MS16
L-1
47-25480-01
03035153

From: Randy Shamblin
TraceWell Services

To: Scott Willson
NRC

September 18, 2002

Tracewell Services,Inc.
Attn: Randy Shamblin
1168 46th Street Industrial Park
Parkersburg, Wv 26101

Dear Randy:

I, John Baker owner of Rosemar Storage X-Press formally known, as Hydrocarbon Storage X-Press, has no objection that Tracewell Services Inc. will continue renting and storing radioactive material on its premises. The property we are discussing is located at 1168 46th Street Industrial Park, Parkersburg, West Virginia.

Tracewell Services, Inc. has shown that the storage of such materials has been approved by the appropriate Federal Government Agency; and that the above agency have jurisdiction on such storage.

Sincerely,

John Baker
Owner

Hydrocarbon Well Logging, Inc.
3901 Briscoe Road
Parkersburg, WV 26104
304-428-5500 Fax 304-428-4698

July 19, 1999

Tracewell Services, Inc.
1168 46th Street Industrial Park
Parkersburg, WV 26101

To Whom It May Concern:

Hydrocarbon Well Logging does not object to Tracewell Services, Inc. to storing Radioactive materials on its land at 1168 46th Street Industrial Park, Parkersburg, West Virginia. The said storage of such materials has been approved by the appropriate Federal Government Agency that has jurisdiction on such storage.

Sincerely,

Hydrocarbon Well Logging, Inc.
Randy Shamblin
Vice President

RS/mlh

1.0 PURPOSE AND SCOPE

The purpose of this section is to establish the training requirements for qualifying personnel to act as logging supervisors and assistants. This section shall apply to all personnel involved in the use of radioactive materials. Qualifying personnel will also have to abide by Subpart D – Radiation Safety Requirements part 39.61 Training outline of the NRC Rules and Regulations.

The training program shall be the responsibility of the Radiation Safety Officer.

2.0 TRAINING PROGRAM FOR ASSISTANTS

A new employee coming to work for this company shall be designated an assistant until after he has completed the following:

2.1 Eight hours of training in the following:

2.1.1 Company's operating & emergency procedures.

2.1.2 Company's radioactive material license.

2.1.3 The State Regulations For Control of Radiation.

2.1.4 Use of sources of radiation.

2.1.5 Related tracer equipment.

2.1.6 Radiation survey instruments.

2.1.7 Personnel monitoring equipment.

2.2 The employee will then be given a performance Examination #2 (see Attachment V- at the end of this section) which he must successfully complete. Any areas that were missed on the examination will be discussed with the employee. Personnel failing the examination will be required to repeat the above training program. The employee will then sign a form stating that he/she has successfully completed this instruction. The RSO will sign the bottom indicating competency to operate as logging/tracer assistant.

2.3 Upon the completion of the training program outlined in 2.1 thru 2.3 above, the individual will work under the direct supervision of a qualified logging supervisor for a period of two months before becoming eligible to qualify as a logging supervisor.

BILL RICHARDSON
Governor

DIANE DENISH
Lieutenant Governor

State of New Mexico
ENVIRONMENT DEPARTMENT
Environmental Health Division
Radiation Control Bureau
Harold Runnels Building
1190 St. Francis Drive 87505-
P. O. 26110
Santa Fe, New Mexico 87502-6110
Telephone number (505) 476-3060
Fax number (505) 476-3232
www.nmenv.state.nm.us/nmrb/hhome.html

RON CURRY
Secretary

JON GOLDSTEIN
Deputy Secretary

CARLOS ROMERO
Director

Wednesday, September 24, 2008

Larry I. Stephenson, PE
ProTechnics
6316 Windfern
Houston,, TX 77040

Dear Applicant:

Carefully review the content of your enclosed certificate(s) of registration to provide radiological services in the State of New Mexico. Please immediately report any errors or omissions to the Radiation Control Bureau.

This registration(s) entitles the holder to provide radiological services in areas within the State of New Mexico not under exclusive federal jurisdiction. Providing such services in other states, or activities falling under federal jurisdiction, must be in accordance with the requirements imposed by those authorities.

Only the specialty(s) in accordance with the provisions stated on the certificate(s) may be performed until the specified expiration date or such time that any change renders the information submitted in the original application invalid. Inform this office of such changes of information from your application, or your certification.

Please call this office at (505) 222-9517 for any further information.

Sincerely,

Edward Vigil
Radiation Specialist
Radiation Control Bureau

enclosure

Certificate of Registration

Larry L Stephenson	6316 Windfern		
Name	Street Address		
ProTechnics	Houston	TX	77040
Organization	City	State/Province	Zip/Postal Code

Registration Number(s)	Radiological Service Specialty(s) For Which Certification Is Issue	Expiration Date(s)
059 - 8H	Qualified Expert in Health Physics	Sep 30, 2011

Qualified expert in the specialty of health physics.

1) The registrant is entitled to provide radiation safety services and consulting including radiation safety training, monitoring, calibration of radiation machines, instrumentation, and application of related activities, as specified in Part 1, Paragraph 106.CC., of the New Mexico Radiation Protection Regulations.
2) Radiation producing machines may include medical X-ray machines, dental X-ray machines, CT scanners, or fluoroscopes and shall be calibrated in accordance with manufacturer specifications and/or industry accepted practices (as appropriate).
3) This registration does not entitle the registrant to hold himself/herself out as a medical physicist or a qualified expert in medical physics.
4) This registration does not entitle the registrant to service or install components of radiation emitting devices.
5) The radiation safety training shall follow a standardized format which at a minimum addresses the following topics affecting workers:
a) The use of radiation and/or radioactive material in the work place;
b) health protection problems associated with exposure to radiation and/or radioactive material;
c) precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;
d) the applicable provisions of applicable regulations for the protection of personnel from exposure to radiation and/or radioactive material;
e) the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation and/or radioactive material; and
- advisement as to radiation exposure reports which workers may request pursuant to Section 1003 of the New Mexico Radiation Protection Regulations.
6) The registrant is responsible for ensuring that all personnel performing service under this registration do so under the direct supervision and oversight of the registrant, and that they possess adequate credentials to discharge their duties.

In accordance with Part 2 of the New Mexico Radiation Protection Regulations (20.3.2 NMAC), the above named person or organization is registered with the New Mexico Radiation Control Bureau as having the necessary training and knowledge to provide radiological services in the specialty(s) indicated above. These services will be provided in New Mexico to both public and private concerns, and to licensees and registrants of the New Mexico Radiation Control Bureau. The registrant shall not perform services that are not specifically indicated by this certificate and its provisions, and is subject to all applicable requirements of the New Mexico Radiation Protection Regulations (20.3 NMAC). The registrant is responsible for applying for timely renewal of registration(s) as they expire individually, and shall notify this Bureau in writing before making any changes that would render the information contained in this certificate to be inaccurate. New Mexico Radiation Control Bureau, PO Box 26110, Santa Fe, New Mexico 87502-6110, phone (505) 222-9517.

POST OR FILE.
This certificate and its provisions must be available for inspection.

9/24/2008
(Date)

Edward Vigil
Radiation Control Bureau
New Mexico Environment Department

Certificate of Registration

Larry J. Stephenson	6316 Windfern		
Name	*Street Address*		
ProTechnics	Houston	TX	77040
Organization	*City*	*State/Province*	*Zip/Postal Code*

Registration Number(s)	Radiological Service Specialty(s) For Which Certification Is Issue	Expiration Date(s)
171 - 3	Calibration of Radiation Detection Instruments and Devices	Sep 30, 2011

Calibration of radiation detection instruments or devices.

1) All calibrations shall be performed in accordance with manufacturer specifications.
2) Radioactive sources and electronic devices used to calibrate radiation detection instruments and devices shall be National Institute of Standards and Technology (NIST) traceable.
3) The registrant is responsible for ensuring that all personnel performing service under this registration possess adequate experience and training on radiation interactions and methods necessary to properly calibrate said instruments and devices.

493 - 7	Leak Testing of Sealed Sources	Sep 30, 2011

Leak testing and analysis of sealed radioactive sources.

1) Leak test procedures will be performed in accordance with New Mexico Radiation Protection Regulations Part 4, Section 415. Notification of contamination, at or above 0.005 µCi, shall be sent to the New Mexico Radiation Control Bureau within five days of determination.
2) The registrant is responsible for ensuring that all personnel performing service under this registration possess adequate experience and training on methods to properly perform and analyze sealed source leak tests and to control radioactive contaminants.

In accordance with Part 2 of the New Mexico Radiation Protection Regulations (20.3.2 NMAC), the above named person or organization is registered with the New Mexico Radiation Control Bureau as having the necessary training and knowledge to provide radiological services in the specialty(s) indicated above. These services will be provided in New Mexico to both public and private concerns, and to licensees and registrants of the New Mexico Radiation Control Bureau. The registrant shall not perform services that are not specifically indicated by this certificate and its provisions, and is subject to all applicable requirements of the New Mexico Radiation Protection Regulations (20.3 NMAC). The registrant is responsible for applying for timely renewal of registration(s) as they expire individually, and shall notify this Bureau in writing before making any changes that would render the information contained in this certificate to be inaccurate. New Mexico Radiation Control Bureau, PO Box 26110, Santa Fe, New Mexico 87502-6110, phone (505) 222-9517.

POST OR FILE.
This certificate and its provisions must be available for inspection.

9/24/2008
(Date)

Edward Vigil
Radiation Control Bureau
New Mexico Environment Department

7

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION
(20.3.4 NMAC)
NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS: INSPECTIONS
(20.3.10 NMAC)

State of New Mexico *Environment Department*

YOUR EMPLOYER'S RESPONSIBILITY
Your employer is either licensed or registered to utilize sources of radiation in accordance with the New Mexico Radiation Protection Regulations (20.3 NMAC).

Your employer is required to:

- Apply the regulations to work involving sources of radiation.
- Post or make available to you a copy of the regulations, license, and operating procedures that apply to work you are engaged in, and explain their provisions to you; post Notices of Violation involving radiological working conditions and orders.

If a company violates the requirements, it can be fined or have its license modified, suspended or revoked.

YOUR RESPONSIBILITY AS A WORKER
You should familiarize yourself with those provisions of the regulations and the operating procedures that apply to the work you do. You should observe their provisions for you own protection and the protection of your co-workers. If you observe a violation, you should reportit..

REPORTS ON YOUR RADIATION EXPOSURE HISTORY
If you work where personnel monitoring is required, your employer must:

- Give you a written report if you receive an exposure in excess of any limit as set forth in the regulations or in the license,
- Advise you of your dose annually, and
- Give you a written report of your radiation exposure upon termination of your employment.

INSPECTIONS

All licensed and registered activities are subject to inspection by representatives of the Environment Department. During inspections, Department inspectors may confer privately with workers.
A worker, or representative of workers, may request an inspection by sending a signed notice of the alleged violation of the Act, regulations, or license condition.

CONTACTING THE RADIATION CONTROL BUREAU
You can contact the Radiation Control Bureau of the New Mexico Environment Department at the address and phone number listed below:

RADIATION CONTROL BUREAU
1190 St. Francis, 87505
P.O. Box 26110, 87502-6110
Santa Fe, New Mexico
Telephone (505) 476-3236
Fax (505) 476-3232

REGULATIONS
The regulations are available on the internet at:
http://nmenv.state.nm.us/nmrcb/lllome.html
Then click on "REGULATIONS".

POSTING REQUIREMENT
Copies of this notice must be posted in a sufficient number of places to permit employees working in or frequenting any portion of a restricted area to observe a copy.

APPENDIX C

Electronic Compensation Sources		
Radioisotope	**Manufacturer/Model No.**	**Quantity**
None		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.
		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.

Tracer Materials					
Radioisotope	**Chemical or Physical Form**			**Millicuries Per Injection**	**Total Quantity Requested**
Ir-192	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	500 mCi	2,000 mCi
Sc-46	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	300 mCi	1,000 mCi
Sb-124	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	150 mCi	1,000 mCi

Depleted Uranium		
Radioisotope	**Manufacturer/Model No.**	**Kilograms Requested**
Depleted Uranium (DU)		NONE

Sealed Sources Not Used in Well Logging Operations

Suggested Format for Providing Information Requested in Items 5 through 11 of NRC Form 313

Item No.	Title and Criteria	Use Table Below	Description Attached
5	**RADIOACTIVE MATERIAL** **Sealed Sources and Devices**	None	None
	• Identify each radionuclide that will be used in sealed sources	[ ]	[ ]
	• Identify each radionuclide that will be used in energy compensation sources	[ ]	[ ]
	• Identify each radionuclide that will be used as tracer materials in single wells	[✓]	[ ]
	• Identify each radionuclide that will be used as tracer materials in field flood studies in multiple wells	[ ]	[ ]
	• Identify any depleted uranium that is used as shielding material or sinker bars.	[ ]	[ ]

Well Logging Sealed Sources

Radioisotope	Manufacturer/Model No.	Quantity
		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.
None		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.
		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.

