

1/4/09

T7  
030-37896  
42-19320-01  
APPENDIX M  
472073

**ITEM 1: ACTION TYPE**

<b>ACTION TYPE:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Amendment <input type="checkbox"/> Renewal	<b>ADMINISTRATIVE REVIEW:</b> <input checked="" type="checkbox"/> Current Guidance Used <input checked="" type="checkbox"/> References in Application Based On Current Regulations
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**ITEM 2: LEGAL IDENTITY**

NAME:	Archana USA, Inc.
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**ITEMS 2 AND 3: ADDRESS**

<b>STORAGE &amp; LOCATION OF USE</b> Temporary job sites in exclusive Federal jurisdiction & #28 Contractors Row, White Sands Missile Range, NM	<b>MAILING ADDRESS</b> 1155 Larry Mahana Dr., Suite B, EL Paso, TX 79925
Temporary Job Sites <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

**ITEM 4: PERSON TO BE CONTACTED ABOUT THIS APPLICATION**

CONTACT PERSON:	Pratap G. Reddy, Ph.D. P.E.
TELEPHONE:	

Application dated December 19, 2008 (ML083660016)  
Facsimile, dated December 29, 2008 (ML083660016)  
letter

**ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND USES**

Yes	No	Radioisotope	Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
	<input checked="" type="checkbox"/>	Cesium-137	Sealed source manufacturer or distributor and model number: <u>As per SSD</u> Device manufacturer or distributor and model number: <u>Troxler 3440</u>	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration (SSDR) Certificate	Yes <input checked="" type="checkbox"/>  Specific description of the gauge use: <u>measure physical properties of material</u>	<input checked="" type="checkbox"/> Not applicable  <input type="checkbox"/> Uses are:
	<input checked="" type="checkbox"/>	Americium-241	Sealed source manufacturer or distributor and model number: <u>as per SSD</u> Device manufacturer or distributor and model number: <u>Troxler 3440</u>	Not to exceed either the maximum activity per source or maximum activity per device as specified in SSDR Certificate	Yes <input checked="" type="checkbox"/>  Specific description of the gauge use: <u>measure physical properties of material</u>	<input checked="" type="checkbox"/> Not applicable  <input type="checkbox"/> Uses are:
	<input checked="" type="checkbox"/>	Californium-252	Sealed source manufacturer or distributor and model number:  Device manufacturer or distributor and model number:	Not to exceed either the maximum activity per source or maximum activity per device as specified in SSDR Certificate	Yes <input type="checkbox"/>  Specific description of the gauge use: _____ _____ _____	<input type="checkbox"/> Not applicable  <input type="checkbox"/> Uses are:

18mCi total

88mCi total

Two Troxler 3440 (serial # 61136 & 36901)



# ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE MANAGEMENT

ITEM NUMBER AND TITLE	SUGGESTED RESPONSE	APPLICANT'S RESPONSE			
		YES	NO	OTHER	
				YES	NO
<p>ITEM 7 INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE - RADIATION SAFETY OFFICER</p> <p>NAME <u>Pratap G. Reddy,</u>  <u>Ph.D.</u>  <u>P.E.</u></p> <p><i>Current RSO listed on TX license (RAM) L05931 (active) → Portable gauge License.</i></p>	<p>Before obtaining licensed materials, the proposed RSO will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience - Radiation Safety Officer" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.</p> <p style="text-align: center;"><i>Optional Response</i></p> <p>Criteria for Acceptable Training Courses for Radiation Safety Officer/Portable Gauge Users</p> <p>Course Content</p> <ul style="list-style-type: none"> <li>• 1.5 to 2 hours of radiation safety and regulatory requirements;</li> <li>• 1.5 to 2 hours practical explanation of gauge theory and operation (including test runs).</li> </ul> <p>Course Examination</p> <ul style="list-style-type: none"> <li>• 25- to 50-question written (closed book) test - 70 percent grade.</li> </ul> <p>Course Instructor Qualifications</p> <ul style="list-style-type: none"> <li>• Bachelor's degree in a physical or life science or engineering with successful completion of both a portable gauge user course and 8-hour radiation safety course and 8 hours hands-on of experience with portable gauges.</li> </ul> <p style="text-align: center;"><b>OR</b></p>	<input checked="" type="checkbox"/>			

