

**David Trinker**

**From:** David Trinker  
**Sent:** Tuesday, August 23, 2022 2:54 PM  
**To:** O'Keefe, Neil; robertoj.torres@nrc.gov  
**Cc:** Ron Blush  
**Subject:** Core Laboratories/ ProTechnics Formal Letter Requesting NRC Region IV Approval to Abandon a Sealed Source in a ENI US Operating GoM Well

**Attachments:**

**Tracking:**

**Recipient**

**Delivery**

O'Keefe, Neil

robertoj.torres@nrc.gov

Ron Blush

Delivered: 8/23/2022 2:55 PM

Good Afternoon Neil,

Enclosed is Core Laboratories/ ProTechnics' formal letter and attachments covering the sealed source abandonment approval request for the ENI US Operating well located in the Gulf of Mexico (GoM). Also attached is a compressed (.zip) file containing letter attachments.

The reason for adding that information to the letter is because a License Amendment Request is a sharp deviation from our agreement in early August to write our letter as a request for approval of sealed source abandonment using alternative procedures (methods).

Please appreciate that ProTechnics has been advised by NRC Region IV since this past January 2022 that NRC Region IV's goal is to reduce, if not eliminate, License Amendment Requests, as a means to resolve abandonment of irretrievable sealed sources inside wellbores.

Please let me know if there is a special portal to which the letter should be emailed in addition to this email transmittal to you and Roberto Torres.

Sincerely,

Regards,

**David Trinker**

*Director Health, Safety, Environment Quality  
Corporate Radiation Safety Officer (RSO)*

**CoreLab – ProTechnics Division**

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August 22, 2022

U.S. Nuclear Regulatory Commission Region IV  
1600 East Lamar Blvd.  
Arlington, TX 76011-4511

License # 42-26928-01

Attn: Neil O'Keefe / Roberto J. Torres

The following is a request for alternate abandonment of an irretrievable sealed source in accordance with 10 CFR §39.15 (c), which reads as follows: "A licensee may apply, pursuant to §39.91, for Commission approval, on a case-by-case basis, of proposed procedures to abandon an irretrievable well logging source in a manner not otherwise authorized in paragraph (a)(5) of this section."

The irretrievable sealed source is located inside an Offshore Gulf of Mexico well owned by [REDACTED]. The sealed source type, the well location, and location of the sealed source inside the wellbore are as follows:

- Date that logging tool containing the sealed source was lodged in the well: 06/29/2022
- Date determined that the logging tool (sealed source) is irretrievable: 07/29/2022

- Well location and identification:



- Sealed Source Location Inside Wellbore:



- Wellbore Lowest Producing Interval Depth:



Multiple fishing attempts were made during the period of June 30th, 2022, to July 28th, 2022. Fishing attempts were unsuccessful. ProTechnics considers the sealed source as non-retrievable. The specific wellbore deviation is at a 45-degree inclination from a 90-degree vertical orientation and location of the sealed source [REDACTED] make it impossible to implement ProTechnics' standard NRC-approved abandonment procedures.

If approved by NRC, sealed source abandonment in accordance with alternative abandonment procedures recognized by 10 CFR §39.15 (c), will meet the intent of ProTechnics' standard, existing NRC-approved abandonment procedures developed in accordance with 10 CFR §39.77.

If approved, abandonment of the sealed logging source in this alternate manner in this well is safe from harming the public, the environment, and the national security. ProTechnics' proposed alternative abandonment procedures will utilize NRC's *Defense-in-Depth protection principle* through implementation of the following categories of multiple barriers: Mechanical, Geographical (Location Non-Proximity to Human Populations), and Administrative.

### **Mechanical/Technology Barriers**

With respect to mechanical barriers, we believe that the mechanical hardware in the wellbore and the wellbore physical orientation gives the sealed source at least as much protection as, if not more than, that normally provided by ProTechnics' existing NRC-approved abandonment procedures.

[REDACTED]

[REDACTED]

Drawings are attached to assist with visualizing the mechanics of this specific wellbore.

[REDACTED]

[REDACTED]

Drawings are attached to assist with visualizing the mechanical geometry of this specific wellbore.