Neutron Generators

Radioisotope	Manufacturer/Model No.	Quantity
	None	

APPENDIX C

Electronic Compensation Sources		
Radioisotope	**Manufacturer/Model No.**	**Quantity**
None		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.
		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.

Tracer Materials					
Radioisotope	**Chemical or Physical Form**			**Millicuries Per Injection**	**Total Quantity Requested**
Ir-192	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	500 mCi	2,000 mCi
Sc-46	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	300 mCi	1,000 mCi
Sb-124	[ ] Gas	[ ] Liquid	[✓] Labeled Frac Sands	150 mCi	1,000 mCi

Depleted Uranium		
Radioisotope	**Manufacturer/Model No.**	**Kilograms Requested**
Depleted Uranium (DU)		NONE

Sealed Sources Not Used in Well Logging Operations

Radioisotope	Manufacturer/Model No.	Quantity
None		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.
		Not to exceed the maximum activity per source as specified in the Sealed Source and Device Registration Sheet.

Commitment:	Yes	N/A
Confirm that each sealed source used in above ground devices is registered as an approved sealed source or device by NRC or an Agreement State and will be possessed and used in accordance with the conditions specified in the registration certificate.	[ ]	[✓]

Item No.	Title and Criteria	Yes	N/A	Description Attached
	RADIOACTIVE MATERIAL			
	Financial Assurance and Record Keeping for Decommissioning			
	• Pursuant to 10 CFR 30.35(g), we shall maintain drawings and records important to decommissioning and transfer these records to a new licensee before licensed activities are transferred, or assign the records to the appropriate NRC Regional Office before the license is terminated.	[✓]	[ ]	[ ]
	OR			
	• If financial assurance is required, submit evidence.	[ ]	[ ]	[ ]

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
6	**PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED**			
	• Oil and Gas Well Logging.	[✓]	[ ]	
	• Mineral Well Logging.	[ ]	[✓]	
	• Geophysical Well Logging.	[ ]	[✓]	
	• Tracer Studies in Single Wells.	[✓]	[ ]	
	• Field Flood or Enhanced Recovery Studies in Multiple Wells.	[ ]	[✓]	
	OR			
	• Specify the purposes for which the sources and device(s) will be used other than those included in the manufacturer's recommendations, and as specified on the SSD Registration Certificate.			[ ]
	AND			
	• We plan to perform in ***fresh water*** aquifers:			
	– Tracer Studies	[ ]	[✓]	
	– Well logging using sealed sources	[ ]	[✓]	
	– Well logging using neutron generator.	[ ]	[✓]	

Item No.	Title and Criteria	Yes	N/A	Description Attached
7	**INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE** **Radiation Safety Officer (RSO)**			
	• The name of the proposed RSO and other individuals who will be responsible for the radiation protection program. Name: Randy Shamblin	[✓]		
	• Demonstrate that the RSO has sufficient independence and direct communication with responsible management officials by providing a copy of an organizational chart by position, demonstrating day-to-day oversight of the radiation safety activities			☑
	AND EITHER			
	• The specific training and experience of the RSO			[✓]
	OR			
	• Alternative information demonstrating that the proposed RSO is qualified by training and experience, e.g., listed by name as an authorized user or the RSO on an NRC or Agreement State license that requires a radiation safety program of comparable size and scope.		[ ]	[ ]

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
8	**TRAINING FOR LOGGING SUPERVISORS AND LOGGING ASSISTANTS**			
	• Submit an outline of the training to be given to prospective logging supervisors and logging assistants.			[✓]
	• Submit your procedures for experienced logging supervisors who have worked for another licensee.			[✓]
	• Provide a copy of a typical examination and the correct answers to the examination questions. State the passing grade %.			[✓]
	• Specify the qualifications of your instructors.	[✓]	[ ]	[ ]
	• If training will be conducted by someone outside the applicant's organization, identify the course by title and provide the name and address of the company providing the training.			[✓]
	• Describe the field (practical) examination that will be given to prospective logging supervisors and logging assistants.			[ ]
	• Describe the annual refresher training program, including topics to be covered and how the training will be conducted.			[ ]
	• Submit a description of your program for inspecting the job performance of each well logging supervisor or logging assistant at intervals not to exceed 12 months, as described in 10 CFR 39.13.			[ ]

