Br. 2

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

RE: Request to Amend License 47-35296-01 03038909

To Whom It May Concern:

The purpose of this letter is to request an amendment to NRC radioactive materials license number 47-35296-01 issued to STS International (STS). STS is pursuing an amendment that would allow STS Authorized Users (AUs) to perform certain non-routine maintenance operations on licensed gauges. Specifically, the intended non-routine maintenance operations would allow STS to work on source holders, shutters, various motors, and install/de-install sources from gauges.

Eleven procedures have been prepared describing the specific operations. They involve replacing the source holder, shutters, and various motors on two types of gauges. The procedures are included in Attachment A.

Non-routine maintenance will be limited to STS radioactive materials supervisors. They are Alfonso Silva and Harold Carter. These individuals have received appropriate training regarding implementation of the non-routine maintenance procedures; their training record and copies of their training certificates are provided in Attachment B. Non-routine maintenance procedures will only be implemented by persons in possession of appropriate radiation detection instrumentation that meets the criteria in NUREG-1556 Volume 18. External radiation dose will be monitored with both whole body and extremity (ring) dosimeter badges obtained from a NVLAP accredited vendor. Proper implementation of these procedures will not result in doses which exceed any annual dose limit established by NRC.

The following steps will be implemented during non-routine maintenance activities:

- Radioactive source(s) will be under constant surveillance if not secured against unauthorized removal or access;
- Work areas will be posted with CAUTION RADIOACTIVE MATERIALS or CAUTION RADIATION AREA, as appropriate;
- All procedures will be implanted as written, in accordance with manufacturer's or distributor's instructions;
- All parts, components, materials (i.e., lubricants) used will be as recommended by the manufacturer or distributor. Should that not be possible, the item(s) in question will be evaluated to ensure that they do not degrade the engineering safety analysis performed and accepted as part of the original device registration; and
- Before being returned to routine use, the sealed source/device will be tested to verify that it functions as designed and the source integrity is not compromised.

We also commit to ensuring that no persons occupying adjacent areas to the restricted areas where non-routine maintenance operations take place will receive a dose exceeding the dose limits established by NRC for members of the public. This will be confirmed by surveying exposure rates with an appropriate instrument and limiting access to these areas. Area surveys performed during non-routine maintenance operations will be maintained in our radiation safety files for a minimum of three years and will include the survey date, name of person performing the survey, instrument used (serial number and calibration information), and measured radiation levels.

Thank you for your attention to this amendment request.

Sincerely yours,

David Morgan
Vice President Operations

Encls: Attachment A – Non-Routine Maintenance Procedures
Attachment B – AU training certificates

ATTACHMENT A
NON-ROUTINE MAINTENANCE PROCEDURES

1. Replace MMVACIS Source Motor
2. Replace MMVACIS Source
3. Replace MVACIS Shutter Gearmotor
4. Replace MVACIS Co60 Source Holder Assembly 2
5. Replace MVACIS Gearmotor Assembly
6. Replace R-VACIS (Primary) Source Actuator
7. Replace R-VACIS Co60 Source Holder Assembly
8. Replace R-VACIS Secondary Shutter Gearmotor
9. Replace R-VACIS Secondary Shutter
10. Replace VACISGT Source Motor
11. Replace VACISGT Source

Job Plan Data Sheet

Asset Number	
Asset Name	MMV
Job Plan Number	MMVSMTRR01
Description	Source Motor replacement
Duratio (Hours)	4

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.2
Task	20	Make sure lock is in the source shutter to prevent source from opening while shutter linkage is off.	0.1
Task	30	remove outer metal covers of the source holder.	0.5
Task	40	Remove the shutter linkage from the top of the source motor.	0.1
Task	50	Remove the shutter linkage bracket off the source motor that holds the shutter linkage to motor.	0.1
Task	60	unplug the motor wires from the Out vehicle wiring harness.	0.1
Task	70	lossen all the allen bolts holding servo coupling to the motor shaft	0.2
Task	80	remove the four allen bolts holding the source motor to the source motor bracket.	0.5
Task	90	remove source motor from the bracket being careful not to damage the servo coupling.	0.2
Task	100	install new source motor thru the source motor bracket while at the same time sliding the servo couping back onto the motor shaft.	0.2
Task	110	reinstall the four source motor allen bolts securing the motor back to the source motor bracket.	0.2
Task	120	tighten down the allen bolts on the servo coupling.	0.2
Task	130	reinstall the shutter linkage bracket back onto the source motor shaft.	0.1
Task	140	reinstall the shutter linkage to the source motor.	0.1
Task	150	plug source motor wires back into the Out Vehicles wiring harness.	0.1
Task	160	remove the source shutter lock.	0.1
Task	170	reinstall the metal covers of the source holder	0.5
Task	180	Perform job Plan "Function Test" and lock the source	0.5
Task	190		
Task	200		
Task	210		
Task	220		
Task	230		
Task	240		
Task	260		

Labor Data

Craft Code	Quantity	Hours
MMV	1	4

Parts/Materials Required

Part Number	Description	Quantity
0205-03-0012-001	source motor assembly	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	MMV
Job Plan Number	MMVSRCEC01
Description	Source change out
Duratio (Hours)	5.3

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.2
Task	20	Make sure lock is in the source and perform source wipe test on old Source if not performed in the last 6 months.	0.2
Task	30	remove outer metal covers.	0.5
Task	40	Remove the shutter linkage from the top of the source holder (blue Pig)	0.2
Task	50	Remove the shutter motor from the source holder.	0.2
Task	60	Remove the battery box that houses the back up batteries to close the shutter in an emergency from the source holder (blue Pig)	0.2
Task	70	remove limit switches from the top of the source holder (blue Pig) making sure to mark the wires.	0.2
Task	80	remove the four bolts on both sides of the source holder connecting the source to the out vehicle source brackets.	0.5
Task	90	connect a lifting chain to the two lifting brackets on the source holder.	0.1
Task	100	using a forklift place the chains on the forks of the forklift and raise forks till the chain is tight but not lifting the source holder.	0.2
Task	110	from the bottom of the out vehicle remove the two 3/4 in bolts mounting the source to the out vehicle source box.	0.1
Task	120	slowly raise the source holder (blue Pig)out of the out vehicle and lowering the source to the ground.	0.5
Task	130	remove the chains and the lifting brackets off the old source and install on the new source.	0.2
Task	140	perform a wipe test on the new source	0.1
Task	150	raise the new source and slowly lower into the out vehicle making sure the holes for the mounting bolts line and install bolts finger tight.	0.5
Task	160	lower source holder and remove the chains and leaving the lifting brackets on the source.	0.2
Task	170	install the 4 bolts on both sides of the source holder the side mounting brackets on the out vehicle.	0.2
Task	180	intall the source motor	0.5
Task	190	intstall battery box that hoses the bak up batteries to close the shutter in an emergency.	0.5
Task	200	install the limit switch back on top the source making sure the wire are plugged back in correctly.	0.5
Task	210	install the shutter linkage back to the source motor	0.2
Task	220	reinstall the metal covers to the source box.	0.5
Task	230	Perform Job Plan "Function Test" and lock the source	1
Task	240		
Task	260		

Labor Data

Craft Code	Quantity	Hours
GT (vtm)	1	5.3

Parts/Materials Required

Part Number	Description	Quantity
0014-03-0001-001	source cobalt 60	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1
3514-03-0011-001	Rad Meter	1
3514-02-0005-001	wipe test kit	2
	fork lift	1
	lifting chain	1

Job Plan Data Sheet

Asset Number	
Asset Name	MVACIS
Job Plan Number	MVCGRMTR01
Description	Replace "Shutter" Gearmotor
Duratio (Hours)	1.87

			Duration (hours)
Task	10	Position source enclosure to an open area where you can easily access all sides.	0.17
Task	20	Ensure the source is tilted all the way down and the locking pin is installed indicating the source shutter is closed.	0.08
Task	30	Perform Job Plan "Initial Safety Preparation Power Off"	0.08
Task	40	Remove the front source cover, (16 ea. ¼-20 screws and washers). Usethe #3 Phillips screwdriver.	0.08
Task	50	Open the source shutter actuator box (4 ea. captured fasteners) using a ¼" standard screwdriver and disconnect the wires going to the shutter actuator "motor"	0.17
Task	60	Loosen allen screws on servo coupling attached to the Gearmotor shaft.	0.05
Task	70	Remove the 4 screws attaching the gearmotor to the gearmotor "housing" assembly.	0.17
Task	80	Slide the old gearmotor out and slide new gearmotor into the gearmotor "housing" assembly and servo coupling.	0.17
Task	90	Reinstall the 4 screws attaching the gearmotor to the gearmotor "housing" assembly.	0.08
Task	100	Tighten the allen screws on the servo coupling.	0.05
Task	110	Using a ¼" standard screwdriver reconnect the wires going to the shutter actuator "motor" assembly and close the source shutter actuator box.	0.17
Task	120	Replace the front source cover, (16 ea. ¼-20 screws and washers). Usethe #3 Phillips screwdriver.	0.08
Task	130	Remove the source locking pin.	0.02
Task	140	Perform Job Plan function Test.	0.5
Task	150		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
			1.87

