From: Schweitzer, Jim F [jfschweitzer@purdue.edu]
Sent: Thursday, August 20, 2009 5:47 PM
To: Adams, Mary
Subject: RE: SNM-142 Renewal early questions

Mary

Answers below. Please let me know if you need this in a letter format or you need more specific or additional information.

Thanks

Jim

From: Adams, Mary [mailto:Mary.Adams@nrc.gov]
Sent: Thursday, August 20, 2009 4:06 PM
To: Schweitzer, Jim F
Cc: Thompson, Richard
Subject: SNM-142 Renewal early questions

Hi Jim,

I've done a completeness review of the renewal application using 10 CFR 70.22 and have a few questions:

1. What is your requested period of time, per 70.22(a)(3)? 10 years is standard for greater-than-critical-mass licenses. We request a renewal for ten years.

2. Are all SNM-142 materials "sealed sources", as defined in 70.4? If not, 70.22(b) requires a program for control and accounting. All enriched uranium is sealed in stainless steel or aluminum cladding material and will not be opened.

3. Does the PUR-1 Emergency Plan also cover the SNM? 70.22(i) requires an Emergency Plan unless you can meet the criteria in 70.22(i)(1)(i) considering the factors in 70.22(i)(2).
The PUR-1 emergency plan does not cover the SNM license. We believe we meet the criteria under 70.22:

The radioactive material is physically separated so that only a portion could be involved in an accident.

The material is stored in 2 building locations. Within those building locations there are walls between some of the material that would prevent the involvement of all of the material at one time.

All or part of the radioactive material is not subject to release during an accident or to criticality because of the way it is stored or packaged.

In addition to the above information all enriched uranium is in sealed fuel rods. Additionally some enriched uranium is further stored in sealed converters which provide another barrier for release.

In the case of fires or explosions, the release fraction would be lower than 0.001 due to the chemical or physical form of the material.

The uranium is all solid UO2 fuel pellets. A number of barriers would significant reduce the amount of U released to the environment. The fuel is encapsulated in cladding, the fuel is enclosed within a cinder block or concrete room within a building, The rooms are in the basement of the building. The likelihood of a fire that would consume the material is low since there is no significant fire fuel loading in these areas.

4. Does the PUR-1 Physical Security Plan also cover the SNM? 70.22(k) requires a PSP for more than 10 kg of LEU. Yes

My "performance metric" says I should make this completeness determination by August 30, so I would be happy with answers by mid-next week.

Thanks,
Mary

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E-mail Properties

Mail Envelope Properties (55C81AACB8EEA34B98BA61E4C3D3F45D7CAECBF799)

Subject: RE: SNM-142 Renewal early questions
Sent Date: 8/20/2009 5:46:56 PM
Received Date: 8/20/2009 5:46:56 PM
From: Schweitzer, Jim F

Created By: jfschweitzer@purdue.edu

Recipients:
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Tracking Status: None

Post Office:
PF1MBX.physfac.purdue.edu

Files	Size	Date & Time
MESSAGE	14491	8/20/2009

Options
Expiration Date:
Priority: olImportanceNormal
ReplyRequested: False
Return Notification: False

Sensitivity: olNormal
Recipients received: