CONSOLIDATED ALUMINUM

314-878-6950
TWX 910-760-1693

August 21, 1986

Dr. Bruce Mallett
U. S. Nuclear Regulatory Commission, Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Reference: Source Material License
No. STB-1097

Dear Sir:

Consolidated Aluminum Corporation is the holder of NRC license STB-1097 for the use of thorium, a source material, in the manufacture of magnesium base thorium alloys, and for long-term storage of thorium-magnesium sludge on company owned land contiguous to the processing plant. The expiration date for the current license is July 31, 1987.

Consolidated Aluminum Corporation, upon NRC approval of the license for Spectrulite Corporation wishes to amend its license to include only the storage of the thorium-magnesium sludge on the property contiguous to the plant. Spectrulite Corporation has agreed to purchase the manufacturing plant and the land on which it is placed as well as assume the possession of all licensed materials and any residual contamination on the portion of the property that they purchased. We therefore wish to delete all responsibilities for the handling and ownership of those materials other than that which applies to the safe storage of the waste products. Consolidated Aluminum Corporation will continue to limit access to the storage areas and follow all requirements for those areas as specified in the current license. No waste receipt, movement of wastes, or waste removal will occur at this storage site other than for site characterization purposes without notification and approval of the Nuclear Regulatory Commission.

Attached is an application for revisions to license STB-1097 to reflect the circumstances cited above. The revised license would incorporate the current decommissioning plan for the area to be retained by Consolidated Aluminum. Consolidated has initiated certain site characterization studies to identify the most appropriate long-term approach for managing the materials in this area. Consolidated will review the study results with NRC when available to identify any further license revisions which may be necessary at that time.

Since it is of essence to handle the licensing aspects of this property transfer so that the manufacturing operations can continue uninterrupted, we hope that you can handle this request expeditiously. Please advise me by telephone if you require additional information.

Sincerely,

William R. Mura

William R. Mura
Manager
Power/Environmental Control

WMR:on
Attachment

R. F. Braun
Vice President

10 CFR 30, 32, 33, 34
35 and 40

APPLICATION FOR MATERIAL LICENSE

3150-0120
Expires 5-31-87

INSTRUCTIONS SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW

FEDERAL AGENCIES FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF FUEL CYCLE AND MATERIAL SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND OR VERMONT, SEND APPLICATIONS TO

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIAL SECTION B
631 PARK AVENUE
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
MATERIAL RADIATION PROTECTION SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30323

IF YOU ARE LOCATED IN

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
MATERIAL RADIATION PROTECTION SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- [ ] A. NEW LICENSE
- [X] B. AMENDMENT TO LICENSE NUMBER STB-1097
- [ ] C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

CONSOLIDATED ALUMINUM CORPORATION
11960 Westline Industrial Drive
St. Louis, MO 63146

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

CONSOLIDATED ALUMINUM CORPORATION
College and Weaver Streets
Madison, IL 62060

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

William R. Mura, Manager, Power/Environmental Control

TELEPHONE NUMBER: (314) 851-2502

SUBMIT ITEMS 5 THROUGH 11 ON 8½ x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT

10. RADIATION SAFETY PROGRAM

11. WASTE MANAGEMENT

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)
FEE CATEGORY: 2-G
AMOUNT ENCLOSED $: 120.00

13. CERTIFICATION (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001, ACT OF JUNE 25, 1948, 62 STAT. 749, MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

SIGNATURE, CERTIFYING OFFICER	TYPED/PRINTED NAME	TITLE	DATE
R. T. Braun	R. T. BRAUN	VICE PRESIDENT	8/21/86

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS
- [ ] < $250K
- [ ] $250K - 500K
- [ ] $500K - 750K
- [ ] $750K - 1M
- [ ] $1M - 3.5M
- [ ] $3.5M - 7M
- [ ] $7M - 10M
- [X] > $10M

b. NUMBER OF EMPLOYEES (Total for entire facility excluding outside contractors): 375

c. NUMBER OF BEDS: N/A

d. WOULD YOU BE WILLING TO FURNISH COST INFORMATION (dollar and/or staff hours) ON THE ECONOMIC IMPACT OF CURRENT NRC REGULATIONS OR ANY FUTURE PROPOSED NRC REGULATIONS THAT MAY AFFECT YOU? (NRC regulations permit it to protect confidential commercial or financial - proprietary - information furnished to the agency in confidence)

[X] YES To the extent resources permit [ ] NO

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
			CONTROL NO. 8[illegible] RECEIVED	
AMOUNT RECEIVED	CHECK NUMBER			DATE
			1986	

PRIVACY ACT STATEMENT ON THE REVERSE

5. Radioactive Material

a. Element: Thorium (228, 230 and 232)

b. Chemical/physical form: Magnesium-Thorium Sludge

c. 1.5 million kg.