Labor Data

Craft Code	Quantity	Hours
MVACIS	1	1.87

Parts/Materials Required

Part Number	Description	Quantity
0205-03-0015-001	Gearmotor	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	MVACIS
Job Plan Number	MVCC60AR01
Description	Replace Co60 Source Holder Assembly
Duratio (Hours)	7.08

		Duration (hours)	
		Due to the DANGER of a crush hazzard or being struck by MHE equipment it is recommended that you have two technicians perform the source removal and new	
Task	10	Position source enclosure to an open area where you can easily access all sides.	0.17
Task	20	Ensure the source is tilted all the way down and the locking pin is installed with the source in the closed position.	0.08
Task	30	Remove the front and back source covers, (16 ea. ¼-20 screws and washers for each cover). Usethe #3 Phillips screwdriver.	0.17
Task	40	Lower the source enclosure to the ground or to a strong platform that can hold the weight of the source enclosure.	0.08
Task	50	Perform Job Plan "Safety Power Off"	0.08
Task	60	Then remove the locking pin and insert combination lock, locking combo lock for transport. Have a calibrated RAD Meter on hand to ensure enternal source shutter is	0.08
Task	70	Perform Job Plan "Leak Test" if the Leak Test has not been done in the past 6 months.	0.33
Task	80	Open the source shutter actuator box (4 ea. captured fasteners) using a ¼" standard screwdriver and disconnect the wires going to the shutter actuator "motor"	0.17
Task	90	Remove the source shutter actuator box from its mounting bracket (4 ea. 10-32 x 1" socket head cap screws). Use the 5/32" Allen key. Let the box dangle from the wires that are attached to it.	0.17
Task	100	Remove the source shutter actuator box bracket.	0.08
Task	110	Remove the pin blocker from the face of the source (2 ea. ¼-20 x .75" socket head cap screws). Use a 3/16" Allen key.	0.08
Task	120	Remove the laser bracket from the face of the source (2 ea. ¼-20 x .5" hex head screws). Use the 7/16" socket or wrench. (If it has one.)	0.08
Task	130	Loosen Motor shaft pivot arm assy and remove from the motor shaft.	0.17
Task	140	Disconnect the source actuator "motor" limit switches (2).	0.08
Task	150	Unbolt and remove source Gearmotor Assembly. (2 bolts)	0.08
Task	160	Remove Mechanical Indicator Installation and Indicator Cable Assy from top of the source holder.	0.17
Task	170	Remove the source locking pin BLOCK.	0.08
Task	180	Remove source shaft limit switch bracket and its two limit switches.	0.17
Task	190	Loosen Shutter shaft pivot arm assy and remove along with attached pivot rod linkage assy and Motor shaft pivot arm assy.	0.17
Task	200	Remove the Source "PLC" Junction Box and and let it hang by the cables so you can have access behind the sourceholder. You will have to disconnect some cables so	0.25
Task	210	Unbolt and remove the old source holder assembly sliding it onto the ground or a strong platform that you have the source enclosure resting on.	0.33
Task	220	Use MHE support to place the old source holder assembly onto a wood pallet for easy transport.	0.17
Task	230	Now use MHE support to help move the New Source Holder Assembly into position so you and another technician can slide it into the Source Frame Assembly's tilt	0.33
Task	240	Once the Source Holder Assembly is in the Source Frame Assembly correctly rebolt it in place.	0.33
Task	250	Perform Job Plan "Leak Test" and have a calibrated RAD Meter on hand for any radiation surveys needed.	0.5
Task	260	Reinstall the Source "PLC" Junction Box and any cables that were removed.	0.25
Task	270	Reinstall the pin blocker on the face of the source (2 ea. ¼-20 x .75" socket head cap screws). Use a 3/16" Allen key.	0.08
Task	280	Reinstall the laser bracket on the face of the source (2 ea. ¼-20 x .5" hex head screws). Use the 7/16" socket or wrench. (If it has one.)	0.08
Task	290	Reinstall the source shutter actuator box bracket.	0.08
Task	300	Reinstall the source Shutter Actuator Box Assembly.	0.17

