

## Form TI-1 Case Resolution

|   |      |          |    |
|---|------|----------|----|
| Case Status as of 09/25/2002  | Open | Closed X |    |
| RCODE: 8204   |      |          |    |
| Region: IV  |      |          |    |
| <p>OLD - Complete Name, Address, Contact, Phone Number:<br/>         Exploration Logging<br/>         5430 Fairbanks Street, Ste. 11<br/>         Anchorage, AK 99518</p> <p>Tim Thueson, Receiving Department</p>  |      |          |    |
| <p>NEW - Complete Name, Address, Contact, Phone Number:<br/>         Baker Hughes<br/>         INTEQ, Baker Atlas, Baker Oil Tools<br/>         Barclayhill Place, Portlethen<br/>         Aberdeen AB12 4PF</p> <p>Patrick Nelis, Radiation Safety Coordinator tel. 01224 408292</p>   |      |          |    |
| Agreement State Licensee? (Double Check)  | NA   | Yes      | No |
| Moved to an Agreement State?  | NA   | Yes      | No |
| <p>Describe Follow-up: (Telephone, Internet, Chamber of Commerce, Other)<br/>         Site in Anchorage on Fairbanks Street was inspected 12/13/01. Site was occupied by Tyco Fire &amp; Security. Spoke to Andy Tilton of Tyco. He did not know what happened to former tenant Ex Log. Tyco was an unrelated company. Inspection indicated that, in the past, this site was probably a shipping/receiving location for Ex Log. It is practically certain that gauges were never used at this location, but instead brought from this location to other sites throughout Alaska. Still could not locate licensee.<br/>         "Found" licensee by accident. I met Patrick Nelis of Baker Hughes at a course. He asked me about my job with the NRC and I told him that part of my responsibilities include trying to locate "lost" general licensees/ generally licensed devices. He said that he also looks for GL devices and that in particular, he was looking for devices from a company bought in the 1990s by Baker Hughes named Exploration Logging. He has been looking for the same Ex Log GL devices from Anchorage (as well as several other former Ex Log locations). We traded notes and shared intelligence. Mr. Nelis has found and recovered a number of former Ex Log GL devices, several in the US and several overseas (see attached emails). Unfortunately, we can't determine if any of the recovered devices are the ones that NRC is looking for because we have no serial numbers for the ones sent to Anchorage. Numerous phone calls/emails to ThermoMeasureTech were not able to come up with any serial numbers for the GL devices sent to Anchorage. If we had the serial numbers, we could try to match the devices recovered by Mr. Nelis to those sent to Anchorage. Therefore, gauges still not accounted for.</p> |      |          |    |
| <p>Describe Communication with Registration Vendor:<br/>         Called Martha Hernandez @ ThermoMeasureTech 11/30/01. She said it would take a while to search their old records. FAX from Ralph Heyer @ ThermoMeasureTech dated 12/04/01 is attached. This documentation indicates that only four gauges were sent to Ex Log in Anchorage, not eight as reported in GLTS. Also shows device sent to Dubai, UAE.</p>   |      |          |    |
| <p>Vendor Follow-up Action:<br/>         None.</p>  |      |          |    |
| <p>Final Action Taken:<br/>         Update RIV database, notify NRC GL Project manager.</p>   |      |          |    |

**Cause of Bad Address/Lesson Learned:**

Mail was not deliverable due to "forward expired". Location is occupied by Tyco Fire & Security, an unrelated company.

## Form TI-2: Device Information

| RCODE: 8204  |              |               |         |                |           |             |                 |   |
|--|--------------|---------------|---------|----------------|-----------|-------------|-----------------|---|
| ID   | Model Number | Serial Number | Isotope | Activity (mCi) | Sold Date | Vendor      | Status (A or N) | Comments  |
| 1.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               | GLTS may be incorrect. Vendor indicates only 4 devices were sent to Anchorage. Unable to match recovered devices with missing devices since serial numbers of missing devices are unknown |
| 2.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 3.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 4.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 5.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 6.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 7.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| 8.   | 5202         | unknown       | 137-Cs  | 200            | 1985      | TN Technol. | N               |   |
| For additional GLD's received by the licensee identified during the inspection: see attached |              |               |         |                |           |             |                 |   |
| ID   | Model Number | Serial Number | Isotope | Activity       | Sold Date | Vendor      | Status          | Comments  |
|  |              |               |         |                |           |             |                 |   |

Status Codes:

