

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 030-19075/97-001

Docket No. 030-19075

License No. 29-19737-01

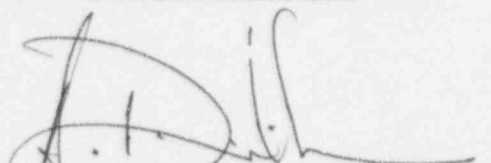
Licensee: Stonybrook Laboratories Inc.  
Subsidiary of Mobil Corporation  
P.O. Box 1029  
Princeton, New Jersey 08543-1029

Facility Name: Stonybrook Laboratories Inc.

Inspection at: Mobil Technical Center  
Pennington-Rocky Hill Road  
Pennington, New Jersey 08534

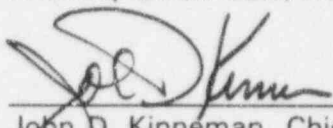
Inspection Conducted: December 17, 1996

Inspector:

  
Anthony Dimitriadis, Health Physicist

2/7/97  
Date

Approved by:

  
John D. Kinneman, Chief  
Nuclear Materials Safety Branch 2

2-12-97  
Date

Inspection Summary: Announced inspection on December 17, 1996 of the Pennington, New Jersey facility to perform a confirmatory survey for residual radioactive contamination.

Areas Inspected: Seventy smear samples were taken and assayed for radioactivity. The facility was surveyed to identify remaining fixed or removable surface contamination.

Results: No residual radioactive contamination was identified in any of the areas surveyed. No safety concerns were identified.

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## DETAILS

### 1. Persons Contacted

#### Stonybrook Laboratories Inc.

\* Lynn A. Fanelli - Team Leader, EHS Services, Mobil Technology Company

\* David J. Durkee - Health Physicist, Radcor, LLC

\* present at exit interview

### 2. Background

Mobil Oil Corporation was issued NRC License No. 29-19737-01 in 1981. This license was amended in 1984 authorizing licensed material use at Stonybrook Laboratories located in Pennington, New Jersey for research and development purposes. The majority of work involving licensed material occurred in Building 17. Loose isotopes used at the facility included hydrogen-3, carbon-14, sulfur-35, phosphorus-32 and technetium-99. Licensed material use was stopped in October 1995.

On August 29, 1996, Stonybrook Laboratories Inc., subsidiary of Mobil Corporation, permanently ceased operations, completed decommissioning of the facility and requested that License No. 29-19737-01 be terminated.

On September 12, 1996, a final status survey report was submitted by the licensee outlining the decommissioning status of the facility. On December 17, 1996, Region I staff visited the facility and conducted a confirmatory survey/inspection of the facility in Pennington, New Jersey.

### 3. Observations

The facility at 311 Pennington-Rocky Hill Road on the grounds of the Mobil Technical Center, in Pennington, New Jersey consists of about 20 buildings on approximately 433 acres bounded by Pennington-Rocky Hill Road on the south-east and by Titus Mill Road to the north-east.

Building 17, the primary location of licensed material use, is approximately 134,000 ft<sup>2</sup>. About 79,000 ft<sup>2</sup> of this area is composed of laboratories and office areas. The building consists of three levels: a main level, which houses all of the laboratory and animal areas, a lower level which consists of office space and an upper level which houses the ancillary equipment and ventilation systems. The interior walls are made of drywall and concrete block. The doors are wood and metal with glass, and the ceiling is a concrete slab with metal deck and suspended tile. The roof is polyethylene. There are approximately 62 offices and 23 laboratories with about 38 fume hoods.

4. Instruments Used in Survey

Fixed surface contamination was measured with a Ludlum Model 2221 meter coupled to a Ludlum Model 44-9 pancake probe and a Ludlum meter Model 14C coupled to a Ludlum Model 44-7 GM probe. (NRC Serial Nos. 054828/120898, and 033508/033502 respectively). The instruments were calibrated with National Institute of Science and Technology (NIST) traceable standards to read in counts per minute and micro Roentgens per hour ( $\mu\text{R/hr}$ ) for gamma radiation on March 14, 1996 and August 9, 1996 respectively. Background and efficiency were confirmed on the day of use.

5. Survey Design

Prior to the survey, the inspector reviewed the final status survey and interviewed the Environmental Health Services team leader of the facility about licensed material use. Based on this information, the inspector decided to focus on surveying the specific locations of licensed material use on the second floor of Building No. 17. The areas outlined on the attached diagram, Figure 1, were considered affected.

6. Survey

The inspector surveyed all of room 264 (large open lab area), and rooms 241 through 262 where licensed material was primarily used. In addition, rooms 529, 404 and 309 were surveyed. The areas surveyed in detail in room 264, are outlined in Figure 2. The inspector scanned about 85% of the accessible areas with the instruments listed above and radiation levels were measured at approximately 46 points in room 264. Radiation levels at various points were measured at additional locations in the other listed rooms. All radiation levels were indistinguishable from background.