6. Purpose:

Long-term storage

7. Responsible individual:

Dr. Kenneth R. Baker, under contract with Roy F. Weston, Inc. (Resume attached as Exhibit A)

8. Training:

Prior to assignment to work requiring access to the restricted area, all personnel will be given training on the procedures and instrumentation to be used in handling of contaminated materials, protective clothing and equipment and procedures to be used, and self-monitoring upon entry and exit from the area.

9. Facilities and equipment:

Magnesium-thorium sludge is stored on a curbed asphalt pad and covered with Hypalon, with warning signs posted in accordance with applicable regulations, thus restricting access.

A site map is attached as Exhibit B.

10. Radiation safety program:

Personnel will not be routinely present within the storage area. Should it be necessary for workers to be present within the storage area for site maintenance, their exposures will be monitored using Landauer film badges and Victoreen Model 440 Survey Meters or equivalent. Radiation surveys and associated record maintenance will be performed by or under the direction of a qualified health physicist. As stated in Item 7, the overall radiation safety program will be coordinated by Dr. Kenneth R. Baker.

11. Waste management:

Subject material is a waste which is in long-term storage. No new material will be brought on-site. Decommissioning is addressed in the decommissioning plan which is part of the current license.

EXHIBIT A

Kenneth R. Baker, Ph.D.

Fields of Competence

Radiation dose and risk assessment, radiological site characterization, and planning for decontamination and decommissioning activities. Hazardous waste management. Emergency planning and response. Radiation measurement techniques and health physics practices and procedures, environmental sampling and analysis.

Experience Summary

Responsible for all environmental, health, and safety aspects of remedial actions at abandoned uranium mill sites. Identified and assisted in solving plant chemistry, waste management, and radiological problems at commercial nuclear power plants. Developed environmental standards and policy for Department of Energy's waste management and decontamination and decommissioning projects.

Credentials

B.S., Mathematics—Indiana State University (1964)

M.S., Physics—Indiana State University (1966)

Ph.D., Experimental Nuclear Physics—Vanderbilt University (1972)

AEC Health Physics Fellow (1968-1971)

Consultant to SC-28 of the National Council on Radiation Protection and Measurements

Health Physics Society

American Nuclear Society, Trinity Section

Employment History

1982-Present	WESTON
1980-1982	Institute of Nuclear Power Operations Radiological Protection and Emergency Preparedness Division
1974-1980	Department of Energy Division of Operational and Environmental Safety
1972-1974	Georgia Institute of Technology School of Chemistry
1966-1968	Bradley University School of Applied Sciences and Engineering

Key Projects

Manager for Health and Safety, technical assistance contractor for the Uranium Mill Tailings Remedial Action Program. Responsibilities include the development of program environmental, health and safety policy and procedures, site characterization and certification procedures, site radiological data acquisition, environmental monitoring data acquisition, and source term and radon barrier cover attenuation calculations.

Radiological Engineering Group Leader, responsible for serving the nuclear power industry by identifying radiation protection, waste management, or environmental problems and proposing or developing solutions to the problems. Notable accomplishments include developing a new method for estimating doses from beta radiation, developing a method for evaluating portal monitors, and publishing the Radiological Experience Notebook, a new periodical for member utilities containing articles on good radiological practices or other items of interest to radiological protection personnel.

As Manager of Environmental Standards and Policy Programs, Department of Energy, initiated and managed programs leading to the development of environmental and occupational safety standards and policy applicable to DOE waste management, decontamination and decommissioning, and radiation protection programs. Appraised the performance of DOE field offices and contractors in health protection and environmental matters. Developed cleanup criteria for sites to be decommissioned and released to the public. Reviewed decommissioning plans and reports for technical accuracy and adequacy. Participated in selecting the best decommissioning options. Special interest and work was done in the areas of transuranics in the environment and natural radioactivity.