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		YES	NO	OTHER	
				YES	NO
ITEM 7 (CONTINUED)	<ul style="list-style-type: none"> <li>An individual with the following training:                             <ul style="list-style-type: none"> <li>Successful completion of portable gauge user course;</li> <li>Successful completion of 40-hour radiation safety course;</li> <li>30 hours of hands-on experience with portable gauges.</li> </ul> </li> </ul>				
ITEM 8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS	<p>Before using licensed materials, authorized users will have successfully completed one of the training courses described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.</p> <p><del>Optional Response</del> Review optional response against criteria listed under Item 7.</p>	✓			
ITEM 9 FACILITIES AND EQUIPMENT	No information needs to be submitted in response to this item; key issues are addressed under "Radiation Safety Program – Public Dose" and "Radiation Safety Program – Operating and Emergency Procedures."			Separate Item 9 Response Need Not Be Submitted With Application	
ITEM 10 RADIATION SAFETY PROGRAM – AUDIT PROGRAM	The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase.			Need Not Be Submitted With Application	
ITEM 10 RADIATION SAFETY PROGRAM – TERMINATION OF ACTIVITIES	The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires or at the time the licensee ceases operations, NRC Form 314 must be submitted.			Need Not Be Submitted With An Individual With the Following Training	
ITEM 10 RADIATION SAFETY PROGRAM – INSTRUMENTS	<p>We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled "Radiation Safety Program – Instruments" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001, in the event of an incident.</p> <p><del>Optional Response</del> A radiation survey meter should satisfy the following criteria:                             <ul style="list-style-type: none"> <li>Be capable of detecting gamma radiation;</li> <li>Be checked for functionality before use.</li> </ul> </p>	✓			

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		YES	NO	OTHER	
				YES	NO
ITEM 10 RADIATION SAFETY PROGRAM – MATERIAL RECEIPT AND ACCOUNTABILITY	<p>Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license.</p> <p><del>Optional Response</del>  Frequency and procedures to ensure no gauge is lost, stolen or misplaced, and if possession exceeds threshold, comply with financial assurance requirements in 10 CFR 30.35.</p>	✓			
ITEM 10 RADIATION SAFETY PROGRAM – OCCUPATIONAL DOSIMETRY	<p>Either we will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20 or we will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.</p> <p><del>Optional Response</del>  Alternative response demonstrates compliance with 10 CFR Part 20 requirements.</p>	✓			
ITEM 10 RADIATION SAFETY PROGRAM – PUBLIC DOSE	The applicant is <i>not</i> required to submit a response to public dose section during the licensing phase. This matter will be examined during an inspection.	Need Not Be Submitted With Application			

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		YES	NO	OTHER	
				YES	NO
ITEM 10 RADIATION SAFETY PROGRAM – OPERATING & EMERGENCY PROCEDURES	<p>We will implement and maintain the operating and emergency procedures in Appendix H of NUREG-1556, Vol. 1, Rev. 1, dated November 2001 and provide copies of these procedures to all gauge users and at each job site.</p> <p style="text-align: center;"><b>OR</b></p> <p><del>Operating and emergency procedures will be developed, implemented, and maintained and will meet the criteria in the section entitled "Radiation Safety Program – Operating and Emergency Procedures" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.</del></p> <p style="text-align: center;"><i>Optional Response</i></p> <ul style="list-style-type: none"> <li>• Instructions to use gauge and perform routine maintenance per manufacturer's recommendations and instructions;</li> <li>• Instructions to maintain security during storage and transportation;</li> <li>• Instructions to keep the gauge under control and immediate surveillance during use;</li> <li>• Steps to take to keep radiation exposures ALARA;</li> <li>• Steps to maintain accountability during use;</li> <li>• Steps to control access to damaged gauge;</li> <li>• Steps to take, and whom to contact, when a gauge has been damaged;</li> <li>• If gauges are used for measurements greater than 3 feet beneath the surface: use of surface casing or other procedures to ensure free movement of source in hole; instructions, procedures to retrieve a stuck source; NRC reporting requirements;</li> <li>• Copies provided to personnel and available at each job site.</li> </ul>			✓	<p>12/29/08 letter</p> <p>Committed to follow revised App. H, Operating, Emergency &amp; Security Procedures</p>

