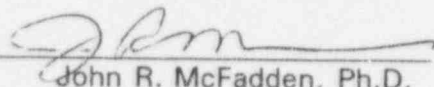


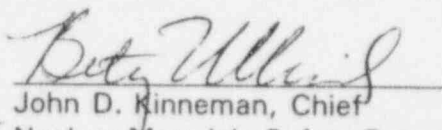
U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Report No. 040-08936/96-001 Program Code 11300
Docket No. 040-08936
License No. STB-1505 Priority 3 Category E
Licensee: B & B Tool Co.
83 Erna Avenue
Milford, CT 06460
Facility Name: B & B Tool Co.
Inspection At: 83 Erna Avenue
Milford, CT 06460
Inspection Conducted: November 7, 1996

Inspector: 
John R. McFadden, Ph.D.
Health Physicist

12-05-96
date

Approved By: 
John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

12/5/96
date

Inspection Summary: Announced inspection conducted on November 7, 1996.

Areas Inspected: Organization and scope of licensed activities, review of previously-identified inspection open items, facilities, equipment and instrumentation, materials receipt, use, transfer, and control, area radiation surveys and contamination control, radioactive waste management, record keeping for decommissioning, and NRC inspector's measurements.

Results: Five apparent violations were identified: failure of radiation safety consultant to visit facility semi-annually (Section 3); failure to calibrate survey instruments in 1995 and 1996 (Section 5), failure to document monthly the survey and inspection results and to retain the documentation for the storage period (Section 7), failure to seek disposal of the waste (Section 8), and failure to submit a certification of financial assurance in accordance with 10 CFR 40.36 within 90 days of receipt of the license amendment (Section 9).

DETAILS

1. Person Contacted and Present at Exit Meeting

John Butka, Building and business owner and operator

2. Organization and Scope of Licensed Activities

Mr. Butka owns and operates a small (two persons) machine shop (B & B Tool Co.) in the rear (north side) of the building which he owns at 83 Erna Avenue in Milford, Connecticut. The rest of the first floor and the second floor is leased to another machining company. The licensee is authorized to possess thorium in the form of magnesium-thorium alloy (less than 4% thorium) in the form of waste soil and debris in an amount not to exceed 12 cubic meters (55 55-gal drums) for possession only, pending access to a facility for disposal. This waste is the byproduct of the licensee's previous machining activities (machining chips) and a fire involving stored machining chips (waste soil and debris). Originally, this licensee received the licensed material as castings from another licensee (AVCO Lycoming) for whom this licensee performed specified machining operations (machining of aircraft engine mainframes, turbines, gearboxes, and compressors) and then returned the machined parts and machining chips to the provider. The licensee reported that the customer refused to take back the machining chips, after a change was made, from dry machining to machining with coolant to reduce the fire hazard. The licensee stated that no machining of licensed material has occurred since the license was amended on July 12, 1995, and that, in the process of redrumming some of the waste which was necessitated by the deterioration of the original drums, there were now only 44 drums due to volume reduction based on settling and manual compaction efforts. The licensee reported that the current radiation safety officer, Ms. Halide J. Caine, had given notice that she could no longer serve as radiation safety officer, due to her increased traveling schedule, and the licensee stated that she was going to be replaced, in the near future, by a hazardous waste consulting company, HRP Associates, Inc. (167 New Britain Avenue, Plainville, CT 06062, 1-800-246-9021). The licensee was advised by the inspector, in a telephone discussion, after the inspection, that a written notification to the NRC is required, when there is a change of radiation safety officers.

No violations or safety concerns were identified.

3. Review of Previously-Identified Inspection Open Items

(Closed) Violation 91-001-A: failure to confine possession and use of licensed material to locations and purposes authorized by the license. Current possession and use of licensed material is in accordance with the license.

(Open) Violation 91-001-B.1: failure of radiation safety consultant to visit licensee's facility quarterly, and meet with the radiation safety officer, to review the radiation safety program. Audits and reviews by a radiation safety consultant have not been taking place; however, the current scope of licensed activities are severely curtailed from previous operations, and thus, the need for such had been deemed unnecessary

by the licensee; the fact that the licensee must correct this violation in a license amendment request was discussed with the licensee by the inspector in a telephone discussion after the inspection. Subsequent to the issuance of this subject violation, the licensee requested via a letter dated April 9, 1992, that the frequency of facility visits by the radiation safety consultant be changed to semi-annual. Condition 18, of the current license dated July 12, 1995, requires that licensed material be possessed and used, in accordance, with the statements, representations, and procedures contained in a letter dated April 9, 1992, which requires that the radiations safety consultant conduct facility visits on a semi-annual basis.