Task	310	Rebolt the source Gearmotor Assembly. (2 bolts)	0.08
Task	320	Using a ¼" standard screwdriver reconnect the wires going to the shutter actuator "motor" assembly into the source shutter actuator box.	0.08
Task	330	Reinstall the Shutter shaft pivot arm assy with the attached pivot rod linkage assy and Motor shaft pivot arm assy onto the source shutter shaft.	0.17
Task	340	Reinstall the Motor shaft pivot arm assy onto the actuator motor shaft.	0.17
Task	350	Reinstall source locking pin BLOCK.	0.08
Task	360	Reinstall the Mechanical Indicator Installation and Indicator Cable Assembly back onto the top of the source shutter shaft.	0.17
Task	370	Reconnect source actuator "motor" limit switches (2).	0.17
Task	380	Reconnect the source shaft limit switch bracket and its two limit switches.	0.17
Task	390	Replace and close the source shutter actuator box (4 ea. captured fasteners)	0.08
Task	400	Raise the source enclosure so you can have access to all sides.	0.08
Task	410	Remove the source combination lock and insert the source locking pin.	0.08
Task	420	Reinstall the front and back source covers, (16 ea. ¼-20 screws and washers for each cover). Usethe #3 Phillips screwdriver.	0.17
Task	430	Remove the source locking pin.	0.02
Task	440	Perform Job Plan "Function Test" .	0.5
			7.08

Labor Data

Craft Code	Quanity	Hours
MVACIS	1	7.08

Parts/Materials Required

Part Number	Description	Quantity
0014-03-0001-001	Co60 Source Holder Assembly	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1
3514-03-0011-001	Rad Meter	1
3514-02-0005-001	Wipe Test Kit	2
	MHE / Forklift Support	1
	lifting chain / strap	1

Job Plan Data Sheet

Asset Number	
Asset Name	MVACIS
Job Plan Number	MVCGMASR01
Description	Replace Gearmotor Assy.
Duratio (Hours)	1.83

			Duration (hours)
Task	10	Position source enclosure to an open area where you can easily access all sides.	0.17
Task	20	Ensure the source is tilted all the way down and the locking pin is installed indicating the source shutter is closed.	0.08
Task	30	Perform Job Plan "Initial Safety Preparation Power Off"	0.08
Task	40	Remove the front source cover, (16 ea. ¼-20 screws and washers). Usethe #3 Phillips screwdriver.	0.08
Task	50	Open the source shutter actuator box (4 ea. captured fasteners) using a ¼" standard screwdriver and disconnect the wires going to the shutter actuator "motor"	0.17
Task	60	Disconnect the source actuator "motor" limit switches (2) from the gearmotor assembly and let hang by their wires.	0.08
Task	70	Loosen the allen screws in the motor shaft pivot arm assy and pull up and off the gearmotor shaft.	0.08
Task	80	Unbolt and remove source Gearmotor Assembly. (2 bolts)	0.08
Task	90	Rebolt the new Gearmotor Assembly back onto the source holder. (2 bolts)	0.08
Task	100	Reconnect the source actuator "motor" limit switches (2) to the gearmotor assembly.	0.08
Task	110	Place the motor shaft pivot arm assy back onto the gearmotor shaft and tighten the allen screws.	0.08
Task	120	Using a ¼" standard screwdriver reconnect the wires from the new gearmotor assembly to the source shutter actuator box and close the source shutter actuator box.	0.17
Task	130	Replace the front source cover, (16 ea. ¼-20 screws and washers). Usethe #3 Phillips screwdriver.	0.08
Task	140	Remove the source locking pin.	0.02
Task	150	Perform Job Plan Function Test.	0.5
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
			1.83

Labor Data

Craft Code	Quantity	Hours
MVACIS	1	1.83

Parts/Materials Required

Part Number	Description	Quantity
0205-03-0012-001	Gearmotor Assy	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	R-VACIS
Job Plan Number	RVCSACTR01
Description	Replace (Primary) Source Actuator
Duratio (Hours)	2.13