[REDACTED]



[REDACTED]

[REDACTED]

[REDACTED] See ProTechnics' attached wellbore drawings.

In addition to the mechanical barriers described above, the sealed source is naturally protected from impact [REDACTED]

[REDACTED]

[REDACTED]

Thus, [REDACTED]

[REDACTED] there are at least (5) discreet mechanical barrier devices in place protecting the sealed source from impact damage and preventing its movement [REDACTED] through the wellbore. The five (5) mechanical barriers include: [REDACTED]

[REDACTED]

In addition, the well bore deviation significantly reduces the risk of damage to ProTechnics stuck logging tool containing the sealed source.

An additional barrier is present at the commencement of, and during, any future well remediation or work-over. This barrier is a combination Mechanical/Technology Barrier and Administrative Barrier. State of the art well drilling and work-over (well remediation) technology includes the technical capability for operators of well drilling and work-over equipment to monitor the precise position and location of drilling and milling bits using GPS technology, as well as monitoring directional deviation/slippage and changes to resistance and vibration inside a wellbore. These mechanically driven activities are performed according to established procedures.

Finally, in the natural progression of the operator's production program there would be no subsequent drilling operations. There is no reason to re-enter the wellbore with a mill or drill since the current mechanical components and technology inside the wellbore would be damaged, causing the existing production hardware to be inoperable.

## Geographic Well Location as a Barrier

ProTechnics (as sealed source licensee) and [REDACTED] (as the well owner/operator) believe that the sealed source's location in this well offers additional, if not superior, protection to the public, the environment, and national security at a level equal to or better than a normal sealed source disposal facility.

- The well is more than [REDACTED] miles away from the nearest habitable land in the Gulf of Mexico. [REDACTED]
- The depth and position of the sealed source shield it from rupture or otherwise posing a risk to the environment and health of the public. Detailed on wellbore drawing.
- The sealed source is located [REDACTED] Sealed source location inside the wellbore is shown on the well sketch and detailed on the wellbore schematic.

[REDACTED]  
[REDACTED] This spatial separation distance inside the wellbore between the bottom of the producing zone and the sealed source is additional to mechanical barriers [REDACTED]  
[REDACTED]

## Administrative Controls as Barriers

Additionally, the following administrative controls will function as additional barriers put into place with the well owner/operator. These administrative barriers will ensure that ProTechnics will be consulted:

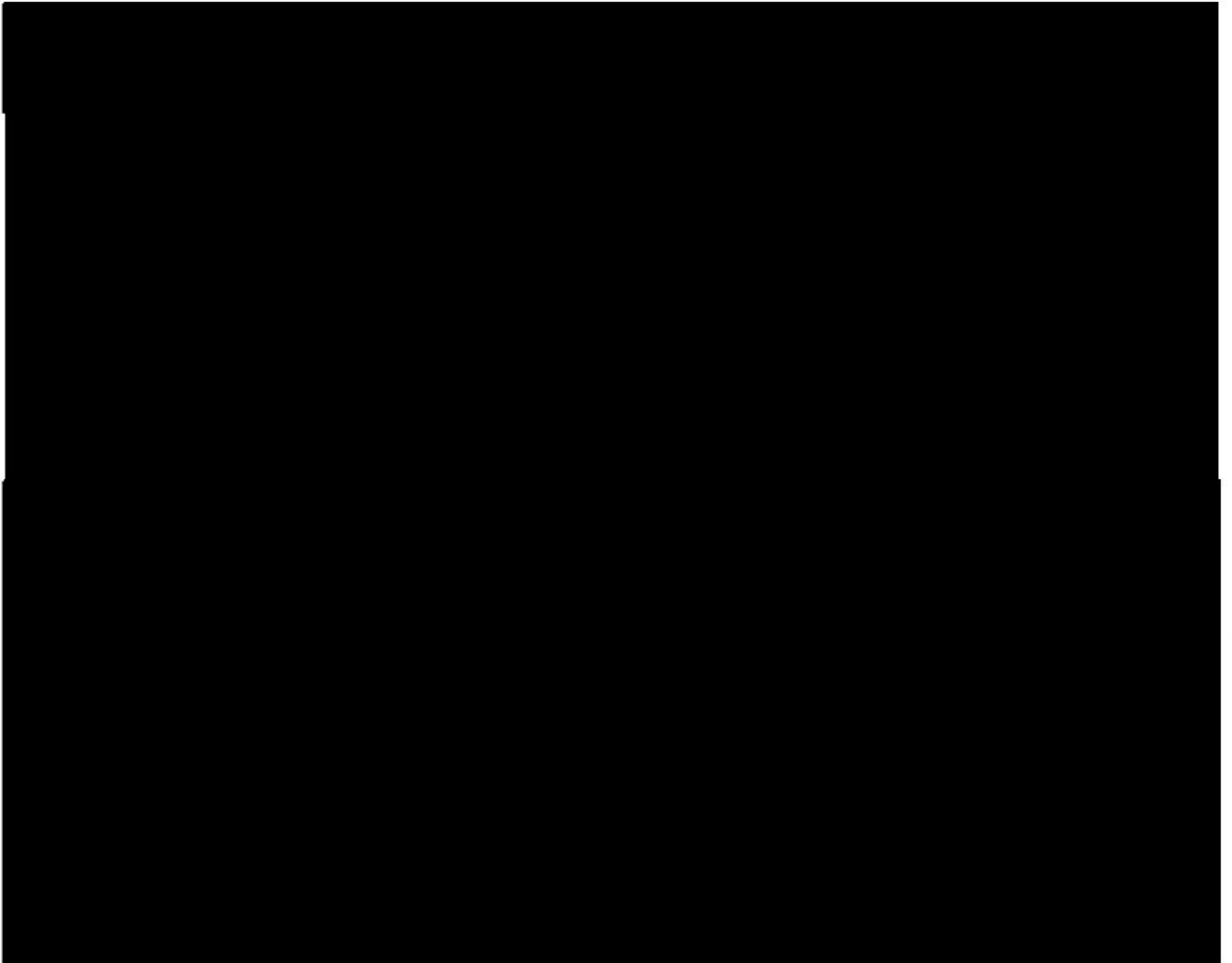
- Before remedial well work is carried out
- If well ownership changes
- During the development stages of the operator's Total Abandonment (TA) Plan for the wellbore after reservoir depletion occurs. (Total Abandonment [TA] of a well is a U.S. BSEE term.)

Physical reentry into the wellbore could happen only after extensive planning. ProTechnics would be a part of such planning through the administrative flow of communication agreed between ProTechnics and the well owner/operator as referenced in the attached *Operator Service Agreement – Downhole Sealed Sources*.

If the operator determines it needs to remediate the well, the existing internal hardware associated with the production assembly and gravel pack completion assembly would have to be pulled from the wellbore. In other words, deliberate physical modifications to the inside of the wellbore would need to be taken to re-enter the wellbore to reach the sealed source location.

In addition, before production operations from a modified wellbore can begin, the U.S. BSEE is required to approve and issue to the well operator a Revised Permit to Modify (RPM) that recognizes and approves (permits) physical modifications made by the operator to the original well design and hardware configuration inside the wellbore. If additional, future wellbore or hardware modifications were planned by the well operator, post-modification production could not resume until such additional well design modifications are reviewed and approved (permitted) by BSEE, resulting in BSEE-required issuance of yet another RPM for the well.

ProTechnics has committed to monitor the status of the well and sealed source. ProTechnics' commitment to monitor the status of the well and sealed source would be accomplished in the following manner:



The following [REDACTED] documents are enclosed as attachments to this letter:



Finally, it is in the public's best interest for NRC to approve this alternate abandonment exemption request to leave the sealed source in place and allow production of hydrocarbon reserves from the [REDACTED] so that recoverable natural resources can be utilized for the benefit of our country.

Since first bringing this subject to NRC Region IV's attention by voicemail on Friday, July 29, 2022, followed by direct voice-to-voice notification on Monday, August 1, 2022, ProTechnics has been in frequent communication with Region IV about this irretrievable sealed source and our plans to request abandonment using alternative procedures. Our August 1, 2022, Region IV phone conversation was followed by providing an official live-voice



notification to NRC Headquarters in Gaithersburg, Maryland using NRC's recorded Hotline [(301) 816-5100] that same day.