Failure of the radiation safety consultant, to conduct semi-annual facility visits to review the radiation safety program, in 1995 and 1996, is an apparent violation of the above-cited requirement.

(Open) Violation 91-001-B.2: failure to perform survey meter calibrations for the year 1990. There is an apparent repeat violation. See Section 5 of this report.

(Closed) Violation 91-001-C: failure to mark inner or outerpackaging packages containing limited quantities, except radioactive materials, as "Radioactive" and failure to certify excepted radioactive materials prepared for shipment, as being acceptable, for transportation by an enclosed notification so stating. This violation occurred when the licensee was shipping machined parts back to the customer. The licensee stated that there have been no shipments of machined parts since July 12, 1995; there are no machined parts in storage awaiting shipment; and machining of parts is no longer authorized by the license.

4. Facilities

A diagram of the first floor of the facility, at 83 Erna Avenue, is attached (Attachment 1). Licensed material is stored in two locations, a Trailer B outside the northeast end of the building and a covered storage area C, at the northwest end of the building. There were twenty 55-gallon drums (two rows of ten each) in Trailer B. There were twenty-four 55-gallon drums (two rows of six each piled two high) in the covered storage area C, which were covered with a blue plastic tarpaulin.

No violations or safety concerns were identified.

5. Equipment and Instrumentation

Survey instrument calibrations for 1995 and for 1996 apparently had not been performed. No calibration records were available to verify compliance with this requirement. Condition 18 of the current license dated July 12, 1995, requires that licensed material be possessed and used in accordance with the statements, representations, and procedures contained in an application dated November 26, 1986. Item 13, in the cover letter, for the application dated November 26, 1986, requires that survey instruments be calibrated at least annually.

Failure to calibrate survey instruments in 1995 and 1996 is an apparent violation of the above-cited requirement.

6. Materials Receipt, Use, Transfer, and Control

The licensee reported that there has not been any receipt, use, or transfer of licensed material since the issuance of Amendment No. 5 (July 12, 1995) of this license. Of the two storage areas for licensed material, Trailer B has a locked pull-down door at its eastern back end, and the covered storage area C is enclosed on its southern and eastern sides by the building and on its western and northern sides by a tall chain-link fence with a locked swinging gate.

No violations or safety concerns were identified.

7. Area Radiation Surveys and Contamination Control

Condition 12 of the current license dated July 12, 1995 requires that the licensee or its representative conduct surveys in the waste storage area monthly and that smear surveys and direct exposure rate surveys shall be taken at the outer accessible surfaces of the drums containing radioactive wastes. The licensee stated that the surveys had been performed through October 1996.

Condition 13 of the current license dated July 12, 1995 requires that accessible drums shall be visually inspected for physical integrity and adequate labeling monthly. The twenty drums in Trailer B were visible, and their physical integrity appeared adequate. The twenty-four drums in covered storage area C were covered by a blue plastic tarpaulin and thus, were not visible. But, based on the solid feel of the lower drums and no visible sagging and the sharp outline produced by the upper drums against the tarpaulin, the physical integrity of these twenty-four drums appeared adequate.

No records of survey and inspection results were available to be reviewed by the inspector. Condition 14 of the current license dated July 12, 1995 requires that survey and inspection results shall be documented monthly and retained for the storage period.

Failure to document monthly the survey and inspection results and to retain the documentation for the storage period is an apparent violation of the above-cited requirement.

8. Radioactive Waste Management

The licensee stated that no waste had been sent for disposal as of the date of this inspection. He indicated that he was unaware that the site in Barnwell, South Carolina was open and that he was waiting for a Connecticut compact site to become available. The site in Barnwell was reopened, to out-of-state radioactive waste, on July 1, 1995.

Condition 15 of the license, dated July 12, 1995, requires that the licensee shall seek disposal of the waste as soon as an acceptable disposal site is identified and the licensee has access to that facility and that the licensee shall send at least five 55-gallon drums of waste for disposal each year, in the event that access to a disposal site is identified.