Research and faculty assignments, Georgia Institute of Technology and Bradley University. Performed exten-

Professional Profile

CONTROL NO. 81964

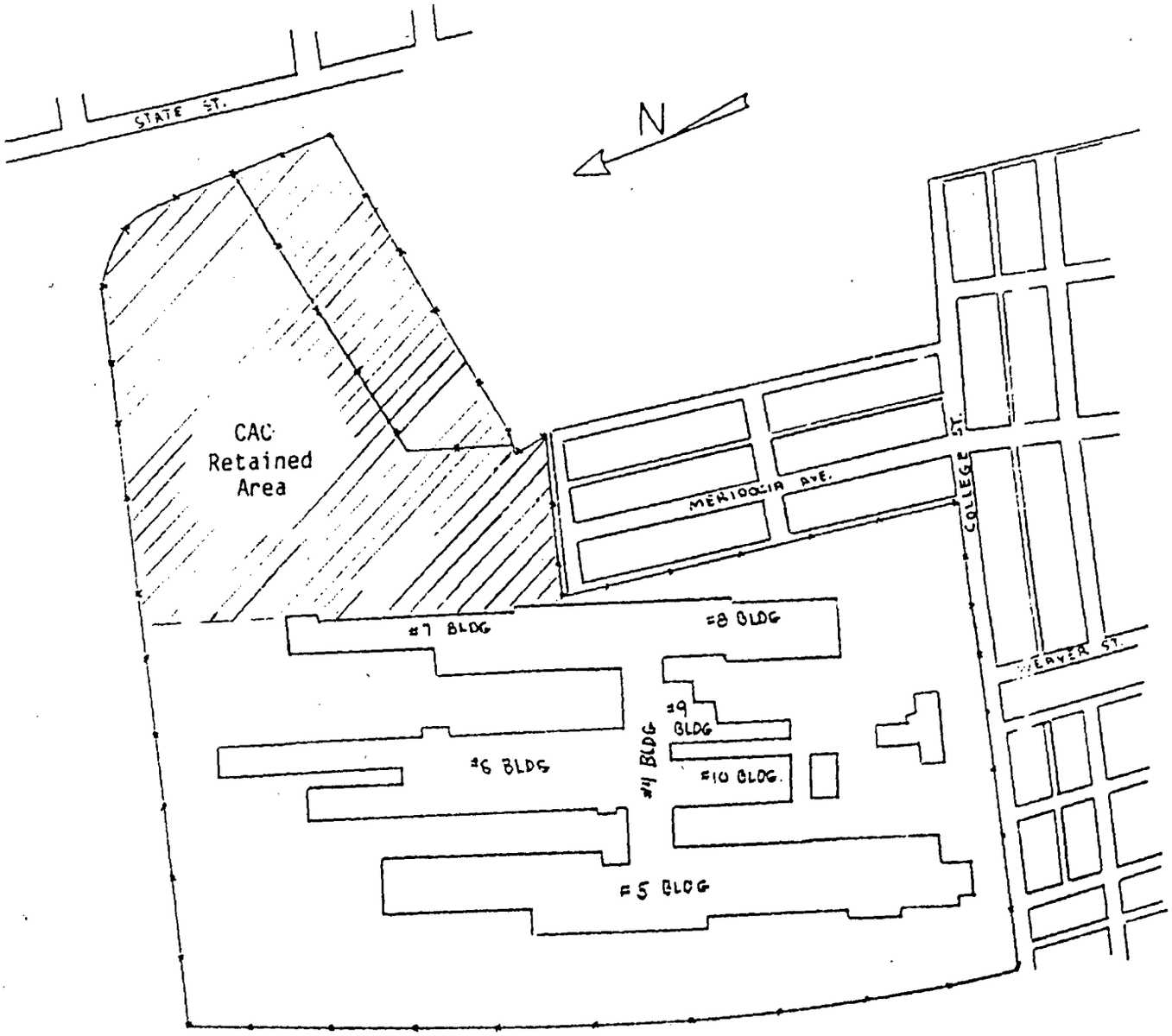
3/84

sive research projects in the areas of atomic and nuclear physics employing gamma-ray, x-ray, and electron spectrometers using radioactive sources and particle accelerators.