A - Source accounted for

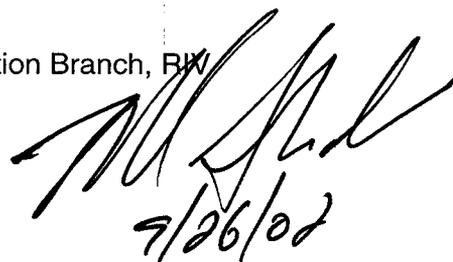
N - Source not accounted for

# Form TI-3: General Licensee Inspection Documentation

|  |   |
|--|---|
| RCODE: 8204  |   |
| General Licensee Information:                        |   |
|  | Check Box if Current Complete Name, Mailing Address, Contact, and Phone Number is Same as Provided by ORNL. If not, include correct information below:  |
|  | Baker Hughes<br>INTEQ, Baker Atlas, Baker Oil Tools<br>Barclayhill Place, Portlethen<br>Aberdeen AB12 4PF<br><br>Patrick Nelis, Radiation Safety Coordinator tel. 01224 408292  |
| Results of inspection: (check the appropriate boxes) |   |
|  | The general licensee of record is located at the address of record and  |
|  | all GLD are accounted for   |
|  | <u>not</u> all GLD are accounted for  |
|  | The general licensee of record is <u>not</u> located at the address of record, however GLD are being used under new ownership at the address of record and  |
|  | all GLD are accounted for   |
|  | <u>not</u> all GLD are accounted for  |
|  | The general licensee of record is <u>not</u> located at the address of record, however they are using GLD at another location and   |
|  | all GLD are accounted for   |
|  | <u>not</u> all GLD are accounted for;   |
|  | Neither the general licensee of record nor the facility operated by the general licensee are located at the address of record and the site has been abandoned or is being used for AN alternate purpose.  |
| X  | Other: (explain) Site in Anchorage inspected 12/01. Site occupied by unrelated company. Exploration Logging was bought by Baker Hughes in the 1990s. Baker Hughes has also been trying to locate all GL devices that belonged to Ex Log. They have recovered several but can't match them to ours because we have no serial numbers and were unable to obtain them from the vendor. |
| Gauge Information:                                   |   |
| ID   | For each gauge for which status is unaccounted for (see last column of Form TI-2), provide any conclusions about location of the gauge:   |
| 1-8  | Documentation from vendor indicates that four devices were sent to the licensee, not eight. Cannot account for gauges or draw any conclusions since we have no serial numbers.  |

Inspector: Janine F. Katanic, Health Physicist, RIV

Approved By: Mark R. Shaffer, Chief, Nuclear Materials Inspection Branch, RIV



9/26/02

**From:** "Nelis, Patrick" <patrick.nelis@bakerhughes.com>  
**To:** "Janine F. Katanic" <JFK@nrc.gov>  
**Date:** 5/1/02 4:54PM  
**Subject:** Source disposals

Hi Janine

I am writing to provide the information you requested on the radioactive sources. Some of the TN model numbers and source activities match those you are looking for, so we might well be on to something. We can not be certain about anything, however, unless the NRC or Texas Nuclear can come up with serial numbers for the actual sources you are trying to track down.

For your information, my understanding is that these devices came into the possession of Baker Hughes when it took over Exlog (AKA Exploration Logging) and incorporated it into a division called Baker Hughes INTEQ. Just to complicate things, it appears that some of the sources came into Exlog's possession when they, previously, took over a French mud company called Samega. Also, to make it worse, others may originally have been purchased by the oil companies themselves and installed permanently on drilling rigs. I have been told that Exlog agreed to give several of these a safe home when they were taken out of service.

I will list here only the items supplied by Texas Nuclear and its subsidiaries. (Let me know if you want details of the Ohmart gauges we have also.) When I get back to my office I will be able to determine when some of these items were supplied, to see if any of the dates tie up with those on your list.

I have found 4 TN 5202 gauge housings, containing 200 mCi Cs-137 sources. The source serial numbers are B349, B350, B1670 and B1671. I have in the past year returned these sources to Thermo MeasureTech.

I have found 2 TN 5203 model housings, also containing 200 mCi Cs-137 sources. The source serial numbers are B631 and B632. These have also now been returned to Thermo MeasureTech also.

I have also disposed of 2 TN 5201 housings, containing 20 mCi Cs-137 sources. The serial numbers are B1914 and B1915.

For completeness, I will also mention that there are 5 TN devices in our store in Nigeria. I am trying to get these shipped off to Thermo MeasureTech. My notes show that 2 of these are 'Series SG11, Model 6176' (maybe this should be 5176?) devices. The sources are Cs-137, with an activity of 500 mCi (not small). The other 3 are TN 'SGD Model As'. I understand that these were supplied by a TN subsidiary in the UK. They contain 20 mCi Cs-137 sources.

I hope this is of use. Let me know if Thermo MeasureTech can match any of these sources to the ones on your list.

Good luck!

Patrick

**From:** "Nelis, Patrick" <patrick.nelis@bakerhughes.com>  
**To:** "Janine F. Katanic" <JFK@nrc.gov>  
**Date:** 8/12/02 5:17AM  
**Subject:** RE: Dose information

Hey, Janine

Thank you for your message. I thought something terrible had happened to you!

About the dose information, I was looking for some published data from the US that I could refer to in my paper. The written paper has now been submitted for publication, but if you can point me towards any published data I will fit it in to my conference presentation, which will be in early October.