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.17
Task	20	Unlock and open the back source access door.	0.08
Task	30	Remove the enviromental cabinet for easy access to the source actuator.	0.08
Task	40	Ensure both shutters are closed by putting source internal shutter in the closed position with the locking pin inserted and secondary shutter in the closed position.	0.08
Task	50	Disconnect the 7-pin cable attached to the top of the source junction box.	0.08
Task	60	Using a ½ in. wrench, remove the four bolts underneath the Source Actuator Mount that attach the Source "Primary" Actuator to the Source Housing.	0.33
Task	70	With your hands lift the Source Actuator straight up and out from the source enclosure.	0.08
Task	80	Place the new source actuator into the source enclosure making sure the shaft lines up with the new source actuator.	0.08
Task	90	Using a ½ in. wrench, tighten the four bolts underneath the Source Actuator Mount that attach the Source "Primary" Actuator to the Source Housing.	0.33
Task	100	Reconnect the 7-pin cable to the top of the junction box.	0.08
Task	110	Remove the source locking pin.	0.08
Task	120	Reinstall enviromental cabinet.	0.08
Task	130	Lock the back source access door.	0.08
Task	140	Perform Job Plan "Function Test"	0.5
Task	150		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
			2.13

Labor Data

Craft Code	Quantity	Hours
R-VACIS	1	2.13

Parts/Materials Required

Part Number	Description	Quantity
391975-001	Source "Primary" Actuator	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	R-VACIS
Job Plan Number	RVCC60AR01
Description	Replace Cobalt 60 Source Holder Assembly
Duratio (Hours)	5.94

			Duration (hours)
		Due to the DANGER of a crush hazzard or being struck by MHE equipment it is recommended that you have two technicians perform the source removal and new	
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.17
Task	20	Unlock and open the back source access door.	0.03
Task	30	Remove the enviromental cabinet for easy access to the Co 60 source and components.	0.08
Task	40	Ensure both shutters are closed by putting source internal shutter in the closed position with the locking pin inserted and secondary shutter in the closed position.***	0.08
Task	50	Perform Job Plan "Leak Test" if the Leak Test has not been done in the past 6 months.	0.33
Task	60	Disconnect the 22 connector pin and 7-pin cables attached to the top of the Source Junction Box.	0.08
Task	70	Due to the weight of the Secondary Shutter, it is recommended that you have two Technicians perform this procedure.	
Task	80	Using a ¾ in. wrench, remove the four mounting bolts on the back of the Secondary Shutter.	0.33
Task	90	With another Technician, remove the Secondary Shutter from the Source Enclosure and set it in a safe place.	0.17
Task	100	Using a ½ in. wrench, remove the four bolts underneath the Source "Primary" Actuator Mount that attach the Source Actuator to the Source Holder.	0.33
Task	110	With your hands lift the Source "Primary" Actuator straight up and out from the source enclosure.	0.08
Task	120	Using an Allen wrench, loosen and remove all four bolts that attach the blue Internal Source Holder to the Source Bracket.	0.33
Task	130	Attach a chain or tow strap to the source and route it to the lifting forks on the MHE equipment so you can lift the source up for removal safely.	0.25
Task	140	Lift up and remove the source out of the source cart platform and to a safe place preferably a pallet that can be easily moved.	0.33
Task	150	Attach a chain or tow strap to the NEW source and route it to the lifting forks on the MHE equipment so you can lift the source up for placement in the source cart	0.25
Task	160	Lift up the NEW source and place it onto the Source Bracket and its two retaining screws.	0.5
Task	170	Once in place lower the lifting forks and remove the strap or chains.	0.08
Task	180	Using an Allen wrench, install and tighten all four bolts that attach the blue Internal Source Holder to the Source Bracket.	0.33
Task	190	With another Technician, align the Secondary Shutter with the four holes in the Mounting Plate.	0.17
Task	200	Using a ¾ in. wrench, insert and tighten the four mounting bolts on the back of the new Secondary Shutter.	0.33
Task	160	Place the source "Primary" actuator into the source enclosure making sure the shaft lines up with the New source actuator.	0.08
Task	170	Using a ½ in. wrench, insert and tighten the four bolts underneath the Source Actuator Mount that attach the Source Actuator to the Source Holder.	0.33
Task	180	Reconnect the 22 connector pin and 7-pin cables to the top of the Source Junction Box.	0.08
Task	190	Perform Job Plan "Leak Test" and have a calibrated RAD Meter on hand for any radiation surveys needed.	0.5
Task	200	Remove the source combination lock.	0.03
Task	210	Reinstall enviromental cabinet and lock the back source access door.	0.17
Task	220	Perform Job Plan "Function Test"	0.5
Task	230		**5.94**
Task	240		
Task	250		