Failure to seek disposal of the waste is an apparent violation of the above-cited requirement.

9. Recordkeeping for Decommissioning

The licensee stated that a certification of financial assurance in accordance with 10 CFR 40.36 had not been submitted as of the date of this inspection, November 7, 1996. The license indicated that, since the cost of storage was so low, he did not believe that financial assurance was necessary. The inspector informed the licensee that financial assurance was meant to cover storage and all disposal costs. The issue date of the current license was July 12, 1995, and, assuming that the licensee received the license within seven days, the date on which 90 days past receipt would have occurred was approximately October 17, 1995.

License Condition 16, of the current license dated July 12, 1995 requires that the licensee shall submit a certification of financial assurance in accordance with 10 CFR 40.36 within 90 days of receipt of this license amendment.

Failure to submit a certification of financial assurance in accordance with 10 CFR 40.36 within 90 days of receipt of the license amendment is an apparent violation of the above-cited requirement.

10. NRC Inspector's Measurements

Independent measurements were made with a Bicron MicroRem Survey Meter, NRC Serial No. 033432, calibrated on November 29, 1995. General area dose rate measurements were made in the B & B Tool Co.'s machine shop, in the two waste storage locations, and in parking lot and driveway areas adjacent to the shop and storage locations. Readings in close proximity to the waste drums ranged from 200 to 400 microrem per hour. No readings above background were noted away from the two drum storage locations.

Five surface smears were taken, and the locations smeared and the results of surface smears are attached (Attachment 2). No removable radioactivity was identified by these smears.

A polaroid camera was used to take photographs. A listing of photographs taken is attached (Attachment 3).

No violations or safety concerns were identified.

11. Other Issues

The licensee discussed several ideas which he was considering for dealing with the stored thoriated magnesium waste, as follows: first, having the waste melted and fabricated into handcarts; second, having the waste compacted into flat dense disks for volume reduction; and third, transferring the waste to a metal reclamation firm in Cleveland, Ohio. The firm in Cleveland would require a sample (approximately 0.25 cubic foot) from each drum for testing and obtaining satisfactory testing results prior to acceptance of each drum. The licensee was advised by the inspector that written NRC approval would be required prior to any use or activity involving the waste which was not specifically authorized in the current license.

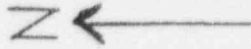
No violations or safety concerns were identified.

