

GREAT GUNS

LOGGING PERFORATING

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

Suite 416 Bitting Building
107 North Market
Wichita, Kansas 67202
(316) 262-8762

September 28, 1988

Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

ATTENTION: Material Licensing Branch

RE: Amendment of License #35-19815-01
Davis Great Guns Logging Digital Division

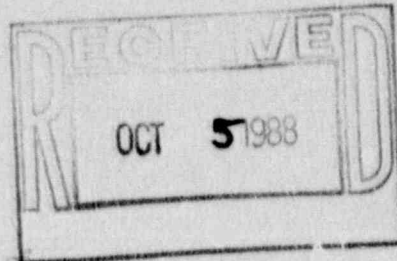
Gentlemen:

Please amend Davis Great Guns Logging Digital Division License No. 35-19815-01 to add the following Sealed Sources:

- | | | |
|--|--|--|
| 6. Byproduct, source and/or special nuclear material | 7. Chemical and/or physical form | 8. Maximum amount that licensee may possess at any one time under this license |
| E. Cesium-137 | E. (ADD) Gamatron Model GT-GHP | E. Not to exceed 2 curies |
| K. Thorium-228 | K. Sealed Source Isotope Product Laboratories Model No. GF 228 | K. No source to exceed 10 microcuries per source |
| L. Uranium-238 | L. Sealed Source Isotope Product Laboratories Model No. EAB238U or A.F. 238U | L. No source to exceed 10 microcuries |

9. Authorized use:

- Item 6-E To be used for oil or gas well logging.
- Item 6-K For use as reference or calibration source.
- Item 6-L For use as reference or calibration source.



Log	<i>Oct-3-18</i>
Remitter	
Check No.	<i>23234</i>
Amount	<i>170</i>
Fee Category	<i>SA</i>
Type of Fee	<i>Aud</i>
Date Check Rec'd.	<i>10/2/88</i>
Date Completed	<i>10/7/88</i>
By:	<i>Russier</i>

Note: SA ok for Th + U
since the cal. sources
are in connection with
well logging w/ 462199

8910170338 881130
REG4 LIC30
35-19815-01 PDR

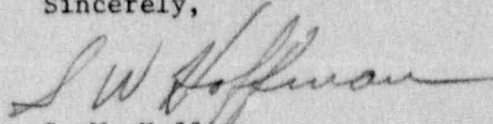
Nuclear Regulatory Commission
Page Two

If it is possible, we would like approval of Item 6-K Thorium-228 as soon as possible. This source is needed to finish the development of our Spectral Gamma Tool.

Enclosed is our check for \$170.00 for the amendment fee.

If you have any questions, please call me at (316) 262-8762.

Sincerely,



S. W. Hoffman

RSO

Davis Great Guns Logging Digital Division
12607 East 60th Street
Tulsa, Oklahoma 74146

SWH/feb

encl.

462199

GREAT GUNS

LOGGING

Digital
Division

12619 E.60th St. S.
Tulsa, OK 74146
(918)252-5416

Corporate Offices:
107 N. Market, Ste. 416
Wichita, KS 67202
(316) 262-8762

May 13, 1988

U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Attn: Mr. Jack E. Whitten
Nuclear Materials Licensing Section

Re: Renewal of License No. 35-19815-01 - Control No. 461190

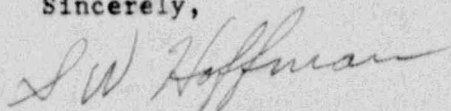
Gentlemen:

Our consultant, Keith E. Moon of Support Consultants and Associates, Inc., who is the preparer of this renewal application submittal and was the preparer of the original license application, has informed me that it is very much to our advantage to maintain the same type of license we originally were issued, which is a well logging license. We were trying to accommodate our research and development needs, as our well logging application is strictly for research and development, but they are well logging applications none the less, and although it does not happen much, we find ourselves in a situation from time to time where some of our personnel are involved in well logging operations where our equipment is being used, mainly for training and demonstration purposes. In order to accommodate all possible applications, we have decided to continue with the well logging license, with research and development operations as well.

As you know, Davis Great Guns Logging Digital Division is a manufacturer of well logging equipment and tools. We do not sell or distribute any radioactive materials within the continental limits of the United States. We do occasionally ship radioactive materials to our overseas joint venture partners, but they are jointly owned which is a prerequisite of the foreign governments involved, so essentially we are shipping the licensed materials to ourselves. Therefore, we are not requesting a distributor's license.

Enclosed in duplicate is a new application and supplemental pages and an Operating and Emergency Procedures Manual. Please disregard the material that was previously sent with the exceptions noted in the supplemental pages where certain items previously sent are referenced. If you have any questions as to its content, you may contact Mr. Moon as he is authorized to represent us in this matter.