Labor Data

Craft Code	Quanity	Hours
R-VACIS	1	5.94

Parts/Materials Required

Part Number	Description	Quantity
0014-03-0001-001	Cobalt 60 Source Holder Assembly	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1
3514-03-0011-001	RAD Meter	1
3514-02-0005-001	Wipe Test Kit	2
	MHE / Forklift Support	1
	lifting chain / strap	1

Job Plan Data Sheet

Asset Number	
Asset Name	R-VACIS
Job Plan Number	RVC2SGMR01
Description	Replace Secondary Shutter Gearmotor
Duratio (Hours)	2.27

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.17
Task	20	Unlock and open the back source access door.	0.08
Task	30	Remove the enviromental cabinet for easy access to the secondary shutter motor.	0.08
Task	40	Ensure both shutters are closed by putting source internal shutter in the closed position with the locking pin inserted and secondary shutter in the closed position.	0.08
Task	50	Open the Source Junction Box and disconncet the wires going to the secondary shutter gearmotor.	0.08
Task	60	Remove the gearmotor wires from their fastners where they are just hanging from the gear motor.	0.17
Task	70	Loosen the allen screws from the pulley attached to the gearmotor shaft.	0.05
Task	80	Remove the 4 allen bolts that attach the gearmotor to the secondary shutter assembly pulling down away from the secondary shutter while letting the shaft slide out of the pulley.	0.25
Task	90	Take the new gearmotor and put it back into the scondary shutter at an angle and slide the pulley with the belt on it back onto the gearmotor shaft.	0.08
Task	100	Bolt the new gearmotor back to the secondary shutter assembly with the 4 allen bolts.	0.25
Task	110	Reconnect the gearmotor wires back to the Source junction Box routing them through their fastners.	0.25
Task	120	Reinstall the cover to the source junction box.	0.05
Task	130	Reinstall the enviromental cabinet.	0.08
Task	140	Remove the source locking pin.	0.05
Task	150	Close and lock the back soucre access door.	0.05
Task	160	Perform Job Plan "Function Test".	0.5
Task	170		**2.27**
Task	180		
Task	190		
Task	200		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		

Labor Data

Craft Code	Quantity	Hours
R-VACIS	1	2.27

Parts/Materials Required

Part Number	Description	Quantity
393833-001	Gearmotor	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	R-VACIS
Job Plan Number	RVC2STRR01
Description	Replace Secondary Shutter.
Duratio (Hours)	2.31

		Duration (hours)	
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.17
Task	20	Unlock and open the back source access door.	0.08
Task	30	Remove the enviromental cabinet for easy access to the secondary shutter motor.	0.08
Task	40	Ensure both shutters are closed by putting source internal shutter in the closed position with the locking pin inserted and secondary shutter in the closed position.	0.08
Task	50	Disconnect the 22 connector pin and 7-pin cables attached to the top of the Source Junction Box.	0.08
		Due to the weight of the Secondary Shutter, it is recommended that you have two Technicians perform this procedure.	
Task	60	Using a ¾ in. wrench, remove the four mounting bolts on the back of the Secondary Shutter.	0.33
Task	70	With another Technician, remove the Secondary Shutter from the Source Enclosure and set it in a safe place.	0.17
Task	80	With another Technician, align the new Secondary Shutter with the four holes in the Mounting Plate.	0.17
Task	90	Using a ¾ in. wrench, tighten the four mounting bolts on the back of the new Secondary Shutter.	0.33
Task	100	Reconnect the 22 connector pin and 7-pin cables to the top of the Source Junction Box.	0.08
Task	110	Remove the source locking pin.	0.08
Task	120	Reinstall enviromental cabinet.	0.08
Task	130	Lock the back source access door.	0.08
Task	140	Perform Job Plan "Function Test"	0.5
Task	150		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
Task	160		
Task	170		
Task	180		
Task	190		
Task	200		
			2.31

Labor Data

Craft Code	Quantity	Hours
R-VACIS	1	2.31

Parts/Materials Required

Part Number	Description	Quantity
320421-001	Secondary shutter	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	GT (VTM)
Job Plan Number	VGTSMTRR01
Description	Source Motor replacement
Duratio (Hours)	4