7. Wipe Samples

Wipe samples were collected at seventy locations in building 17, as listed in Attachment 1. The wipes were analyzed in a liquid scintillation counter and counted for 600 seconds discriminating for H-3, C-14. In addition, an open window was also used to detect any other radionuclides. The minimum detectable activity (MDA) for H-3 and C-14 were 15 and 10 disintegrations per wipe (dpm/wipe), respectively. All results were below 100 dpm/wipe.

8. Exit Interview

The preliminary results of the survey were discussed with the individuals indicated in Section 1 of this report on December 17, 1996. In addition, the inspector discussed the results of the wipe samples with the EHS Team Leader, Mobil Technical Company during a telephone conversation on January 20, 1997.

# ATTACHMENT 1

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Wipe Nos. 1 through 36 were taken in Room 264. Refer to Figure 2.  
Wipe Nos. 37 through 70 were taken in various rooms. Refer to Figure 1.

<u>Wipe No.</u>	<u>Room</u>	<u>Location where wipe was taken</u>
37	248	Floor areas
38	248	Fume Hood
39	248	Bench Top
40	244	Center of floor
41	244	Bench Top
42	246	Floor
43	246	Bench Top
44	246	Fume Hood
45	254	Floor
46	254	Sink
47	266B	Floor
48	266	Fume Hood
49	245	Floor
50	247A	Floor
51	247	Floor
52	247	Sink
53	309	Fume Hood
54	407	Fume Hood
55	404	Floor
56	422	Floor
57	507	Floor
58	501	Floor
59	523	Floor
60	413	Floor
61	423	Bench Top
62	529	Floor
63	328	Floor
64	321	Floor
65	315	Floor
66	316	Floor
67	411	Floor
68	505	Floor
69	304	Floor
70	306	Floor