12. Exit Interview

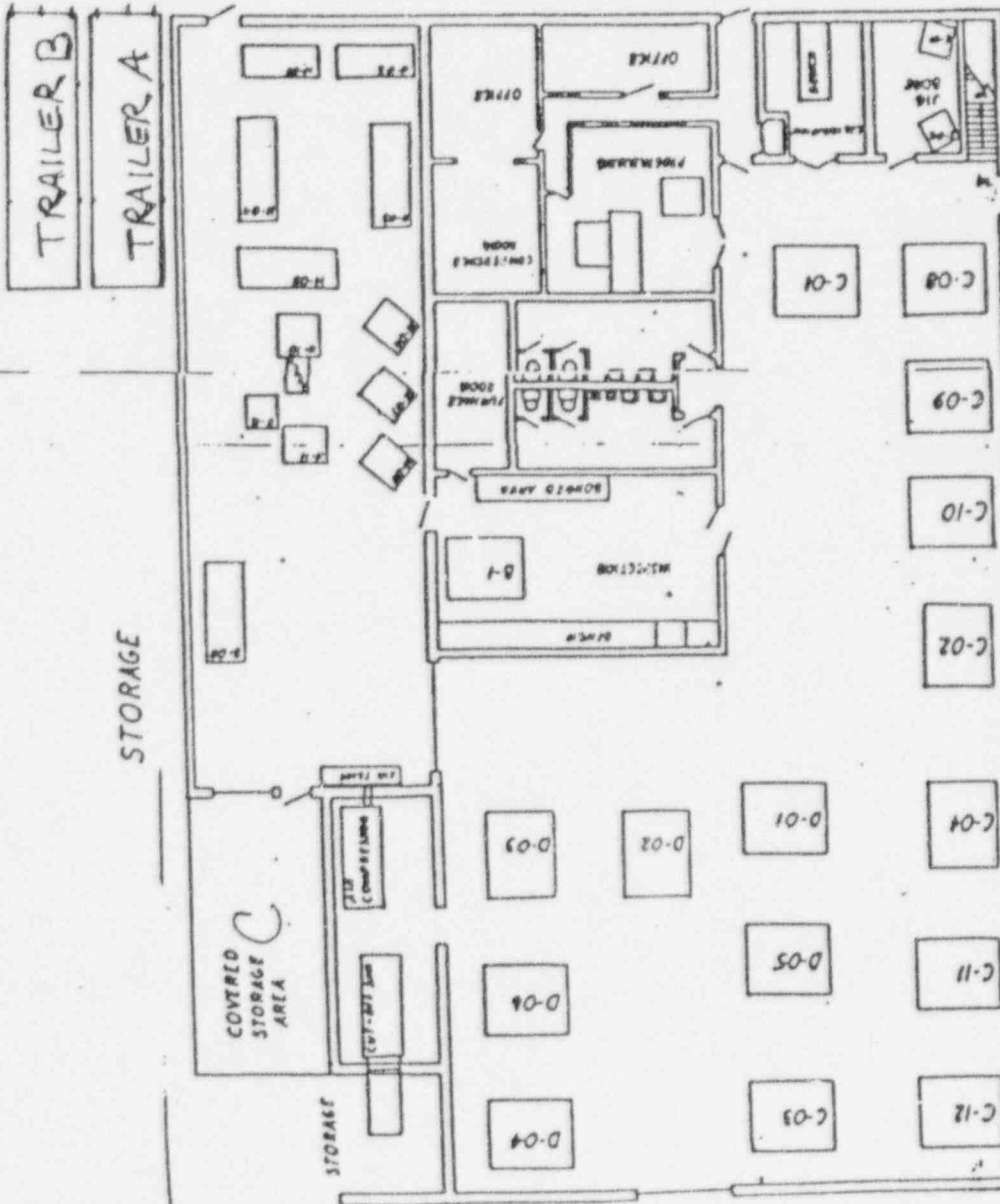
The findings of the inspection were discussed with the individual identified in Section 1 of this report at the conclusion of the inspection. The four apparent violations discussed in Sections 5, 7, 8, and 9, the status of previously-identified inspection open items cited in Section 3, and the caution concerning prior NRC approval cited in Section 11 were reviewed.

Hilford Plant #2

Attachment 1



PARKING AREA



DATE	BY	REVISION	DESCRIPTION
10/1/88	J. HILFORD	1	PLANT #2 LAYOUT
10/1/88	J. HILFORD	2	PLANT #2 LAYOUT
10/1/88	J. HILFORD	3	PLANT #2 LAYOUT
10/1/88	J. HILFORD	4	PLANT #2 LAYOUT
10/1/88	J. HILFORD	5	PLANT #2 LAYOUT
10/1/88	J. HILFORD	6	PLANT #2 LAYOUT
10/1/88	J. HILFORD	7	PLANT #2 LAYOUT
10/1/88	J. HILFORD	8	PLANT #2 LAYOUT
10/1/88	J. HILFORD	9	PLANT #2 LAYOUT
10/1/88	J. HILFORD	10	PLANT #2 LAYOUT
10/1/88	J. HILFORD	11	PLANT #2 LAYOUT
10/1/88	J. HILFORD	12	PLANT #2 LAYOUT
10/1/88	J. HILFORD	13	PLANT #2 LAYOUT
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10/1/88	J. HILFORD	16	PLANT #2 LAYOUT
10/1/88	J. HILFORD	17	PLANT #2 LAYOUT
10/1/88	J. HILFORD	18	PLANT #2 LAYOUT
10/1/88	J. HILFORD	19	PLANT #2 LAYOUT
10/1/88	J. HILFORD	20	PLANT #2 LAYOUT
10/1/88	J. HILFORD	21	PLANT #2 LAYOUT
10/1/88	J. HILFORD	22	PLANT #2 LAYOUT
10/1/88	J. HILFORD	23	PLANT #2 LAYOUT
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10/1/88	J. HILFORD	75	PLANT #2 LAYOUT
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83 ERNA AVE