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.2
Task	20	Make sure lock is in the source shutter to prevent source from opening while shutter linkage is off.	0.1
Task	30	remove outer metal covers of the source holder.	0.5
Task	40	Remove the shutter linkage from the top of the source motor.	0.1
Task	50	Remove the shutter linkage bracket off the source motor that holds the shutter linkage to motor.	0.1
Task	60	unplug the motor wires from the Out vehicle wiring harness.	0.1
Task	70	lossen all the allen bolts holding servo coupling to the motor shaft	0.2
Task	80	remove the four allen bolts holding the source motor to the source motor bracket.	0.5
Task	90	remove source motor from the bracket being careful not to damage the servo coupling.	0.2
Task	100	install new source motor thru the source motor bracket while at the same time sliding the servo couping back onto the motor shaft.	0.2
Task	110	reinstall the four source motor allen bolts securing the motor back to the source motor bracket.	0.2
Task	120	tighten down the allen bolts on the servo coupling.	0.2
Task	130	reinstall the shutter linkage bracket back onto the source motor shaft.	0.1
Task	140	reinstall the shutter linkage to the source motor.	0.1
Task	150	plug source motor wires back into the Out Vehicles wiring harness.	0.1
Task	160	remove the source shutter lock.	0.1
Task	170	reinstall the metal covers of the source holder	0.5
Task	180	Perform job Plan "Function Test" and lock the source	0.5
Task	190		
Task	200		
Task	210		
Task	220		
Task	230		
Task	240		
Task	260		

Labor Data

Craft Code	Quantity	Hours
GT (vtm)	1	4

Parts/Materials Required

Part Number	Description	Quantity
0205-03-0012-001	source motor assembly	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1

Job Plan Data Sheet

Asset Number	
Asset Name	GT (VTM)
Job Plan Number	VGTSRCEC01
Description	Source change out
Duratio (Hours)	5

			Duration (hours)
Task	10	Perform Job Plan "Initial Safety Preparation Power Off"	0.2
Task	20	Make sure lock is in the source and perform source wipe test on old Source if not performed in the last 6 months.	0.2
Task	30	remove outer metal covers.	0.5
Task	40	Remove the shutter linkage from the top of the source holder (blue Pig)	0.2
Task	50	Remove the shutter motor from the source holder.	0.2
Task	60	Remove the Secondary source shutter from the source holder (blue Pig)	0.2
Task	70	remove limit switches from the top of the source holder (blue Pig) making sure to mark the wires.	0.2
Task	80	remove the four bolts on both sides of the source holder connecting the source to the out vehicle source brackets.	0.5
Task	90	connect a lifting chain to the two lifting brackets on the source holder.	0.1
Task	100	using a forklift place the chains on the forks of the forklift and raise forks till the chain is tight but not lifting the source holder.	0.2
Task	110	from the bottom of the out vehicle remove the two 3/4 in bolts mounting the source to the out vehicle source box.	0.1
Task	120	slowly raise the source holder (blue Pig)out of the out vehicle and lowering the source to the ground.	0.5
Task	130	remove the chains and the lifting brackets off the old source and install on the new source.	0.2
Task	140	perform a wipe test on the new source	0.1
Task	150	raise the new source and slowly lower into the out vehicle making sure the holes for the mounting bolts line and install bolts finger tight.	0.5
Task	160	lower source holder and remove the chains and leaving the lifting brackets on the source.	0.2
Task	170	install the 4 bolts on both sides of the source holder the side mounting brackets on the out vehicle.	0.2
Task	180	intall the source motor	0.5
Task	190	intstall secondary source sutter	0.5
Task	200	install the limit switch back on top the source making sure the wire are plugged back in correctly.	0.5
Task	210	install the shutter linkage back to the source motor	0.2
Task	220	reinstall the out covers to the source box.	0.5
Task	230	Perform Job Plan "Function Test" and lock the source	1
Task	240		
Task	260		

Labor Data

Craft Code	Quantity	Hours
GT (vtm)	1	5.3

Parts/Materials Required

Part Number	Description	Quantity
0014-03-0001-001	source cobalt 60	1

Tools/Support Equipment Required

Part Number	Description	Quantity
6600-02-0100-001	General FSR Tool Kit	1
3514-03-0011-001	Rad Meter	1
3514-02-0005-001	wipe test kit	2
	fork lift	1
	lifting chain	1

ATTACHMENT B
AUTHORIZED USER TRAINING RECORD AND CERTIFICATES

Alfonso Silva
Harold Carter

STS

INTEGRATED SOLUTIONS FOR A SECURE FUTURE

TO: Licensing Assistance Team; Division of Nuclear Materials Safety; U.S. Nuclear Regulatory Commission, Region I

FROM: Program Manager, Non-Intrusive Inspection Systems, STS International, Inc.