Publications

Have 19 publications in professional journals in the areas of health physics, nuclear physics, and atomic physics.

EXHIBIT B



CONSOLIDATED ALUMINUM

MADISON PLANT

CONTROL NO. 81964

CONSOLIDATED ALUMINUM CORPORATION
MADISON, ILLINOIS PLANT
MAGNESIUM-THORIUM ALLOY PRODUCTION SCHEMATIC

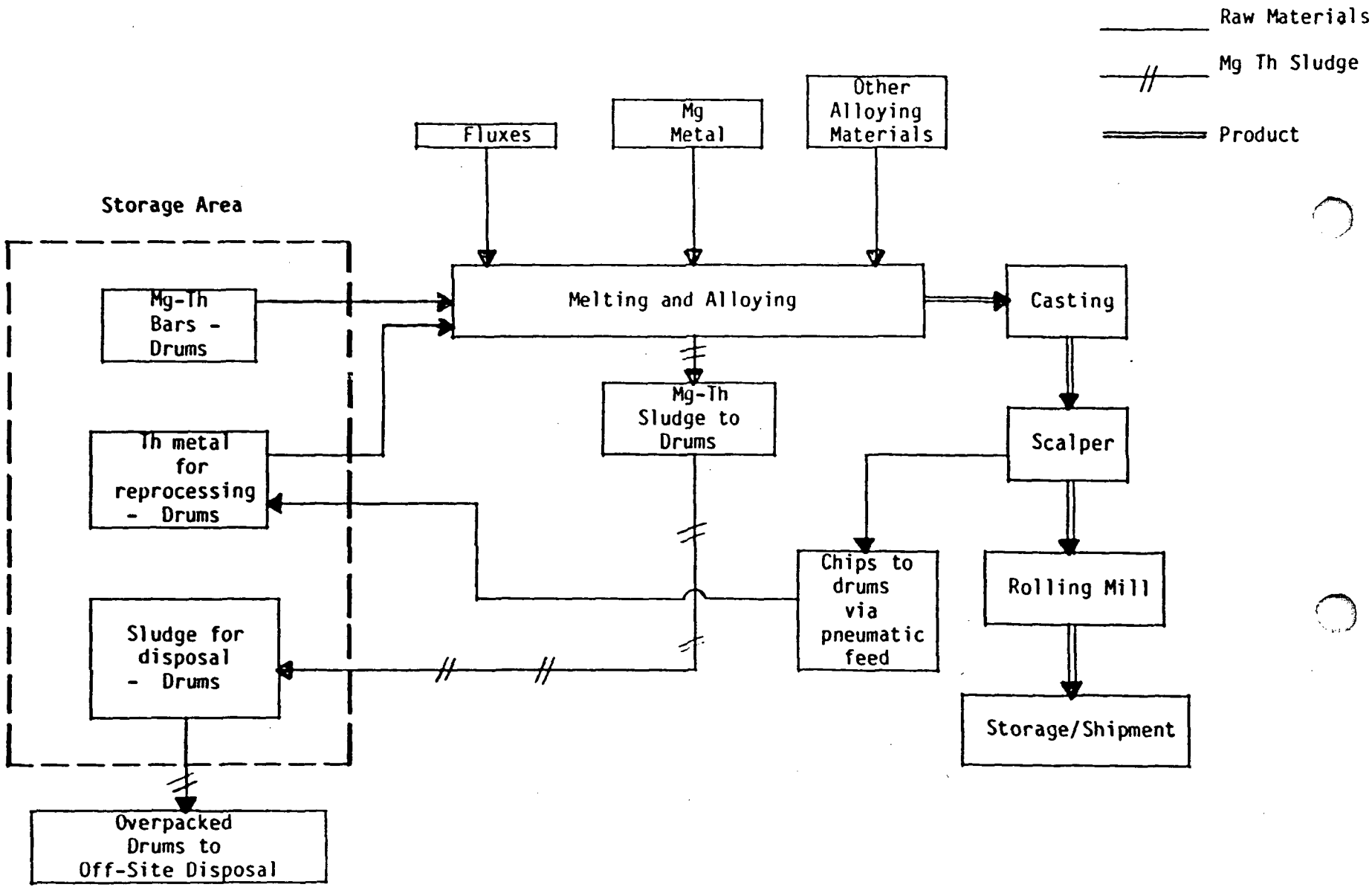