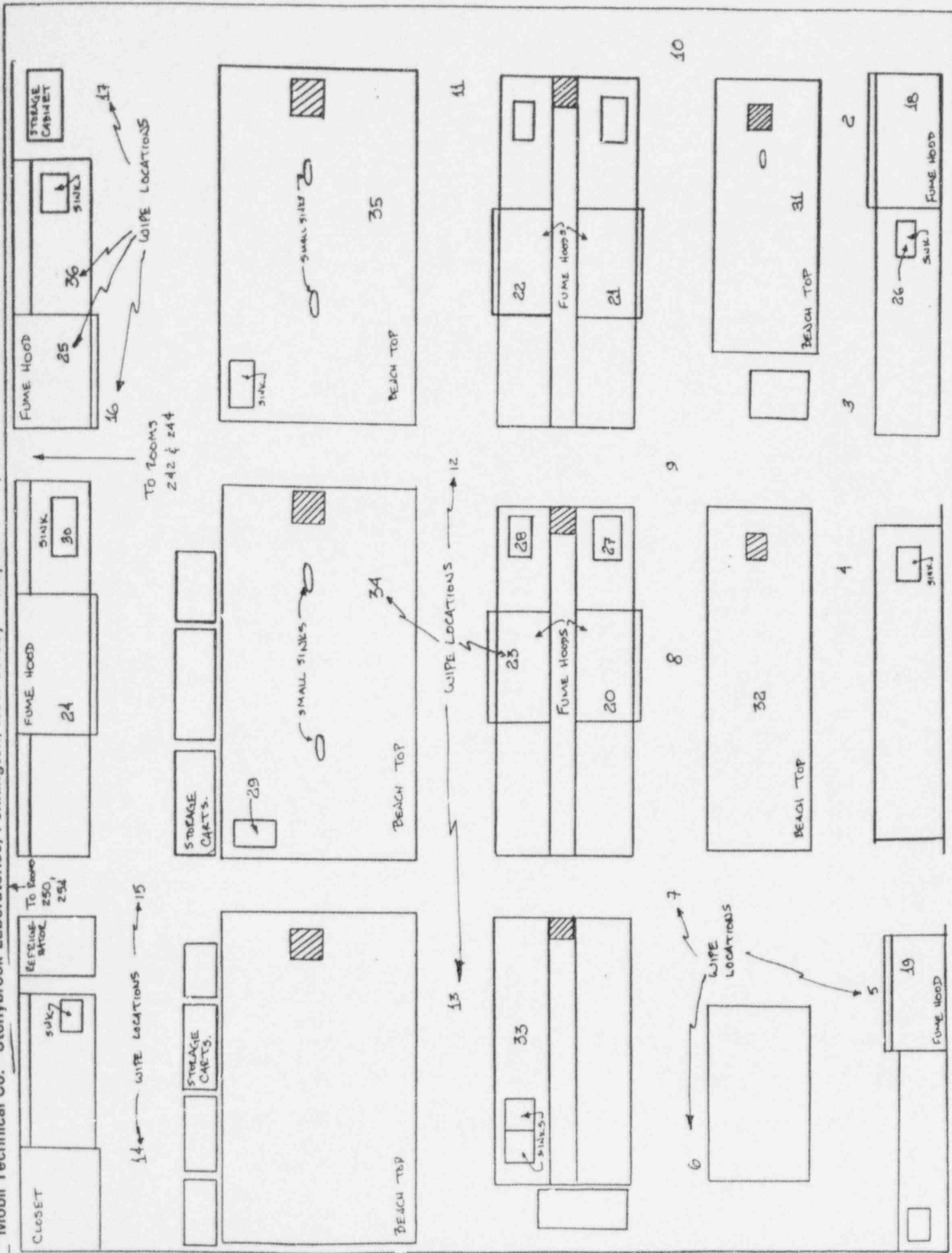
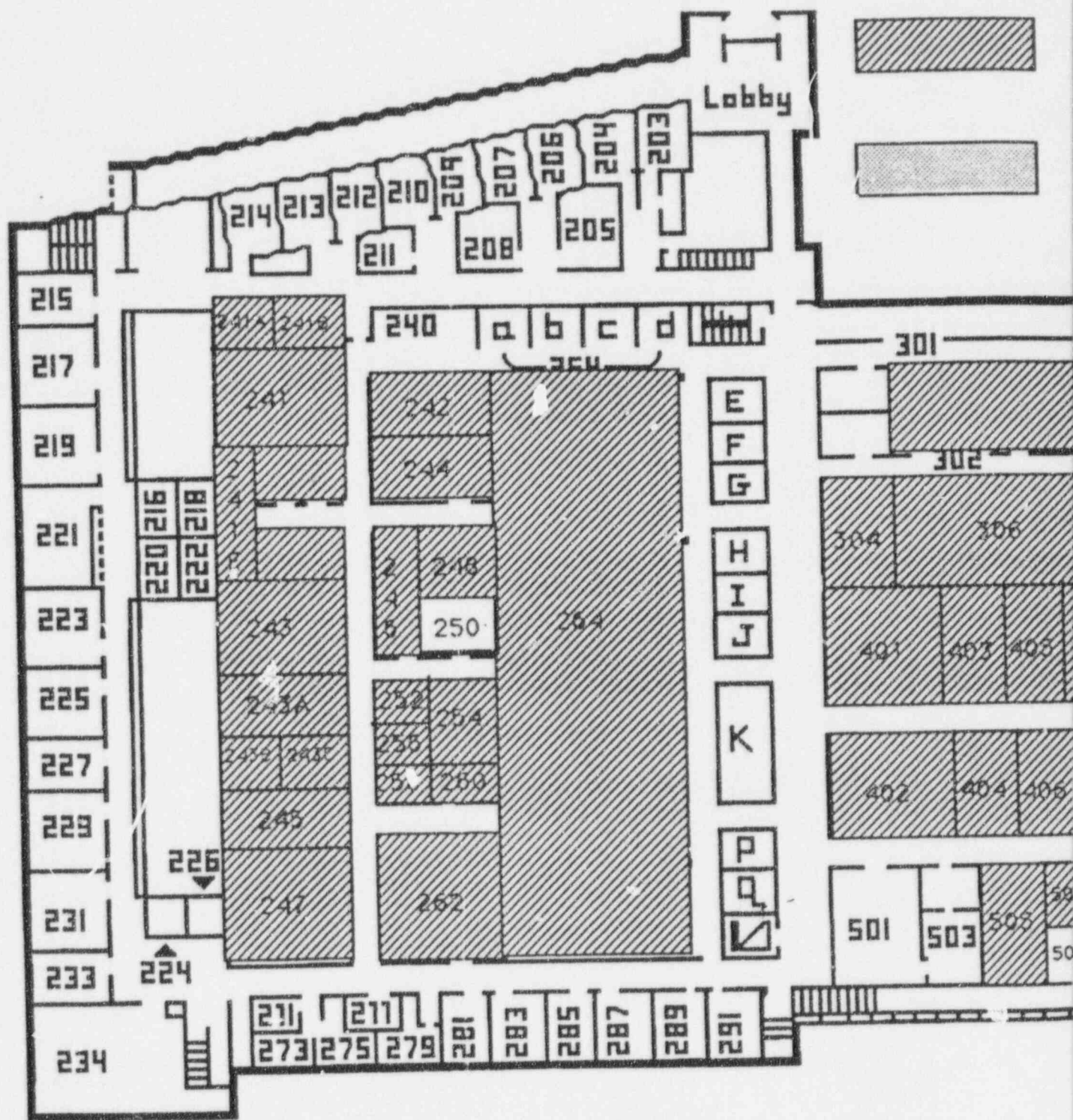