Sincerely,



S. W. Hoffman
Corporate Radiation Safety Officer
Davis Great Guns Logging Digital Div.

pm
Enclosures
cc: SC&A, Inc.

APPLICATION FOR MATERIAL LICENSE

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
- B. AMENDMENT TO LICENSE NUMBER _____
- C. RENEWAL OF LICENSE NUMBER 35-19815-01

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

Davis Great Guns Logging Digital Division
12619 East 60th Street South
Tulsa, Oklahoma 74146

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

12619 East 60th Street South, Tulsa, Oklahoma 74146
and temporary job site locations

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

S. W. (Bill) Hoffman

TELEPHONE NUMBER

(316) 262-8762

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 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 AMOUNT ENCLOSED \$ Previously sent

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

S. W. Hoffman

Corp. Radiation Safety Officer 5-13-88

14. VOLUNTARY ECONOMIC DATA

a. ANNUAL RECEIPTS

<input type="checkbox"/> <\$250K	<input type="checkbox"/> \$1M-3.5M
<input type="checkbox"/> \$250K-500K	<input type="checkbox"/> \$3.5M-7M
<input type="checkbox"/> \$500K-750K	<input type="checkbox"/> \$7M-10M
<input type="checkbox"/> \$750K-1M	<input type="checkbox"/> >\$10M

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

c. NUMBER OF B.O.C.S.

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)

YES

NO

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS	APPROVED BY
AMOUNT RECEIVED	CHECK NUMBER			DATE

DAVIS GREAT GUNS LOGGING DIGITAL DIVISION

SUPPLEMENT TO NRC FORM 313 - APP. FOR RENEWAL OF LICENSE NO. 35-19815-01

5. RADIOACTIVE MATERIAL:

A. Americium-241:Be	Sealed neutron sources (Monsar Research Corp. Model SS-W-AmBe; Gulf Nuclear (GN) Models NEEI- AmBe-71-1 or CSV; Gammatron Model AN-HP; Gamma Ind.(GI) Model NB-HP)	Not to exceed 5 curies per source
B. Americium-241:Be	Sealed neutron sources (GN Model AmBe-71-2A; GI Model NB-HP; Gammatron Model AN-HP; Amersham Model AMN-CYN Series)	Not to exceed 20 curies per source
C. Cesium-137	Sealed sources (General Nuclear Model GNI-VD-HP; GN Model CSV; GI Model VD-HP; Amersham Model CDC- CYN Series)	Not to exceed 2 curies per source
D. Cesium-137	Sealed sources (GN Model VL-1)	Not to exceed 125 millicuries per source
E. Cesium-137	Sealed sources	Not to exceed 1 millicurie per source
F. Cobalt-60	Sealed sources	Not to exceed 1 millicurie per source
G. Manganese-54	Sealed sources (Disc. Amersham Model MFR.8151)	Not to exceed 10 microcuries per source
H. Americium 241	Sealed sources (Amersham AMM Alpha Foil)	Not to exceed 1 millicurie

6. PURPOSES OF USE:

- A thru D. For use in well logging; calibration of logging tools;
and research and development.
E thru H. For use as reference standards

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY:

Corporate Structure: Dale Davis - Owner & President
Gary Davis - Vice President

Corporate Radiation Safety Officer: S. W. (Bill) Hoffman
Digital Div. Radiation Safety Officer: John D. Broughton
Digital Div. Manager: Bennie Holt

The Digital Division of Davis Great Guns Logging is set up under the same corporate structure but is a separate entity. The Corporate Radiation Safety Officer, S. W. Hoffman, will oversee all of the radiation compliance. John Broughton is the Radiation Safety Officer for the Digital Division, taking the responsibility of the day-to-day radiation compliance. Please consider as part of this application the resumes and certificates of training for these two men which were attached to Mr. Hoffman's letter dated September 10, 1987.

8. TRAINING FOR INDIVIDUALS:

We request that our Corporate RSO have the authority to designate Logging Supervisors and Logging Assistants who have met the training criteria set out in Section I-F of the enclosed Operating and Emergency Procedures Manual. Employees who have not already been trained in a course approved by the NRC will be trained in radiation safety for well loggers by Keith E. Moon of Support Consultants & Associates, Inc., De Leon, Texas. An outline of the topics that will be covered is attached. We will provide training in proper use, operation and maintenance of licensed materials, remote handling tools, radiation survey instruments, and other equipment used in our operations. Designation of employee as a Logging Supervisor will be made using the attached "Memo to Training File", along with copies of certificates, tests, etc. A safety review individually or in group sessions will be conducted annually by the Corporate Radiation Safety Officer or by Mr. Moon. "In-house" training such as on-the-job training, instruction to ancillary personnel, field evaluations, etc. will be conducted by the Radiation Safety Officer. Please reference the Training & Safety Manual submitted with Mr. Hoffman's letter of September 10, 1987. Sections I & II of that Manual in addition to our Operating & Emergency Procedures Manual Sections I-VIII will be used for "in-house" training. A "key" for the 50 question exam is attached.