ITEM NUMBER AND TITLE	SUGGESTED RESPONSE	APPLICANT'S RESPONSE			
		YES	NO	OTHER	
				YES	NO
ITEM 10 RADIATION SAFETY PROGRAM – LEAK TEST	<p>Leak tests will be performed at intervals approved by NRC or an Agreements State and will be specified in the SDR Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreements State to provide leak test kits to other licensees and according to the kit supplier's instructions.</p> <p><b>Optional Response</b>            Provide the information in Appendix J supporting a request to perform leak testing and sample analysis:</p> <ul style="list-style-type: none"> <li>• Individual who will make the analysis; qualifications to make quantitative measurements;</li> <li>• Leak test frequency as specified in the appropriate SDR Sheet;</li> <li>• How and where test samples taken; materials to be used; methods of handling samples to prevent or minimize exposure to personnel;</li> <li>• Type of instrument(s) used, counting efficiency, and minimum levels of detection for each radionuclide.</li> </ul> <p><i>Note: An instrument capable of making quantitative measurements should be used; hand-held survey meters will not normally be considered adequate for measurements.</i></p> <ul style="list-style-type: none"> <li>• Standard calibration sources including for each: the radionuclide, quantity, accuracy, and traceability to primary radiation standards;</li> </ul> <p><i>Note: Accuracy of standards should be within <math>\pm 5</math> percent of the stated value and traceable to a primary radiation standard such as those maintained by the National Institutes of Standards and Technology (NIST).</i></p> <ul style="list-style-type: none"> <li>• Sample calculation to convert measurement data to becquerels (or microcuries);</li> <li>• Instructions on actions, notifications regarding leaking source.</li> </ul>	<input checked="" type="checkbox"/>			

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		YES	NO	OTHER	
				YES	NO
ITEM 10 RADIATION SAFETY PROGRAM – MAINTENANCE	<p><i>Routine Cleaning and Lubrication</i></p> <p>We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.</p> <p><del><i>Optional Response</i></del></p> <ul style="list-style-type: none"> <li><del>• Considers ALARA;</del></li> <li><del>• Ensures gauge functions as designed;</del></li> <li><del>• Ensures source integrity not compromised.</del></li> </ul> <p><i>Non-Routine Maintenance</i></p> <p>We will send the gauge to the manufacturer or other person authorized by NRC or an Agreement State to perform non-routine maintenance or repair operations that require the removal of the source or source rod from the gauge.</p> <p><del><i>Optional Response</i></del></p> <p><del>Provide the information listed in Appendix G supporting a request to perform non-routine maintenance in-house.</del></p> <ul style="list-style-type: none"> <li><del>• Types of work to be performed;</del></li> <li><del>• Who will perform maintenance, training, experience, why competent;</del></li> <li><del>• Handling procedures: doses to public, personnel ALARA and regulatory limits; security; posting; manufacturing instructions and recommendations;</del></li> <li><del>• Use of whole-body and extremity monitoring or evaluation to demonstrate that individuals are not likely to receive greater than 10 percent of allowable limits;</del></li> <li><del>• Possess survey instrument (detects gamma radiation; range 1-50 mrem/hr; annual calibration w/point source at 2 points/scale; readings within <math>\pm 20</math> percent; calibrated by NRC/Agreement State licensee; checked before use);</del></li> <li><del>• 10 CFR 20.1301 surveys (when and where instrument survey performed, records for 3 years).</del></li> </ul>	✓			
		✓			

ITEM NUMBER AND TITLE	SUGGESTED RESPONSE	APPLICANT'S RESPONSE			
		YES	NO	OTHER	
				YES	NO
ITEM 10 RADIATION SAFETY PROGRAM – TRANSPORTATION	The applicant is <i>not</i> required to submit a response to transportation section during the licensing process. However, this issue will be reviewed during inspection.			Need Not Be Submitted With Application	
ITEM 11 WASTE DISPOSAL – GAUGE DISPOSAL AND TRANSFER	The applicant is <i>not</i> required to submit a response to waste management section during the licensing process. However, the licensee should develop, implement, and maintain gauge transfer and disposal procedures in its radiation safety program.			Need Not Be Submitted With Application	