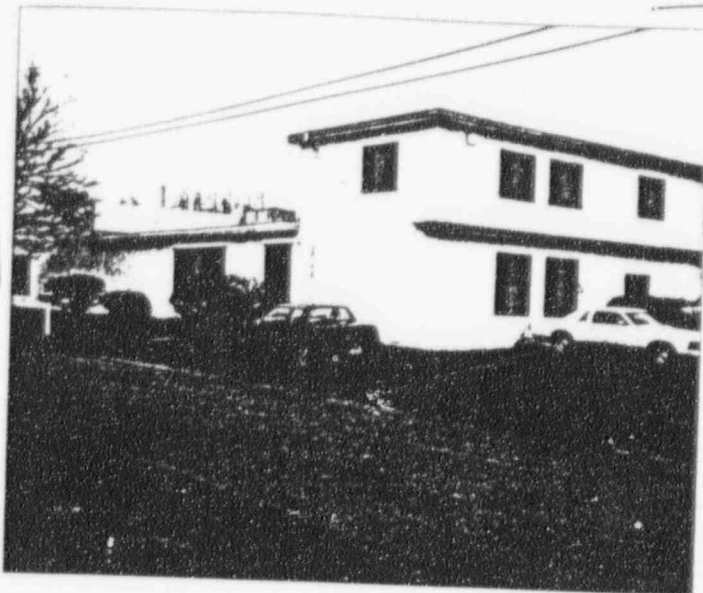
Attachment 2. Results - Surface Smears*

<u>Smear Number</u>	<u>Location</u>	<u>(dpm σ /100 cm²)</u>
1	Trailer B, Floor, Between door & drums	-1.9 \pm 1.2
2	Trailer B, Side of drum, First row, Left drum	0 \pm 1.5
3	Trailer B, Side of drum, First row, Right drum	2 \pm 2
4	Covered storage area C, Surface of blue tarp covering drums, Spot at chest level and nearest entrance to building	-1.4 \pm 1.3
5	Concrete pad, Top surface, Spot on line between drums and nearest entrance to building, Two feet from drums	-1.9 \pm 1.2

*Random uncertainties reported are 1 standard deviation (1 σ); the lower limit of detection (LLD) was 6 dpm σ /smear.

Attachment 3. Listing of Photographs

<u>No.</u>	<u>Location</u>
1	Toward southeast corner of building at a distance of 50 feet, front door visible at left of center
2	Toward southeast corner of building at a distance of 50 feet, trailers visible at extreme right of center
3	Toward northeast corner of building at a distance of 30 feet, back ends of two trailers visible
4	Toward northeast corner of building at a distance of 30 feet, back ends of two trailers visible and door into area occupied by B & B Tool Co. visible at left of center
5	Toward inside of Trailer B at roll-up door, drums visible in center
6	Toward inside of Trailer B at five feet inside roll-up door, drums visible in center
7	Toward northwest corner of building at a distance of 50 feet, Covered storage area C visible in center, drums stacked two high and covered with blue tarp visible left of center
8	Toward northwest corner of building at a distance of 25 feet, Covered storage area C visible in center, drums stacked two high and covered with blue tarp visible left of center
9	Toward northwest corner of building at a distance of 5 feet, drums stacked two high and covered with blue tarp visible in center
10	Toward northwest corner of covered storage area C, from entrance to inside of building, drums stacked two high and covered with blue tarp visible in center and concrete pad visible in foreground
11	Radiation survey and counting instruments displayed in office on second floor of building



