

TEXAS A&M UNIVERSITY

COLLEGE STATION, TEXAS 77843

March 28, 1985

Office of
RADIOLOGICAL SAFETY
(713) 845-1361

Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, TX 76011

| | |
|------------------|----------|
| RECEIVED BY LFMC | |
| Date... | 5/1/85 |
| Log... | Apr 3 II |
| By... | Brown |
| Orig. To... | |
| Action Compl... | |

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| APR 25 1985 | |
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U.S. N.R.C.
FEE MGMT. BRANCH

ATTN: Material Licensing Section

Dear Sir:

It is requested that Texas A&M University Materials License 42-09082-09 (expiration date - November 30, 1987) be amended to include the possession and use of the following materials:

| <u>Byproduct Material</u> | <u>Chemical/Physical Form</u> | <u>Amount</u> |
|---------------------------|-------------------------------|---------------|
| ^{137}Cs | Sealed Source | 10 mCi |

The sealed source is further described as follows:

| | |
|---|-------------|
| Isotope Products Laboratory Catalog No. | HEG-137-10 |
| Capsule Type 225 | Model 225 |
| Serial No. G-037 | 100 gillows |

This sealed source is mounted in a device to measure the variations in the density of cores from the ocean floor by the transmission method.

The density gauge is mounted on the research vessel Sedco Joides Resolution which is under contract to Texas A&M University. The ship is prepared for operation on the high seas with ports-of-call world wide.

The design of the Gamma Ray Attenuator and Porosity Evaluator (GRAPE) is shown in Figure 1.

The location of the device on board ship is shown in Figure 2.

Radiation levels measured after installation on board ship are shown in Figure 3.

All Texas A&M University personnel operating the device have received instructions per 10CFR 19 and all are furnished personnel radiation monitoring devices through the Radiological Safety Office of Texas A&M University.

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REG4 LIC30 PDR
42-09082-09

FEE EXEMPT

170.11(a)(9)

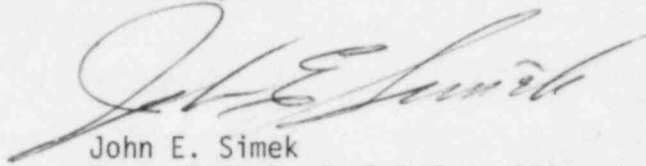
X60606

Page 2

The ship has on board a Philips PN 3144/00 radiation alarm monitor equipped with a thin end window GM tube. The detection range is 0.1 mR/hr to 100 mR/hr.

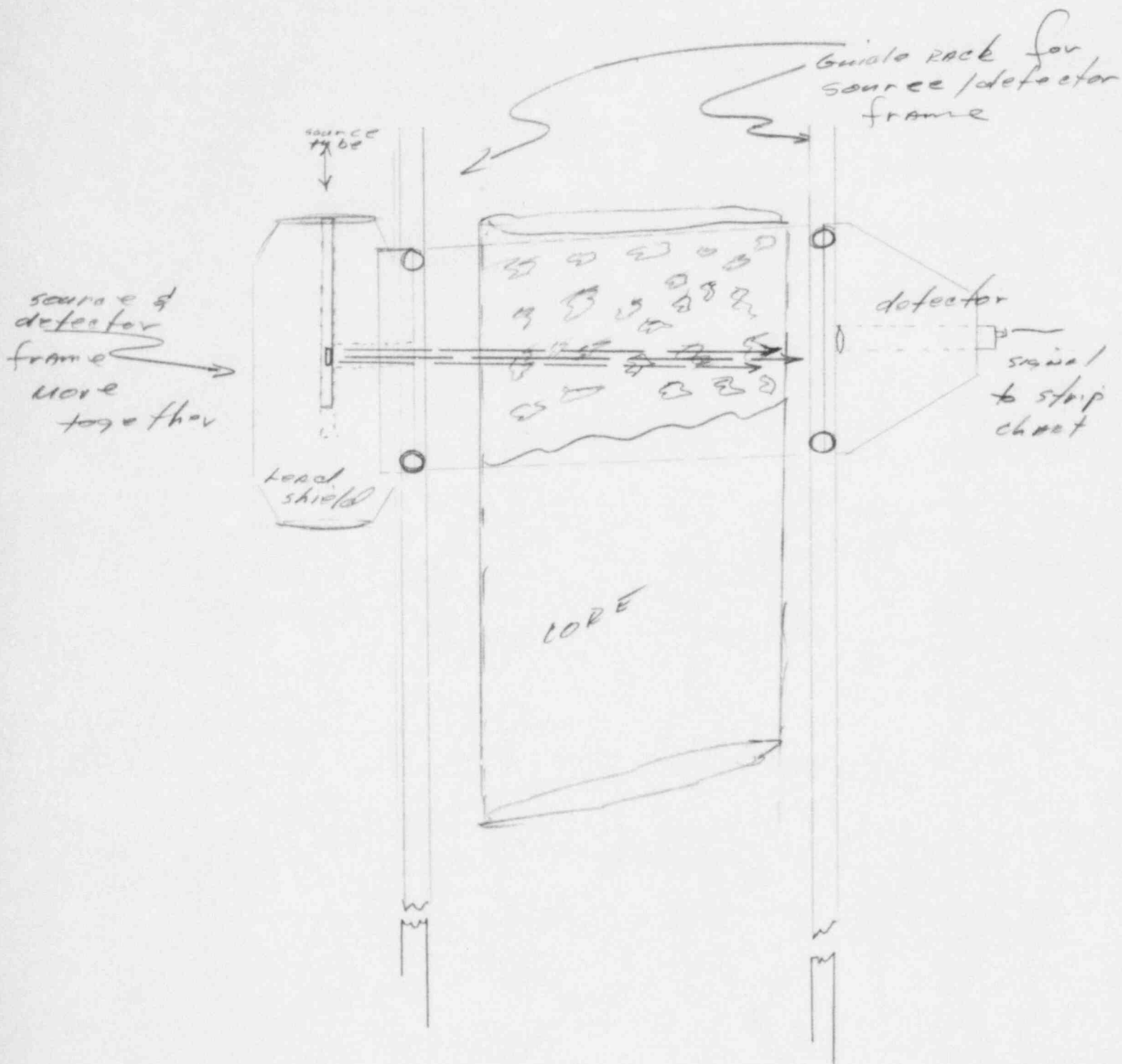
Should further information be required please contact me at 409-845-1361.