Figure 2

Building 17, Room 264, (Open Lab Area)





## MAIN LEVEL WEST

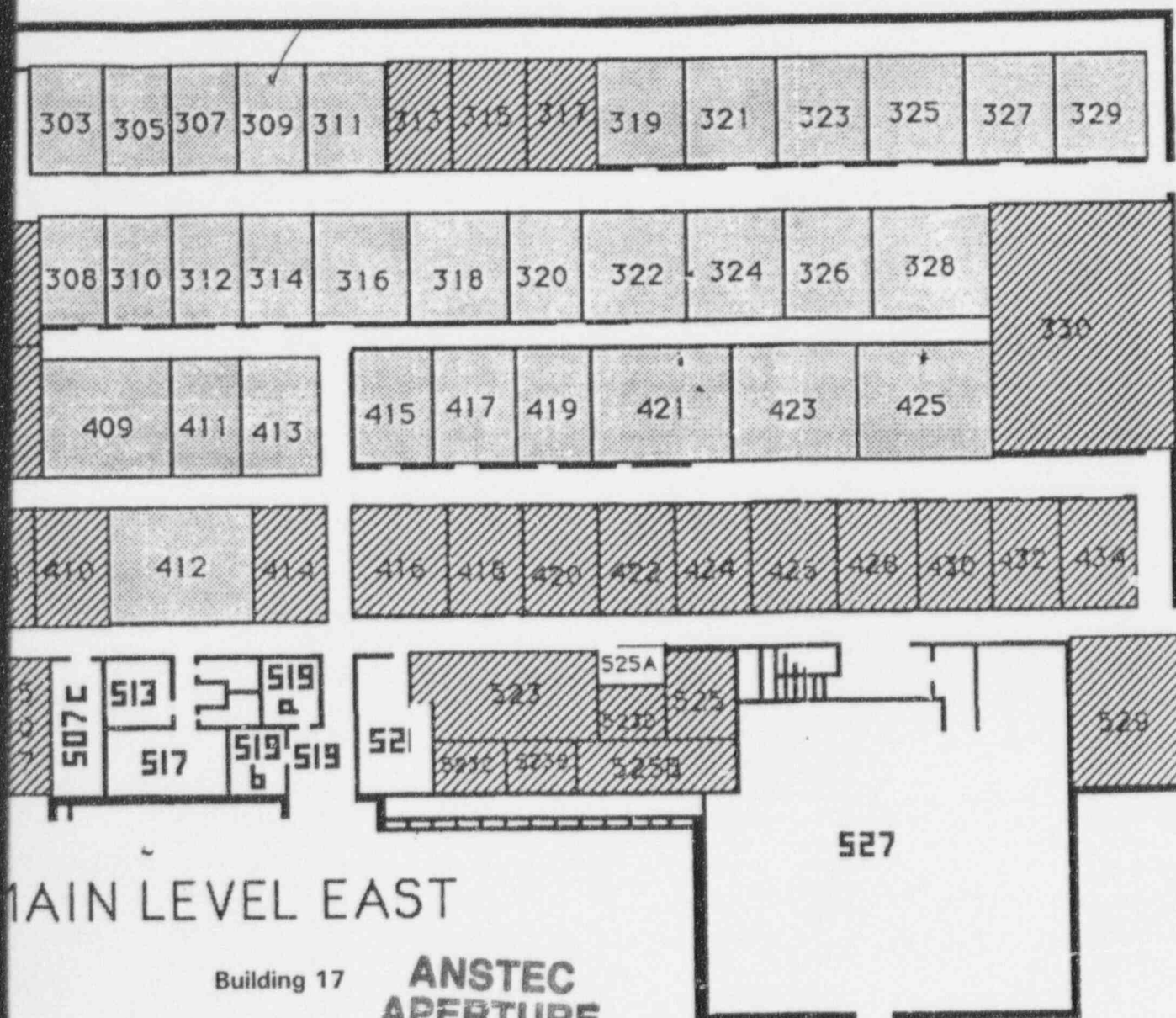
Mobil Technical Co. Stonybrook Laboratories, Pennington, New Jer

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Figure 1

Areas considered Affected

Areas considered Unaffected



MAIN LEVEL EAST

Building 17

**ANSTEC  
APERTURE  
CARD**

Also Available on  
Aperture Card

9702200212-1

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