The problem with this is that there is too much folklore, and not enough hard data available. The UK regulator, the Health and Safety Executive, have a 'Central Index of Dose Information' and publishes annual reports of the doses received by persons in different occupational categories, but there doesn't seem to be much more than this available, in English anyway. If the NRC publish something, then let me know, If not, just leave it.

About Exlog, I got some very good news last week that the last batch of gauges I have been working on, 9 of them in Nigeria, had been safely delivered to Thermo MeasureTech for disposal. I have nothing more to report about the items supplied to Alaska etc, but having cleared away all the ones I know about, I am now ready to start phase 2 of my project, and will do some proper digging to see what other information I can come up with.

But I don't really know what more can be done on this until we get some serial numbers for the sources involved. I asked my contact at Thermo MeasureTech about a year ago for details of all the sources they supplied to Exlog over the years, but he didn't have this information, which I thought was strange. If they don't know what they supplied, how do they know what they have already taken back? My next step will be to go back to Thermo MeasureTech again to see if they can provide this information. That will tell me which ones are still unaccounted for, if any. I haven't been in touch with the RSO yet, the Ralph guy that you have been dealing with - I am hoping that he can provide more information than I got from them previously.

I too am now away for a month, but I will get something done on this Exlog stuff on my return. What are your plans on this?

Take care, and keep in touch.

Patrick

-----Original Message-----

From: Janine F. Katanic [mailto:JFK@nrc.gov]  
Sent: 09 August 2002 21:57  
To: patrick.nelis@bakerhughes.com  
Subject: Re: Dose information

# Thermo MeasureTech

DEC - 4 2001

TO: Ms. Janine Katanic  
T: 817.860.8151  
F: 817.860.8188

FROM: Ralph S. Heyer  
Corporate Radiation Safety Officer  
and Manager of Technical Services  
2555 N. IH 35  
Round Rock, Texas 78664  
T: 512.388.9287  
F: 512.388.9287  
E: rhey@thermoMT.com

DATE: December 4, 2001

SUBJECT: ADDRESSES (4 PAGES)

Here is the information you requested.

See attached for Exploration Logging.

Sincerely,



LICENSE PACK REQUEST

Customer No: 381 C#: 532391 PC#: 285043  
Date Rec: 04/01/85 Date Rel: 04/18/85 Lic#: G. 6-1105 Ship Date: 05/01

Quantity: 4 Activity: 200 mCi Source: Cs-137 Source Holder: 5202  
Quantity: Activity: Source: Source Holder:  
Quantity: Activity: Source: Source Holder:  
Quantity: Activity: Source: Source Holder:

USER: EXPLORATION LOGGING INTERMEDIATE PERSON: None SHIP TO: Same  
5430 Fairbanks  
Suite 11-Receiving  
Anchorage, AK 99502  
ATTN: Tim Thueson Relationship: ATTN: Tim Thueson

SOLD TO: Exploration Logging

SPECIAL INSTRUCTIONS: Customer input-welded to pipe sections.

License Pack Mailed: 00/00/00 License Applied For: 00/00/00 BW: PLW:

STATUS COMMENTS: DRD: 05-03-85 (Suite 11 is Receiving Station)  
Martin Fennell (lic contact) 916/983-1900  
Tim Thueson, Sr. Engineer 907/563-3112  
Ed Guenard (Vercara, CA) 805/656-1941 Coordinator

943

Ship Date: 05/01/85 Jurisdiction: NRC

Account Holder: 5202

Account Holder:

Account Holder:

Account Holder:

SHIP TO:

MAIL TO:

Same

EXHIBITATION LOADING

5430 FAIRBANKS  
Suite 11

Anchorage, AK 99502

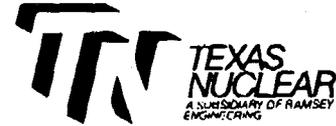
ATTN: Tim Tauson

ATTN: Tim Tauson, Sr. Engr

Rwt

PLK:

MR: X



TO: Doris Bryan cc: File  
 FROM: Lupie Palacios  
 DATE: April 17, 1985  
 SUBJECT: EXPLORATION LOGGING, C-530391

The following changes have been made to the above referenced order.

1. 4 each 5203 source heads with standard block have been replaced with 4 each 5202 source heads with standard block. 4 each 200 mCi, Cs-137 sources will be used as originally entered.
2. 1 each 5176 with standard block with 200 mCi, Cs-137 has been added to this order.
3. The four units in Item 1 above are shipping as originally entered to Exploration Logging in Anchorage, AK.
4. The fifth unit with the 5176 source head has been requested to ship to:
  - EXPLORATION LOGGING ARABIAN GULF LTD.  
 Sharjah, United Arab Emirates  
 c/o Peeraj Clearing & Forwarding Agents  
 Dubai, United Arab Emirates

Thanks,

UNRECORDED CORRESPONDENCE