

sensor
SERVICES, Inc.

Radiological & Maintenance Services for Industrial Nuclear Gauging Systems
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August 7, 1997

Licensing Assistant Section
Nuclear Materials Safety Branch
United States Nuclear Regulatory Commission Region I
475 Allendale Road
King of Prussia, PA 19406-1415

SUBJECT: Amendments to Sensor Services, Inc. USNRC License #37-30117-2G,
Reference SSI's check # 1939 for \$310.00.

The following amendments are requested to enable Sensor Services, Inc. (SSI) to:

* Barber-Colman devices:

- a. Be the primary Radiological consultant and field contractor for Techcontrol Services concerning procurement, shipment, handling and installation of, sealed sources.
- b. Redistribute new or used sealed sources, in cooperation with Techcontrol Services of Mountain City, GA, to a new or existing customer.
- c. Redistribute new or used sealed sources to a new or existing customer in conjunction with installation of used Indev Control Systems equipment, or modified support electronics. (SSI total project)
- d. Issue a General License to the new or existing customer to operate that sealed source

* Loral Devices:

- a. Redistribute used sealed sources, complete in the original source housing unit.
- b. Install source housing unit on existing, or new, C-Frame with original or new detector assembly and support electronics.
- c. Issue a General License to the new or existing customer to operate that sealed source.

* ABB Devices:

- a. Document changes made by ABB to current model numbers as it applies to SSI's license.

The request to possess the same amended sealed sources are included in a separate application to amend SSI's license 37-30117-01. As per conversations with Region I office personnel, it is my understanding that the following proposed amendments can be accomplished by letter rather than by completing NRC form 313.

AMENDMENTS

to

37-30117-2G

Barber-Colman Devices
Techcontrol Services, Inc

NMSS/RONI MATERIALS-002

1 2 4 8 8 0

Techcontrol Services is a manufacturer of Process Control equipment specializing in small Paper Mills. Techcontrol has a license from the state of Georgia to possess sources but does not have a license to handle, install, inspect or package for shipment, sealed sources. In the past, Techcontrol would purchase source assemblies from

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different suppliers such as Ohmart, DMC or Barber-Colman, and use their assembly with Techcontrol's support electronics. The entire handling of the sources and source assemblies was performed by the field representatives of the respective companies. At the present time, Barber Colman has become the primary supplier, but due to economic conditions, has a reduced field force making timely response for service a problem.

Techcontrol has asked SSI to be it's primary Radiological consultant and service force. To this end, SSI is requesting to be able to perform the following services at the Techcontrol facilities at Tiger, GA, or in the customer's plant.

- * Install shutter assemblies in a Barber-Colman approved source housing. Barber-Colman's housing is a rectangular box tubing, 5" by 5", made of 1/8" aluminum. Techcontrol's housing is the same size box but made of 3/16" steel.
- * Install steel, and/or aluminum, sheet guides on the source housing head. Items not normally used on Barber-Colman systems.
- * Install Techcontrol's detector unit with sheet guides. This unit is more massive than Barber-Colman's detector.
- * Install external shutter indicator lamps rather than use Barber-Colman's internal lamps, as seen through translucent plexiglass on the front of the source housing unit.

NOTE: These four changes reduce the overall radiation profile and operator accessibility to the main radiation beam while the shutter is open.

- * Adjust air gap dimensions as per application. Usually completed at installation site.
- * Install support electronics supplied by Techcontrol Services.
- * Replace aged sources with new sources purchased from Barber-Colman or the original manufacturer.

All sources would be the property of Techcontrol Services and resale and installation would be under the authority of SSI's License. Any source handling would be performed by SSI or other licensed contractor.

SSI also requests the ability to reinstall used Barber-Colman devices, i.e. source assemblies on existing frames, with or without modification, to be used either with Barber-Colman original or new support electronics and detector assemblies from other suppliers.

- 1) To redistribute the following sealed sources received from an existing customer, or new sources from Barber-Colman (aka Indev Control Systems) or their Isotope supplier, be it 3M Company, or current supplier for sealed sources designed for source holder model 15030.

Reference Registry # RI-372-D-101-G

ISOTOPES

For use in Barber Colman (aka Indev Control Systems) source holder assemblies 15030.

Item	Radionuclide	Chemical and/or Physical form	Max. activity per source	Max. Possession Limit
A.	Kr-85	Sealed Source - 3M Model No. 3E40	500 mCi	2 Cui

- 2) To redistribute the following sealed sources received from an existing customer, or new sources from Barber-Colman (aka Indev Control Systems) or their Isotope supplier, be it 3M Company, or current supplier for sealed sources designed for source holder model 15202.

Reference Registry # RI-372-D-102-G

ISOTOPES

For use in Barber Colman (aka Indev Control Systems) source holder assemblies 15030.

Item	Radionuclide	Chemical and/or Physical form	Max. activity per source	Max. Possession Limit
A.	Sr-90	Sealed Source - 3M Model No. 3FIL	100 mCi	1 Cui

SSI does not intend to do the following: (Barber Colman devices 15030 & 15202)

- * Affix repairs, or modify the actual K-85 or Sr-90 sealed sources.
- * Modify the source shutter assemblies.
- * Use the sealed source in a measurement device for process measurement or production while in the possession of SSI or Techcontrol Services, other than testing the unit prior to it being transferred to a customer for it's intended use as a measurement device.