1



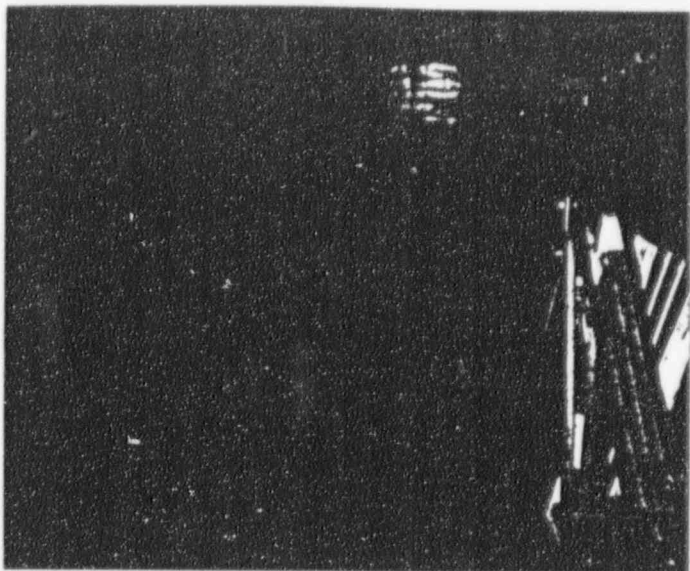
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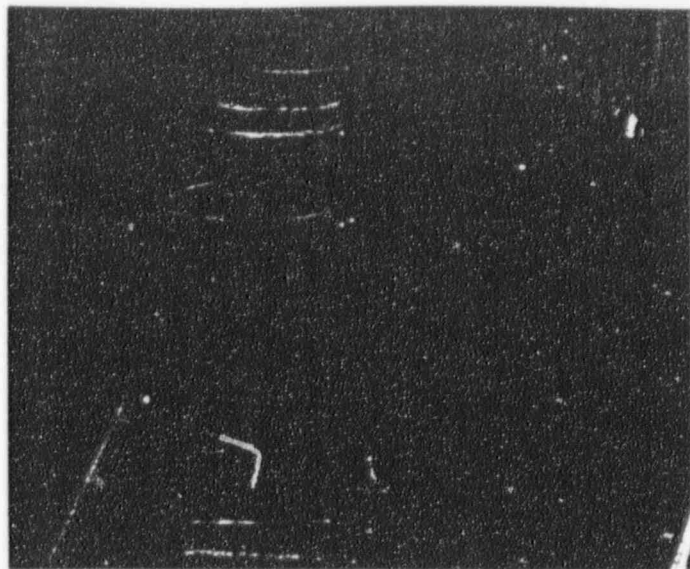
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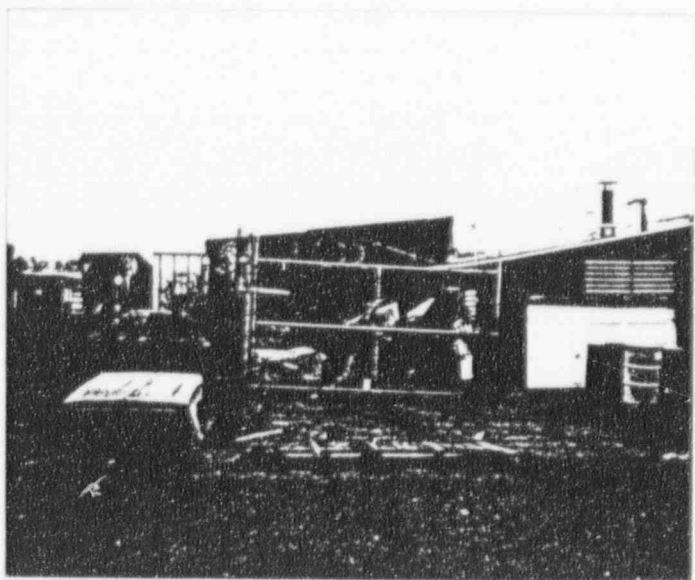
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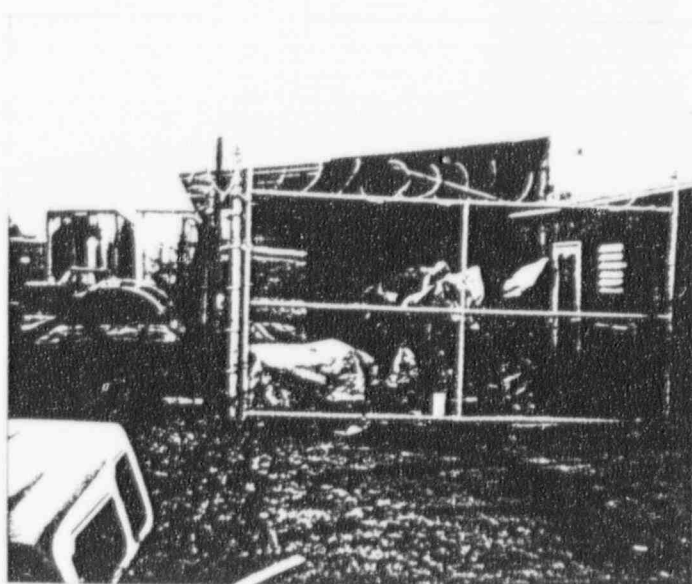