9. FACILITIES AND EQUIPMENT:

A sketch of Digital's facility is included in the O&EP manual (Figure #4). This sketch will serve as a facility/bunker survey form. A description of the radioactive materials storage bunker is given in Figure #5. Records will be kept in our offices at 12607 East 60th Street South, which is west of the building where the sources are stored. (The NRC was notified of this change of location in a request for amendment dated January 14, 1988.)

Our sealed sources used for well logging are double encapsulated and are housed and transported in assemblies and shields manufactured by companies whose designs are approved by the NRC. These sources are used for testing the well logging tools which we manufacture. We also have AmBe 241 (not to exceed 200 mCi) and Cs 137 (not to exceed 1 mCi) sealed sources used for calibrating well logging tools, and reference sources as indicated in Item 5 of this supplement.

We have the following GM type survey meters for surveying and monitoring:

2	G.E. Smith Model 500A	Gamma	0-500 mr/hr
---	-----------------------	-------	-------------

These meters will be converted to Model 500P at the time of the next calibration by having the manufacturer add a remote beta probe. Please consider as part of this application the procedures submitted with Mr. Hoffman's letter of September 10, 1987, wherein he requested approval for in-house calibration of our meters. Calibration procedures will be performed by our Corporate Radiation Safety Officer. The only source which will be used for calibration of survey meters is a 1 curie Cs-137, Gulf Nuclear Model CSV sealed source (Serial No. CSV-937). We have requested the traceability report on this source from Gulf Nuclear.

Should we need an instrument sensitive enough to detect the low radiation and contamination levels that could be encountered if a sealed source is ruptured, we will contact Support Consultants & Associates, Inc., De Leon, Texas (817) 893-2088 and have their Ludlum Model 14 crystal scintillation detector delivered to the site of the ruptured source within 24 hours.

10. RADIATION SAFETY PROGRAM:

Our radiation safety program is outlined in the enclosed Operating and Emergency Procedures Manual. We are presently using TLD badges with neutron capabilities from I.C.N. Dosimetry Service, Irvine, California. All employees, including office personnel, are furnished a TLD badge. Badges are exchanged on a monthly basis. Leak tests are performed every six months using kits provided by one of the companies listed in Section II-D of the enclosed O&EP Manual. (We are presently using kits furnished by Nuclear Sources and Services, Houston, Texas.)

11. WASTE MANAGEMENT:

Sealed sources will be disposed of as outlined in the enclosed O&EP Manual, Section VII-G. Most common disposal will be to return them to the original supplier.

Support Consultants & Associates, Inc.

Route 2, Box 254

De Leon, Texas 76444

(817) 893-2088

OUTLINE OF RADIATION SAFETY TRAINING COURSE
FOR WELL LOGGERS

- I. Fundamentals of Radiation Safety (8 hours)
 - A. Characteristics of radiation
 - B. Units of radiation dose (rem) and quantity of radioactivity (curie)
 - C. Hazards of exposure to radiation
 - D. Levels of radiation from licensed material
 - E. Methods of controlling radiation dose (time, distance and shielding)
 - F. Radiation safety practices, including prevention of contamination and methods of decontamination

- II. Radiation Detection Instrumentation (4 hours)
 - A. Types of radiation survey instruments
 - B. Use, operation, calibration, and limitations of survey instruments
 - C. Survey techniques
 - D. Methods and occasions for conducting radiation surveys
 - E. Use of personnel monitoring devices (film badges, TLDs and dosimeters)

- III. Equipment to be Used (4 hours)
 - A. Radionuclides commonly used in well logging and purpose of use
 - B. Operation and control of equipment, including source handling equipment and remote handling tools
 - C. Storage, control and disposal of licensed material
 - D. Maintenance of equipment
 - E. Case histories of accidents in well logging

- IV. Requirements of Pertinent Federal and State Regulations (3 hours)

- V. Licensee's Written Operating and Emergency Procedures (3 hours)

- VI. Examination (2 hours)

MEMO TO TRAINING FILE:

Name: _____

Social Security Number: _____

Date of Birth: _____

In accordance with radiation safety training requirements set out in 10 CFR Part 39.61, the above named employee has completed the following:

1. Approved radiation safety training course for well loggers:

Date: _____

Instructor: _____

Attach copy of certificate and/or test.