Since that time, ProTechnics has been in phone and email contact with the Region IV Materials Licensing Branch Chief (Mr. Neil O'Keefe) approximately twice weekly since that initial notification, including email transmission of a draft of this letter on August 16, 2022, for NRC Region IV review. Thus, given those communications in combination with this letter, ProTechnics has satisfied the 30-day reporting requirements of 10 CFR Part 39.15(a)(5) and 10 CFR 39.77(c) and (d).

This letter also serves to request in writing, in accordance with 10 CFR Part 39.77(c)(3), an extension of time while NRC Region IV reviews this request.



If you have any questions or need additional information, please contact me at (346) 229-9043 or (713) 328-2327.

Sincerely,

David Trinker

Corporate Radiation Safety Officer  
Core Laboratories - ProTechnics Division

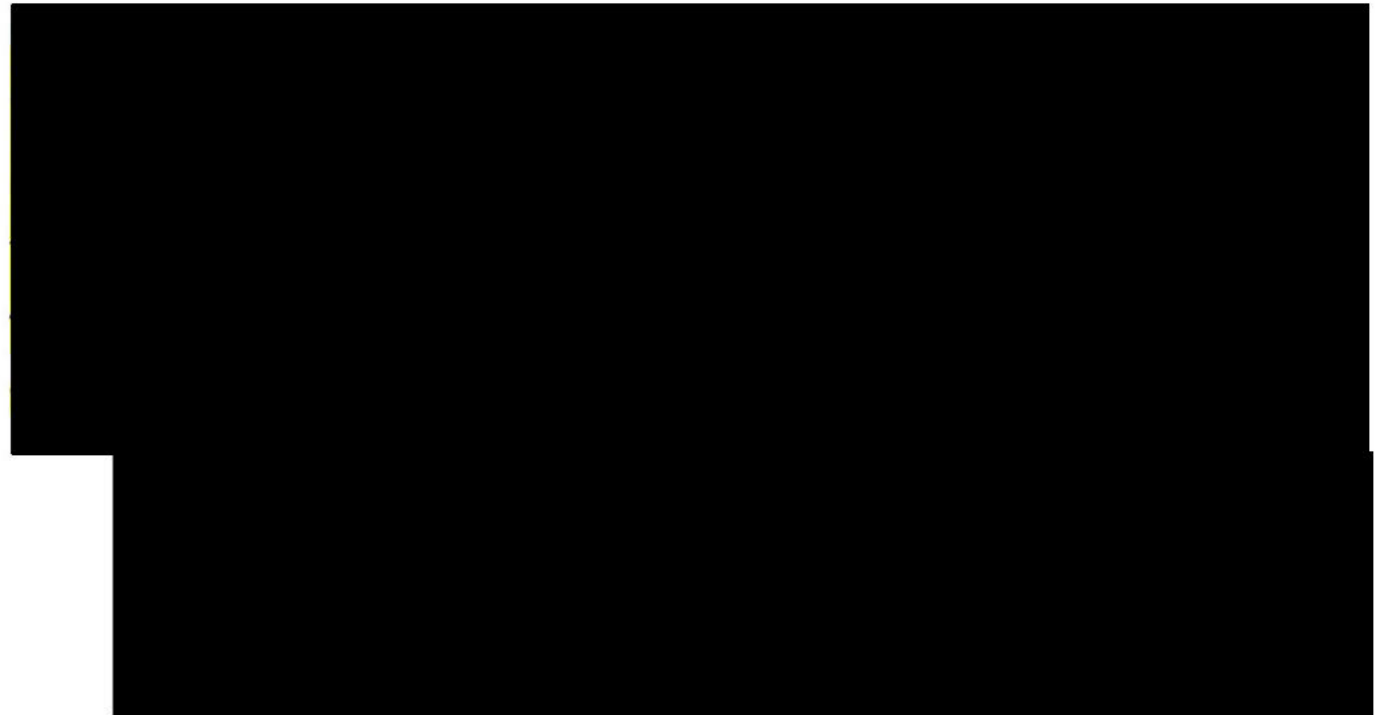
Attachments: [redacted] in single Zip Folder



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