Item No.	Title and Criteria	Yes	N/A	Description Attached
9	**FACILITIES AND EQUIPMENT**			
	• Submit a drawing or sketch of the proposed facility, identifying areas where radioactive materials, including radioactive wastes, will be used or stored.		[ ]	[✓]
	• Drawings should show, where applicable, adjacent buildings, boundary lines, security fences, and lockable storage areas.		[ ]	[✓]
	• Illustrate area(s) where explosive, flammable, or other hazardous materials may be stored.		[ ]	[✓]
	• Drawings should also show the relationship and distance between restricted areas and adjacent unrestricted areas.		[ ]	[✓]
	• Drawings should specify shielding materials (concrete, lead, etc.) and means for securing radioactive materials from unauthorized removal.		[ ]	[✓]
	• Submit a drawing or sketch of the proposed tracer material storage facilities, including rooms, buildings, below ground bunker storage areas, or containers used for storage of both tracer and tracer waste materials, if appropriate. Specify the types and amount of shielding materials (concrete, lead, etc.) and means for securing tracer materials from unauthorized removal.		[ ]	[✓] [ ]
	• Describe protective clothing (such as rubber gloves, coveralls, respirators, and face shields), auxiliary shielding, absorbent materials, injection equipment, secondary containers for waste water storage for decontamination purposes, plastic bags for storing contaminated items, etc. that will be available at well sites when using tracer materials.		[ ]	[✓]
	• Describe proposed laundry facilities, if applicable, used for contaminated protective clothing. Specify how the contaminated waste water from the laundry machines or sinks is disposed. Operating and emergency procedures should address decontamination of the laundry area and equipment.		[✓]	[ ]
	• Describe proposed decontamination facilities for trucks, tracer injection tools, or other equipment contaminated by tracer materials, if applicable. Specify how the contaminated waste water for these decontamination facilities is disposed. Operating and emergency procedures should address decontamination of these types of equipment and facilities.		[✓]	[ ]

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
9	**FACILITIES AND EQUIPMENT** ***(Cont'd)***			
	• Describe, if applicable, equipment for "repackaging" gaseous, volatile, or finely divided tracer material. Most tracer users do not repackage materials and acquire their injections in precalibrated amounts or "ready to use" forms. However, should an applicant request the ability to repackage tracer, volatile, or finely divided material, the following equipment should be considered when repackaging tracer materials: sinks, trays with absorbent material, glove boxes, fume hoods with charcoal filtration, filtered exhaust, special handling equipment including special tools, rubber gloves, etc.		[✓]	[ ]

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** The applicant is required to establish and submit its radiation protection program. The format use for providing information should be developed by the applicant. No specific format is required by NRC for submitting a radiation safety program.			[✓]
	Radiation Safety Program Audit: The applicant is *not* required to, and should not, submit its audit program to the NRC for review during the licensing phase.	Need Not Be Submitted With Application		
	Well Owner Operator/Agreement			[✓]
	Instruments • A description of the instrumentation (as described above) that will be used to perform required surveys. **OR**			[✓]
	• We will use instruments that meet the radiation monitoring instrument specifications published in Appendix N to NUREG-1556, Vol. 14, 'Program-Specific Guidance About Well Logging, Tracer and Field Flood Studies,' dated May 2000. **AND**	[ ]		
	• We will implement the model survey meter calibration program published in Appendix N to NUREG-1556, Vol. 14, 'Program-Specific Guidance About Well Logging, Tracer and Field Flood Studies,' dated May 2000. We reserve the right to upgrade our survey instruments as necessary. **OR**	[✓]	[ ]	
	• A description of alternative equipment and/or procedures for ensuring that appropriate radiation monitoring equipment will be used during licensed activities and that proper calibration and calibration frequency of survey equipment will be performed. Further, the statement "We reserve the right to upgrade our survey instruments as necessary" should be added to the response.		[ ]	[ ]

