAWRENCEBURG, TENNESSEE  
Disposition information present: NO DISPOSITION INFORMATION GIVEN  
This license was listed as expired on 08/31/66  
Remarks: ASSUMED TRANSF TO STATE OF TN WHICH BECAME AN AGREEMENT STATE 9/1/65  
JOB NUMBER: 0318 BOX NUMBER: 05

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A/46

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Reviewer's comments concerning potential TURNOVER OF MATERIALS

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DURING THE EARLY STAGES OF THE LICENSE (1960'S) THERE WAS PROBABLY CONSIDERABLE TURNOVER. THE MAJORITY OF THE LICENSE FILE CONCERNS THE PERIOD OF TIME WHEN THE FACILITY WAS MOTHBALLED (STANDBY STATUS) AND LICENSE ONLY COVERED CONTAMINATION. IT IS DIFFICULT TO ESTIMATE TURNOVER DURING THIS TIME, BUT IT IS CONSERVATIVELY ASSUMED TO BE FREQUENT. THE LICENSE WAS NOT TERMINATED UNTIL 1974, BUT OPERATIONS APPEARED TO HALT CONSIDERABLY BEFORE THAT TIME (1966?)

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7. There was limited use of glove boxes, hoods, or protective clothing
8. Contaminated material was probably appropriately disposed of  
No change in rank
9. There was significant generation of waste material in routine cleanup of facility. Rank=rank\*1.5
10. Contaminated waste material from cleanup was probably appropriately disposed of. Rank=rank\*1.0
11. No documentation of materials disposition, or very inadequate  
Rank=rank\*1.2
12. There was no information in file indicating burial or dumping by licensee. Rank not changed
13. There WAS a closeout survey for this license. Change in rank depends on the quality of survey.
14. The closeout survey was conducted in the period 1970-1980  
Rank=rank\*.85
15. There was some check for alpha contamination, but not thorough.  
Rank=0.85\*rank
16. There was NOT an NRC FINAL INSPECTION of the facility. Rank not changed.

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CATEGORY FOR POTENTIAL SITE CONTAMINATION:  
HIGHEST PRIORITY-Category 1A

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The final ranking for SITE CONTAMINATION is: 15456
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Description of THE LICENSEE ACTIVITY AUTHORIZED by this license

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FILE IS VAGUE ABOUT ACTIVITIES AND MATERIALS. HOWEVER, WEAPONS-GRADE (93% ENRICHED) URANIUM WAS BEING USED. ONE ACTIVITY WAS CONVERSION OF URANIUM OXIDE TO URANIUM DICARBIDE IN CONVERSION FURNACES.

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THERE WAS SUPPOSEDLY A CLOSEOUT SURVEY CARRIED OUT BY TODD RESEARCH CORP, WHICH DECONTAMINATED THE FACILITY. HOWEVER, REVIEWER COULD NOT FIND A COPY OF THE SURVEY IN THE FILE (ALTHOUGH AEC CORRESPONDENCE INDICATES IT SHOULD BE THERE). THERE IS A COPY OF A SURVEY CARRIED OUT BY AEC REGION INSPECTOR IN 1974. THE SURVEY DID CHECK FOR ALPHA. DURING THE LATE 1960'S AND EARLY 1970'S SEVERAL BLDGS AT THE FACILITY WERE RELEASED FOR UNRESTRICTED USE BASED ON LICENSEE SURVEYS OF THE BLDGS. ONE WAS A HIGH BAY, WHERE THERE MAY HAVE BEEN MATERIALS STORAGE. IT IS DIFFICULT TO TELL FROM THE INFORMATION IN THE FILES HOW GOOD THE SURVEYS WERE. (A) IT IS HARD TO TELL WHAT THE LICENSEE WAS DOING IN THE VARIOUS BLDGS, SO DIFFICULT TO ESTIMATE THE NEED FOR A SURVEY IN ANY ONE BLDG. (B) IT IS HARD TO TELL WHAT THE POSSESSION LIMITS WERE (THE VALUE OF 475000 GRAMS OF U-235 WAS OBTAINED FROM AN AEC LETTER TO UNION CARBIDE) (C) THERE WAS CLEARLY NO SURVEY AT ANY TIME OF THE GROUNDS OUTSIDE THE BLDGS (EXCEPT AFTER THE EXPLOSION WHERE VALUES OF 11-44 pCi/G WERE OBTAINED IN SOIL SAMPLES). (D) THE SURVEYS APPEARED TO CHECK ONLY FOR ALPHA, AND MAY HAVE DONE SO ONLY AFTER PAINTING OF THE FLOORS AND WALLS HAD TAKEN PLACE (THIS AGAIN IS HARD TO DETERMINE EXACTLY). IT IS NOT CLEAR WHY BETA-GAMMA READINGS WERE NOT OBTAINED.

IN SUMMARY, THIS FACILITY HAS A HIGH POTENTIAL FOR CONTAMINATION AND SHOULD BE RECHECKED.

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EXPERT SYSTEM EVALUATION WAS BASED ON THE  
INVENTORY RECORD IN JOB 0336, BOX 06

Docket 70-00784

Licensee: UNION CARBIDE CORPORATION  
Address: LAWRENCEBURG, TENNESSEE  
State of operation: TN  
Disposition information present: NO DISPOSITION INFORMATION GIVEN  
A closeout survey was conducted for this license by NRC-  
This license was listed as terminated on 06/04/74  
Remarks:

Zip: 38464

JOB NUMBER: 0336      BOX NUMBER: 06

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CONTENTS OF  
INVENTORY RECORD IN JOB 0347, BOX 14

Docket 70-00784

Licensee: UNION CARBIDE CORPORATION  
Address: LAWRENCEBURG TENNESSEE  
State of operation: TN  
Disposition information present: NO DISPOSITION INFORMATION GIVEN  
A closeout survey was conducted for this license by NRC-  
There is an NRC verification letter in this license file  
This license was listed as expired on 05/31/67  
Remarks:

Zip: 38464

JOB NUMBER: 0347      BOX NUMBER: 14

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