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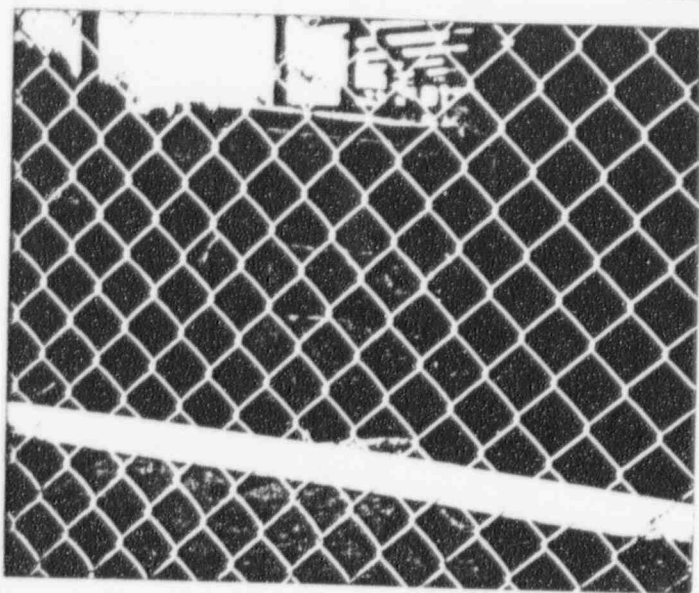
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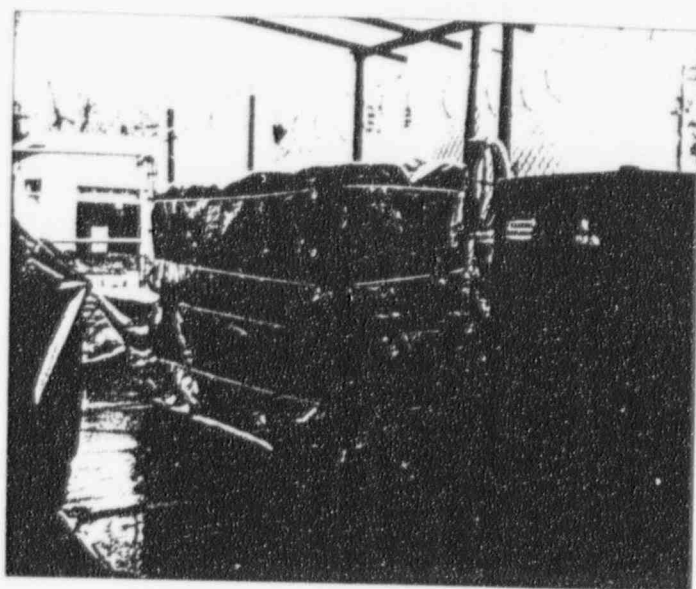
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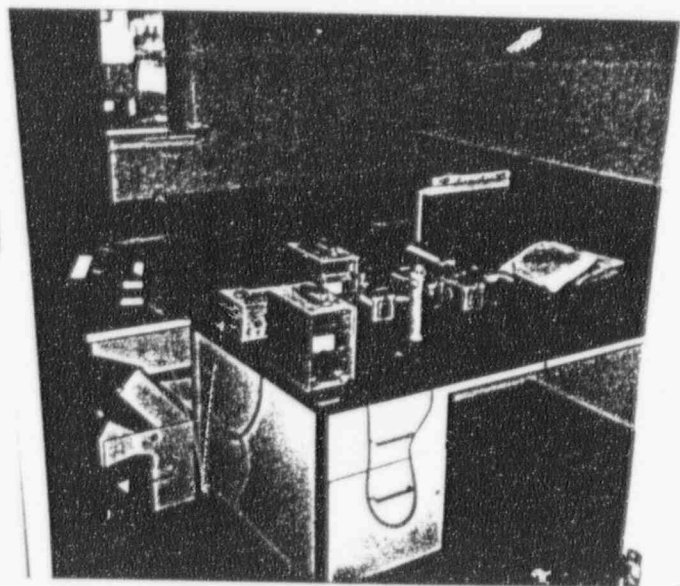
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