DATE: 28 April 2018

SUBJECT: Verification of VACIS Non-Routine Maintenance Procedure Training for Alfonso Silva and Harold Carter

The following STS International, Inc. employees have received VACIS Non-Routine Maintenance Procedure training for the eleven (11) procedures listed in Attachment A of this license amendment request for NRC radioactive materials license number 47-35296-01.

1. Alfonso Silva
    a. OEM (SAIC) training course
        i. Dates: 4-31 Aug 2007
        ii. Location: SAIC training facility
    b. On the Job Training
        i. Dates: Apr-Sep 2014
        ii. Instructor: Lloyd Thomas
        iii. Location: Afghanistan, various locations
    c. Radiation Safety Officer
        i. Dates: 11-15 Jan 2016
        ii. Instructor: Dade Moeller Training Academy
        iii. Location: Gaithersburg, MD
2. Harold Carter
    a. On the Job Training
        i. Dates: Sep 2009-Dec 2011

STS International, Inc.
1225 South Clark Street, Suite 1300 Arlington, VA 22202
Phone: 703-575-5180 Fax: 703-575-5181

ii. Instructor: Gustavo Mariano (SAIC certified Field Support Representative)

iii. Location: Iraq, various locations

b. Radiation Safety Officer

i. Dates: 23-27 Jul 2012

ii. Instructor: Nevada Technical Associates, Inc.

iii. Location: Arlington, TX

3. Point of contact for this memorandum is David N. Vandivort, Program Manager, david.vandivort@stsint.com, 703-575-5185.

David N. Vandivort
Program Manager
STS International, Inc.

Certificate of Training

Awarded To

Alfonso Silva

Recognizing completion of 40 hours of specialized instruction in

Radiation Safety Officer

January 15, 2016

Presented By

Dade Moeller Training Academy

438 N. Frederick Avenue, Suite 220, Gaithersburg, MD 20877
www.moellerinc.com/academy -- 301-990-6006
AAHP has awarded this course 40 Continuing Education Credits, 2014-00-051 (AS-289)
ABIH Diplomates can claim this course for 40 hours in the IH CM Area

Alan L. Fellman, PhD, CHP

Harold Carter

Has successfully completed the 40 hour technical short course entitled

Radiation Safety Officer

July 23, 2012 – July 27, 2012

This certificate presented in Arlington, Texas, July 27, 2012

By Nevada Technical Associates, Inc.

Approval codes for C.E. units are: ASRT 30.5 units: NVZ0146001, AAHP 32 units: 2008-00-005, ABIH 4.5 units: 08-1362

H Hermon Rao

Hermon Rao

Instructor

Certificate Number: 1343026833

NRC FORM 532
(05-2016)

U.S. NUCLEAR REGULATORY COMMISSION

ACKNOWLEDGEMENT - RECEIPT OF CORRESPONDENCE

Name and Address of Applicant and/or Licensee

David Morgan
Vice President, Operations
STS International, Inc.
1225 South Clark Street
Suite 1300
Arlington, Virginia 22202

Date
May 14, 2018

License Number(s)
47-35296-01

Mail Control Number(s)
608763

Licensing and/or Technical Reviewer or Branch
Commercial, Industrial, R&D, and Academic Branch
Rec'd in RI on 05/08/18

This is to acknowledge receipt of your: ☑ **Letter and/or** ☐ **Application** **Dated:** _____

The initial processing, which included an administrative review, has been performed.

☑ **Amendment** ☐ **Termination** ☐ **New License** ☐ **Renewal**

☑ **There were no administrative omissions identified during our initial review.**

☐ **This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.**

☐ **Your application for a new NRC license did not include your taxpayer identification number. Please complete and submit NRC Form 531, Request for Taxpayer Identification Number, located at the following link: http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf**

Follow the instructions on the form for submission.

☐ **The following administrative omissions have been identified:**

Your application has been assigned the above listed MAIL CONTROL NUMBER. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

Region I
U. S. Nuclear Regulatory Commission
Division of Nuclear Materials Safety
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713
(610) 337-5260, (610) 337-5313,
(610) 337-5398, (610) 337-5239