2. Read and received instruction in the regulations appropriate to our license (10 CFR Energy -- Parts 19, 20, & 39) and our operating and emergency procedures manual.

3. Received on-the-job training*, under the personal supervision of a logging supervisor with at least 1 year of experience, in the use of sources of radiation, related handling tools, and radiation survey instruments which will be used in his work assignment. If this training was received under another company's employ, obtain a resume of experience from the employee to attach to this memo.

_____ has demonstrated in my presence his understanding of and competence in the areas above described, and I hereby designate him as a logging supervisor.

Date: _____

By: _____
Radiation Safety Officer

I hereby acknowledge that I have completed the above described training.

Date: _____

Employee's Signature

*Must be three months full time equivalent of actual well logging work using licensed materials.

KEY FOR INSTRUCTORS IN GRADING EXAM.

(Note that more than one answer is given for some questions separated by //.)

Full Name: _____

Date: _____

RADIATION SAFETY EXAMINATION FOR IN HOUSE USE TO EVALUATE WELL LOGGERS

1. Radiation is present in the atmosphere at all times and cannot be detected by man's senses. True? False?
2. Half life is the time required for the activity of a radioactive isotope to decrease (radioactive decay) to half of its initial value.
3. A Curie is a unit of measurement of radioactivity representing 37 Billion disintegrations per second.
4. A millicurie is one/thousandth of a Curie.
5. Rem is the unit of measurement expressing radiation exposure dose to man.
6. The most important considerations for protection from radiation are time, distance, and shielding.
7. According to the inverse square law, if the distance from a source of radiation is twice as far away as before, the intensity is one-fourth as great. True? False?
8. Half Value Layer // HVL is the thickness of shielding material necessary to reduce the intensity of x-ray or gamma ray to one half of its initial value.
lead//concrete//
9. A commonly used type of shielding material is parafin//tungston.
10. Neutron sources are shielded by parafin or other material with a high hydrogen content. True? False?
11. Radioactive materials contained in sealed sources commonly used for well logging operations are AmBe 241 (for neutron logging) and Cesium 137 (for density logging).
12. Radioactive materials commonly used for tracer studies are Iodine 131 and Iridium 192.
13. A "logging supervisor" is an individual who handles or supervises others in handling radioactive materials at temporary job sites.
14. A "logging assistant" is an individual who handles radioactive materials or performs surveys under the personal supervision of a logging supervisor.
15. To qualify as a logging supervisor, an individual must have satisfactorily completed training requirements being: approved radiation safety training course for well loggers of at least 24 hours; read and received instruction in applicable regulations and our Operating and Emergency Procedures; and completed 3 months on-the-job training.

16. Regulations require that logging supervisors be inspected annually// at a temporary job site to evaluate job performance. without notice
17. Only radioactive materials specifically authorized by our license can be used in our well logging operations.
18. The Radiation Safety Officer is responsible for the over-all radiation safety program.
19. NRC regulations specific for well logging operations are found in 10 CFR Part 39.
20. Our radiation safety program is governed by conditions of our radioactive material license, our Operating and Emergency Procedures manual, and appropriate regulations.
21. Three ways to monitor personnel for radiation exposure are TLD badges, film badges, and dosimeters.
22. In our operations, we use TLD badges for personnel monitoring, and they must be worn during all operations which involve possible exposure to radiation.
23. TLD badges must be exchanged at least quarterly. True? False?
24. According to regulations, the total allowable radiation dose to the whole body is 5 rems in one year; 1.25 rems in one quarter.
25. In the "bank account" formula $5(N-18)$ for determining available exposure, N represents the individual's age. True? False?
26. A 30 year old man has a "bank account" of 60 rems, minus prior exposure, if any.
leadlined//concrete
27. A downhole//underground bunker is recommended for storage of radioactive materials.
28. Signs reading "Caution - Radioactive Materials" must be posted on all four sides of the radiation storage bunker.
29. The radiation level which distinguishes a restricted area from a non-restricted area is 2 mR/hr.
30. How often do regulations require that a physical inventory and inspection of licensed materials be made? semi-annually//every 6 mos.
31. Leak testing of sealed sources is required once each year. True? False?
32. How often must a survey meter used for well logging be calibrated? semi-annually//every 6 months
33. Geiger-Mueller type survey meters are the most efficient of the three principal types of survey instruments. True? False?
34. On a survey meter, mr/hr means exposure dose in millirems per hour.