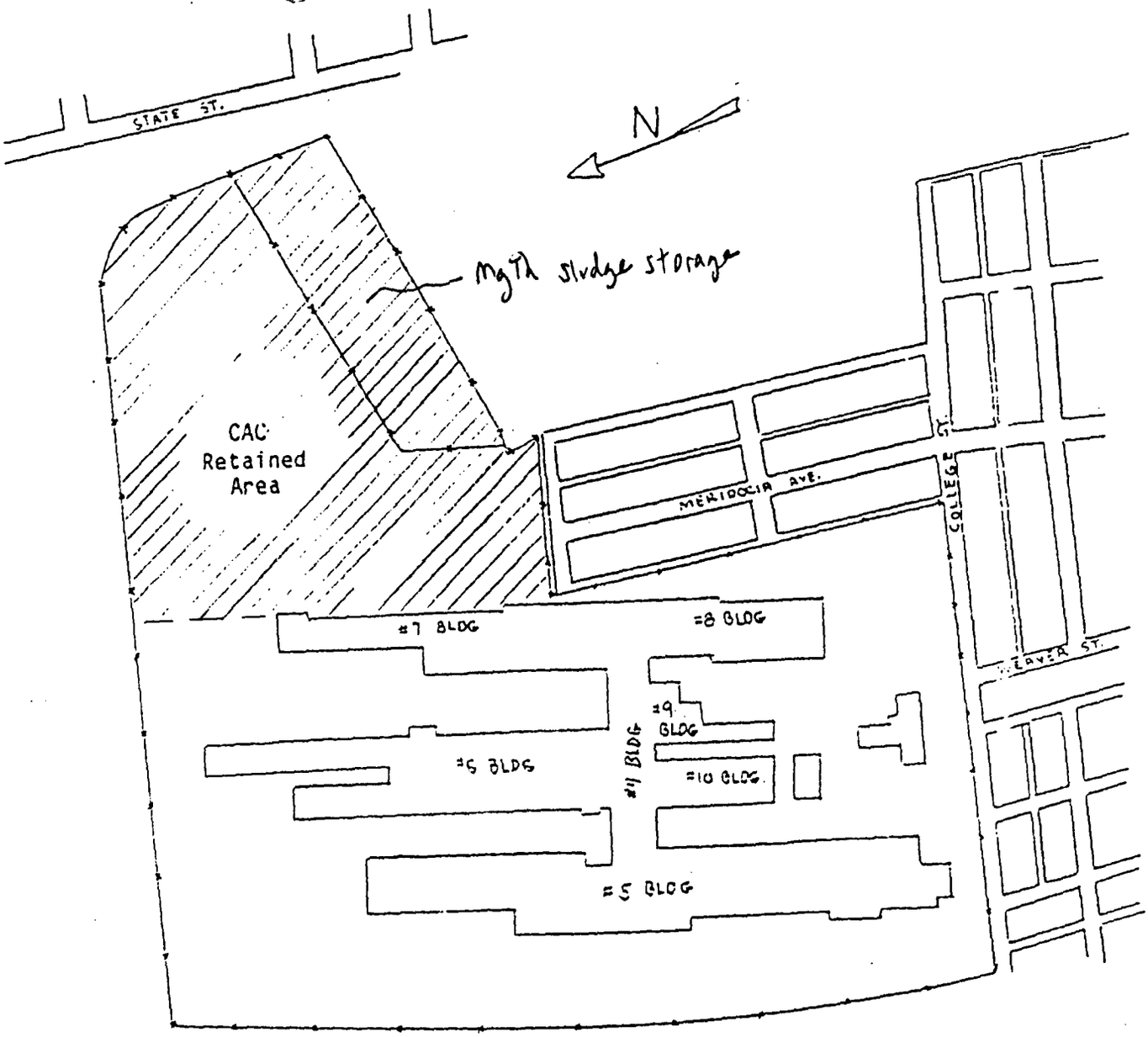


EXHIBIT B



CONSOLIDATED ALUMINUM

MADISON PLANT

1. Sale of production to Spectralite
2. Spectralite – using new process that does not generate storage of waste on site.
   – they have report on contamination.
3. Conalco will retain Mg Th sludge –
   ? will they continue decomm. plan?