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Material Receipt and Accountability			
	• Physical inventories will be conducted and documented at intervals not to exceed six months, to account for all byproduct materials (sealed sources and tracer materials) and devices containing depleted uranium received and possessed under the license.	[✓]		
	Occupational Dosimetry			
	• Film badge, TLD, or OSL dosimeter will be processed and evaluated by a NVLAP-accredited entity, exchanged at the approved frequency, and worn by well logging supervisors and logging assistants.	[✓]	[ ]	
	AND/OR			
	• Individual logging supervisors and logging assistants using more than 50 millicuries of iodine-131 at any one time or in any 5-day period will be provided a bioassay.	[ ]	[✓]	
	• Bioassay plan attached.			[ ]
	• Individual logging supervisors and logging assistants will not use more than 50 millicuries of iodine-131 at any one time or in any 5-day period at field stations or at temporary job sites.	[ ]	[✓]	
	• We will contract with an outside group for bioassay services.	[ ]	[✓]	
	• Each vendor is licensed or otherwise authorized by NRC or an Agreement State to provide required bioassay services.	[ ]	[✓]	
	Public Dose The applicant is not required to, and should not, submit a response to the public dose section during the licensing phase. This matter will be inspected during an inspection.	Need Not Be Submitted With Application		

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Leak Tests			
	• Leak tests, when required by the license, will be performed at intervals approved by the NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed either by an organization authorized by NRC or an Agreement State to provide leak testing services to other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.	[ ]		
	• Leak testing and analysis will be done by the applicant, and the information in Appendix R supporting a request to perform leak testing and sample analysis is attached.	[ ]		[ ]
	• We will follow alternate procedures, and our specific procedures are enclosed for review.	[ ]	[✓]	[ ]
	Daily Maintenance			
	• A description of procedure(s) for conducting daily visual inspection is submitted.			[ ]
	OR			
	• Visual daily inspections will be conducted and records maintained in accordance with Section 8.10.9.1 of NUREG-1556, Vol. 14 to ensure that well logging equipment is in good working condition and that required labeling is present.	[✓]	[ ]	

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM *(Cont'd)***			
	Semi-Annual Maintenance			
	• Procedure(s) for conducting semi-annual inspections and routine maintenance of source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars to ensure that the labeling required by 10 CFR Part 39 is legible and that no physical damage is visible, is attached.			[ ]
	OR			
	• Semi-annual inspections and routine maintenance will be conducted and records maintained for source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars in accordance with Section 8.10.9.2 of NUREG 1556, Vol. 14, to ensure that well logging equipment is in good working condition with no physical damage evident and that the required labeling is present.	[✓]	[ ]	
	Maintenance Requiring Special Authorization			
	• Prohibited activities described in Section 8.10.9.3 of NUREG-1556, Vol. 14 will not be conducted unless approved by the NRC.	[✓]		
	OR			
	• Detailed procedures for any prohibited activities, including radiation safety precautions that individuals will be expected to follow when performing these tasks and the minimum qualifications of these individuals, are attached. Each different task must is. Should a procedure require the removal of the sealed source from the holder before performing any maintenance on the holder, applicants should describe the removal procedures.		[✓]	[ ]
	Transportation	No Response is Necessary for this Section		
	No response is needed from applicants during the licensing phase. Transportation issues are reviewed during inspections.			

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)* **Minimization of Contamination** The applicant does not need to provide a response to this item under the following conditions, and NRC will consider that the above criteria have been met if the applicant's responses meet the criteria in the following sections: "Facilities and Equipment," "Radiation Safety Program - Tracer Studies," "Radiation Safety Program - Operating and Emergency Procedures," and "Radiation Safety Program - Waste Management."	No Response is Necessary for this Section		
	AND			
	• Major decontamination procedures *will not be performed*. Decontamination of the facilities or sealed sources require special authorization from the NRC or an Agreement State.	[ ]	[✓]	
	OR			
	• Major decontamination procedures *will be performed*, and procedures to perform major decontamination activities are provided. Applicants should submit their procedures to perform major decontamination activities if they intend to perform the activity rather than contracting the work to a licensed entity.	[✓]	[ ]	[ ]
	Drill-to-stop			
	• Operating and emergency procedures for conducting DTS well logging operations submitted.	[ ]	[✓]	[ ]
	OR			
	• A summary addressing important radiation safety aspects of its O&E Procedures when conducting DTS submitted.		[ ]	