35. Survey meters used for well logging must measure as high as 50 mR/hr.
36. Survey meters used for well logging must read beta and gamma radiation.
37. Loading and unloading of source holder assembly must only be done with an approved source handling tool.
38. During efforts to recover a sealed source lodged in the well, circulating fluids//drilling mud must be continually monitored.
39. Logging tool detector may be energized for monitoring for contamination at job site.
40. When it is determined that a sealed source has been ruptured, the RSO must immediately notify the NRC Region IV office.
41. Three items of equipment that must be visually checked for defects labeling, and working condition prior to use are source holder, source handling tool, and logging tool.
42. NRC regulations require licensees to transport radioactive materials in compliance with Department of Transportation regulations.
43. Well logging sources cannot be transported unless they are in a transport container that meets DOT 7A specifications.
44. Before transporting radioactive materials a radiation survey must be made of each position occupied by personnel and the exterior// of the vehicle. outside
45. The radiation level in the passenger compartment of a vehicle transporting radioactive materials cannot exceed 2 mR/hr.
46. When transporting radioactive materials, shipper's certification shipping papers// must be properly completed, signed and within reach of the driver.
47. The transport index is determined by the survey meter reading of the highest radiation level at a distance of 1 meter//1 yard from the exterior of the transport container.
48. A Radiation Yellow III label on the source container indicates that the transport index is more than 1 but less than 10.
49. Vehicles transporting radioactive materials which require a Radiation Yellow III label must be placarded on both sides, the front and the back with placard reading "RADIOACTIVE."
50. In the event of an emergency involving radioactive materials employees must notify the Radiation Safety Officer immediately.

GREAT GUNS

Suite 1120 KSB&T Building
125 N. Market
Wichita, KS 67202
(316) 264-2613

**LOGGING
PERFORATING**

January 14, 1988

U. S. Nuclear Regulatory Commission Region IV
Material Licensing Section
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

RE: License No. 35-19815-01

Dear Sirs:

This is to inform you that Davis Great Guns Logging Digital Division has been forced to move our Research and Development operation in Tulsa, Oklahoma.

We are asking that our License No. 35-19815-01 be amended to show the following:

Condition 2 and Condition 10

Delete 9810 A East 58th Street
Tulsa, Oklahoma 74146

Condition 2 and Condition 10

Add 12619 East 60th Street South
Tulsa, Oklahoma 74146

This is the address where the R.A. Sources will be stored. The records will be kept in our offices at 12607 East 60th Street South, which is west of the building where the sources are kept.

We have had sealed sources only at our R & D center in Tulsa. Our phone number will remain the same, 918-252-5416. An Abandonment Survey of the facility at 9810 A East 58th Street is attached, as well as a drawing of our new facility. Enclosed, also, is our check for \$170.00 for the Amendment fee.

Sincerely,



S. W. Hoffman
Radiation Protection Officer
Davis Great Guns Logging Digital Div.
416 Bitting Building, 107 N. Market
Wichita, Kansas 67202
(316) 262-8762

Encl.

461190
461810

GREAT GUNS

Suite 1120 KSB&T Building
125 N Market
Wichita, KS 67202
(316) 264-2613

7MS-16
72

LOGGING PERFORATING

September 10, 1987

Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

ATTENTION: Charles Cain
Material Licensing Branch

RE: Digital Logging License #35-19815-01

Dear Sir:

Enclosed you will find, in duplicate, Application for Byproduct Material License (Form N.R.C. 313) for Davis Great Guns Logging Digital Logging Division.

Digital Logging Division is the Research and Development Division of Davis Great Guns Logging. Our primary function is to build logging tools and support equipment for oil and gas well logging. As such, Digital Division does not do any well logging in oil or gas wells. We do have a test well at our site in Tulsa, Oklahoma. This well is used by Great Guns Logging engineers when they take equipment to Tulsa for repair. Licensed material used at Digital are calibration sources only. The oil and gas well logging sources are stored at Tulsa for the purpose of distribution when equipment is shipped to our field locations, or sold to other companies. Records kept at the Digital Station are all transaction and shipment of sources leak tests for all sources that are in use at the Digital Center. Sources held in storage will be leak tested at our regular interval so they can be shipped as needed.

Sources will be inventoried at the same time leak tests are made, and those records will be kept at Digital Logging and at our R.P.O. office in Wichita, Kansas. Also, all leak test records will be on file at both Digital in Tulsa and at Wichita.

Sincerely,

S. W. Hoffman
Radiation Protection Officer
Davis Great Guns Logging Digital Div.
416 Bitting Building
Wichita, Kansas
(316) 262-8762

461190
461671