SSI does plan to remove or replace the Barber-Colman Kr-85 and Sr-90 sealed sources from the source assemblies if necessary. This operation would be completed in compliance with the procedures outline in letter dated March 19, 1994 to Region I for amendment to existing license.

All installation procedures would be completed in compliance with SSI's license 37-30117-2G including:

- * Tags: Existing Barber Colman installed external tags would be removed and SSI's required Isotope I.D, General License and SSI's Installation tag installed.
- * Original internal identification of Isotope, serial number and date of measure would not be altered or removed. If unreadable, it would be enhanced or replaced.
- * Radiation profile would be documented (SSI form 9) and kept on file with the new customer. The radiation profile, in all cases, would be the same, or better, than the distances listed in the device Registry of Sealed Sources.

Techcontrol Services, Inc.
P.O. Box 563
Mountain City, GA 30562
706 782-3529
Attn: Johnny Smith - RSO
Plant located in Tiger Georgia

Loral Control Systems

- 3) To redistribute the following Loral Control Systems (aka Weston, Fairchild Weston or Sangoma-Weston-Schlutierger) sealed sources from an existing customer installed in source holder models 5310, 5310-1 and 5310-3.

Reference Registry # NR-582-D-101-B

ISOTOPES

For use in Loral (aka Weston - Fairchild) source holder assemblies 5310, 5310-1 & 5310-3

Item	Radionuclide	Chemical and/or Physical form	Max. activity per source	Max. Possession Limit
A.	Am-241	Sealed Source - Amersham AMC.19	1 Curie	2 Cui
B.	Am-241	Sealed Source - Amersham AMC.30	3 Curies	6 Cui
C.	Am-241	Sealed Source - DuPont Merck NER-479C	3 Curies	6 Cui

All installation procedures would be completed in compliance with SSI's license 37-30117-2G including:

- * Loral units would be installed in existing or new C-Frames with the original, or new, support electronics.
- * Detector head could be the original Photomultiplier Tube assembly or a new Ion Chamber assembly. The Ion Chamber detector head would be more massive and thus reduce the overall radiation profile.
- * Air gap dimensions to be determined by application, not to exceed a maximum of 12 inches.
- * Source housing unit would be used intact. Source housing is easily installed or removed with three bolts, air and electrical connections.
- * Original external tags would be removed or defaced. (Loral tags are very difficult to remove) SSI's required Isotope I.D, General License and SSI's Installation tag installed.
- * Original internal identification of Isotope, serial number and date of measure would not be altered or removed. If unreadable, it would be enhanced or replaced.
- * Radiation profile would be documented (SSI form 9) and kept on file with the new customer. The radiation profile, in all cases, would be the same, or better, than the distances listed in the device Registry of Sealed Sources.

SSI does not intend to do the following:

- * Remove, affix repairs, or modify the actual Am-241 sealed source.
- * Modify the source shutter assembly.
- * Use the sealed source in a measurement device for process measurement or production while in the possession of SSI, other than testing the unit prior to it being transferred to a customer for it's intended use as a measurement device.

ABB Devices

- 4) To update and document changes to ABB's (aka AccuRay) model designation numbers as it applies to SSI's license.

In the early Nineties, ABB changed several model numbers. SSI wants to document the changes as it applies to it's license. Reference amendment letter dated to Region I, September 27, 1995.

Reference Registry # NR-109-D-122-B

Formerly registered as AccuRay models O-7, U-7 and U-7D now TG-1
June 27, 1994

ISOTOPES

For use in *ABB source housing series models TG-1

Item	Radionuclide	Physical form	Max. activity per source
A.	Kr-85	Sealed Source - *ABB Holder model S-11,	1.0 Curies
B.	Sr-90	Sealed Source - *ABB Holder model S-18,	.07 Curies
C.	Am-241	Sealed Source - *ABB Holder model S-16, * ABB also known as AccuRay, Industrial Nucleonics.	3.0 Curies

Reference Registry # NR-109-D-123-B

Formerly registered as models M3, M-3D, U-6, U-6D, U-8 & U-8D now TG-2
October 1, 1993

ISOTOPES

For use in *ABB source housing series models TG-2

Item	Radionuclide	Physical form	Max. activity per source
A.	Sr-90	Sealed Source - *ABB Holder model S-18,	.8 Curies
B.	Am-241	Sealed Source - *ABB Holder model S-16, * ABB also known as AccuRay, Industrial Nucleonics.	3.0 Curies

Reference Registry # NR-109-D-124-B

Formerly registered as models O-2, now TG-3
June 27, 1994

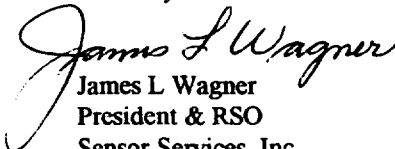
ISOTOPES

For use in *ABB source housing series models TG-3

Item	Radionuclide	Physical form	Max. activity per source
A.	Kr-85	Sealed Source - *ABB Holder model S-11,	1.5 Curies
B.	Sr-90	Sealed Source - *ABB Holder model S-18, * ABB also known as AccuRay, Industrial Nucleonics.	.07 Curies

If you have any questions or if I can be of further service, please do not hesitate to call.

Sincerely


James L. Wagner
President & RSO

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