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Measurement While Drilling or Logging While Drilling			
	• Operating and emergency procedures for conducting MWD and/or LWD well logging operations submitted.	[ ]	[✓]	[ ]
	OR			
	• Summary that addresses important radiation safety aspects of Operating and Emergency Procedures when conducting MWD and/or LWD well logging operations submitted.			[ ]
	Energy Compensation Sources			
	• Operating and emergency procedures for using ECDs submitted.	[✓]	[✓]	[ ]
	OR			
	• A summary or outline addressing important radiation safety aspects of operating and emergency procedures when using or handling ECSs submitted.	[ ]	[✓]	[ ]
	- Instructions for testing ECSs requiring leak tests at intervals not to exceed 3 years	[ ]		
	- Instructions for conducting physical inventories of ECSs at least every 6 months	[ ]		
	- A record system for maintaining inventory records required by 10 CFR 39.37	[ ]		
	- A record system for maintaining records of use for ECSs.	[ ]		
	Use of Sealed Sources or Neutron Generators in Fresh Water Aquifers	No response is required from the licensee unless it requests authorization for the prohibited activity.		
	Tracer Studies in Single Well Applications	No response required to this section provided that the elements listed in 8.10.13.1 are contained in other sections.		

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Field Flood and Secondary Recovery Applications (Tracer Studies in Multiple Wells)			
	• We will be using tracer materials in conducting field flood studies in multiple wells.	☑		
	• We will not conduct field flood studies.	☑		
	OR			
	• We have submitted the information outlined in Appendix F for conducting field flood studies.	[ ]	☑	[ ]
	Tracer Studies in Fresh Water Aquifers			
	• We will not knowingly inject tracer material into a fresh water aquifer.	☑		
	OR			
	• Applicants requesting authorization to inject licensed radioactive material into a fresh aquifer must provide their reasons for performing the study and procedures to protect their workers and the public. Licensees must also provide the information required for an environmental assessment. Authorization to conduct such activities requires that applicants provide procedures to safeguard the public, licensee personnel, and the environment, in addition to providing an environmental impact study.	[ ]	☑	[ ]

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Radioactive Collar and Subsidence or Depth Control Markers			
	• We will only use radioactive markers where each individual marker contains only quantities of licensed material not exceeding the exempt quantities authorized in 10 CFR 30.71, Schedule B, as described in Section 8.10.14 of NUREG-1556, Vol. 14.	☑	[ ]	
	OR			
	• Procedures for using radioactive markers that are in excess of the quantities in Section 8.10.14 of NUREG-1556, Vol.14. are submitted for review.		☑	[ ]
	Neutron Accelerators Using Licensed Material			
	• We will not use neutron generators (accelerators) in our well logging operations.	☑	N/A	
	OR			
	• We will use neutron generators (accelerators) in accordance with the criteria in Section 8.10.15 of NUREG-1556, Vol. 14.	[ ]		

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** ***(Cont'd)***			
	Depleted Uranium Sinker Bars			
	• Depleted uranium sinker bars will be obtained under the provisions of a general license, per 10 CFR 40.51, and registration form NRC Form 244 will be filed, as required.	[ ]	[✓]	
	OR			
	• Depleted uranium sinker bars will not be obtained under the provision of a general license per 10 CFR 40.51 (general license).	[ ]	[✓]	
	AND			
	• Uranium sinker bars will be possessed and inspected as specified in Section 8.10.16 of NUREG-1556, Vol. 14.	[ ]	[✓]	
	AND			
	• We have specified the number of kilograms of specifically licensed source material (DU) that should be included in the license.	[ ]	[✓]	

APPENDIX C

Item No.	Title and Criteria	Yes	N/A	Description Attached
10	**RADIATION SAFETY PROGRAM** *(Cont'd)*			
	Waste Management			
	• We will use the model waste procedures published in Appendix T to NUREG-1556, Vol. 14, "Program-Specific Guidance About Well Logging, Tracer, and Field Flood Study Licenses," dated May 2000.	[ ]	[✓]	
	OR			
	• "We will use the (specify either (1) Decay-In-Storage, or (2) Disposal of Liquids Into Sanitary Sewerage) model waste procedures that are published in Appendix T to NUREG-1556, Vol. 14, "Program-Specific Guidance About Well Logging, Tracer, and Field Flood Study Licenses," dated May 2000.	[✓]	[ ]	[ ]
	OR			
	• Provided are our procedures for waste collection, storage and disposal by any of the authorized methods described in this section. Applicants should contact the appropriate Regional Office of the NRC for guidance to obtain approval of any method(s) of waste disposal other than those discussed in this section.		[✓]	[ ]
	OR			
	• If access to a radioactive waste burial site is unavailable, the applicant should request authorization for extended interim storage of waste. Applicant should refer to NRC IN 90-09, "Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees," dated February 1990, for guidance and submit the required information with the application.	[ ]	[✓]	[ ]