Sincerely,

A handwritten signature in cursive script, appearing to read "John E. Simek".

John E. Simek
Asst. Radiological Safety Officer

JES:da

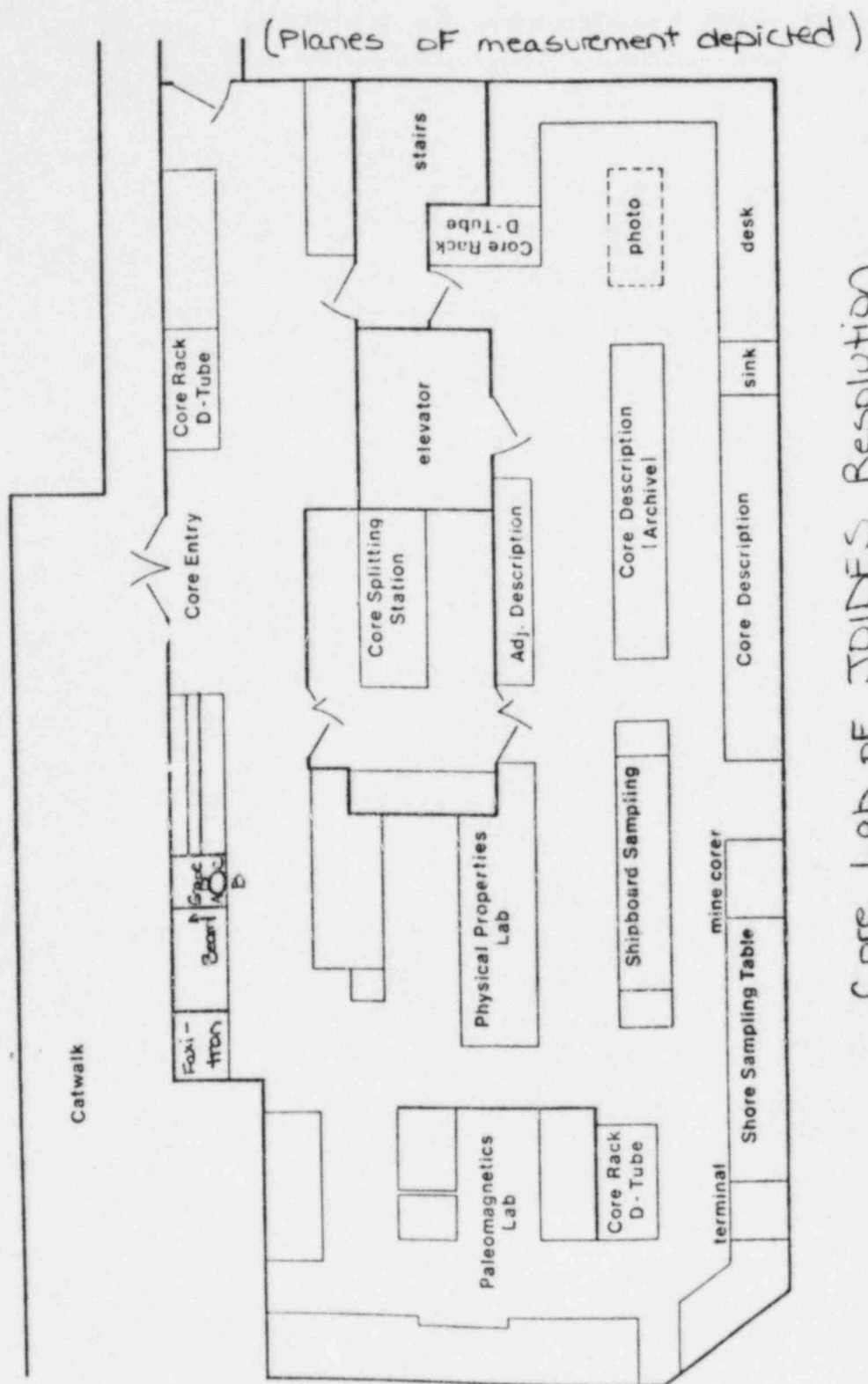


vertical mount core density analyzer

Figure 1

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Location of GRAPE CS-137 source



Core Lab of JOIDES Resolution

Figure 2.

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Radiation Survey Data for the ^{137}Cs Sealed Source Attenuator Device

Condition: Source up and no core in place

| Position | Contact | 1 ft. | 2 ft. | 3 ft. |
|----------|---------|-------|-------|-------|
| A | 2.0 | 0.8 | 0.2 | <0.1 |
| B | 2.0 | 0.4 | 0.1 | <0.1 |
| C | 2.5 | 0.8 | 0.2 | <0.1 |
| D | 1.0 | <0.1 | <0.1 | <0.1 |

All readings in MR/hr

Instrument used: Victoreen 470A
Serial No. 295
Calibrated to ^{137}Cs

Figure 3

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